

# Symantec Enterprise Vault™

## Administrator's Guide

10.0

# Symantec Enterprise Vault: Administrator's Guide

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# About this guide

This chapter includes the following topics:

- [Prerequisite knowledge](#)
- [Where to get more information about Enterprise Vault](#)
- [Comment on the documentation](#)

## Prerequisite knowledge

To administer Enterprise Vault, you need a working knowledge of the following products:

- Windows Server 2008 R2 administrative tasks
- Microsoft SQL Server
- Microsoft Message Queue Server
- Internet Information Services (IIS)
- Your archive storage hardware and software

If you intend to use Enterprise Vault with Domino server, Microsoft Exchange, or Microsoft SharePoint, you also require a working knowledge of these products.

## Where to get more information about Enterprise Vault

[Table 1-1](#) lists the documentation that accompanies Enterprise Vault.

**Table 1-1** Enterprise Vault documentation set

Document	Comments
Symantec Enterprise Vault Help	<p>Includes all the following documentation so that you can search across all files. You can access this file by doing either of the following:</p> <ul style="list-style-type: none"> <li>■ On the Windows <b>Start</b> menu, click <b>Start &gt; Programs &gt; Enterprise Vault &gt; Documentation</b>.</li> <li>■ In the Administration Console, click <b>Help &gt; Help on Enterprise Vault</b>.</li> </ul>
<i>Introduction and Planning</i>	Provides an overview of Enterprise Vault functionality.
<i>Deployment Scanner</i>	Describes how to check the prerequisite software and settings before you install Enterprise Vault.
<i>Installing and Configuring</i>	Provides detailed information on setting up Enterprise Vault.
<i>Upgrade Instructions</i>	Describes how to upgrade an existing Enterprise Vault installation to the latest version.
<i>Setting up Exchange Server Archiving</i>	Describes how to archive items from Microsoft Exchange user mailboxes, journal mailboxes, and public folders.
<i>Setting up Domino Server Archiving</i>	Describes how to archive items from Domino mail files and journal databases.
<i>Setting up File System Archiving</i>	Describes how to archive the files that are held on network file servers.
<i>Setting up SharePoint Server Archiving</i>	Describes how to archive the documents that are held on Microsoft SharePoint servers.
<i>Setting up SMTP Archiving</i>	Describes how to archive SMTP messages from other messaging servers.
<i>Administrator's Guide</i>	Describes how to perform day-to-day administration, backup, and recovery procedures.

**Table 1-1** Enterprise Vault documentation set (*continued*)

Document	Comments
<i>Reporting</i>	Describes how to implement Enterprise Vault Reporting, which provides reports on the status of Enterprise Vault servers, archives, and archived items. If you configure FSA Reporting, additional reports are available for file servers and their volumes.
<i>Utilities</i>	Describes the Enterprise Vault tools and utilities.
<i>Registry Values</i>	A reference document that lists the registry values with which you can modify many aspects of Enterprise Vault behavior.
Help for Administration Console	The online Help for the Enterprise Vault Administration Console.
Help for Enterprise Vault Operations Manager	The online Help for Enterprise Vault Operations Manager.

For the latest information on supported devices and versions of software, see the *Enterprise Vault Compatibility Charts* book, which is available from this address:  
<http://www.symantec.com/docs/TECH38537>

## “How To” articles on the Symantec Enterprise Support site

Most of the information in the Enterprise Vault administration manuals is also available online as articles on the Symantec Enterprise Support site. You can access these articles by searching the Internet with any popular search engine, such as Google, or by following the procedure below.

### To access the “How To” articles on the Symantec Enterprise Support site

- 1 Type the following in the address bar of your Web browser, and then press **Enter**:  
[http://www.symantec.com/business/support/all\\_products.jsp](http://www.symantec.com/business/support/all_products.jsp)
- 2 In the Supported Products A-Z page, choose the required product, such as Enterprise Vault for Microsoft Exchange.
- 3 In the **Product Support** box at the right, click **How To**.
- 4 Search for a word or phrase by using the Knowledge Base Search feature, or browse the list of most popular subjects.

## Enterprise Vault training modules

The Enterprise Vault Tech Center ([http://go.symantec.com/education\\_evtc](http://go.symantec.com/education_evtc)) provides free, publicly available training modules for Enterprise Vault. Modules are added regularly and currently include the following:

- Installation
- Configuration
- Getting Started Wizard
- Preparing for Exchange 2010 Archiving
- Assigning Exchange 2007 and Exchange 2010 Permissions for Enterprise Vault

More advanced instructor-led training, virtual training, and on-demand classes are also available. For information about them, see [http://go.symantec.com/education\\_enterprisevault](http://go.symantec.com/education_enterprisevault).

## Comment on the documentation

Let us know what you like and dislike about the documentation. Were you able to find the information you needed quickly? Was the information clearly presented? Report errors and omissions, or tell us what you would find useful in future versions of our guides and online help.

Please include the following information with your comment:

- The title and product version of the guide on which you want to comment.
- The topic (if relevant) on which you want to comment.
- Your name.

Email your comment to [evdocs@symantec.com](mailto:evdocs@symantec.com). Please only use this address to comment on product documentation.

We appreciate your feedback.



# Managing administrator security

This chapter includes the following topics:

- [About administrator security](#)
- [Roles-based administration](#)
- [Using permissions to control access](#)
- [Changing the Vault Service account](#)

## About administrator security

Enterprise Vault provides the following mechanisms to control the abilities of Enterprise Vault administrators:

### Roles-based administration

Many administrative tasks do not require all the permissions that are associated with the Vault Service account. Roles-based administration enables you provide individual Enterprise Vault administrators with exactly the permissions that are required to perform their individual administrative tasks.

You can assign individuals or groups to roles that match their responsibilities, and they are then able to perform the tasks that are included in those roles. Because the permissions are associated with roles rather than individual administrators, you can control the role permissions without having to edit the permissions for each administrator.

There are two types of role:

- An administrator role typically limits your abilities by functional area, such as Messaging, Exchange, or Storage. Enterprise Vault provides several predefined administrator roles, which restrict your access within the Administration Console to the containers and commands that relate to a functional area. These roles also limit what you can see when you use Enterprise Vault Operations Manager and Enterprise Vault Reporting.
- An application role typically lets you perform the operations that are required to run a particular Enterprise Vault application. Application roles are not intended to control access to the Administration Console. Enterprise Vault provides one predefined application role, the Placeholder Application role. This role enables you to run the FSAUndelete utility.

### Admin permissions

You can grant or deny access to the following containers in the Administration Console tree:

- File Servers
- Exchange
- Domino
- SharePoint
- Enterprise Vault Servers
- Indexing

You can control access to the Administration Console by assigning administrator roles, or by using admin permissions, or both.

## Roles-based administration

Use Windows Authorization Manager to configure roles for Enterprise Vault roles-based administration. All such configuration is performed using the Vault Service account.

See *Installing and Configuring* for details of the prerequisite software that is needed to run Authorization Manager.

For an introduction to using Authorization Manager, see the following article:

<http://msdn.microsoft.com/en-us/library/bb897401.aspx>

Within Authorization Manager, roles are built up using operations and tasks, as follows:

- An operation is a low-level permission that represents a privileged action or capability. When the Administration Console determines whether a role has access to perform a task, it is the operations associated with the role that are checked.

Operations with names prefixed by "{STO}" or "{DIR}" are internal operations that do not affect the Administration Console display. Other, external operations control the view of the Administration Console that an administrator sees.

- A task is a group of operations that collectively provide sufficient permissions to do a particular job.

A role is a collection of tasks and, possibly, operations and other roles.

Enterprise Vault supplies the following predefined administrator roles:

Messaging Administrator	Responsible for the day-to-day administration of Exchange Server and Lotus Domino archiving. This administrator does not have access to other parts of the product, such as File Server archiving or SharePoint archiving.
Domino Administrator	<p>Responsible for the day-to-day administration of Lotus Domino archiving, including NSF migration. This administrator does not have access to other parts of the product, such as File Server archiving or SharePoint archiving.</p> <p>In Enterprise Vault Operations Manager, can view Domino information and parameters.</p>
Exchange Administrator	<p>Responsible for the day-to-day administration of Exchange Server archiving. This administrator does not have access to other parts of the product, such as File Server archiving or SharePoint archiving.</p> <p>In Enterprise Vault Operations Manager, can view Exchange Server information and parameters.</p>

File Server Administrator	Responsible for the day-to-day administration of File Server archiving. This administrator does not have access to other parts of the product, such as Exchange Server archiving or SharePoint archiving.
PST Administrator	Has a view of the Administration Console that concentrates on those components that are required to manage personal stores.  In Enterprise Vault Operations Manager, can view Exchange Server information and parameters.
NSF Administrator	Has a view of the Administration Console that concentrates on those components that are required to manage NSF files.  In Enterprise Vault Operations Manager, can view Domino information and parameters.
SharePoint Administrator	Has a view of the Administration Console that concentrates on those components that are required to manage SharePoint archiving.
Storage Administrator	Has a view of the Administration Console interface that concentrates mainly on those components that are required to keep storage running properly. This administrator does not have access to archiving policy settings for the various targets.
Indexing Administrator	Has a view of the Administration Console interface that concentrates mainly on those components that are required to keep indexing running properly. This administrator does not have access to archiving policy settings for the various targets.
Power Administrator	Can perform all the tasks in the other predefined administrator roles.  Cannot perform reconfiguration tasks such as changing the Vault Service account or Directory SQL server.

Enterprise Vault provides one predefined task role:

Task Applications	This role provides access to archives to allow an account other than the Vault Service account to run Exchange Server tasks. Enterprise Vault grants this role automatically when you configure an Exchange Server task to run under an account other than the Vault Service account.
-------------------	---

Enterprise Vault provides one predefined application role:

Placeholder Application	Able to run the FSAUndelete utility. This role enables the undeletion of items from archives.
-------------------------	---

You can use the predefined roles as supplied, customize them, or create new roles, as required.

By assigning roles you can adjust the permissions of individual administrators to match their job responsibilities. The mechanism is flexible enough for you to be able to modify an individual's role to cope with any change in responsibility.

You can assign roles to the following:

- Windows Users and Groups.
- The results of an LDAP query.
- Application-specific groups. These are specific to Authorization Manager and can contain a mixture of users and groups. They can also be based on an LDAP query. The main benefit of using application groups is that there is no need to create new groups within Active Directory to support Enterprise Vault.

Enterprise Vault auditing does not log changes to role membership within Authorization Manager. If you require auditing of changes within Authorization Manager, assign Enterprise Vault roles to Windows security groups and enable Windows auditing of changes to those groups.

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**Note:** The predefined Placeholder Application role does not allow access to the Administration Console.

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[Table 2-1](#) shows the Administration Console features and actions that are available to the supplied administrator roles.

**Table 2-1** Administration Console features and actions

Role	Administration Console containers available	Administration Console actions available
Messaging Admin	<ul style="list-style-type: none"> <li>■ <b>Targets:</b> Exchange; Domino</li> <li>■ <b>Policies:</b> Exchange; Domino Journaling; Retention Categories</li> <li>■ <b>Services:</b> Task Controller</li> <li>■ <b>Tasks:</b> Mailbox Archiving; Public Folder; Exchange Journaling; Exchange Provisioning; Domino Mailbox Archiving; Domino Journaling; Domino Provisioning</li> <li>■ <b>Archives:</b> Journal; Mailbox; Public Folder; Shared</li> </ul>	<ul style="list-style-type: none"> <li>■ Enable Mailbox</li> <li>■ Disable Mailbox</li> <li>■ Site Property tabs: General; Archiving Settings; Site Schedule</li> <li>■ Import NSF</li> <li>■ Advanced Features</li> <li>■ Exchange Message Classes</li> <li>■ Domino forms</li> </ul>
Domino Admin	<ul style="list-style-type: none"> <li>■ <b>Targets:</b> Domino</li> <li>■ <b>Policies:</b> Domino; Retention Categories</li> <li>■ <b>Services:</b> Task Controller</li> <li>■ <b>Tasks:</b> Domino Mailbox Archiving; Domino Journaling; Domino Provisioning</li> <li>■ <b>Archives:</b> Domino Mailbox; Domino Journal</li> </ul>	<ul style="list-style-type: none"> <li>■ Enable Mailbox</li> <li>■ Disable Mailbox</li> <li>■ Site Property tabs: General; Archiving Settings; Site Schedule</li> <li>■ Advanced Features</li> <li>■ Domino forms</li> </ul>
Exchange Admin	<ul style="list-style-type: none"> <li>■ <b>Targets:</b> Exchange</li> <li>■ <b>Policies:</b> Exchange; Retention Categories</li> <li>■ <b>Services:</b> Task Controller</li> <li>■ <b>Tasks:</b> Mailbox Archiving; Public Folder; Exchange Journaling; Exchange Provisioning</li> <li>■ <b>Archives:</b> Exchange Journal; Exchange Mailbox; Public Folder; Shared</li> </ul>	<ul style="list-style-type: none"> <li>■ Enable Mailbox</li> <li>■ Disable Mailbox</li> <li>■ Site Property tabs: General; Archiving Settings; Site Schedule</li> <li>■ Advanced Features</li> <li>■ Exchange Message Classes</li> </ul>
PST Admin	<ul style="list-style-type: none"> <li>■ <b>Policies:</b> PST Migration; Retention Categories</li> <li>■ <b>Services:</b> Task Controller</li> <li>■ <b>Tasks:</b> Mailbox Archiving; PST Locator; PST Collector; PST Migrator</li> <li>■ <b>Personal Store Management:</b> All functions</li> </ul>	<ul style="list-style-type: none"> <li>■ Site Property tabs: General; Site Schedule</li> <li>■ Import Archive</li> <li>■ Export Archive</li> <li>■ Advanced Features</li> </ul>

**Table 2-1** Administration Console features and actions (*continued*)

Role	Administration Console containers available	Administration Console actions available
NSF Admin	<ul style="list-style-type: none"> <li>■ <b>Policies:</b> Domino Mailbox; Domino Desktop; Retention Categories</li> <li>■ <b>Archives:</b> Import NSF</li> </ul>	<ul style="list-style-type: none"> <li>■ Import NSF</li> <li>■ Domino forms</li> </ul>
File Server Admin	<ul style="list-style-type: none"> <li>■ <b>Targets:</b> File Server</li> <li>■ <b>Policies:</b> File Archiving; Retention Categories</li> <li>■ <b>Services:</b> Task Controller</li> <li>■ <b>Tasks:</b> File Server Archiving</li> <li>■ <b>Archives:</b> File System; Shared</li> </ul>	<ul style="list-style-type: none"> <li>■ Site Property tabs: General; Archiving Settings; Site Schedule</li> <li>■ Advanced Features</li> </ul>
SharePoint Admin	<ul style="list-style-type: none"> <li>■ <b>Targets:</b> SharePoint</li> <li>■ <b>Policies:</b> SharePoint; Retention Categories</li> <li>■ <b>Services:</b> Task Controller</li> <li>■ <b>Tasks:</b> SharePoint</li> <li>■ <b>Archives:</b> SharePoint; Shared</li> </ul>	<ul style="list-style-type: none"> <li>■ Enable Workspace</li> <li>■ Disable Workspace</li> <li>■ Site Property tabs: General; Archiving Settings; Site Schedule</li> <li>■ Advanced Features</li> </ul>
Storage Admin	<ul style="list-style-type: none"> <li>■ <b>Tasks:</b> Indexing</li> <li>■ <b>Services:</b> Storage; Indexing; Task Controller</li> <li>■ <b>Archives:</b> All types of archive</li> <li>■ <b>Vault stores:</b> All vault stores</li> <li>■ <b>Indexing:</b> All Index servers and Index Server groups</li> </ul>	<ul style="list-style-type: none"> <li>■ Site Property tabs: General; Archiving Settings; Site Schedule; Storage Expiry</li> <li>■ Import Archive</li> <li>■ Export Archive</li> <li>■ Advanced Features</li> </ul>
Indexing Admin	<ul style="list-style-type: none"> <li>■ <b>Services:</b> Indexing; Task Controller; Storage</li> <li>■ <b>Tasks:</b> Indexing</li> <li>■ <b>Archives:</b> All types of archive</li> <li>■ <b>Indexing:</b> All Index Servers</li> </ul>	<ul style="list-style-type: none"> <li>■ Site Property tabs: Indexing; Advanced</li> <li>■ Advanced Features</li> <li>■ Manage indexes</li> </ul>

**Table 2-1** Administration Console features and actions (*continued*)

Role	Administration Console containers available	Administration Console actions available
Power Admin	<ul style="list-style-type: none"> <li>■ <b>Targets:</b> All targets</li> <li>■ <b>Policies:</b> All policies</li> <li>■ <b>Services:</b> All services</li> <li>■ <b>Tasks:</b> All tasks</li> <li>■ <b>Archives:</b> All types of archive</li> <li>■ <b>Vault stores:</b> All vault stores</li> <li>■ <b>Indexing:</b> All Index Servers and Index Server groups</li> <li>■ <b>Personal Store Management:</b> All functions</li> </ul>	<ul style="list-style-type: none"> <li>■ Enable Mailbox</li> <li>■ Disable Mailbox</li> <li>■ Enable Workspace</li> <li>■ Disable Workspace</li> <li>■ Site Property tabs: All tabs</li> <li>■ Manage Indexes</li> <li>■ Import Archive</li> <li>■ Export Archive</li> <li>■ Import NSF</li> <li>■ Advanced Features</li> <li>■ Exchange Message Classes</li> <li>■ Domino forms</li> </ul>

## Roles and Enterprise Vault Operations Manager

Any user other than the Vault Service account must be assigned to a suitable administrator role to access the Enterprise Vault Operations Manager Web application. Users can view only the tabs and tables in Operations Manager that are applicable to the role to which they are assigned. The tabs and tables that are available for a role are consistent with the containers that are available to that role in the Administration Console. The Power Administrator role is able to see all the tabs and tables in Operations Manager.

## Roles and Enterprise Vault Reporting

Any user other than the Vault Service account must be assigned to a suitable administrator role to access Enterprise Vault Reporting's reports.

The following roles do not have access to any reports:

- SharePoint Administrator
- NSF Administrator
- PST Administrator
- Indexing Administrator

The other default administrator roles have access to the Enterprise Vault Reporting reports that are appropriate to their role.

For information on the reports available to each role, see the *Reporting* guide.



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**Note:** If you have configured Enterprise Vault Reporting, you must enable the synchronization of Enterprise Vault Reporting roles-based security.

See "Enabling the synchronization of Enterprise Vault Reporting roles-based security" in the *Reporting* guide.

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## Assigning roles for administration

The Vault Service account can perform all Enterprise Vault management operations and is not restricted in any way. Initially, the Vault Service account is the only account that can create roles and assign them to lower-level administrators.

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**Note:** If you have configured Enterprise Vault Reporting, you must enable the synchronization of Enterprise Vault Reporting roles-based security.

See "Enabling the synchronization of Enterprise Vault Reporting roles-based security" in the *Reporting* guide.

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### To assign a role to a user or group

- 1 In the Administration Console, right-click the **Directory** container and click **Authorization Manager**.
- 2 In the Authorization Manager window, under Enterprise Vault, click **Role Assignments**.  
  
If role you want to use is not listed, right-click **Role Assignments** and, on the shortcut menu, click **Assign Roles**. The **Add Role** listing shows the roles you can select. Select the required role and click **OK**.
- 3 Right-click the role to which you want to assign users and then, on the shortcut menu, click **Assign Application Groups** or **Assign Windows Users and Groups**.
- 4 If chose **Assign Application Groups**, check the users or groups you want to add to the role, and then click **OK**.

- 5 If you chose **Assign Windows Users and Groups**, the standard Windows **Select Users, Computers or Groups** dialog appears. Select the required users or groups and then click **OK** to close the dialog box.
- 6 In the Authorization Manager **File** menu, click **Exit**. Click **Yes** to confirm that you want to save your changes to the Directory database.

The changes take approximately one minute to be replicated to all Enterprise Vault servers, and to any SQL Server Reporting Services servers on which Enterprise Vault Reporting is configured. Wait a minute if you want to start Authorization Manager again to make further changes.

Administration Consoles do not reflect the assignment changes until they are restarted. After you perform role assignments, administrators may receive role-related error messages until they restart the Administration Console.

## Modifying a role for administration

You can modify the tasks, roles, and operations that are associated with a role definition.

---

**Note:** If you have configured Enterprise Vault Reporting, you must enable the synchronization of Enterprise Vault Reporting roles-based security.

See "Enabling the synchronization of Enterprise Vault Reporting roles-based security" in the *Reporting* guide.

---

### To modify a role

- 1 Using Vault Service account, start the Administration Console.
- 2 Right-click the **Directory** container and, on the shortcut menu, click **Authorization Manager**.
- 3 In the Authorization Manager window, under Enterprise Vault, expand **Definitions**.
- 4 Click **Role Definitions**.
- 5 In the list of role definitions, double-click the name of the role you want to modify.
- 6 In the role properties, click the **Definition** tab. The list shows the tasks and roles that comprise this role definition.
- 7 To remove a task or role from the definition, click the task or role and then click **Remove**.

The task is removed immediately, without any confirmation prompt.

- 8 To add a task or role to the definition, do the following in the order listed:
  - Click **Add**.
  - The Add Definition window appears.
  - To add roles to the definition, check each role to add.
  - To add tasks to the definition, click the Task tab and then check each task to add.
  - To add operations, click the Operations tab and then check each operation to add.

Instead of adding individual operations to a role, we recommend that you use tasks to create custom roles. The tasks contain the correct combination of internal and external operations.
  - Click **OK** to close the Add Definition window.
- 9 Click **OK** to close the definition properties window.
- 10 On the **File** menu, click **Exit**, and click **Yes** to confirm that you want to save your changes to the Directory database.

The changes take approximately one minute to be replicated to all Enterprise Vault servers, and to any SQL Server Reporting Services servers on which Enterprise Vault Reporting is configured. Wait a minute if you want to start Authorization Manager again to make further changes.

Administration Consoles do not reflect the assignment changes until they are restarted. After you modify a role, administrators may receive role-related error messages until they restart the Administration Console.

## Creating a new role for administration

You can create new roles, adding other roles, tasks, and operations, as required. You can create roles from a combination of existing roles and tasks.

---

**Note:** It is not advisable to add individual operations to a role. We recommend that you use tasks to create custom roles. The tasks contain the correct combination of internal and external operations. Adding unnecessary internal operations to a role reduces the security of that role.

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**Note:** If you have configured Enterprise Vault Reporting, you must enable the synchronization of Enterprise Vault Reporting roles-based security.

See "Enabling the synchronization of Enterprise Vault Reporting roles-based security" in the *Reporting* guide.

---

#### To create a new role

- 1 Using Vault Service account, start the Administration Console.
- 2 Right-click the **Directory** container and, on the shortcut menu, click **Authorization Manager**.
- 3 In the Authorization Manager window, under Enterprise Vault, expand **Definitions**.
- 4 Right-click **Role Definitions** and, on the shortcut menu, click **New Role Definition**.
- 5 In the **Role Definition** window, enter a **Name** and **Description** for the new role.
- 6 Click **Add** to add roles, tasks, or operations to the role.
- 7 When you have finished, in the Authorization Manager **File** menu click **Exit**. Click **Yes** to confirm that you want to save your changes to the Directory database.

The changes take approximately one minute to be replicated to all Enterprise Vault servers, and to any SQL Server Reporting Services servers on which Enterprise Vault Reporting is configured. Wait a minute if you want to start Authorization Manager again to make further changes.

Administration Consoles do not reflect role assignment changes until they are restarted. Administrators may receive role-related error messages until they restart the Administration Console.

## Determining your current role entitlements

If you need to find out what your current role is, and which tasks you can perform, you can list the role entitlements.

#### To list your role entitlements

- 1 In the Administration Console, right-click the **Directory** container and, on the shortcut menu, click **Show Roles**.
- 2 If you want to keep a copy of the list, click **Copy to clipboard**. You can then paste the text into a document or mail message as required.
- 3 Click **OK**.

## Resetting all roles and assignments

You can use a registry value to reset all the roles and role assignments so that they are the same as they were when installed.

See the description of the ResetAuthorizationStore value in the *Registry Values* manual.

## Using permissions to control access

When you install or upgrade to Enterprise Vault 10.0, only the Vault Service account has access to the Administration Console. You can then use the Vault Service account to assign administrative roles as required.

An administrator in any given role has access to all Administration Console containers that are relevant to that role. For example, a Messaging Administrator has access to every Exchange Server and Domino server in the Enterprise Vault Site.

You can assign administrator permissions to grant or deny access to individual containers in the Administration Console. For example, you can grant an administrator access to a single Exchange Server computer.

You can assign permissions to grant or deny access to any of the following Administration Console containers:

- A file server
- An Exchange Server
- A Domino Server
- A SharePoint Web application
- An Enterprise Vault server

As soon as you modify a container's permissions, access to that container and its contents is controlled by the list you defined. The only exception to this is that the Vault Service account always has access.

For example, a Messaging Administrator who does not have access to a particular Exchange Server cannot enable mailboxes on that Exchange Server. This is because the Enable Mailbox wizard does not allow the administrator to list the mailboxes on that Exchange Server.

If you need to return to the state in which all administrators have access to a container, you must delete all entries in the administrator permissions list for that container.

### To grant or deny permission to access a container

- 1 Using Vault Service account, start the Administration Console.
- 2 In the Administration Console, right-click the file server, Exchange Server, SharePoint Web application, or Enterprise Vault server to which you want to apply permissions and, on the shortcut menu, click **Properties**.
- 3 Click the **Admin Permissions** tab. The list shows the specific users or groups who have been granted or denied permission to administer this computer.
- 4 If you want to add an entry to the list, click **Add** and then proceed as follows:
  - If you are adding the first entry on the list, there is a warning that adding an entry to the list restricts access to those users with Grant access. Click **OK**.
  - In the Add Users and Groups window, add the users or groups to whom you want to grant or deny access to the container. Click **OK**.  
The **Admin Permissions** list now shows the users and groups you have added, with a **Grant** and **Deny** option next to each.
- 5 If you want to remove an entry from the list, click the entry to select it and then click **Remove**.
- 6 For each user and group, select **Grant** to grant access to this container, or **Deny** to deny access to this container, as required.
- 7 If you need to delete an entry from the list
- 8 Click **OK** to close **Admin Properties**.  
  
If you have removed all entries from the list there is a warning that all administrators in a role that allows access to this container now have access. Click **OK**.

## Changing the Vault Service account

If you need to change the Vault Service account, this section describes how to proceed.

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**Note:** You are recommended not to change the account name if possible, because of the amount of work involved, and the potential for introducing mistakes that take time to rectify.

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Before you change the account, ensure that the following apply:

- The new Vault Service account is part of the Administrators group, with permission Full Control (All), on each Enterprise Vault computer in the Enterprise Vault Site.
- If Exchange Server archiving is implemented, the new account has full permissions on the Microsoft Exchange Server.
- The Microsoft Message Queue security has been set up to grant the Administrators group access to the Enterprise Vault queues.
- The new account has database creator access on the SQL server.
- If you use the Enterprise Vault FSA Agent, ensure that the new account is a local administrator on each computer on which the FSA Agent is installed. In addition, ensure that the account has the required privileges on the computer. See “Setting permissions for FSA on a Windows file server” in *Setting up File System Archiving*.
- If SharePoint Server archiving is implemented, add the new Vault Service account to the SharePoint sites, or to the group that contains the old Vault Service account. The new account must be a local administrator on the SharePoint Servers.

For instructions on how to set permissions for the Vault Service account, see Enterprise Vault prerequisite software and settings in *Installing and Configuring*.

Note the following:

- Always use the Administration Console to specify a new password for the Vault Service account or to change the Vault Service account itself. Do not use the Windows Services MMC snap-in to edit the logon credentials for an Enterprise Vault service unless you are instructed to do so.
- If you ever change the password of the Vault Service account, and you have installed an add-on such as Enterprise Vault Discovery Collector, then you may also need to change the user account credentials of the Vault Service account in the add-on. See the documentation that accompanies the add-on for more information.
- If you change only the password of the Vault Service account, and you have installed the FSA Agent on any computers, you must update the logon credentials that the FSA Agent services use.  
See “Updating the logon credentials of the FSA Agent services” in *Setting up File System Archiving*.

**To change the Vault Service account**

- 1** Start the Administration Console as the existing Vault Service account.
- 2** In the Administration Console, open Directory Properties and click the Service Account tab.
- 3** Change the Vault Service account details to reference the new account.
- 4** On SharePoint servers, run the Enterprise Vault SharePoint Configuration wizard and specify the new Vault Service account credentials.
- 5** If you have installed any add-ons such as Enterprise Vault Discovery Collector, you may need to change the Vault Service account credentials in the add-on. See the documentation that accompanies the add-on for information on how to do this.
- 6** Restart all Enterprise Vault services on all Enterprise Vault servers in the Enterprise Vault Site.
- 7** Restart the Enterprise Vault services on any other computers that have Enterprise Vault services installed. This includes the FSA Agent services on any computers that have the FSA Agent installed.



# Day-to-day administration

This chapter includes the following topics:

- [Monitoring the system status](#)
- [Monitoring application logs](#)
- [Monitoring MSMQ queues](#)
- [About starting or stopping tasks or services](#)
- [Checking logs with the Windows Event Viewer](#)
- [Monitoring journal mailboxes](#)
- [About monitoring disks](#)
- [About maintaining the SQL databases](#)
- [About managing vault store groups and sharing](#)
- [About managing safety copies](#)
- [About managing partition rollover](#)
- [Recovering deleted items](#)
- [About expiry and deletion](#)
- [Creating a new retention category](#)
- [About maintaining provisioning groups](#)
- [Enabling archiving for new mailboxes](#)
- [About moving archives](#)
- [Deleting an archive](#)

- [Deleting a vault store](#)
- [Setting a system message](#)
- [About index volumes](#)
- [Moving the directory database](#)
- [Moving a vault store database](#)
- [Moving a fingerprint database](#)
- [Moving the Monitoring database](#)
- [Moving the audit database](#)

## Monitoring the system status

Enterprise Vault automatically runs checks to monitor the health of the Enterprise Vault system.

Enterprise Vault displays the results of the checks in the **Status** section of the Administration Console. Check the status results every day and fix any problems that are shown.

**To customize the checks for your environment you can do the following:**

- 1 Choose which checks to run.
- 2 Modify the levels at which the checks report errors.
- 3 Specify when to run each check.

See [“Monitoring in Site Properties”](#) on page 226.

## Monitoring application logs

Messages from the various Enterprise Vault services and tasks go into the event logs on their respective computers. You need to check each of these logs for error messages and take appropriate action as necessary.

When using the Event Viewer, you can filter the messages using the options on the View menu.

[Table 3-1](#) shows the event logs that Enterprise Vault uses.

**Table 3-1** Enterprise Vault event logging

Event log	Contents
Application Log	The Application log includes Enterprise Vault events that show that components have started or stopped, or that require you to take some corrective action.
Symantec Enterprise Vault	All Enterprise Vault events, except for those from document conversion or from the Symantec Enterprise Vault CryptoModule. Events that are placed in the Application Log also appear in here.
Symantec Enterprise Vault Converters	Events resulting from document conversions.
Symantec Enterprise Vault CryptoModule	<p>Events that the Symantec Enterprise Vault CryptoModule generates, in accordance with the FIPS 140-2 standard. These events indicate when known-answer tests and self-integrity tests are run, and whether they complete successfully.</p> <p>For more information about Enterprise Vault and FIPS 140-2, see the following article on the Symantec Support Web site:</p> <p><a href="http://www.symantec.com/docs/DOC4820">http://www.symantec.com/docs/DOC4820</a></p>

# Monitoring MSMQ queues

It is important that you monitor MSMQ queues so that you can quickly spot any problems that may occur.

## To monitor the performance of the queues:

- ◆ Use the Windows Performance Monitor
 

You may find it useful to have the Windows Performance Monitor running continuously, showing the number of messages on all the queues.

See “[Accessing Enterprise Vault message queues](#)” on page 325.

You will quickly become used to the normal behavior of the queues and will notice excessive backlogs. Investigate the cause of any such backlogs promptly.

# About starting or stopping tasks or services

You may want to stop an Enterprise Vault task or service for many possible reasons, such as when you do any of the following:

- Changing tasks, policies, or service settings. For many of the service settings you must stop and restart one or more services before the new settings come

into effect. For details of which settings require a restart to take effect, see the help for the property pages of each service and task.

- Changing hardware configurations.
- Reconfiguring a service.
- Troubleshooting.

## Starting or stopping tasks

You can start and stop tasks from the Administration Console.

### To start a task

- 1 In the left pane of the Administration Console, expand **Enterprise Vault Servers**.
- 2 Expand the name of the computer that runs the task you want to start.
- 3 Click **Tasks**.

The right pane shows the tasks on that computer.

- 4 In the right pane, click the task you want to start.
- 5 Do one of the following:
  - Click **Start the Task** on the toolbar.
  - Right-click the name of the task and then, on the shortcut menu, click **Start**.

### To stop a task

- 1 In the left pane of the Administration Console, expand **Enterprise Vault Servers**.
- 2 Expand the name of the computer that runs the task you want to stop.
- 3 Click **Tasks**.

The results pane shows the tasks on that computer.

- 4 In the right pane, click the task you want to stop.
- 5 Do one of the following:
  - Click **Stop the Task** on the toolbar.
  - Right-click the name of the task and, on the shortcut menu, click **Stop**.

## Starting or stopping services

You can start and stop services from both the Administration Console and the Windows Service Control manager.

Note that there is a command-line utility, EVservice, with which you can start and stop local and remote Windows services. EVservice is useful if you have a backup procedure that you want to automate. The utility is in the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`). See the *Utilities* manual for guidelines on how to use it.

### To start a service

- 1 In the left pane of the Administration Console, expand **Enterprise Vault Servers**.
- 2 Expand the name of the computer that is running the service that you want to start.
- 3 Click **Services**.

The right pane shows the services on that computer.

- 4 In the right pane, click the service you want to start.
- 5 Do one of the following:
  - Click **Start the Service** on the toolbar.
  - Right-click the name of the service and then, on the shortcut menu, click **Start**.

### To stop a service

- 1 In the left pane of the Administration Console, expand **Enterprise Vault Servers**.
- 2 Expand the name of the computer that runs the service you want to stop.
- 3 Click **Services**.

The results pane shows the services on that computer.

- 4 In the right pane, click the service you want to stop.
- 5 Do one of the following:
  - Click the **Stop the Service** button on the toolbar.
  - Right-click the name of the service and then, on the shortcut menu, click **Stop**.

## Checking logs with the Windows Event Viewer

Enterprise Vault services and tasks all write their diagnostic logging information to the standard Enterprise Vault Event Log. You can view the event log by using the standard Windows Event Viewer.

The amount of diagnostic logging information output depends on the diagnostic logging level you set for that service or task. Enterprise Vault generates many log entries. You must take some action to make sure that the log files do not grow too large.

The Windows Event Viewer provides the following ways to ensure that the log files are the proper size:

- The default setting for the Event Viewer is for new events to replace old events. This ensures that all events are logged.
- You can specify a length of time to keep all log entries before they can be overwritten.
- You can set a maximum size for the log file, to make sure that the log file contains as much history as you are likely to need.
- You can keep all log entries and clear the log file manually, using the Event Viewer.

If you have purchased a suitable reporting tool, you can use information from the Application Log in your own, customized reports.

For more information on controlling log files, see the Event Viewer help.

### To run the Windows Event Viewer

- 1 On the Windows **Start** menu, click **All Programs > Administrative Tools > Event Viewer**.
- 2 In the left pane of the Event Viewer, click the **Application** log or one of the Enterprise Vault logs:
  - **Symantec Enterprise Vault**
  - **Symantec Enterprise Vault Converters**
  - **Symantec Enterprise Vault CryptoModule**

The Event Viewer loads the log you selected.

# Monitoring journal mailboxes

You can set up Enterprise Vault so that it archives all messages that the Microsoft Exchange Server system sends and receives, provided that the messages are passed to one or more specific Microsoft Exchange journal mailboxes.

The Exchange Journaling task runs continuously, checking for items in journal mailboxes and immediately archiving them. These items are deleted from the mailbox as they are archived and no shortcuts are created.

It is important that you monitor journal mailboxes to make sure that items are archived promptly. It is especially important that you do this if you have suffered some sort of system failure which required a system restart.

If you are running an Exchange Journaling task, messages in the journal mailbox should be archived soon after they arrive in the mailbox.

## To check a journal mailbox

- 1 Run Microsoft Exchange Client or Microsoft Outlook.
- 2 Log on to a profile that has access to the journal mailbox.
- 3 Check that there are no messages in the Inbox folder that are older than one day. If there are any messages older than one day, then there is likely to be a problem.
- 4 Look in the following folders, which are under the Enterprise Vault Exchange Journaling Task folder:

Above maximum size

Contains messages that exceed the maximum size that is set in the Exchange journaling policy.

Failed Codepage nnn

To fix the problem, do one of the following:

- Install the missing codepage.
- Use the default ANSI codepage (ACP codepage).

These tasks are described below.

When you have set up codepages correctly, move the failed messages back to the Journal Inbox so that they are processed again.

Failed DL Expansion

Contains the items that cannot be archived because Enterprise Vault is unable to expand their distribution lists.

Failed External Filter	<p>Contains the messages that cannot be processed by a custom filter.</p> <p>Check the Enterprise Vault Event Log to determine the cause of the problem.</p> <p>Also check that the rule set file references the correct XML schema.</p>
Failed to copy	<p>Contains the messages that are probably corrupt. Try dragging them to your desktop and then, when they are on the desktop, double-clicking them.</p> <p>You may find that the messages are now not corrupt. If you drag them from your Desktop to the Inbox folder, the Exchange Journaling task tries to archive them again. Remember to delete the corrupt versions from the Failed to copy folder.</p>
Failed to store	<p>Contains the messages that cannot be archived. They probably failed because of a problem with the Storage service. You can move all these items back to the Inbox folder and the Exchange Journaling task tries again to archive them.</p>
Invalid Journal Report	<p>Contains messages whose journal report (P1 envelope message) does not conform to Microsoft's specification.</p>

### To add the codepage

- 1 Install the required codepage on the Exchange Journaling task computer.
- 2 To prevent a similar problem from happening on Exchange Mailbox task computers, install the codepage on each Exchange Mailbox task computer.
- 3 If you use a building blocks configuration, repeat the changes on every Enterprise Vault server in your site.

## Use the default ANSI codepage (ACP codepage)

Enterprise Vault has a list of codepages in the file `CodePages.txt`, which is installed in the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`).

You can force Enterprise Vault to use the default ANSI codepage (ACP codepage) by deleting the appropriate codepage entry from the file. If you find that the ACP codepage does not give you good conversions, replace the entry in `Codepages.txt` and install the missing codepage.



### To delete a codepage entry

- 1 Edit `CodePages.txt` on the Exchange Journaling task computer to remove the entry for the codepage that caused the problem.
- 2 To prevent a similar problem happening on Exchange Mailbox task computers, make the same change to `CodePages.txt` on each Exchange Mailbox task computer.
- 3 If you use a building blocks configuration, repeat the change on every Enterprise Vault server in your site.

## About monitoring disks

You need to check that there is enough free space on the disks that contain the vault stores and indexes. Just how much space you need depends on your use of Enterprise Vault. However, during the course of monitoring, you will quickly get used to the rate at which the various Enterprise Vault databases consume disk space.

### Checking disk space for vault stores

You must ensure that there is enough disk space for the vault store databases. When your Enterprise Vault installation has reached its normal running state, you can estimate the rate at which disk space is consumed and so be able to plan accordingly.

If a disk is running out of space, you can use SQL Enterprise Manager to create a new SQL device on another disk and then expand the database on to the new device.

### How the Admin service monitors disk space

The Admin service runs automatically when any other Enterprise Vault service starts.

The main task of the Admin service is to monitor the following:

- Free space on local hard disks. By default, the Admin service monitors all local hard disks, but you can restrict it to specific disks if required.
- The amount of available virtual memory.

The Admin service has a warning threshold and a critical threshold for each type of check. When the warning threshold is reached, the Admin service writes a warning message to the Windows Application Log. When the critical threshold is reached, the Admin service stops all Enterprise Vault services.

Stopping Enterprise Vault before problems arise helps to maintain its stability. However, it is important to watch the Application Log for Enterprise Vault messages so that you can take corrective action as necessary.

Table 3-2 describes the thresholds that the Admin service uses.

Table 3-2 Admin service thresholds

Check	Warning threshold	Critical threshold	Example of message
Free space on local hard disks	95% full	99% full	<div><div>■ Warning message:</div><div>The system is running out of disk space on drives C: and D: - delete any unwanted files. Enterprise Vault will be shut down when 99% of the disk space is used.</div><div>■ Critical message:</div><div>Insufficient disk space is available on drive C: for Enterprise Vault to run. Enterprise Vault will now be shut down; to correct this problem, delete any unwanted files and restart Enterprise Vault.</div></div>
Virtual memory	90% of limit	95% of limit	<div><div>■ Warning message:</div><div>The system is running out of Virtual Memory - free memory by closing any unwanted applications. Enterprise Vault will be shut down when 95% of Virtual Memory is used.</div></div>

### Modifying the Admin service

You do not normally need to make any changes to the Admin service. However, there may be occasions when you want to turn off or modify the monitoring. For example, you may have a disk on the system that is nearly full but that Enterprise Vault does not use. The Admin service monitors all local disks, so it may stop Enterprise Vault even though Enterprise Vault has enough space. In such circumstances you probably want to stop monitoring the disk.

---

**Note:** Do not stop the Admin service unnecessarily. Enterprise Vault requires the Admin service to be present at all times. If you do stop the Admin service, all the other Enterprise Vault services on the same computer stop as well. Also, if you start one of the other services and the Admin service is not running, the Admin service automatically starts.

---

#### To pause monitoring by the Admin service

- 1 In the Windows Control Panel, double-click **Services**.
- 2 In the list of services, click **Enterprise Vault Admin Service**.
- 3 On the **Action** menu, click **Pause**.

To resume monitoring, click **Resume** on the **Action** menu.

#### To modify the behavior of future instances of the Admin service

- 1 In the Windows Control Panel, double-click **Services**.
- 2 In the list of services, double-click **Enterprise Vault Admin Service**.
- 3 If the Admin service is running, click **Stop**, and then click **Yes** when prompted to stop other Enterprise Vault services.
- 4 In the **Start Parameters** box, type the parameters to use.

To specify the disks that the Admin service should monitor. By default, the service monitors all local hard disks.

Type the following start parameter:

**/DISKS[=list]**

where list specifies one or more disks to monitor. Do not include any spaces or tabs in the list. The colon (:) in the disk name is optional.

For example, to monitor disks C, E, and F only, type either of the following:

**/DISKS=C:E:F:**

**/DISKS=CEF**

To make this apply every time the Admin service starts, add the /SAVE parameter as follows:

**/DISKS=C:E:F:/SAVE**

**/DISKS=CEF /SAVE**

To monitor all disks (this restores the default behavior), type the following:

**/DISKS**

To turn off monitoring for the instance of the Admin service that will start when you click **Start** in the Services control panel. Type the following start parameter:  
**/NOMONITOR**

To turn off monitoring every time the Admin service starts. Type the following start parameter:  
**/NOMONITOR /SAVE**

To turn on monitoring for the instance of the Admin service that will start when you click **Start** in the Services control panel. Type the following start parameter:  
**/MONITOR**

To turn on monitoring every time the Admin service starts. Type the following start parameter:  
**/MONITOR /SAVE**

To apply the changes every time the Admin service starts. Type the following start parameter:  
**/SAVE**

For example, to monitor disks E and F every time the Admin service starts, type the following:

**/DISKS=EF /SAVE**

- 5 Click **Start** to start the Admin service.
- 6 Start other Enterprise Vault services as necessary.

## Disk space and indexes

If you are running out of disk space for indexes, you can create new index locations for the Indexing service to use to store its indexes. You can add more locations if needed. When you add a new location, the Indexing service may choose to use it when creating indexes for a new archive. If you want to force the Indexing service to use a particular location, use Close Location to close all the other locations, thus leaving just one location open.

When you close a location, you prevent the Indexing service from creating new indexes there. This does not stop the Indexing service from adding to existing indexes, so you must take action before space runs out.

## About maintaining the SQL databases

You can use Microsoft SQL Enterprise Manager to maintain all the Enterprise Vault databases, but if you have other tools that you prefer to use, you can use

those instead. For more information on using Microsoft SQL Enterprise Manager, see the Microsoft SQL Server documentation.

Back up all the databases as part of a planned backup procedure. Depending on your procedures, you may decide to truncate the transaction logs after each database has been backed up.

See [“About Enterprise Vault backups”](#) on page 367.

You may find that the transaction logs do not need all the disk space that has been allocated to them. If so, you can shrink them to some suitable size. Do not do this until you are sure that you have understood the disk space requirements for the transaction logs.

## Vault store database maintenance

Monitor the amount of allocated space that the vault store databases and transaction logs have used, and take appropriate action as necessary.

The initial size of each vault store database is as follows:

Data device	100 MB
Transaction log	80 MB
Total	180 MB

The vault store database components are named as follows:

Database name	EVVS <i>vaultstore_n</i>
Data device name	EVVS <i>vaultstore_n</i>
Log device name	EVVS <i>vaultstore_n</i> LOG

The variables in the names are as follows:

- *vaultstore* is the name of the vault store, with any spaces removed.
- *n* is an internally generated integer, which ensures that the database name is unique across an Enterprise Vault site.

## Directory database maintenance

The directory database contains the configuration information for Enterprise Vault. The initial size for the data device of 10 megabytes was chosen to support 10,000 archives. This database is not likely to increase much in size.

The initial size of the directory database is as follows:

Data device	10 MB
Transaction log	25 MB
Total	35 MB

The directory database components are named as follows:

Database name	EnterpriseVaultDirectory
Data device name	VaultDev
Log device name	VaultLog

## Fingerprint database maintenance

Each vault store group has a fingerprint database. One possible exception is the Default Upgrade Group, which Enterprise Vault creates if you previously upgraded to Enterprise Vault 8.0. The Default Upgrade Group does not have a fingerprint database until you configure sharing for it.

The total initial disk space requirement is 244 MB.

The fingerprint database holds information about each Enterprise Vault single instance storage part (SIS part) that is stored in the group's vault stores. In addition to the primary filegroup, a fingerprint database has 32 non-primary filegroups, which hold the information about the SIS parts.

If you share items using Enterprise Vault single instance storage, Enterprise Vault generates a large amount of SIS part data. The non-primary filegroups may therefore grow very rapidly in size. To ensure acceptable archiving and retrieval performance, you must locate the non-primary filegroups appropriately for the amount of sharing in the vault store group. You can configure the filegroup locations when you create the vault store group, or when you configure sharing for the Default Upgrade Group.

See "Creating vault store groups" and "Configuring sharing for a vault store group" in *Installing and Configuring*.

To add or change the filegroup locations after the fingerprint database is configured is a SQL Server administration task. See your Microsoft SQL Server documentation for details.

The initial size of the fingerprint database is as follows:

Primary filegroup	132 MB
-------------------	--------

Non-primary filegroups	32 MB (1 MB for each of the 32 non-primary filegroups)
Transaction log	80 MB
Total	244 MB

The fingerprint database components are named as follows:

Database name	EVVSG <i>vaultstoregroup_n_m</i>
Data device name	EVVSG <i>vaultstoregroup_n_m</i>
Log device name	EVVSG <i>vaultstoregroup_n_m</i> LOG

The variables in the names are as follows:

- *vaultstoregroup* is the name of the vault store group, with any spaces removed.
- *n* and *m* are internally generated integers.

## Monitoring database maintenance

The Monitoring database contains the data that is gathered by the Enterprise Vault Monitoring agents. The data is used by Enterprise Vault Operations Manager, and in some of the reports generated by Enterprise Vault Reporting.

Ensure that there is adequate space for the database to grow as data is added.

The initial size of the Monitoring database is as follows:

Data device	100 MB
Transaction log	80 MB
Total	180 MB

The Monitoring database components are named as follows:

Database name	EnterpriseVaultMonitoring
Data device name	EnterpriseVaultMonitoring_Data
Log device name	EnterpriseVaultMonitoring_Log

## FSA Reporting database maintenance

Enterprise Vault creates at least one FSA Reporting database if you configure FSA Reporting. The data is used in the Data Analysis reports that FSA Reporting generates.

See "Maintaining the FSA Reporting databases" in the Enterprise Vault *Reporting* guide.

## About managing vault store groups and sharing

This section describes how to do the following:

- View the status of the vault stores in a vault store group.
- Change the sharing level of a vault store.
- Move a vault store to a different vault store group.
- Delete a vault store group.
- Monitor the fingerprint databases.
- Monitor the archive space reduction due to single instance storage.

You must back up each vault store group's fingerprint database as part of your backup regime.

See ["About Enterprise Vault backups"](#) on page 367.

---

**Note:** For information on how to create vault store groups and vault stores, and how to set up a sharing regime that is suitable for your organization, see "Setting up Storage" in *Installing and Configuring*.

---

## Viewing the status of the vault stores in a vault store group

The Administration Console shows a summary of the status of each vault store in a vault store group.

**To view a status summary for the vault stores in a vault store group**

- 1 In the Administration Console, expand the Site and then expand **Vault Store Groups**.
- 2 In the left pane, click the Vault Store Group for which you want to see details.

The right pane of the Administration Console lists the details of each vault store in the group. To refresh this view at any time, click F5.



Enterprise Vault displays the following information for each vault store in the group:

- **Name:** The name of the vault store.
- **Status:** The status of the vault store. The status is either Available or Marked for deletion.
- **Backup Mode:** If the vault store is in backup mode, "Yes" appears in this column. To place a vault store in backup mode, or to clear it from backup mode, right-click the vault store and select "Set backup mode" or "Clear backup mode".
- **Sharing Type:** Indicates the vault store's sharing level. You can change a vault store's sharing level from the Sharing tab of its parent Vault Store Group's properties.  
See ["Changing the sharing level of a vault store"](#) on page 57.
- **Computer:** The computer whose Enterprise Vault Storage service the vault store uses.
- **Removal Status:** The remove safety copy setting. This setting determines when Enterprise Vault deletes the safety copy it makes as part of the archiving process. You can change the safety copy setting from the General tab of the vault store's properties.

To see more details for a particular vault store, right-click the vault store and select Properties.

## Changing the sharing level of a vault store

You can change the sharing level of any vault store within a vault store group. You can also configure all vault stores to use a specific sharing level, including any new vault stores that you add to the group.

The sharing level of a vault store must be one of the following:

- **No sharing.** The vault store does not participate in Enterprise Vault single instance storage.
- **Share within Vault Store.** The vault store shares SIS parts only within itself.
- **Share within group.** The vault store shares SIS parts with other vault stores in the group that also have the **Share within group** sharing level.

To change the sharing levels you must run the Configure Sharing wizard on the vault store group. The vault store group must contain at least one vault store.

---

**Note:** You can rerun the Configure Sharing wizard at any time, but changes you make to the vault store sharing levels do not act retrospectively.

---

#### To configure sharing for a vault store group

- 1 In the left pane of the Administration Console, expand the Enterprise Vault site hierarchy until **Vault Store Groups** is visible.
- 2 Expand the **Vault Store Groups** container to show the existing vault store groups.
- 3 Right-click the vault store group for which you want to configure sharing, and on the shortcut menu click **Properties**.
- 4 Click the **Sharing** tab.

The Sharing tab lists the vault stores in the vault store group, and their current sharing levels.

- 5 Click **Configure Sharing**.

The Configure Sharing wizard starts.

- 6 In the special case of the Default Upgrade Group, Enterprise Vault helps you to configure a fingerprint database for the group, if one does not exist already.
- 7 The Configure Sharing wizard takes you through the steps to configure sharing levels for the vault stores in the vault store group. You can set the vault store sharing levels individually, or apply a sharing level to all the current vault stores.

If you change one or more vault store sharing levels to **Share within vault store** or **Share within group**, the wizard prompts you to run a connectivity test before the wizard makes any changes. The connectivity test helps to determine whether the network connectivity is sufficient to support the sharing configuration you have selected.

The wizard makes no changes until you click **Finish** on the final page of the wizard.

If the connectivity test shows poor results you may want to do one of the following:

- Click **Back**, modify the vault store sharing levels and rerun the connectivity test.
- Click **Cancel** to discard your changes.

For more information on the connectivity test, see the Administration Console help for the Configure Sharing wizard.

## Moving a vault store to a different vault store group

In most cases you cannot move a vault store to a different vault store group.

You can move a vault store to a different vault store group only if all of the following circumstances apply:

- You previously upgraded to Enterprise Vault 8.0.
- The vault store is one that Enterprise Vault upgraded to Enterprise Vault 8.0, or one that you created in the Default Upgrade Group.
- The vault store's sharing level is "No sharing" and has never been changed.

Note that when you move a vault store, it retains the sharing level "No sharing".

### To move a vault store to another vault store group

- 1 Right-click the vault store and select **Change Vault Store Group** from the shortcut menu.

The **Change Vault Store Group** wizard starts.

- 2 Work through the **Change Vault Store Group** wizard.

For more information, see the help that is provided with the wizard.

## Deleting a vault store group

You can delete a vault store group if you no longer want to use its vault stores and their associated archives. Deletion permanently removes all the partitions and archives that the vault stores contain, and all the items that are stored in these partitions and archives.

You can delete a vault store group only if all of the following conditions apply to every vault store in the group:

- It is not a default vault store for automatically-enabled archives.
- It does not contain any archives that are associated with archiving targets.
- Its status is Available.
- It is not in backup mode.

When you delete a vault store group, the status of each vault store changes to Marked for deletion. Shortcuts to items within the vault stores' archives no longer work.

Enterprise Vault may take a long time to complete the deletion operation. If a vault store contains any items that are on legal hold, or any SIS parts that are referenced by other vault stores, Enterprise Vault marks the vault store for deletion

but it does not delete the vault store or the group until these conditions no longer apply.

---

**Note:** If you delete a vault store group, you cannot stop or undo the process. The action overrides any form of deletion protection that is applied to items or Retention Categories, other than legal hold.

---

#### To delete a vault store group

- 1 In the Administration Console, select the vault store group that you want to delete.
- 2 The right pane of the Administration Console displays the status of the group's vault stores. Click F5 to refresh the view. The right pane displays each vault store's current status, and indicates whether backup mode is set. You can only delete a vault store if the status is Available and backup mode is not set.
- 3 Right-click the vault store group and select **Delete** from the shortcut menu.
- 4 On the warning dialog, click **Delete**.

The status of each vault store in the group changes to Marked for Deletion. The icon for the Vault Store Group also changes to indicate that it is marked for deletion.

When Enterprise Vault eventually completes the deletion, it removes the vault stores and the vault store group from the Administration Console.

## Monitoring the fingerprint databases

If you enable monitoring on the **Monitoring** tab of the Site Properties, a number of alerts are available for the vault store group fingerprint databases. These alerts are as follows:

- **Vault Store fingerprint database backup.** The number of days before Enterprise Vault issues a warning about a fingerprint database that is not backed up. The default value is 3.
- **Vault Store fingerprint database log backup.** The number of days before Enterprise Vault issues a warning about a fingerprint database transaction log that is not backed up. The default value is 1.
- **Vault Store fingerprint database log size.** The percentage of available space that a fingerprint database transaction log can occupy before Enterprise Vault issues a warning about space usage. The default value is 85 percent.

See [“Monitoring in Site Properties”](#) on page 226.

The fingerprint databases must be backed up as part of your backup regime.

See [“About Enterprise Vault backups”](#) on page 367.

## Monitoring the archive space reduction due to single instance storage

If you have installed and configured Enterprise Vault Reporting, you can access the reports that provide information on the archive storage savings that are due to Enterprise Vault single instance storage.

The reports that relate to single instance storage are as follows:

- **Single Instance Storage Reduction Summary.** This report shows the storage reduction that has resulted from Enterprise Vault single instance storage for each vault store group in an Enterprise Vault Site.
- **Single Instance Storage Reduction per Vault Store Group.** This report shows the storage reduction that has resulted from Enterprise Vault single instance storage for each vault store in a vault store group.
- **Single Instance Storage Reduction by File Type.** This report shows the storage reduction that has resulted from Enterprise Vault single instance storage for each file type within a vault store group.

You can access the single instance storage reports from the Microsoft SQL Server Reporting Services Report Manager Web application, or from within the Administration Console. See the *Reporting* manual for more information.

## About managing safety copies

Enterprise Vault can be configured to retain archived items, until the vault store partition in which they are archived has been backed up. During the time between archiving and removal, the original items are treated as safety copies by Enterprise Vault. When the vault store partition has been backed up, Enterprise Vault can remove the safety copies. Enterprise Vault also creates shortcuts and placeholders at this time if it is configured to do so.

---

**Note:** Enterprise Vault removes safety copies when the Storage service is started or when backup mode is cleared from the vault store.

---

For more information about the configuration of safety copies, see “About Enterprise Vault safety copies” in *Installing and Configuring*.

## Configuring the removal of Enterprise Vault safety copies

During the creation of each vault store, you chose from following settings to control how Enterprise Vault manages safety copies:

- **Never.** Enterprise Vault does not remove safety copies, even after they have been backed up.
- **After backup.** Enterprise Vault does not remove safety copies until the partition that contains the archived items has been backed up.
- **After backup (immediate for journaling).** This option is the same as the **After backup** option except for journal items which are removed immediately after they are archived.
- **Immediately after archive.** All original items are removed as soon as they have been archived.

You can change this setting subsequently in the Administration console.

#### To configure the removal of safety copies for an existing vault store

- 1 In the left pane of the administration console, expand the **Vault Store Groups** container and find the vault store.
- 2 Right-click the vault store and click **Properties**.
- 3 On the **General** tab of the **Vault Store Properties** page, choose an option from the **Remove safety copies** list.
- 4 Click **OK**.

## Checking that partitions have been backed up

If you select the **After backup** option or the **After backup (immediate for journaling)** option, Enterprise Vault must check that the partition has been backed up before it removes safety copies.

During the creation of each vault store, you chose from the following options:

- **Use the archive attribute.** Files on the partition whose archive attributes are cleared are considered backed up and Enterprise Vault removes the corresponding safety copies. This option is appropriate only if your backup software clears archive attributes after backup.
- **Check for a trigger file.** A partition is considered backed up when Enterprise Vault finds a trigger file on the partition. Typically, this trigger file is placed on the partition by your backup software. When you choose this option, you can also configure how often the partition is checked for the presence of a trigger file

You can change this setting subsequently in the Administration console.

To configure which method Enterprise Vault uses to ensure a partition's data is backed up

- 1 In the left pane of the administration console, expand the **Vault Store Groups** container and select the vault store contains the partition.
- 2 In the right pane, right-click the partition and click **Properties**.
- 3 Click the **Backup** tab.
- 4 Select one of the following options:
  - **Use the archive attribute**
  - **Check for a trigger file**
- 5 If you selected the **Check for a trigger file** option, you can also set a partition scan interval, which determines how often Enterprise Vault checks the partition for a trigger file. Select the **Scan partition every** option and set a scan interval in minutes.
- 6 Click **OK**.

## About managing partition rollover

Each vault store must contain at least one partition, which is the physical location where Enterprise Vault stores archived data. As the data in a vault store grows, you can create more partitions to provide additional capacity.

You can manually change the open partition in a vault store. For example, when the disk that hosts the open partition reaches capacity, close the partition and open a partition on a different disk.

Enterprise Vault also provides an automatic partition rollover feature. This feature lets you configure partitions so that archiving rolls over from one partition to another when certain criteria are met. For example, you can configure a partition to roll over to the next available partition when the host disk has only 5% free space. You can also configure a partition to roll over on a specific date.

In support of both these features, each partition can exist in one of three states:

- **Closed.** A partition that is closed, is not available for archiving until you manually open it, or make it ready for partition rollover.
- **Open.** Each vault store can have only one open partition. Enterprise Vault archives data into the open partition. Without partition rollover, Enterprise Vault automatically closes a partition when the disk that hosts it becomes full, but does not open another.

However, if the open partition is rollover enabled, and a ready partition exists, Enterprise Vault automatically opens the ready partition when the open partition meets its rollover criteria.

- **Ready.** Each vault store can have any number of ready partitions that are available to Enterprise Vault when partition rollover occurs.

## Configuring partition rollover

In each vault store where you use partition rollover, the open partition must be rollover enabled, and there must be at least one ready partition. For partition rollover to work for an extended period without intervention, each ready partition in a vault store must also be partition rollover enabled. If not, partition rollover stops at the first partition that is not rollover enabled. In summary, for Enterprise Vault to roll over through a series of partitions, each must be both ready for partition rollover, and partition rollover enabled.

---

**Note:** Centera partitions cannot be rollover enabled, which means Enterprise Vault cannot roll over from a Centera partition. However, Centera partitions can be rollover ready.

---

You can enable and configure partition rollover for each partition when you create it using the **New Partition** wizard. For more information on creating a new vault store partition, see the *Setting up storage* chapter of the *Installing and Configuring* manual. You can also configure partition rollover for existing vault store partitions, using the **Vault Store Partition Properties** page.

Each partition can be configured to roll over using any of the following options:

- **Enabled based on volume.** Partition rollover is enabled for this partition, and occurs according to the amount of free space on the volume that hosts the partition.
- **Enabled based on time.** Partition rollover is enabled for this partition, and occurs according to the time criteria you specify.
- **Enabled based on time or volume.** Partition rollover is enabled and occurs according to whichever of the volume criteria or time criteria are met first. For example, you can configure the partition to roll over when its host volume falls below 5% free space, or on a specific date, whichever comes first.

Depending on the choice you make, you can then set appropriate rollover criteria. If you choose either **Enabled based on volume** or **Enabled based on time or volume**, you can make appropriate settings to trigger partition rollover according to the remaining free space on partition's host volume. Set one of the following criteria to trigger rollover:



- A percentage of free space.
- A specific amount of free space in MB, GB, or TB.

If you chose either **Enabled based on time** or **Enabled based on time or volume**, you can make appropriate settings to trigger partition rollover. Set one of the following criteria to trigger rollover:

- An elapsed period of time, in days, weeks, months, or years.
- A specific date and time for rollover to occur.

This flexibility enables a number of approaches to the management of partition rollover. You can take a purely volume-based approach, in which you configure a series of partitions that roll over when their host disks approach capacity. Normally, this approach would require you to create the partitions on separate physical disks. However, it is still possible to host partitions on a single disk when you mount multiple physical volumes in one file system. In this case, Enterprise Vault rolls over based on the free space on the physical volume, rather than on the host file system.

The time-based approach to partition rollover lets you roll over according to any time criteria that suit your environment. For example, you can configure partitions to roll over at the end of each week, or on a specific date each month.

---

**Note:** When you use date-based partition rollover, you must ensure that each partition has sufficient storage capacity for period it is open.

---

Enterprise Vault also lets you use a mixture of volume and time criteria.

#### To enable and configure partition rollover on an existing partition

- 1 In the left pane of the administration console, expand the **Vault Store Groups** container and select the vault store in which you want to configure partition rollover.
- 2 In the right pane, right-click a partition and click **Properties**.
- 3 Click the **Rollover** tab.
- 4 From the **Partition Rollover** list, select one of the following options:
  - **Enabled based on volume**
  - **Enabled based on time**
  - **Enabled based on time or volume**
- 5 Use the options that are available to you to set appropriate rollover criteria for this partition.

## Changing rollover order

As you create and configure rollover ready partitions, the order in which they are used depends on the rollover criteria you set. By default, partitions configured with volume-based criteria are used in the same order they are made ready for rollover. Partitions configured with time-based criteria are used in the order the rollover dates determine.

You can change partition rollover order using the **Partition Rollover** tab on the **Vault Store Properties** page.

---

**Note:** You can place the partitions that are configured for volume-based rollover in any order. However, you cannot break the rollover order for any partitions that are configured for time-based rollover. For example, you cannot move a partition that is configured to roll over on 10 October before one that is configured to roll over on 3 October.

---

### To change rollover order

- 1 In the administration console, right-click a vault store and click **Properties**.
- 2 Click the **Partition Rollover** tab.
- 3 From the list of ready partitions, select the one whose position you want to change.
- 4 Click **Move Up** or **Move down** until the partition is in the correct position.
- 5 Repeat the previous two steps until the ready partitions are in the correct order.

## Forcing partition rollover

You can force partition rollover using the PowerShell cmdlet `Start-PartitionRollover`. This cmdlet forcibly closes the open partition in the vault store you specify and, if one is available, opens the first ready partition.

---

**Note:** `Start-PartitionRollover` forces partition rollover irrespective of the rollover criteria on the current open partition.

---

### To force partition rollover

- 1 Open the Enterprise Vault management shell.
- 2 Run `Start-PartitionRollover`.

The syntax for this cmdlet is:

```
Start-PartitionRollover -EVServerName server -VaultStore  
vault_store
```

where:

*server* is the Enterprise Vault server that runs the storage service for the vault store in which you want to force partition rollover.

*vault\_store* is the name or ID of the vault store in which you want to force partition rollover.

For example:

```
Start-PartitionRollover EVServer-Win2k3 VS1
```

This connects to the Enterprise Vault server `EVServer-Win2k3` and verifies that vault store `VS1` uses the storage service on this server. If it does,

`Start-PartitionRollover` forces partition rollover in vault store `VS1`.

## Recovering deleted items

Enterprise Vault can retain items that users have deleted so that you have some time in which to recover items that users have deleted accidentally. You can configure this recovery feature on the Archive Settings tab of Site Properties.

If recovery is enabled, Enterprise Vault retains deleted items for the period of time that is specified on the Archive Settings tab of Site Properties. At the end of that time the item is permanently deleted.

When a user deletes an item from an archive, the item is removed from the archive's index, so the item can no longer be found by searching and is not visible in Archive Explorer. However, direct links to the item, such as mailbox shortcuts, still work. The deleted item no longer contributes to the archive quota usage.

Note that a user can retrieve a copy of a deleted item by using a shortcut. If the user then rearchives this item without modifying it, the item is still in a deleted state and therefore is not searchable and not visible in Archive Explorer.

Recovery is available only for those items that users have deleted. You cannot recover items that Storage Expiry has deleted. Also, if Storage Expiry deletes an item that has already been deleted by a user, you cannot then recover that item.

#### To recover items that have been deleted from an archive

- 1 In the Administration Console, expand the tree view until the **Archives** container is visible.
- 2 Expand the **Archives** container and then click the container that has the archive with the deleted items.
- 3 Right-click the archive with the deleted items and, on the shortcut menu, click **Properties**.
- 4 Click the **Deleted Items** tab. The tab shows the number of items that can be recovered.
- 5 Click **Recover Items**. This recovers all available items in the archive. You cannot select specific items.

## About expiry and deletion

Enterprise Vault can automatically perform the following:

Storage expiry	Delete items from archives when the items' retention periods have expired.
Shortcut deletion	Delete shortcuts from users' Exchange mailbox folders and Exchange public folders. You can configure Enterprise Vault to delete shortcuts over a certain age, or shortcuts to items that have been deleted from an archive.

## Setting up storage expiry

If you configure storage expiry, the Enterprise Vault Storage service automatically deletes items from archives when their retention periods expire. When the Exchange Mailbox task next runs, it automatically deletes the associated shortcuts from the mailboxes. Similarly, the Exchange Public Folder task deletes the shortcuts that are associated with expired items in public folders.

When certain items such as calendar, task, and meeting items are archived, the original item in the mailbox is not replaced with a shortcut. By default, the archiving task does not delete the original items when it performs shortcut deletion. To include such items in shortcut deletion, configure the registry setting, `DeleteNonShortcutItems`. The setting is described in the *Registry Values* manual.

If storage expiry for Exchange Server Archiving is based on archived date, and you have configured Enterprise Vault to archive unexpired calendar, meeting, and task items (that is, items with an end date in the future), then we recommend that you use the advanced Exchange Mailbox policy setting, **Future item retention**

**category.** This ensures that storage expiry does not delete any archived calendar, meeting, or task items before their end date.

See “[Future item retention category \(Exchange Archiving General setting\)](#)” on page 132.

#### To set up storage expiry

- 1 In the left pane of the Administration Console expand the hierarchy until the appropriate vault site is visible.
- 2 Right-click the vault site and then, on the shortcut menu, click **Properties**.
- 3 In the **Site Properties** dialog box, click the **Storage Expiry** tab.
- 4 Select the settings to use, and then click **OK**.
- 5 You do not need to configure shortcut deletion in the Exchange Mailbox policy or Exchange Public Folder policy. The Exchange Mailbox task and Exchange Public Folder task automatically delete expired item shortcuts when they next run.

## Setting up shortcut deletion

The Exchange Mailbox task and Exchange Public Folder task perform shortcut deletion. The tasks delete the shortcuts for expired items automatically. The following additional shortcut deletion options are available on the **Shortcut Deletion** tab of the Exchange Mailbox policy and the Exchange Public Folder policy:

- Delete shortcuts that exceed the specified age.
- Delete orphaned shortcuts. Orphaned shortcuts are shortcuts for items that have previously been deleted from the archive.

When certain items such as calendar, task, and meeting items are archived, the original item is not replaced with a shortcut. By default, the archiving task does not delete the original items when it performs shortcut deletion. To include such items in shortcut deletion, configure the registry setting,

`DeleteNonShortcutItems`. The setting is described in the *Registry Values* manual.

If you have configured Enterprise Vault to archive unexpired calendar, meeting, and task items, any items with an end date in the future will not be deleted from users' mailboxes.

#### To set up shortcut deletion options

- 1 In the Administration Console, expand the hierarchy until the appropriate Exchange Mailbox or Public Folder policy is visible.
- 2 Right-click the policy. On the shortcut menu, click **Properties**.

- 3 In the policy dialog box, click the **Shortcut Deletion** tab.
- 4 Select the required options, and then click **OK**.

## Creating a new retention category

By assigning a retention category to items at the time they are archived, it is possible to categorize stored items. This categorization makes it easier to retrieve items because it is possible to search by category.

A retention category also specifies a retention period, which is the minimum amount of time after its last modification date that an item must be retained. For mail messages, the Retention Period is the time since the message was received. For documents, it is the time since the document was last modified.

Users can select retention categories from the list and assign them to items in their mailboxes. When Enterprise Vault archives an item, it is stored with the appropriate retention category.

If you later modify a retention category, the changes are retrospective. For example, if you have a retention category called "Customer Accounts" with a retention period of 5 years and you change it to 10 years, then items that have been already archived with the "Customer Accounts" retention category are retained for a minimum of 10 years.

You can create as many retention categories as you require. You can also modify the standard retention categories to suit your own needs. If you modify a retention category, the changes apply to all items that are archived with that retention category and also to all items that have already been archived with that retention category.

Each retention category has a retention period, which indicates how long you want to retain the items that are archived with this retention category. When the retention period has elapsed, Enterprise Vault can automatically delete the items. See the Storage Expiry tab in Site Properties to set up expiry.

---

**Note:** If you plan to store items indefinitely on a WORM storage device, then ensure that the retention settings on the device are correctly configured. For details, refer to *Enterprise Vault hardware requirements* in the manual, *Installing and Configuring*.

---

**To create a new retention category**

- 1 In the left pane of the Administration Console, expand the vault site hierarchy until **Policies** is visible.
- 2 Expand **Policies**.
- 3 Right-click **Retention Categories** and, on the shortcut menu, click **New Retention Category**.

The New Retention Category wizard starts.

- 4 Work through the wizard.

## About maintaining provisioning groups

The Exchange Provisioning task automatically provisions new mailboxes provided that they are included in its list of targets. Mailboxes that are not included in the list of targets do not result in any warnings when the Provisioning task runs.

If you have chosen to have mailboxes enabled automatically, remember that a mailbox is provisioned according to the first provisioning group in which it appears, so it is important that the mailbox is in the correct group before the Exchange Provisioning task runs.

---

**Note:** If you choose to use the inherited vault store or inherited Indexing Service, and the provisioning group includes mailboxes from more than one Exchange Server, different vault stores or Indexing Services may be used for mailboxes that are enabled according to this provisioning group. Depending on the configuration options you have chosen, it is also possible that mailboxes on a particular Exchange Server cannot be enabled because no vault store or Indexing Service is defined for them.

---

## Enabling archiving for new mailboxes

You can enable archiving for a new Microsoft Exchange Server mailbox in the following ways:

- You can make Enterprise Vault automatically enable archiving for new Microsoft Exchange Server mailboxes.  
If you do this, Enterprise Vault automatically creates the mailbox's archive in the default vault store.
- You can manually enable archiving for specific Microsoft Exchange Server mailboxes. If you have not set up Enterprise Vault to enable archiving for

mailboxes automatically, you must use this method to enable archiving for mailboxes.

Making Enterprise Vault enable archiving for new mailboxes automatically means that you do not need to enable each mailbox manually whenever there is a new Microsoft Exchange Server mailbox.

The advantage of enabling archiving manually is that you can select a specific vault store as the location for each archive that is created.

Note that, if you make Enterprise Vault automatically enable archiving for new mailboxes, the new archives are created the next time an Exchange Mailbox task runs. If there is a new mailbox that you want to be archived somewhere other than the default vault store, you must manually enable archiving for that mailbox before the Exchange Mailbox task runs. If you do not enable the mailbox yourself, Enterprise Vault automatically enables archiving for it and creates an archive in the default location.

If you want all the new archives to be in the same vault store, making Enterprise Vault automatically create archives is the option that means the least work on your part. It is easy to turn this option on or off. For example, you can make Enterprise Vault automatically create archives on the first run of the Exchange Mailbox task, and then turn off the option and enable new mailboxes manually.

When Enterprise Vault automatically enables archiving for a mailbox, the new archive is stored in the default location.

#### To make Enterprise Vault enable archiving for new mailboxes automatically

- 1 In the left pane of the Administration Console, expand the vault site hierarchy until the name of the vault site is visible.
- 2 Expand the vault site and then expand **Archiving Targets**.
- 3 Expand **Exchange**.
- 4 Expand the required domain.
- 5 Click **Provisioning Group**.

If no provisioning groups are listed, create a new one as follows:

- Right-click **Provisioning Group** and, on the shortcut menu, click **New** and then **Provisioning Group**.
- Work through the **New Provisioning Group** wizard.

- 6 In the right pane, double-click the provisioning group that will contain the mailboxes that will be enabled automatically.
- 7 In the **Provisioning Group Properties**, click the **Archiving Defaults** tab.
- 8 Select **Automatically enable mailboxes**.



- 9 If you want to use a specific vault store for the new mailbox archives, click **Override the inherited Vault Store** and click **Change** to pick the vault store to use.

If you do not specify a vault store, the vault store that will be used is the one defined in the Enterprise Vault server properties. If no vault store is defined there, the vault store that is defined in the Exchange Server properties is used.

- 10 If you want to use a specific Indexing Service when archiving from the new mailboxes, click **Override the inherited Indexing Service** and click **Change** to pick the Indexing Service to use.

If you do not specify an Indexing Service, the Indexing Service that is used is the one defined in the Enterprise Vault server properties. If no Indexing Service is defined there, the Indexing Service that is defined in the Exchange Server properties is used.

- 11 Select the default retention category to use for items that are stored in the new archives.

Users can select other retention categories to use from the list of those available.

- 12 Select **OK**.

#### To enable archiving for mailboxes manually

- 1 On the **Tools** menu, click **Enable Mailboxes**.

The Enable Mailbox wizard starts.

- 2 Work through the wizard.

Note the following:

- You can manually disable a new mailbox. This stops Enterprise Vault from automatically enabling archiving for the mailbox. You would then have to enable the mailbox at some point, as otherwise Enterprise Vault would never archive items from it.
- When you enable a mailbox, Enterprise Vault automatically selects one of the open Indexing Locations to use to store the indexing data that is associated with that mailbox's archive. Before you enable mailboxes, make sure that the open Indexing Locations are the ones you want to use. Enterprise Vault does not provide a way to change a mailbox's Indexing Location after you have enabled archiving for the mailbox.
- You can select an existing archive to use for a mailbox that is being enabled. This is useful when a mailbox has been migrated to a different

Exchange Server in the same Enterprise Vault site and needs to be enabled for archiving to the same archive as before.

## Checking for hidden mailboxes

By default, Enterprise Vault archives only the mailboxes that are listed in the Exchange Global Address List. In the Enterprise Vault Administration Console, hidden mailboxes are not listed in the Enable Mailbox wizard and do not appear in Exchange Mailbox archiving task reports. If you want Enterprise Vault to archive hidden mailboxes, you can use the registry setting, `ProcessHiddenMailboxes`.

Enterprise Vault does not process the mailboxes of disabled Active Directory accounts. Even if you have configured the registry value `ProcessHiddenMailboxes`, the mailboxes of hidden disabled accounts are not processed. To force Enterprise Vault to include the mailboxes of users whose accounts have been disabled, configure both of the registry settings, `ProcessHiddenMailboxes` and `ExcludeDisabledADAccounts`.

These settings are documented in the *Registry Values* manual.

To check if a mailbox is hidden

- 1 Click **Start** > **Microsoft Exchange** > **Active Directory Users and Computers**.
- 2 Click **View** and select **Advanced features**.
- 3 Navigate to the user of the mailbox that you want to check, and display the properties for that user.
- 4 Select the **Exchange Advanced** tab. Check if the option, **Hide from Exchange Address Lists**, is selected.

## About moving archives

Enterprise Vault's Move Archive wizard lets you move content from existing Domino and Exchange mailbox archives, and from Domino and Exchange journal archives, to new archives or existing archives in other vault stores. You can use the wizard to move archives between vault stores in one site, and between two sites. This includes moves between two sites that are controlled by different Enterprise Vault directories.

---

**Note:** Move Archive supports the move of archives to destination servers that run Enterprise Vault 9.0.1 or later.

---

Move Archive handles each move operation differently, depending whether the source and destination archives are associated with a mailbox at the time of the move. Move Archive considers an archive to be:

- Active if it is associated with a mailbox, regardless of whether the mailbox is enabled for archiving
- Inactive if it is not associated with a mailbox

Move Archive does not support move operations for the following archive types:

- File System Archiving (FSA) archives
- SharePoint archives
- Shared archives
- Exchange public folder archives

Move Archive also prevents moves in the following circumstances:

- The source archive exceeds its archive usage limit and the destination is a new archive.
- The destination archive exceeds its archive usage limit.

In these cases you should increase the appropriate archive's usage limit on the **Archive Properties: Archive Usage Limit** tab in the Administration Console.

## How Move Archive works

When you have submitted a number of Move Archive operations using the wizard, each move is then controlled by the Move Archive task. The Move Archive task is responsible for the actions that must take place as part of an archive move. For example, the Move Archive task copies the content from the source archive to the destination. The Move Archive task also manages the wait time that is necessary while other archiving operations take place. For example, the Move Archive task waits for the mailbox archiving task to point mailbox shortcuts to the items in the destination archive.

For each Move Archive operation, the Move Archive task:

- Closes the source archive to prevent Enterprise Vault from archiving any further content to it.
- Renames the source archive
- Copies the content from the source archive to the destination archive.
- Synchronizes the permissions from the user's mailbox to the destination archive.

- Waits for the mailbox archiving task to point shortcuts to the items in the destination archive (in the case of mailbox archives).
- Waits for the destination vault store to be backed up.
- Verifies that all the data is present in the destination archive. If any items are missing from the destination archive, the Move Archive task repeats the copy of content from the source, and all the subsequent steps. This can happen up to five times before the Move Archive task fails the move operation.

When verification has completed successfully, the move operation is complete. If necessary, you can then delete the source archive.

## How Compliance Accelerator and Discovery Accelerator affect Move Archive

The use of Compliance Accelerator and Discovery Accelerator in your environment can place certain restrictions on Move Archive operations.

Both Compliance Accelerator and Discovery Accelerator can register an interest in an archive. This happens in the following circumstances:

- Items in the archive appear in the results of a Compliance Accelerator or Discovery Accelerator search.
- Items in the archive are in a Compliance Accelerator or Discovery Accelerator review set.

When Compliance Accelerator or Discovery Accelerator has registered an interest in an archive, you can move the archive, but cannot delete it at the end of the move operation.

Discovery Accelerator also lets users place cases on legal hold to prevent the deletion of archived items that are included in the case. Move Archive prevents you from moving and deleting any archives which contain items included in Discovery Accelerator cases that have been placed on legal hold.

## Move Archive and indexing levels

When you move an archive to an existing destination archive, the destination archive retains the indexing level it had before the move.

However, when you move an archive to a new destination archive, the indexing level that Move Archive sets depends on whether the archive is associated with a mailbox after the move.

If the new destination archive is associated with a mailbox after the move, the archive inherits the mailbox's indexing level. If there is no mailbox association

after the move, Move Archive sets the destination site's default indexing level on the archive.

## Move Archive and user deleted items

Enterprise Vault lets you retain items that users delete from their archives so that they are available for recovery for a period of time. You can enable this feature using the **Enable recovery of user deleted items** option on the **Site Properties: Archive Settings** tab. Enterprise Vault then retains user deleted items for the number of days you set.

---

**Note:** During a move operation, Move Archive does not copy these deleted items from the source archive to the destination. As a result, the deleted items are not available for recovery from the destination archive.

---

## About moving mailbox archives within a site

Move Archive lets you move archives within an Enterprise Vault site. For example, this is useful when you want to move existing archives to a new storage device. You might also want to move archives to a newer server to take advantage of the features introduced in Enterprise Vault version 8.0, such as the optimized single instance storage model.

Within an Enterprise Vault site, Move Archive supports the following moves:

- Moving an active archive to a new archive
- Moving an inactive archive to an active archive
- Moving an active archive to an inactive archive

## Moving an active archive to a new archive

This section describes the move of an archiving enabled user's default archive in the source vault store, to a new archive in the destination vault store. In this case, the new archive in the destination automatically becomes the default archive for subsequent archiving.

In summary, this Move Archive operation includes the following steps:

- Move Archive closes the source archive to prevent Enterprise Vault from archiving any further content to it. However, the source archive is still accessible in read-only mode.
- Move Archive renames the source archive. It appends the archive's creation date, and the date of the move operation to the archive's name.

- Move Archive copies the data from the source archive to the destination.
- Enterprise Vault synchronizes the permissions from the user's Domino or Exchange mailbox to the new archive.  
From this point, Enterprise Vault archives new content to the destination archive.
- The mailbox archiving task on the destination server points all the shortcuts in the user's mailbox to the content in the new archive in the destination site. Move Archive completes this step even if you do not use mailbox shortcuts in your environment.
- Move Archive waits for the destination vault store to be backed up.
- Move Archive verifies that all the data is present in the destination archive.

The move operation is now complete and you may delete the source archive.

## Moving an inactive archive to an active archive

This section describes the move of an archiving enabled user's non-default archive in the source vault store, to an existing default archive in the destination vault store.

In summary, this move operation includes the following steps:

- Move Archive closes the source archive. However, the source archive is still accessible in read-only mode.
- Move Archive renames the source archive. It appends the archive's creation date, and the date of the move operation to the archive's name.
- Move Archive copies the data from the source archive to the destination.
- The mailbox archiving task on the destination server runs and processes shortcuts if required.  
Move Archive completes this step even if you do not use mailbox shortcuts in your environment.
- Move Archive waits for the destination vault store to be backed up.
- Move Archive verifies that all the data is present in the destination archive.

The move operation is now complete and you may delete the source archive.

## Moving an active archive to an inactive archive

This section describes the move of an archiving enabled user's default archive in the source vault store, to an inactive archive in the destination vault store.

In summary, this Move Archive operation includes the following steps:

- Move Archive closes the source archive to prevent Enterprise Vault from archiving any further content to it. However, the source archive is still accessible in read-only mode.
  - Move Archive renames the source archive. It appends the archive's creation date, and the date of the move operation to the archive's name.
  - Move Archive copies the data from the source archive to the destination.
  - Move Archive waits for the destination vault store to be backed up.
  - Move Archive verifies that all the data is present in the destination archive.
- The move operation is now complete and you may delete the source archive.

## Moving other mailbox archives

You can also move other mailbox archives between vault stores, such as source archives that are not associated with archiving enabled mailboxes. You can move these archives to new destination archives, or to other existing archives that are not associated with a mailbox.

In cases like these, Move Archive moves the content from one archive to another. However, Enterprise Vault does not complete any shortcut processing because neither the source archive nor the destination archive is associated with an archiving enabled user.

## About moving mailbox archives between sites

Move Archive lets you move archives between Enterprise Vault sites. This includes sites that belong to different Enterprise Vault directories. For example, a move between sites is useful when users move to a new location and you move their mailboxes to a mail server in the new site.

---

**Note:** When move operations cross two Active Directory domains, a one-way trust is required for the moves to proceed. The destination domain must trust the source domain.

---

Between Enterprise Vault sites, Move Archive supports the following move:

- Moving an inactive archive to an active archive

## Moving active archives between sites

Move Archive lets you move archives between Enterprise Vault sites. This is useful when you want to move an individual user's mailbox to a different Domino or Exchange mail server in another Enterprise Vault site.

In this case, you must disable archiving for the user in the source site, then move the mailbox and enable it for archiving in the destination. When you have done this, you can use Move Archive to move the associated archive to the destination site.

This section describes the actions you must complete to move a user's mailbox, and the subsequent steps that are required to move the archive.

To move the user's mailbox:

- Disable archiving on the user's mailbox in the source site.
- Move the user's mailbox from the source mail server to the mail server in the destination site.
- Provision the user's mailbox on the destination Enterprise Vault server.
- Enable the user for archiving in the destination site.

---

**Note:** Ensure that you run the provisioning task before running the **Enable Mailbox** wizard to remove association of the mailbox with the original Site.

---

The user's mailbox is now enabled for archiving in the destination site, but the existing shortcuts in the user's mailbox still point to the source archive. New content is archived to the newly created destination archive.

When you have moved the user's mailbox and enabled it for archiving in the destination site, you can move the inactive source archive. In this case, the move operation includes the following steps:

- Move Archive closes the source archive. However, the source archive is still accessible in read-only mode.
- Move Archive renames the source archive. It appends the archive's creation date, and the date of the move operation to the archive's name.
- Move Archive copies the data from the source archive to the destination.
- The mailbox archiving task on the destination server points all the shortcuts in the user's mailbox to the content in the newly created archive in the destination site.  
Move Archive completes this step even if you do not use mailbox shortcuts in your environment.
- Move Archive waits for the destination vault store to be backed up.
- Move Archive verifies that all the data is present in the destination archive.

The move operation is now complete and you may delete the source archive.



## Moving other mailbox archives between sites

You can also move an inactive archive in the source site to an existing inactive archive or to a new archive in the destination site.

However Enterprise Vault completes shortcut processing only when the destination is an existing archive that is associated with a user mailbox.

In summary, these Move Archive operations include the following steps:

- Move Archive closes the source archive to prevent Enterprise Vault from archiving any further content to it. However, the source archive is still accessible in read-only mode.
- Move Archive renames the source archive. It appends the archive's creation date, and the date of the move operation to the archive's name.
- Move Archive copies the data from the source archive to the destination.
- If the destination archive is associated with a user mailbox, Enterprise Vault synchronizes the permissions from the user's Domino or Exchange mailbox to the new archive.
- If the destination archive is associated with a user mailbox, the mailbox archiving task on the destination server points all the shortcuts in the user's mailbox to the content in the destination archive.  
Move Archive completes this step even if you do not use mailbox shortcuts in your environment.
- Move Archive waits for the destination vault store to be backed up.
- Move Archive verifies that all the data is present in the destination archive.

The move operation is now complete and you may delete the source archive.

## About moving journal archives within a site

Move Archive lets you move Domino and Exchange journal archives only within an Enterprise Vault site, and you cannot move a journal archive that is currently in use by the journaling task. When you want to move a source journal archive that is in use, first you must configure the journaling task to use a new archive in the destination vault store. To change the archive that is used by the journaling task, use the Administration Console to edit the journal mailbox properties.

You can move an inactive journal archive to a new archive, to an existing active archive, or to another inactive archive.

## About configuring Move Archive

You can control Move Archive's behavior using two XML configuration files:

- `EvMoveArchiveTask.exe.config`, which controls the Move Archive task
- `EvTaskGuardian.exe.config`, which controls the task guardian service

## Configuring the Move Archive task

`EvMoveArchiveTask.exe.config` controls the moves of any archives in the vault stores that are associated with the storage service on the server where it is present.

A basic version of this file exists in the Enterprise Vault installation folder, for example `C:\Program Files (x86)\Enterprise Vault`. The installation folder also contains another file which is called `Example`

`EvMoveArchiveTask.exe.config`. This file contains examples of the additional settings you can change to control the Move Archive task.

### To change the default behavior of the Move Archive task

- 1 Rename `EvMoveArchiveTask.exe.config` in case you need to revert to it later.
- 2 Edit the settings in `Example EvMoveArchiveTask.exe.config`, as described in the following sections.
- 3 Rename the file to `EvMoveArchiveTask.exe.config`.
- 4 Restart the Move Archive task.

### ReportVersions (Move Archive)

For each source archive it processes, Move Archive creates a report file in the `Reports\Move Archive` subfolder of the Enterprise Vault installation folder (for example `C:\Program File (x86)\Enterprise Vault`). If you move the same archive a second time, following a failure for example, Move Archive creates another report when it processes the archive for the second time. `ReportVersions` sets the number of these report files it retains for each source archive, before it removes the oldest file.

Default value:	5
Minimum value:	1
Maximum value:	100

### RescheduleIntervallInMins (Move Archive)

For each move operation, Move Archive enters a sleep state between each stage of the move. For example, Move Archive enters the sleep state while it waits for shortcut processing, and for destination archive backup. `RescheduleIntervallInMins`

sets the length of this sleep state in minutes. At the end of the interval, Move Archive resumes processing if a processing slot is available.

You should consider setting a longer interval in environments where you move large numbers of archives at the same time.

Default value:	30
Minimum value:	5
Maximum value:	1000

### **SkipDuplicateItems (Move Archive)**

If Move Archive finds that items from the source archive are duplicated in the destination vault store, it writes errors to the event log for the first 10 duplicates, then marks the move operation as failed. It does this because the presence of duplicates can indicate that the source archive has already been moved to the destination.

---

**Note:** All the items in one vault store must have a unique transaction ID. Move Archive considers two items in one vault store to be duplicates when they both have the same transaction ID.

---

You can change this behavior by setting SkipDuplicateItems to 1. Then, Move Archive still logs the duplicate items but skips them and proceeds with the move operation.

Default value:	0
----------------	---

## **Configuring task guardian service**

When Move Archive enters a temporary error state while it processes an archive, it waits for a period of time before it retries the archive. You can change the default retry interval using the RetryTimeInMinutes key in the task guardian service configuration file. `EvTaskGuardian.exe.config` controls the retry interval on each Enterprise Vault server where it is present.

A basic version of this file exists in the Enterprise Vault installation folder, for example `C:\Program Files (x86)\Enterprise Vault`. The installation folder also contains another file called `Example EvTaskGuardian.exe.config`. This file contains an example of the `RetryTimeInMinutes` key.

Default value:	30
----------------	----

Minimum value:	5
Maximum value:	1000

#### To change the default behavior of the task guardian service

- 1 Rename `EvTaskGuardian.exe.config` in case you need to revert to it later.
- 2 Edit the `RetryTimeInMinutes` setting in `ExampleEvTaskGuardian.exe.config`.
- 3 Rename the file to `EvTaskGuardian.exe.config`.
- 4 Restart the task guardian service.

## Changing Move Archive's performance

By default, Move Archive operations are given a lower priority than other Enterprise Vault tasks on the server. You can change Move Archive's priority setting and other aspects of its performance using the **Settings** tab in **Move Archive Task properties**.

For guidance on Move Archive performance adjustment using the options on the **Settings** tab, see the Enterprise Vault *Performance Guide* which is available on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH125795>

#### To change Move Archive's performance

- 1 In the Administration Console, right-click the Move Archive Task and click **Properties**.
- 2 Click the **Settings** tab.
- 3 Change the settings as required and click **OK**.

If you change **Priority of Move Archive operations in relation to other processes** or **Number of threads per move operation**, you must restart the Move Archive Task for the changes to take effect.

If you change **Number of concurrent move operations**, you must restart the Task Controller service for the changes to take effect.

## Running Move Archive

To run the Move Archive wizard, you must log in using the vault service account, or use an account that is assigned to the power administrator role.

In the case of moves between two sites that are controlled by different Enterprise Vault directories, your source user account must be assigned to the power administrator role in the destination Enterprise Vault directory.

See “Roles-based administration” in the *Administrator’s Guide*.

#### To run Move Archive

- 1 In the left pane of the Administration Console, right-click **Archives** and click **Move Archive**.
- 2 Work through the pages of the wizard and select appropriate options.

### Move Archive introduction page

This page introduces the Move Archive wizard and provides important information which you should read before you proceed.

---

**Note:** Move Archive supports the move of archives to destination servers that run Enterprise Vault 9.0.1 or later.

---

Move Archive does not support move operations for the following archive types:

- Closed archives
- File System Archiving (FSA) archives
- SharePoint archives
- Shared archives
- Exchange public folder archives

Move Archive also prevents moves in the following circumstances:

- The source archive exceeds its archive usage limit and the destination is a new archive.
- The destination archive exceeds its archive usage limit.

In these cases you should increase the appropriate archive’s usage limit on the **Archive Properties: Archive Usage Limit** tab in the Administration Console.

### Selecting a destination site

Move Archive lets you move mailbox and journal archives within the current Enterprise Vault site, or between two sites. Use this page to select the site into which you want to move the archives.

---

**Note:** You can move journal archives only within a site.

---

#### To move archives within a site

- ◆ Select the **Move archives within the current Enterprise Vault Site** option.

#### To move archives to another site

- 1 Select the **Move archives to a different Enterprise Vault Site** option.
- 2 Enter the name of the **Directory Service Computer** that controls the destination vault stores.

### Selecting a site

If you have chosen to move archives to a destination that contains more than one site, this page lets you select a destination site.

#### To select a destination site

- ◆ Select a site from the **Destination Site** list.

### Selecting archives

Use this page to select the archives you want to move, and to select destination archives.

---

**Note:** Move Archive does not let you move ineligible archives. You cannot move closed archives, FSA archives, SharePoint archives, shared archives, Exchange public folder archives, or archives that contain items placed on legal hold by Discovery Accelerator.

---

#### To add archives

- 1 Click **Add**.
- 2 Use the **Select Source** dialog box to add the archives you want to move.

When you move an archive that is currently in use by an archiving-enabled user, you can only move it to a new archive. In this case, **<New archive>** is selected automatically in the **Destination Archive** column next to the archive, and you cannot change it. You can only move active archives within a site.

When you move an inactive archive, you can select an existing archive as the destination, either in the current site or in another site.

### To select a destination archive

- 1 Select the source archive for which you want to select a destination archive.
- 2 Click **Move To** and click **Select Destination**.
- 3 Use the **Select Destination** dialog box to select a destination archive.

### To move archives to new destination archives

- 1 Select one or more archives.
- 2 Click **Move To** and click **New Archive**.

### To remove an archive from the list

- ◆ Select an archive and click **Remove**.

You can also display more information about any pair of source and destination archives on this page.

### To display the properties of a pair of source and destination archives

- 1 Select the row whose properties you want to display.
- 2 Click **Properties**.

## Select destination

Use this dialog box to search for the archive you want to set as the destination.

### To search for a specific archive

- 1 Enter all or part of the name of an archive in the search box.
- 2 Click the search icon.

The archives whose names contain the string you entered appear in the list.

You can display the properties of any of the archives in the list.

### To show an archive's properties

- 1 Select the archive whose properties you want to see.
- 2 Click **Properties**.

### To set an archive as the destination

- ◆ Select the archive and click **OK**.

## Selecting destination vault stores

If you have chosen to move any archives to new destination archives, this page lets you choose a destination vault store for each. Each destination archive must be in a different vault store from the associated source archive.

### To select destination vault stores

- 1 Select one or more source archives.
- 2 Click **Select Destination**.
- 3 Use the **Select Vault Store** dialog box to select a destination vault store for the selected archives.

## Selecting billing accounts

Use this page to change the billing accounts assigned to the destination archives. By default, new destination archives are assigned the same billing account as the source archive. For existing destination archives, the **New Billing Account** column shows the billing account already assigned to the archive.

### To change a billing account

- 1 Find the archive whose billing account you want to change.
- 2 Under the **New Billing Account** column, enter a new billing account in this format:

***domain\username***

You can also click the browse icon next to the billing account and use the **Select a User or Group** dialog box to select a new billing account.

## Matching retention categories

When you move archives from one Enterprise Vault site to another, you can use this page to match source retention categories to destination retention categories.

For each source retention category, Move Archive tries to find a retention category in the destination site that matches the source, based on name and retention period. If it can find a matching category, it appears in the **Destination Retention Category** column. You can change the destination retention categories that Move Archive has matched automatically.

A check icon in the right column indicates that Move Archive has matched retention categories automatically. The first time you run the Move Archive wizard, this icon is green. Move Archive remembers the selections you make each time you run the wizard, and they become the defaults for next time. When you run the Move Archive wizard again, the matched retention categories are identified by a gray check icon.

In the case of Exchange managed folders, Move Archive maps all their associated retention categories in the source to just one destination retention category. You can change the destination retention category, but the change maps all the source retention categories to the single destination category you select.



For each source retention category where there is no match, you must select a destination retention category.

#### To select or change a destination retention category

- 1 Find the source retention category whose destination retention category you want to change.
- 2 Under the **Destination Retention Category** column, use the drop-down list by each source retention category to select a destination retention category.

You can also display more information about any pair of source and destination retention categories on this page.

#### To display the properties of a pair of source and destination retention categories

- 1 Select the row whose properties you want to display.
- 2 Click **Properties**.

If you do not find a suitable retention category in the destination site, you can use the Administration Console at the destination site to create one. When you have done this, click **Refresh** on this page to make the new retention category available for selection.

## Reviewing the archives you have chosen to move

This page lets you review the archives you have chosen to move before you close the Move Archive wizard.

This page lists the following for each archive:

- **Type**. The icon shows the archive's type: Domino mailbox archive, Domino journal archive, Exchange mailbox archive, or Exchange journal archive.
- **Source Archive**. The name of the source archive.
- **Destination Archive**. The name of the destination archive. This column shows **<New archive>** if you are moving the source archive to a new archive.
- **Destination Vault Store**. The name of the vault store that hosts the destination archive.

Once you have reviewed the archives you have chosen to move, click **Finish**.

## Displaying the status page

On this page, select the **Show the 'Move Archive Status' dialog** option if you want to monitor the progress of the archive moves.

The first time you move an archive associated with a particular storage server, Enterprise Vault creates a Move Archive task on that server. The task is configured

to start automatically each time the task controller service starts. If you want to start the task straight away, select the **Start the new tasks now** option. Enterprise Vault shows this option only once for each storage server.

## Monitoring Move Archive

All the Move Archive operations you have submitted are displayed in the **Move Archive Status** page. If you selected the **Show the 'Move Archive Status' dialog** option when you ran the Move Archive wizard, Enterprise Vault displays the **Move Archive Status** page when you close the wizard. You can also display the page at any other time.

### To display the Move Archive Status page

- ◆ In the Administration Console, right-click **Archives** and click **Move Archive Status**.

For each move operation, the **Move Archive Status** page shows the following:

- **Source Archive.** The original name of the source archive. This is the archive's name before Move Archive renames it.
- **Move Status.** The current move status for this archive.  
See ["Move Archive statuses"](#) on page 91.
- **Destination Archive.** The name of the destination archive. This column shows **<New archive>** if you are moving the source archive to a new archive.
- **Source Server.** The fully qualified domain name of the source storage service computer.
- **Destination Server.** The fully qualified domain name of the destination storage service computer.
- **Start Time.** The date and time at which the archive was submitted.

### To see additional information about any of the move operations in the list

- 1 Select a move operation.
- 2 Click **Properties**.

The **Move Archive Properties** dialog box shows additional information, including the names and locations of the log files associated with the move operation.

### To see the latest statuses for the archives you have submitted

- ◆ Click the refresh button on the toolbar.

If you are moving large numbers of archives, you can find specific source archives using the search feature on the **Move Archive Status** page.

### To search for a source archive

- 1 Enter all or part of the name of the source archive in the **Find source archive where the name contains:** box.
- 2 Click the search button.

You can also sort any of the columns on the **Move Archive Status** page by clicking the column heading.

## Modifying move operations in the Move Archive Status page

The **Move Archive Status** page lets you selectively modify the move operations of archives in the queue. For example, you can sort the operations by destination site, select all the move operations, then stop them during maintenance on the site.

---

**Note:** You cannot stop a move operation during the shortcut processing stage.

You can use **Restart** when the move status is either **Completed** or **Completed with errors**.

You can use **Continue** or **Retry failed items** when the move status shows **Failed** or **Error**.

---

### To modify the move operations

- 1 Select the archives you want to start, stop, or any other action.
- 2 Click the **Start**, **Stop**, or any other available action.
- 3 Click the **Refresh** button to see the changes in statuses for the selected archives.

See [“Managing Move Archive operations with Failed and Error statuses”](#) on page 94.

## Move Archive statuses

Move operations whose status is **Failed** or **Error** appear in red and require your intervention to proceed.

Archives in the **Move Archive Status** page can have the following statuses:

- **Queued.** The archive is queued for processing. Move Archive starts processing the archive when the Move Archive task runs. You can wait for the task to run to its schedule, or right-click the task and click **Run Now**.
- **Step 1 of 5 - Copying (x%).** Move Archive is processing the archive.

- **Step 2 of 5 - Waiting to update shortcuts.** Move Archive has finished moving items from the source archive to the destination, and is waiting for the Domino or Exchange mailbox archiving task to update the shortcuts in the user's mailbox. You can wait for the task to run to its schedule, or right-click the task and click **Run Now**.

---

**Note:** Shortcut processing for disabled archives occurs only when you run the mailbox archiving task for all mailboxes.

---

During this stage, Move Archive checks whether shortcut processing has completed and enters a sleep state if it has not completed. By default, the length of the sleep state is 30 minutes. When the sleep state ends, Move Archive again checks to see if the shortcut processing has completed.

Move Archive completes this step even if you do not use mailbox shortcuts in your environment.

- **Step 3 of 5 - Updating shortcuts.** The Domino or Exchange mailbox archiving task is updating the shortcuts in the user's mailbox.
- **Step 4 of 5 - Waiting for destination backup.** Move Archive is waiting for the vault store that contains the destination archive to be backed up. During this stage, Move Archive checks whether the destination archive has been backed up and enters a sleep state if it has not been backed up. By default, the length of the sleep state is 30 minutes. When the sleep state ends, Move Archive again checks to see if the destination archive has been backed up.
- **Step 5 of 5 - Verifying moved items (x%).** Move Archive is checking that the destination contains all the items that it moved from the source archive. This does not include items that users have deleted, and items that Enterprise Vault has expired.
- **Error.** When Move Archive encounters an error on an archive, it tries to move the archive five times before it changes the status to **Failed**. In between retries, Move Archive sets the archive's status to **Error**.  
Move operations whose status is **Error** appear in red and require your intervention to proceed.
- **Completed.** Move Archive has completed all processing for this archive.
- **Completed with errors.** Move Archive has completed all processing but there were some errors.  
For more information on move operations that have completed with errors, see the following technical note on the Enterprise Vault Support Web site:  
<http://www.symantec.com/docs/TECH77475>
- **Failed.** Move Archive has failed to process the archive.

Move operations whose status is **Failed** appear in red and require your intervention to proceed.

To find why a Move Archive operation has failed, check the Move Archive report files in the `Reports\Move Archive` subfolder of the Enterprise Vault installation folder (for example `C:\Program File (x86)\Enterprise Vault`).

See “[Move Archive reporting and monitoring](#)” on page 95.

Move Archive lets you use **Continue** or **Retry failed items** on move operations that have a status of **Failed** or **Error**, unless the failure occurred during the verification stage. You can use **Restart** when the move status is either **Completed** or **Completed with errors**.

See “[Managing Move Archive operations with Failed and Error statuses](#)” on page 94.

## Deleting archives after Move Archive

When Enterprise Vault has finished moving an archive, its status in the **Move Archive Status** page is **Completed**. You can remove the completed archives from this page, and a prompt asks if you also want to delete the source archive.

---

**Note:** You cannot delete an archive when Compliance Accelerator or Discovery Accelerator has registered an interest in it, or when Discovery Accelerator has placed items in the archive on legal hold.

---

See “[How Compliance Accelerator and Discovery Accelerator affect Move Archive](#)” on page 76.

At the end of a move operation, an archive’s status can be **Completed with errors**. This happens when Move Archive records errors during the move, but does not consider the errors to be serious enough to terminate the move operation. Before you remove archives that have completed with errors, you should check the Move Archive log files for the archive to ensure the errors are not serious or unexpected. For example, you might expect some items to be absent following the failure of a storage device.

For more information on move operations that have completed with errors, see the following technical note on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH77475>

#### To remove completed archives

- 1 Select the completed archives you want to remove from the **Move Archive Status** page.
- 2 Click the **Delete** button on the toolbar.
- 3 At the prompt **Do you want to delete the source archives as well?**, click **Yes** if you want to delete the associated source archives, or **No** if you do not.

If you choose not to delete source archives when you remove them from the **Move Archive Status** page, you can remove them subsequently from the Administration Console.

## Managing Move Archive operations with Failed and Error statuses

Move operations whose status is **Failed** or **Error** appear in red and require your intervention to proceed.

Move operations can fail or complete with errors due to transient problems. For example, move operations can fail because the source vault store is unavailable during the initial data copy stage. When this happens, you can retry move operations after you have resolved the problem.

Move Archive lets you retry move operations that have a status of **Failed**, or **Error** unless the errors occurred during the verification stage.

Use of **Restart**, **Continue**, and **Retry failed items**:

- Use **Restart** when the move status is either **Completed** or **Completed with errors**.
- Use **Continue** or **Retry failed items** when the move status shows **Failed** or **Error**.

For more information on move operations that have completed with errors, see the following technical note on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH77475>

#### To retry move operations

- 1 In the **Move Archive Status** page, select one or more move operations that have the status **Failed** or **Error**.
- 2 Right-click the selected move operations and click **Retry failed items**.
- 3 Click **OK** to confirm your request.

Move Archive resubmits the move operations, and their status initially reverts to **Queued** before processing begins again.

When Move Archive starts processing a retried move operation, it begins processing from the first point of failure.

Similarly, you can use **Continue** to proceed without retrying the failed items.

## Move Archive reporting and monitoring

Move Archive creates up to three report files for each move operation, in the `Reports\Move Archive` subfolder of the Enterprise Vault installation folder (for example `C:\Program File (x86)\Enterprise Vault`).

Move Archive names the three report files using the following convention:

```
MoveArchive_archive_yyyymmddhhmmss.txt  
MoveArchive_archive_yyyymmddhhmmss_Errors.txt  
MoveArchive_archive_yyyymmddhhmmss_Verification_nnnn.txt
```

where:

- *archive* is the name of the archive.
- *yyymmddhhmmss* is the date and time when the report was generated.
- *nnnn* represents a sequential number. To produce verification files of a manageable size, Move Archive rolls over the verification report to a new file each time the maximum file size is reached. This sequential number shows the order of the files.

`MoveArchive_archive_yyyymmddhhmmss.txt` contains a summary report for the move operation. The report shows the start and end time for the move operation, including the times for the start and end of each phase. It also shows counts of the items processed.

`MoveArchive_archive_yyyymmddhhmmss_Errors.txt` reports errors that occurred during the move operation.

`MoveArchive_archive_yyyymmddhhmmss_Verification_nnnn.txt` contains a report of any differences between source items and their corresponding items in the destination archive.

For information on how to troubleshoot Move Archive verification errors, see the following technical note on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH77475>

## Deleting an archive

You can delete an archive, provided that the Administration Console shows a status of Available or Closed.

Note the following:

- There is no undo when you delete an archive, and you cannot stop the deletion process.
- Be careful about deleting an archive that still has an associated mailbox. There will be many errors from the Exchange Mailbox task when it tries to archive to a deleted archive. Make a note of those users who have access to the archive and then get them to change their archiving settings, so that they do not try to archive to the archive you are about to delete. Use the Permissions tab on the archive's property page to find out who has access to the archive.

### To delete an archive

- 1 In the Administration Console, with the archive displayed in the listing, press F5 to refresh the view. This shows you the archive's current status.
- 2 Right-click the archive that you want to delete and, on the shortcut menu, click **Delete**.
- 3 When prompted, confirm that you do want to delete the archive.

The archive's status changes to Marked for deletion. You can no longer view the properties of the archive and shortcuts to items within the archive no longer work.

## Deleting a vault store

You can delete a vault store that is no longer required. Deletion permanently removes all the partitions and archives that the vault store contains, and all the items that are stored in them.

You can delete a vault store only if all of the following conditions apply to the vault store:

- It is not a default vault store for automatically-enabled archives.
- It does not contain any archives that are associated with archiving targets.
- Its status is Available.
- It is not in backup mode.

When you delete a vault store, its status changes to Marked for Deletion. Shortcuts to items within the vault store's archives no longer work.



Enterprise Vault may take a long time to complete the deletion operation. If the vault store contains any items that are on legal hold, or any SIS parts that are referenced by other vault stores, Enterprise Vault marks the vault store for deletion but it does not delete the vault store until these conditions no longer apply.

---

**Note:** If you delete a vault store, you cannot stop or undo the process. The action overrides any form of deletion protection that is applied to items or Retention Categories, other than legal hold.

---

#### To delete a vault store

- 1 In the Administration Console, select the vault store group that contains the vault store that you want to delete.
- 2 The right pane of the Administration Console displays the status of the group's vault stores. Click F5 to refresh the view. The right pane displays each vault store's current status, and indicates whether backup mode is set. You can only delete a vault store if the status is Available and backup mode is not set.
- 3 Right-click the vault store that you want to delete and, on the shortcut menu, click **Delete**.
- 4 On the warning dialog, click **Delete**.

The status of the vault store changes to Marked for Deletion.

When Enterprise Vault eventually completes the deletion, it removes the vault store from the list.

## Setting a system message

Users see the system message when they use the Enterprise Vault Web Access application. For example, you can use the message to indicate periods when there is going to be an interruption to the service because of hardware changes.

The message is not visible to a user who is using a shortcut to retrieve an item, but only to a user who is searching by using the Enterprise Vault Web Access application. The message is available to all users in the Enterprise Vault site.

#### To change the system message from the Vault Administration Console

- 1 In the left pane of the Administration Console expand the hierarchy until the appropriate vault site is visible.
- 2 Right-click the vault site and then, on the shortcut menu, click **Properties**.
- 3 In the Site Properties dialog box, click the **General** tab.
- 4 Edit **System message** as required.

- 5 Click **OK** to accept your changes.
- 6 Stop and restart the IIS Admin service to make the change take effect.

## About index volumes

When an index volume becomes full, Enterprise Vault automatically creates a new one. In the Administration Console, the Advanced tab of an archive's properties shows the number of index volumes.

Each new index volume does not have the same index root path as the previous one. The new location for the new index is a random selection from the Indexing Service's open index root paths.

If an archive has more than one index volume, the initial search is performed against the current index volume, which contains the most recently-archived items. To view search results from earlier index volumes, you must choose a date range from a list. The date ranges correspond to the archived date range of items in the index volumes.

Rollover is more likely to occur for File System Archiving archives, Journal archives, and Public Folder archives than for normal mailbox archives.

Rollover archives created before Enterprise Vault 6.0 SP1 are not merged back into the master archive. Archiving continues to the current rollover archive, and that archive's index expands to multiple index volumes as necessary.

## Moving the directory database

You can move the directory database between SQL Server instances. This is useful for reconfiguration and disaster recovery.

### To move the directory database

- 1 Move the directory database to the new SQL Server.
- 2 Make sure that the Vault Service account has the correct permissions to access the new database.
- 3 Make sure that the new SQL Server is running.
- 4 In the left pane of the Administration Console, right-click the Enterprise Vault icon.
- 5 On the shortcut menu, click **Properties**.
- 6 Click **Change Directory SQL Server**.
- 7 Enter the new SQL Server.

## Moving a vault store database

You can move a vault store database to a different SQL Server. This is useful for reconfiguration and disaster recovery.

### To move the vault store database

- 1 Move the vault store database to the new SQL Server.
- 2 Make sure that the Vault Service account has the correct permissions to access the new database.
- 3 Make sure that the new SQL Server is running.
- 4 Stop the storage service that is associated with the vault store whose database you want to move.
- 5 In the Administration Console, right-click the vault store whose database you want to move, and click **Properties**.
- 6 Click the **Database** tab.
- 7 In the **SQL Server** box, enter the name of the new SQL Server.
- 8 Click **OK**.

## Moving a fingerprint database

You can move a vault store group's fingerprint database to a different SQL Server if required, for example during disaster recovery.

For information on how to move a fingerprint database, see the following TechNote on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH64655>

## Moving the Monitoring database

You can move the Monitoring database between SQL Server instances. This is useful for reconfiguration and disaster recovery.

### To move the Monitoring database

- 1 Move the EnterpriseVaultMonitoring database to the new SQL Server.
- 2 Ensure that the Vault Service account has the required permissions to access the new database.
- 3 Ensure that the new SQL Server is running.

- 4 Connect to the SQL server that is hosting the EnterpriseVaultMonitoring database, using SQL Enterprise Manager or SQL Query Analyzer, or a similar tool.
- 5 Enter and run the following SQL commands:

```
USE EnterpriseVaultDirectory  
UPDATE MonitoringSettings SET SQLServer =  
"New_SQL_Server"
```

where *New\_SQL\_Server* is the name of the new SQL server.

## Moving the audit database

You can move the audit database to a different SQL Server if required, for example during disaster recovery. When you have moved the database, complete the following procedure on each Enterprise Vault server on which auditing is enabled.

### To move the audit database

- 1 Move the audit database to the new SQL Server.
- 2 On the Enterprise Vault server, use the ODBC Data Source Administrator to select the new SQL Server on the EVAudit ODBC data source.
- 3 Test the data source when the ODBC Data Source Administrator gives you the opportunity.

# Managing indexes

This chapter includes the following topics:

- [About the indexing wizards](#)
- [Viewing details of index volumes](#)
- [About the indexing PowerShell cmdlets](#)

## About the indexing wizards

Enterprise Vault provides the following wizards which you can use to manage your index volumes. All these wizards are available in the **Manage Indexes Wizard**.

Upgrade wizard	Use the Upgrade wizard to upgrade 32-bit index volumes to 64-bit.
Verify wizard	Use the Verify wizard to check that index volumes are accessible, healthy, and up to date.
Synchronize wizard	Use the Synchronize wizard to synchronize index volumes and fix known issues.
Rebuild wizard	Use the Rebuild wizard to completely rebuild index volumes. The Rebuild wizard also upgrades any 32-bit index volumes that it encounters.
Change Location wizard	Use the Change Location wizard to help you to move index volumes to a new location.

See [“Using the indexing wizards”](#) on page 107.

## About indexing tasks and subtasks

When you run the indexing wizards, they create indexing tasks that complete the same action on one or more index volumes. Each task has one or more subtasks associated with it. There is one indexing subtask for each index volume to be processed.

Tasks and their subtasks are controlled by Enterprise Vault's Index Administration Task. You can display and manage indexing tasks and subtasks in the **Monitor Indexing Tasks** page.

See [“Managing indexing tasks”](#) on page 108.

Note that you cannot use the indexing wizards to create new tasks for archives, index volumes, and index locations that have other incomplete indexing subtasks associated with them. Archives, index volumes, and index locations must have either no indexing tasks associated with them, or only indexing tasks that have completed before you can submit further tasks.

The following list describes some situations in which you might not be able to add a new task:

- Any archive that has an existing task associated with it cannot be added to a new task. Note that some archives have more than one associated index volume. If just one of these index volumes has a task associated with it, you cannot add the archive to a new task.
- Index volumes that all belong to one archive can be hosted in different index locations. In this case, a task that is associated with just one archive can create tasks that make more than one index location unavailable in the indexing wizards.
- In some of the indexing wizards, you cannot select an empty index location. For example, you cannot select an empty source index location in the Change Location wizard because it contains no index volumes that can be moved.
- When you use the Change Location wizard, both the source location and the destination location are unavailable until the change location task has completed.

When you search for archives and index volumes in the indexing wizards, by default search results include archives and index volumes that already have tasks associated with them. In your searches, you can choose to exclude any archives and index volumes with associated tasks if you want to see only those that are available for you to select.

If you need to add new tasks for archives, index volumes and index locations that have associated tasks, you must first wait for the tasks to complete. Use the

**Monitor Indexing Tasks** page, including its subtask view to see the progress of tasks.

In situations where you cannot wait for a task or subtasks to complete, you must first stop then delete the relevant existing tasks. Use the **Monitor Indexing Tasks** page, including its subtask view to stop and delete tasks.

Note that you must also delete failed tasks before you can submit new tasks for affected archives, index volumes and index locations.

## Configuring the deletion of indexing subtasks

Enterprise Vault automatically deletes indexing subtasks that have completed with no errors, or have completed with warnings. By default, Enterprise Vault deletes these subtasks seven days after their completion. Enterprise Vault does not automatically delete subtasks that have failed.

You can change the number of days that elapse before deletion of completed subtasks in Enterprise Vault's site properties.

**To change the number of days after which Enterprise Vault deletes indexing subtasks**

- 1 In the Administration Console, open **Site Properties**.
- 2 Click the **Indexing** tab.
- 3 Change the **Delete indexing subtasks after** value.

## About the Upgrade wizard

The Upgrade wizard lets you upgrade 32-bit index volumes to 64-bit. Use the wizard to select the archives whose index volumes you want to upgrade to 64-bit. You can select only archives that have one or more 32-bit index volumes.

The 32-bit index volumes remain searchable during the upgrade to avoid impact on users.

---

**Note:** The Upgrade wizard is absent from the **Manage Indexes Wizard** if there are no 32-bit index volumes, such as in a new installation of Enterprise Vault 10.0.

---

Before you upgrade Enterprise Vault to version 10.0, each archive has one or more 32-bit index volumes. Journal archives typically have multiple index volumes. Other types of archive such as mailbox archives usually have only one index volume.

For all archive types, the upgrade to Enterprise Vault 10.0 closes the old 32-bit index volumes and creates a new, live 64-index volume for each archive.

Subsequently when users search their archives, Enterprise Vault uses the content from both the 32-bit and 64-bit index volumes.

When you use the Upgrade wizard to upgrade 32-bit index volumes to 64-bit, it consolidates 32-bit index volumes if it can to create fewer 64-bit index volumes. In the case of journal archives, this consolidation excludes the new 64-bit index volume that was created during the upgrade to Enterprise Vault 10.0. For all other archive types however, the upgrade includes the new 64-bit volume in the consolidation.

See [“Deletion of upgraded index volumes”](#) on page 104.

## Deletion of upgraded index volumes

During the upgrade of index volumes, Enterprise Vault deletes the old 32-bit index volumes as soon as it makes replacement 64-bit index volumes live and searchable.

In the case of the upgrade of multiple index volumes that are associated with one archive, the upgrade might create fewer 64-bit index volumes than there were 32-bit index volumes. When a new 64-bit volume is made live and searchable, Enterprise Vault deletes the 32-bit index volumes that the 64-bit index volume replaces. If the upgrade does not encounter any items that cannot be indexed, it continues until all the 32-bit index volumes have been replaced by 64-bit index volumes.

Each time you run the Upgrade wizard, you can choose to ignore items that cannot be indexed during the upgrade. If you choose to ignore these items, even if the upgrade encounters items that cannot be indexed it proceeds to completion in the same way.

If you do not choose to ignore items that cannot be indexed, the upgrade pauses at the end of processing for each 32-bit index volume in which it encounters these items and waits for your input in the **Monitor Indexing Tasks** page.

## About the Verify wizard

The Verify wizard lets you check the health of 32-bit and 64-bit index volumes. The wizard lets you select individual archives to verify all their associated index volumes, and you can select individual index volumes. Alternatively, you can select an entire index location to verify all the index volumes it contains.

During verification, if a subtask finds no errors in an index volume that was previously marked as failed, it clears the failed status automatically.

Each time you run the wizard, you can choose one of the following verification levels:

- **Basic:** Checks that the index volume is accessible and healthy.



- **Complete:** Checks that the index volume is accessible and healthy, and completes an item level verification.

For 32-bit and 64-bit index volumes, complete verification checks for missing items in the index. These are items that are present in the archive but have not been indexed. For 64-bit archives only, this option also checks for orphaned items, which are index entries for items that do not exist in the archive.

By default, complete verification does not log individual items that are missing content, such as attachments that have not been indexed because they are encrypted. Only the total number of items that are missing content is listed in the log file. If you want each item that is missing content to be logged individually, select the **Include content missing details** option when you initiate a complete verification task.

During complete verification, users can search their archives but no new entries are added to the index volumes.

Each time you run the Verify wizard, you can choose to create a synchronization task automatically for each index volume in which it encounters missing items and orphaned index entries.

## About the Synchronize wizard

The Synchronize wizard lets you synchronize index volumes and fixes known issues.

---

**Note:** This wizard replaces the Repair Index Volume feature in versions of Enterprise Vault before version 10.0.

---

Synchronization tasks fix known issues including those identified by verification tasks you have run previously. For 32-bit and 64-bit index volumes, synchronization tasks index items that are present in the archive but have not been indexed. For 64-bit archives only, synchronization tasks also remove orphaned index entries for items that do not exist in the archive.

When the synchronization task has fixed known issues, it then initiates an internal synchronization to ensure the index volumes are up to date.

In addition to synchronization tasks that you create when you run the Synchronize wizard, the verification tasks can also create synchronization tasks automatically, depending on the choices you make in the Verify wizard.

## About the Rebuild wizard

The Rebuild wizard lets you rebuild index volumes, and upgrades any 32-bit index volumes it encounters. Use the wizard to select the archives whose index volumes you want to rebuild. You can also rebuild individual index volumes.

The old index volumes remain searchable during the rebuild to avoid impact on users.

You can use the Rebuild wizard to initiate rebuilds of index volumes which contain issues that synchronization tasks have failed to fix. You might also use the Rebuild wizard to rebuild index volumes after you have changed indexing level. In this case, the index volumes are rebuilt with the new indexing level you have set.

When you use the Rebuild wizard to rebuild all the index volumes associated with an archive, the rebuild consolidates the index volumes if possible to create a smaller number of rebuilt index volumes. For all archive types, this consolidation includes the archive's live index volume.

See [“Deletion of rebuilt index volumes”](#) on page 106.

### Deletion of rebuilt index volumes

During a rebuild of index volumes, Enterprise Vault deletes the old index volumes as soon as it makes their replacements live and searchable.

In the case of a rebuild of multiple index volumes that are associated with one archive, the rebuild might create fewer new index volumes. When a new index volume is made live and searchable, Enterprise Vault deletes the old index volumes it replaces. If the rebuild does not encounter any items that cannot be indexed, it continues until all the old index volumes have been replaced by rebuilt index volumes.

Each time you run the Rebuild wizard, you can choose to ignore items that cannot be indexed during the rebuild. If you choose to ignore these items, even if the rebuild encounters items that cannot be indexed it proceeds to completion in the same way.

If you do not choose to ignore items that cannot be indexed, the rebuild pauses at the end of processing for each old index volume in which it encounters these items and waits for your input in the **Monitor Indexing Tasks** page.

## About the Change Location wizard

The Change Location wizard lets you move an archive's index volumes from one physical location to another.

Change location tasks do not copy the index volumes from the source location to the target. You must copy the files manually, and use the Change Location wizard to make the necessary changes in Enterprise Vault.

When you run the Change Location wizard, you must indicate whether or not you have already copied the archive's index volumes from the source location to the target location.

If you choose to copy the index volumes before you run the wizard, you must first set the index volumes offline, then copy the files. When you run the wizard and indicate that you have already copied the files, it creates a change location task which checks the index volumes are offline then completes the configuration of the new location.

If you choose to copy the index volumes after you run the Change Location wizard, it creates a change location task which sets the index volumes offline then pauses while you copy the files. When you have copied the files, you can use the **Monitor Indexing Tasks** page to indicate that you have copied the files for the relevant change location task. The task then completes the configuration of the new location.

## Using the indexing wizards

To run the indexing wizards, your user account must be assigned the Indexing Administrator role.

See [“Roles-based administration”](#) on page 26.

The indexing wizards are all accessible from the **Indexing Summary** page in the Administration Console.

### To run the Manage Indexes Wizard from Indexing Summary page

- 1 In the left pane of the Administration Console, click the **Indexing** container.
- 2 In the right pane, click **Manage Indexes**.

The **Manage Indexes Wizard** is also accessible from the following places in the Administration Console:

- **Common Tasks**
- The **Indexing** container, and the containers beneath it
- The **Archive Properties: Index Volumes** tab

#### To run the Manage Indexes Wizard from Common Tasks

- 1 In the left pane of the Administration Console, click the name of the Enterprise Vault site.
- 2 In **Common Tasks** in the right pane, expand **Index Management**.
- 3 Click **Manage Indexes Wizard**.

#### To run the Manage Indexes Wizard from the Indexing container

- ◆ In the left pane of the Administration Console, right-click **Indexing** or any of the containers beneath it and click **Manage Indexes**.

#### To run the Manage Indexes Wizard from The Archive Properties: Index Volumes tab

- 1 In the Administration Console, right-click an archive and click **Properties**.
- 2 Click the **Index Volumes** tab.
- 3 Click **Manage Indexes**.

## Managing indexing tasks

All the indexing tasks that you create using the indexing wizard are shown in the Administration Console in the **Monitor Indexing Tasks** page. The **Monitor Indexing Tasks** page is accessible from the **Indexing Summary** page in the Administration Console.

#### To run Monitor Indexing Tasks from Indexing Summary page

- 1 In the left pane of the Administration Console, click the **Indexing** container.
- 2 In the right pane, click **Monitor Indexing Tasks**.

The **Monitor Indexing Tasks** page is also accessible from the following places in the Administration Console:

#### ■ Common Tasks

- The **Indexing** container, and the containers beneath it

#### To run the Monitor Indexing Tasks from Common Tasks

- 1 In the left pane of the Administration Console, click the name of the Enterprise Vault site.
- 2 In **Common Tasks** in the right pane, expand **Index Management**.
- 3 Click **Monitor Indexing Tasks**.

#### To run the Manage Indexes Wizard from the Indexing container

- ◆ In the left pane of the Administration Console, right-click **Indexing** or any of the containers beneath it and click **Monitor Indexing Tasks**.

## Using the Monitor Indexing Tasks page

The **Monitor Indexing Tasks** page lists all the current indexing tasks. Use this page to monitor and manage the tasks. Use the **Search** controls to filter the tasks in the list.

For example, to list only synchronization tasks whose names contain 2011-05-05

- 1 Choose **Task** from the **Search** list.
- 2 Enter **2011-05-05** in the **search text contains** box.
- 3 Click **Deselect All** to clear the current selections.
- 4 Select **Synchronize** under **Task Type**.
- 5 Click **Search**.

If you want to include in the search results only those tasks that need attention, click **Yes** under **Show only tasks that need attention**. This includes only the tasks whose status is **Failed**, **Stopped**, and **Waiting**.

You can also click **Clear All** to clear existing search criteria before you start a new search.

For each task, the search results show the following information:

- **Task.** The name of the task.
- **Type.** The type of the task.
- **Created Date.** The date and time the task was created.
- **Not Active.** The number of inactive subtasks associated with the task. This number includes the numbers of subtasks whose status is **Inactive**, **Queued**, **Waiting**, or **Stopped**.
- **Active.** The number of active subtasks associated with the task. This is the number of subtasks whose status is **Processing**.
- **Successful.** The number of successful subtasks associated with the task. This is the number of subtasks whose status is **No errors**.
- **Unsuccessful.** The number of unsuccessful subtasks associated with the task. This number includes the numbers of subtasks whose status is **Warnings**, **Will retry**, or **Failed**.
- **Successful Subtasks.** The bar shows progress through the subtasks associated with the task.

If all the statuses of the subtasks are all in **Active** or **Successful** categories, the bar is green. If any of the subtasks have statuses in the **Not Active** category, the bar is yellow. If any of the subtasks have statuses in the **Unsuccessful** category, the bar is red.

Select tasks from the list and use the buttons on the button bar or the items on the **Actions** menu to initiate the following actions:

- **Start.** Click to start stopped tasks.
- **Stop.** Click to stop running tasks.
- **Restart.** Click to restart tasks.
- **Retry.** Click to retry failed tasks.
- **Delete.** Click to delete tasks.
- **I have copied the files** or **Process waiting subtasks.**  
For change location tasks, click **I have copied the files** when you have copied the files associated with the task to their new location.  
For all other tasks, click **Process waiting subtasks** to process the waiting subtasks.
- **Show all subtasks for the current task** (button bar only). Click to show the subtasks associated with the selected parent task.  
You can also click the name of a task to show its associated subtasks.  
See [“Using the Monitor Indexing Tasks page \(subtask view\)”](#) on page 110.
- **Copy selection to clipboard** (**Actions** menu only). Click to copy details of the selected tasks to the clipboard.
- **Refresh view.** Click to refresh the current view.

## Using the Monitor Indexing Tasks page (subtask view)

In subtask view, the **Monitor Indexing Tasks** page lists all the indexing subtasks associated with a task. Use this page to monitor and manage the subtasks. Use the **Search** controls to filter the subtasks in the list.

For example, to list only unsuccessful subtasks whose archive names contain “John Doe”

- 1 Enter **John Doe** in the **search text contains** box.
- 2 Click **Deselect All** to clear the current selections.
- 3 Select **Warnings**, **Will retry**, and **Failed** under **Subtask status**.
- 4 Click **Search**.

You can also click **Clear All** to clear existing search criteria before you start a new search.

For each subtask, this page lists information in the columns described in the following table. The page includes only the columns that are relevant to the types of subtasks that are displayed.

<b>Archive Name</b>	The name of the archive that the subtasks are associated with.
<b>Index Volume Range</b>	The range of sequence numbers of the items indexed in the index volume.
<b>Items Added</b>	<p>For upgrade and rebuild subtasks, this shows the total number of items successfully processed.</p> <p>For synchronization subtasks, this shows the number of items that have been indexed by the subtask.</p>
<b>Items Deleted</b>	For synchronization subtasks, this shows the number of pending deletions and other previously orphaned index entries items that have been removed from the index volume by the subtasks.
<b>Items With Errors</b>	<p>For upgrade, rebuild and synchronization subtasks, this shows the number of items that could not be retrieved, usually due to storage issues.</p> <p>In the case of upgrade and rebuild subtasks, items with errors cause the subtask to wait for user input if you did not select the <b>Ignore items that cannot be indexed</b> option when you submitted the task.</p>
<b>Missing Items</b>	For verification subtasks, this shows the number of items in the archive that Enterprise Vault has failed to index.
<b>Extra Items</b>	For verification subtasks, this shows the number of orphaned index entries it found in the index volume. These are index entries for items that do not exist in the archive.
<b>Original Location</b>	For change location subtasks, this shows the original location of the index volume.
<b>Destination Location</b>	For change location subtasks, this shows the destination location of the index volume.
<b>Status</b>	<p>The subtask's status.</p> <p>See <a href="#">“Subtask statuses”</a> on page 112.</p>
<b>Progress</b>	<p><b>Progress.</b> The bar shows subtask's progress. The color of the bar matches the category that subtask status belongs to. <b>Active</b> and <b>Successful</b> tasks have a green bar, <b>Not Active</b> subtasks have a yellow bar, and <b>Unsuccessful</b> subtasks have a red bar.</p>

Select subtasks from the list and use the buttons on the button bar or the items on the **Actions** menu to initiate the following actions:

- **Switch back to parent task summary view** (button bar only). Click to show the task view.
- **Start**. Click to start stopped subtasks.
- **Stop**. Click to stop running subtasks.
- **Restart**. Click to restart subtasks.
- **Retry**. Click to retry failed subtasks.
- **Delete**. Click to delete subtasks.
- **I have copied the files or Process waiting subtasks**.  
For change location tasks, click **I have copied the files** when you have copied the files associated with the subtask to their new location.  
For all other subtasks, click **Process waiting subtasks** to process the waiting subtasks.
- **Open report**. Click to open the report file associated with the subtask.
- **Save report**. Click to save the report file associated with the subtask.
- **Details**. Click to display details about the selected subtask.
- **Copy selection to clipboard** (**Actions** menu only). Click to copy details of the selected subtasks to the clipboard.
- **Refresh view**. Click to refresh the current view.

Subtask statuses

Table 4-1 Subtask statuses

Category	Status	Description
Not active	Inactive	<p>The subtask is inactive. This can happen in the following cases:</p> <ul style="list-style-type: none"><li>■ The Index Administration Task on the server the subtask is associated with is not in schedule.</li><li>■ The Index Administration Task on the server the subtask is associated with has not yet picked up the subtask for processing. This can happen when you submit a task that creates a large number of subtasks.</li><li>■ Vault stores or index locations are in backup mode.</li></ul>



**Table 4-1** Subtask statuses (*continued*)

Category	Status	Description
	<b>Queued</b>	The Index Administration Task on the server the subtask is associated with has not yet picked up the subtask for processing. The statuses of these subtasks are <b>Queued</b> until the Index Administration tasks starts processing them.
	<b>Waiting</b>	<p>The subtask is waiting for user input:</p> <ul style="list-style-type: none"> <li>■ For change location tasks on which you did not select <b>The index folders have been copied to the new location</b>, the associated subtasks complete their initial processing, then wait for you to indicate that you have copied the index folders. When you have copied the index folders, use the <b>I have copied the files</b> action in the <b>Monitor Indexing Tasks</b> page.</li> <li>■ For upgrade and rebuild tasks on which you did not select <b>Ignore items that cannot be indexed</b>, the associated subtasks wait for your input when they encounter minor errors. Use the <b>Process waiting subtasks</b> action in the <b>Monitor Indexing Tasks</b> page to force the subtask to continue processing.</li> </ul>
	<b>Stopped</b>	You have stopped the subtask. The Index Administration Task does not process the subtask again until you use the <b>Start</b> action in the <b>Monitor Indexing Tasks</b> page to resume the subtask.
<b>Active</b>	<b>Processing</b>	The subtask is being processed.
<b>Successful</b>	<b>No errors</b>	The subtask completed without errors.
<b>Unsuccessful</b>	<b>Warnings</b>	<p>The subtask completed with warnings.</p> <p>Examine the <b>Subtask Details</b> page and the subtask report file for more information.</p>
	<b>Will retry</b>	Change location and verify subtasks can have this status when errors occur. The Index Administration Task tries a subtask up to five times when it encounters errors, in case the errors are transient. After five tries, if the errors persist the subtask is marked as <b>Failed</b> .

Table 4-1 Subtask statuses (continued)

Category	Status	Description
	Failed	<p>The subtask failed.</p> <p>Examine the <b>Subtask Details</b> page and the subtask report file for more information.</p> <p>If you can ascertain and rectify the cause of the failure, use the <b>Retry</b> action in the <b>Monitor Indexing Tasks</b> page to retry the subtask.</p>

Managing index upgrade and index rebuild tasks

Upgrade and rebuild tasks which do not complete successfully with the status **No errors**, can have the following statuses:

- **Waiting.** If you did not select the **Ignore items that cannot be indexed** option when you submitted the upgrade or rebuild task, its subtasks wait for your input when they encounter minor errors. Use the **Process waiting subtasks** action in the **Monitor Indexing Tasks** page to force the subtask to continue processing.
- **Failed.** The upgrade or rebuild subtask has failed. This happens when the subtask encounters serious errors, or a significant number of minor errors. In the **Monitor Indexing Tasks** page, open the subtask’s report file to see details of the failure. If you can ascertain and rectify the cause of the failure, use the **Retry** action in the **Monitor Indexing Tasks** page to retry the subtask.

Managing index verification tasks

Verification tasks which do not complete successfully with the status **No errors**, can have the following statuses:

- **Will retry.** The subtask has encountered errors but will retry the subtask. You do not need to take action for subtasks with this status.
- **Warnings.** When you submit a **Complete** verification task, its subtasks can complete with **Warnings**. In the **Monitor Indexing Tasks** page, open the subtask’s report file to see the warnings.
- **Failed.** The verification subtask has failed. In the **Monitor Indexing Tasks** page, open the subtask’s report file to see details of the failure. If you can ascertain and rectify the cause of the failure, use the **Retry** action in the **Monitor Indexing Tasks** page to retry the subtask.

If any of your verification subtasks fail, or complete with warnings about missing items and orphaned index entries, consider submitting a synchronization task

for the same archive, index volume or index location. You do not need to do this if you selected the **Auto Synchronize** option when you originally added the verification task because Enterprise Vault automatically creates synchronization tasks in this case.

## Managing index synchronization tasks

Synchronization tasks which do not complete successfully with the status **No errors**, can have the following statuses:

- **Warnings.** Synchronization subtasks can complete with **Warnings**. In the **Monitor Indexing Tasks** page, open the subtask's report file to see the warnings.
- **Failed.** The synchronization subtask has failed. In the **Monitor Indexing Tasks** page, open the subtask's report file to see details of the failure. If you can ascertain and rectify the cause of the failure, use the **Retry** action in the **Monitor Indexing Tasks** page to retry the subtask.

## Managing change location tasks

Change location tasks which do not complete successfully with the status **No errors**, can have the following statuses:

- **Will retry.** The subtask has encountered errors but will retry the subtask. You do not need to take action for subtasks with this status.
- **Waiting.** If you did not select the **The index folders have been copied to the new location** option when you submitted the task, after completing their initial processing, the associated subtasks wait for your input. Copy the index folder to the new location, then use the **I have copied the file** action in the **Monitor Indexing Tasks** page to complete processing.
- **Warnings.** When you submit a change location task, its subtasks can complete with **Warnings**. In the **Monitor Indexing Tasks** page, open the subtask's report file to see the warnings.
- **Failed.** The change location subtask has failed. In the **Monitor Indexing Tasks** page, open the subtask's report file to see details of the failure. If you can ascertain and rectify the cause of the failure, use the **Retry** action in the **Monitor Indexing Tasks** page to retry the subtask.

# Viewing details of index volumes

The Index Volumes Browser enables you to do the following:

- Search for those index volumes that meet the criteria that you specify. You can search for indexes by various attributes.
- Set individual index volumes online or offline.
- View details of individual index volumes. For example, the details of an index volume include the following:
  - The location of the index volume
  - The server or the index group that hosts the index volume
  - Details of the archive with which the index volume is associated

To display the Index Volumes Browser, do one of the following in the Administration Console:

- Click **Index Volumes Browser** in the **Indexing Summary** page.
- Right-click the **Archives** container and then click **Index Volumes Browser**.
- Right-click the **Indexing** container and then click **Index Volumes Browser**.
- Display the properties of an archive, click the **Index Volumes** tab and then click **Details**.

# About the indexing PowerShell cmdlets

The Enterprise Vault Management Shell provides the following indexing cmdlets:

Cmdlet	Description
<code>Get-IndexServerForIndexLocation</code>	Reports the server name and server entry ID for the index server that is responsible for a specified index location.
<code>Set-IndexMetadataSyncLevel</code>	Forces the synchronization of index metadata at the next startup of the specified indexing service.  This is useful after you have restored index locations during disaster recovery.

## Running the indexing PowerShell cmdlets

To run PowerShell cmdlets directly, first run the Enterprise Vault Management Shell

- ◆ Click **Start > Programs > Enterprise Vault > Enterprise Vault Management Shell**.

PowerShell opens, then loads the Enterprise Vault snap-in which makes the indexing cmdlets available in the shell.

Help is available for all the cmdlets. For example, the following command shows the detailed help for `Get-IndexServerForIndexLocation`:

```
Get-Help Get-IndexServerForIndexLocation -detailed
```

## Using Get-IndexServerForIndexLocation

Use the following syntax when you run `Get-IndexServerForIndexLocation`:

```
Get-IndexServerForIndexLocation -Location <String>
[<CommonParameters>]
```

The following examples show how `Get-IndexServerForIndexLocation` is used to report the index server that is responsible for an index location:

- `Get-IndexServerForIndexLocation -Location "F:\EVIndexes\index7"`  
This command returns the index server responsible for the index location whose path is `F:\EVIndexes\index7`.
- `Get-IndexServerForIndexLocation -Location 10AA6CBA47F403244A85E3CF172B00DEC1810000Server.Domain1.local`  
This command returns the index server responsible for the index location whose root path entry ID is `10AA6CBA47F403244A85E3CF172B00DEC1810000Server.Domain1.local`.

## Using Set-IndexMetadataSyncLevel

Use the following syntax when you run `Set-IndexMetadataSyncLevel`:

```
Set-IndexMetadataSyncLevel -EntryId <String> -SyncLevel <String>
[<CommonParameters>]
```

Synchronization level	Description
0	No synchronization occurs at indexing service startup.
1	At startup, the indexing service indexes items that are present in archives but have not been indexed, and removes orphaned index entries for items that do not exist in the archives.

Synchronization level	Description
2	<div>At startup, the indexing service:</div> <ul style="list-style-type: none"><li>■ Indexes items that are present in archives but have not been indexed, and removes orphaned index entries for items that do not exist in the archives</li><li>■ Checks that all the index locations stored in the Directory database are correctly referenced in the index metadata</li></ul>

The following example shows how `Set-IndexMetadataSyncLevel` is used to force the synchronization of index metadata:

```
■ Set-IndexMetadataSyncLevel -EntryId
15B63FA16EF2BD4418934B87F2F6651A51710000.Domain1.local -SyncLevel
1
```

This command sets the synchronization level to 1 for the indexing service that has entry ID `15B63FA16EF2BD4418934B87F2F6651A51710000.Domain1.local`.

# Advanced Domino mailbox and desktop policy settings

This chapter includes the following topics:

- [About the advanced policy settings for Domino mailbox and desktop policy](#)
- [Editing the advanced settings for Domino mailbox and desktop policy](#)
- [Domino mailbox policy advanced settings](#)
- [Domino desktop policy advanced settings](#)

## About the advanced policy settings for Domino mailbox and desktop policy

The Domino mailbox policy advanced settings control advanced archiving behavior such as the action to take for failed items, and the method for resolving email addresses.

The Domino desktop policy advanced settings let you fine-tune the user experience provided by the Domino client desktops. The settings control advanced features and functionality of Vault Cache.

## Editing the advanced settings for Domino mailbox and desktop policy

The advanced settings for a policy are provided on the Advanced tab of the policy properties.

#### To edit the advanced settings for a policy

- 1 In the left pane of the Administration Console, expand the hierarchy until **Policies** is visible.
- 2 Expand **Policies**.
- 3 Expand **Domino**.
- 4 Click **Mailbox** or **Desktop** as appropriate.
- 5 In the right-hand pane, double-click the name of the policy you want to edit.  
The policy's properties are displayed.
- 6 Click the **Advanced** tab.
- 7 Next to **List settings from**, select the category of settings that you want to modify.
- 8 Edit the settings as required.

You can double-click a setting to edit it, or click it once to select it and then click **Modify**.

## How to apply the new settings for Domino mailbox and desktop policy

Modified mailbox and desktop policy settings are applied to users' mailboxes during the next synchronization run of the Domino Provisioning task. If you want to apply the changes before the next synchronization, run Synchronize Individual Mailboxes, which is on the Synchronization tab of the Domino Provisioning task's properties.

## Domino mailbox policy advanced settings

These settings control advanced aspects of Domino mailbox archiving.

There is one category of Domino mailbox policy advanced settings:

- [Archiving General: Domino mailbox policy](#)

### Archiving General: Domino mailbox policy

These settings control advanced aspects of archiving behavior.

The Archiving General settings are:

- [Action for failed items \(Domino Archiving General setting\)](#)
- [Archive draft items \(Domino Archiving General setting\)](#)
- [Lookup e-mail addresses \(Domino Archiving General setting\)](#)



- [Reset archive names \(Domino Archiving General setting\)](#)
- [Strip attachments to non-shortcut items \(Domino Archiving General setting\)](#)

## Action for failed items (Domino Archiving General setting)

Description	Lets you control whether items that fail three times to be archived are processed on later archiving runs.
Supported values	<ul style="list-style-type: none"> <li>■ Reprocess. Items that have failed repeatedly are reprocessed on each archiving run.</li> <li>■ Do not reprocess (default). Items that have failed repeatedly are not reprocessed on later archiving runs.</li> </ul>
Legacy name	SetFailedMsgsDoNotArchive

## Archive draft items (Domino Archiving General setting)

Description	Lets you control whether draft items are archived. Changes to the setting are applied to users' mail files when the Domino Provisioning task next runs. To apply the changes immediately, click <b>Synchronize Individual Mailboxes</b> on the <b>Synchronization</b> tab of the Domino Provisioning task properties.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Draft items are not archived.</li> <li>■ On. Draft items are archived. When draft items are archived, they never change into shortcuts, and attachments are not removed.</li> </ul>
Legacy name	ArchiveDraftItems

## Lookup e-mail addresses (Domino Archiving General setting)

Description	Controls whether email addresses are resolved using the Domino Directory, including SMTP addresses where available.
Supported values	<ul style="list-style-type: none"> <li>■ On (default). Email addresses are resolved.</li> <li>■ Off. Email addresses are not resolved.</li> </ul>
Legacy name	LookupNames

### Reset archive names (Domino Archiving General setting)

Description	Controls whether archive names are kept synchronized with Domino user names. If the setting is On, any changes to the Domino user name are applied to the archive name when the Domino Provisioning task runs, either on a scheduled run or when the administrator clicks <b>Synchronize Individual Mailboxes</b> on the task properties.
Supported values	<ul style="list-style-type: none"><li>■ On (default). Archive names are updated during synchronization.</li><li>■ Off. Archive names are not updated during synchronization.</li></ul>

### Strip attachments to non-shortcut items (Domino Archiving General setting)

Description	Controls whether attachments are removed from appointments and tasks after archiving. These items are not changed into Enterprise Vault shortcuts when they are archived. If Enterprise Vault removes an attachment, it replaces it with a link to the attachment.
Supported values	<ul style="list-style-type: none"><li>■ On (default). Attachments are removed from non-shortcut items after archiving.</li><li>■ Off. Attachments are not removed from non-shortcut items after archiving.</li></ul>
Legacy name	StripAttachmentsToNonShortcutItems

## Domino desktop policy advanced settings

These settings allow you to fine-tune the behavior of the Enterprise Vault Lotus Notes client.

There is one category of Domino desktop policy advanced settings:

- [Vault Cache: Domino desktop policy](#)

### Vault Cache: Domino desktop policy

These settings control advanced behavior of the Lotus Notes client with respect to Vault Cache.

The Vault Cache settings are:

- [Pause interval \(Domino Vault Cache setting\)](#)
- [Preemptive archiving threshold \(Domino Vault Cache setting\)](#)

## Pause interval (Domino Vault Cache setting)

Description	Specifies the number of minutes to wait before Enterprise Vault starts searching for items that need to be added to the Vault Cache.
Supported values	■ Integer value, specifying a number of minutes. The default is 3.

## Preemptive archiving threshold (Domino Vault Cache setting)

Description	Specifies the number of days before archiving at which Enterprise Vault copies items preemptively to the Vault Cache, in anticipation that the items will soon be archived. The copy takes place on the user's computer, with no further download required.
Supported values	■ Integer value, specifying a number of days. The default is 7.



# Advanced Exchange mailbox and desktop policy settings

This chapter includes the following topics:

- [About the advanced Exchange mailbox and desktop settings](#)
- [Editing the advanced Exchange mailbox and desktop settings](#)
- [Exchange mailbox policy advanced settings](#)
- [Exchange desktop policy advanced settings](#)

## About the advanced Exchange mailbox and desktop settings

The Exchange mailbox policy advanced settings control advanced aspects of archiving behavior such as whether deleted items and unexpired calendar events are archived.

The Exchange desktop policy advanced settings let you fine-tune the user experience provided by the Exchange client desktops. The settings control the advanced features and functionality provided by Vault Cache and Virtual Vault for Outlook and the Outlook and OWA clients.

# Editing the advanced Exchange mailbox and desktop settings

The advanced settings for a policy are provided on the Advanced tab of the policy properties.

To edit the advanced settings for a policy

- 1 In the left pane of the Administration Console, expand the hierarchy until **Policies** is visible.
- 2 Expand **Policies**.
- 3 Expand **Exchange**.
- 4 Click **Mailbox** or **Desktop** as required.
- 5 In the right-hand pane, double-click the name of the policy you want to edit.  
The policy's properties are displayed.
- 6 Click the **Advanced** tab.
- 7 Next to **List settings from**, select the category of settings that you want to modify.
- 8 Edit the settings as required.

You can double-click a setting to edit it, or click it once to select it and then click **Modify**.

## How to apply the new Exchange mailbox and desktop settings

Modified mailbox and desktop policy settings are applied to users' mailboxes during the next synchronization run of the Exchange Mailbox task. If you want to apply the changes before the next synchronization, run Synchronize, which is on the Synchronization tab of the Exchange Mailbox task's properties.

## Exchange mailbox policy advanced settings

These settings control advanced aspects of Exchange mailbox archiving.

There is one category of Exchange mailbox policy advanced settings:

- [Archiving General \(Exchange mailbox policy advanced settings\)](#)

### Archiving General (Exchange mailbox policy advanced settings)

The Archiving General settings enable you to control advanced archiving behavior.

The Archiving General settings are:

- [Archive deleted items \(Exchange Archiving General setting\)](#)
- [Archive draft items \(Exchange Archiving General setting\)](#)
- [Archive Exchange Managed Folders \(Exchange Archiving General setting\)](#)
- [Archive naming convention \(Exchange Archiving General setting\)](#)
- [Archive unexpired Calendar Events \(Exchange Archiving General setting\)](#)
- [Code pages for right-to-left custom shortcuts \(Exchange Archiving General setting\)](#)
- [Do not archive pending reminders \(Exchange Archiving General setting\)](#)
- [Encode custom body using appropriate code pages \(Exchange Archiving General setting\)](#)
- [Future item retention category \(Exchange Archiving General setting\)](#)
- [Include default and anonymous permissions \(Exchange Archiving General setting\)](#)
- [Inherited permissions \(Exchange Archiving General setting\)](#)
- [Maximum message size to archive in MB \(Exchange Archiving General setting\)](#)
- [Pending shortcut timeout \(Exchange Archiving General setting\)](#)
- [Reset archive names \(Exchange Archiving General setting\)](#)
- [Set failed messages 'Do Not Archive' \(Exchange Archiving General setting\)](#)
- [Shortcut sync for mail clients \(Exchange Archiving General setting\)](#)
- [Strip attachments to non-shortcut items \(Exchange Archiving General setting\)](#)
- [Synchronize folder permissions \(Exchange Archiving General setting\)](#)
- [Warn if default or anonymous permissions exist \(Exchange Archiving General setting\)](#)
- [Warn when mailbox not under quota after archiving run \(Exchange Archiving General setting\)](#)

### Archive deleted items (Exchange Archiving General setting)

Description	Controls whether items are archived from the Deleted Items folder.
Supported values	<ul style="list-style-type: none"><li>■ Off (default). Items in the Deleted Items folder are not archived.</li><li>■ On. Items in the Deleted Items folder are archived.</li></ul>

Legacy name

ArchiveDeletedItems

## Archive draft items (Exchange Archiving General setting)

Description

Controls whether draft items are archived. This applies to all draft items, not just those in the Drafts folder.  
  
Enterprise Vault does not convert archived draft items to shortcuts, even if the policy is configured to create shortcuts. Archived draft items are treated as shortcuts for purposes of shortcut deletion. Enterprise Vault does not remove attachments from archived draft items.

Supported values

- Off (default). Draft items not archived.
- On. Draft items are archived.

## Archive Exchange Managed Folders (Exchange Archiving General setting)

Description

Controls whether items are archived from Microsoft Exchange managed folders, and whether to apply managed content settings. Managed folders were introduced in Exchange Server 2007.

Supported values

- Off. Enterprise Vault does not archive items from managed folders. Additionally, users are not allowed to archive items manually from managed folders.
- Normal. Enterprise Vault treats managed folders as normal mailbox folders.  
  
The value Normal lets users modify the contents of managed folders in Virtual Vault, provided the Virtual Vault policy settings allow such operations. For example, users can move items as follows:
  - From the mailbox to a managed folder in Virtual Vault
  - From a managed folder in Virtual Vault to another Virtual Vault folder
- Managed (default). Enterprise Vault archives items from managed folders and uses retention settings that are synchronized from Exchange Server.

Legacy name

ArchiveManagedFolders2



## Archive naming convention (Exchange Archiving General setting)

Description	<p>By default, archives are given the same name as the associated mailbox on an Exchange Server. In some environments this may mean that the archive name is not unique. This can cause confusion when searching multiple archives, especially when items are returned from different archives that have the same name.</p> <p>The <b>Archive naming convention</b> setting lets you select the naming convention to use for archives. You can use this setting to ensure that the name given to an archive is unique within the organization. This setting is particularly useful if you use Symantec Discovery Accelerator to search multiple Exchange mailbox archives.</p> <p>If you modify the value of this setting, check that the value of the advanced policy setting, <b>Reset archive names</b>, is <b>On</b>. This setting is in the <b>Archiving general</b> list of settings.</p> <p>To update the names of existing archives so that they conform to the new naming convention, synchronize the mailboxes that use the modified policy.</p>
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Supported values	<p>The following list describes the valid values for the setting. In the examples given, the resultant archive names assume that the user, John Doe, has the following account and mailbox details:</p> <p>Account logon name in Active Directory: "JDoe"</p> <p>Domain: "EXAMPLE"</p> <p>Exchange Server mailbox name: "John Doe"</p> <ul style="list-style-type: none"><li>■ <i>Mailbox name</i> (Default) The name of the associated Exchange mailbox. For example, John Doe</li><li>■ <i>Mailbox name (account name)</i> The name of the associated mailbox, followed by the mailbox user's account logon name in Active Directory. For example, John Doe (JDoe)</li><li>■ <i>Mailbox name (domain-qualified account name)</i> The name of the associated mailbox, followed by the domain and account logon name of the mailbox user (in the form DOMAIN\name). For example, John Doe (EXAMPLE\JDoe)</li><li>■ <i>Account name (mailbox name)</i> The account logon name of the mailbox user, followed by the name of the associated mailbox. For example, JDoe (John Doe)</li><li>■ <i>Domain-qualified account name (mailbox name)</i> The domain and account logon name of the mailbox user (in the form DOMAIN\name), followed by the name of the associated mailbox. For example, EXAMPLE\JDoe (John Doe)</li></ul>
Legacy name	ArchiveNameFormat

## Archive unexpired Calendar Events (Exchange Archiving General setting)

Description	Controls whether unexpired calendar items are archived.
Supported values	<ul style="list-style-type: none"><li>■ Off (default). Unexpired calendar items are not archived.</li><li>■ On. Unexpired calendar items are archived.</li></ul>
Legacy name	ArchiveNonExpiredCalEvents

## Code pages for right-to-left custom shortcuts (Exchange Archiving General setting)

Description	A semicolon-separated list of code pages. Custom shortcuts that use these code pages are always formatted right-to-left.
Supported values	<ul style="list-style-type: none"> <li>■ A list of code pages, separated by semicolons. For example, 1255;1256. Default is 1255.</li> </ul>
Legacy name	CustomShortcutRTLCodePages

## Do not archive pending reminders (Exchange Archiving General setting)

Description	Controls whether Enterprise Vault archives items that have pending reminders.
Supported values	<ul style="list-style-type: none"> <li>■ Off. Items that have pending reminders are archived.</li> <li>■ On (default). Items that have pending reminders within the next five years are not archived.</li> </ul>
Legacy name	DontArchiveItemsPendingReminder

## Encode custom body using appropriate code pages (Exchange Archiving General setting)

Description	Use the appropriate ANSI code pages (rather than always using Unicode) when encoding the bodies of customized Enterprise Vault shortcuts.
Supported values	<ul style="list-style-type: none"> <li>■ Off. Use Unicode when encoding the bodies of customized Enterprise Vault shortcuts.</li> <li>■ On. Always use ANSI code pages when encoding the bodies of customized Enterprise Vault shortcuts.</li> </ul>
Legacy name	EncodeCustomBodyUsingAppropriateCodePages

## Future item retention category (Exchange Archiving General setting)

Description	<p>The name of the retention category to use for calendar, meeting, and task items that have end dates in the future; that is, unexpired calendar, meeting, and task items. The retention category must exist.</p> <p>If Enterprise Vault storage expiry for your site is based on the archived date of an item, then archived calendar, meeting, or task items with an end date in the future could be deleted by Enterprise Vault storage expiry before the end date of the item. To prevent this, you can create a retention category that Enterprise Vault will apply automatically to such items when they are archived, and specify this retention category in this policy setting. In the retention category properties, we recommend that you set the value of <b>Base expiry on</b> to <b>Modified date</b>, and configure the retention period as <b>Retain items forever</b>.</p> <p><b>Note:</b> The retention category will not be applied retrospectively to items that have already been archived.</p>
Supported values	<ul style="list-style-type: none"><li>■ The name of an existing retention category that you have set up to be used for these items. For example, <b>Future Calendar Items</b>.</li><li>■ Leave blank to use the default retention category for the provisioning group. This is the default value.</li></ul>
Legacy name	FutureItemsRetCat

## Include default and anonymous permissions (Exchange Archiving General setting)

Description	<p>Controls whether Enterprise Vault includes Default and Anonymous permissions when synchronizing each mailbox with its default archive.</p> <p>Enterprise Vault automatically removes existing Default and Anonymous user settings from archives unless you choose to synchronize them.</p>
Supported values	<ul style="list-style-type: none"><li>■ Off (default). Do not synchronize Default or Anonymous permissions.</li><li>■ On. Synchronize Default and Anonymous permissions. This has the side-effect that users can view each others' archives.</li></ul>
Legacy name	IncludeDefOrAnonPerms

## Inherited permissions (Exchange Archiving General setting)

Description	Controls whether Enterprise Vault includes inherited permissions when synchronizing permissions between mailboxes and archives.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Do not synchronize inherited permissions.</li> <li>■ On. Synchronize inherited permissions.</li> </ul>
Legacy name	IncludeInheritedRights

## Maximum message size to archive in MB (Exchange Archiving General setting)

Description	Controls the maximum size of messages that are archived.
Supported values	<ul style="list-style-type: none"> <li>■ 0. No restriction on maximum message size.</li> <li>■ Integer larger than 0. The maximum size of messages that are archived, in megabytes. Default is 250.</li> </ul>
Legacy name	MaxMessageSizeToArchiveMB

## Pending shortcut timeout (Exchange Archiving General setting)

Description	Specifies the number of days to allow items to remain in the state of archive-pending, restore-pending, or delete-pending before they are reset.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Archive-pending, restore-pending, and delete-pending shortcuts are never reset.</li> <li>■ 0. When run in report mode, Exchange Mailbox tasks reset all archive-pending, restore-pending, and delete-pending shortcuts. When run in normal mode, the shortcuts are not reset.</li> <li>■ Any integer larger than zero. Archive-pending, restore-pending, and delete-pending shortcuts that are older than this number of days are reset. This happens in both normal archiving and in Report Mode.</li> </ul>
Legacy name	PendingShortcutTimeout

## Reset archive names (Exchange Archiving General setting)

Description	Controls whether, during synchronization, archive names are automatically changed to match mailboxes names.
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- Supported values
- Off. During synchronization archive names are never changed.
  - On (default). During synchronization, archive names are automatically changed if necessary to match mailbox names.

Legacy name      ResetArchiveNames

## Set failed messages 'Do Not Archive' (Exchange Archiving General setting)

Description

If an item cannot be archived, the default Exchange Mailbox task behavior is to reprocess the item on the next archiving run because such items can often be successfully archived on a second try.

This setting enables you to change the behavior so items that fail archiving are marked as Do Not Archive and thus are not reprocessed on the next archiving run.

- Supported values
- Off (default). Failed items are not marked as Do Not Archive.
  - On. Failed items are marked as Do Not Archive.

Legacy name      SetFailedMsgsDoNotArchive

## Shortcut sync for mail clients (Exchange Archiving General setting)

Description

Controls whether Enterprise Vault creates shortcuts for items in the cache of a simple mail client, such as Microsoft Entourage. This setting applies to registered Entourage mailboxes only.

Because of the way in which shortcuts are synchronized, this setting has no effect when it is used with the following email clients:

- Entourage 2008 Web Services Edition
- Outlook 2011 for Mac

The setting applies to Entourage 2004 and Entourage 2008 only.

- Supported values
- Off (default). Do not create shortcuts.
  - On. Create shortcuts for items in the cache.

## Strip attachments to non-shortcut items (Exchange Archiving General setting)

Description	Controls whether attachments are removed from calendar items, meeting items (including requests, responses and cancellations), task and task request items, and contacts after archiving. These items are not changed into Enterprise Vault shortcuts when they are archived. If Enterprise Vault removes an attachment, it replaces it with a link to the attachment.
Supported values	<ul style="list-style-type: none"> <li>■ On (default). Attachments are removed from non-shortcut items after archiving.</li> <li>■ Off. Attachments are not removed from non-shortcut items after archiving.</li> </ul>
Legacy name	StripAttachmentsToNonShortcutItems

## Synchronize folder permissions (Exchange Archiving General setting)

Description	Controls whether synchronization of delegate and shared folder permissions within mailboxes are synchronized. If these are not synchronized, only mailbox owners have access to the corresponding archives. For example, this prevents delegates, from having access to mailbox archives.
Supported values	<ul style="list-style-type: none"> <li>■ Off. Folder permissions are not synchronized.</li> <li>■ On (default). Folder permissions are synchronized.</li> </ul>
Legacy name	SynchronizeFolderPermissions

## Warn if default or anonymous permissions exist (Exchange Archiving General setting)

Description	<p>Controls whether Enterprise Vault places an entry in the Enterprise Vault Event Log when a folder has Default or Anonymous permissions set.</p> <p>The warning looks similar to the following:</p> <div><div>Date: 29/06/2004</div><div>Source: Enterprise Vault</div><div>Time: 18:00:42</div><div>Category: Archive Service</div><div>Type: Warning</div><div>Event ID: 3284</div><div>User: N/A</div><div>Computer: DEMO</div></div> <p>Description:</p> <p>The folder has Anonymous permissions set that grant all users access to this folder. By default, this has not been synchronized to the users archive.</p> <p>MailboxDn: /o=Admin/ou=First Administrative Group/cn=Recipients/cn=HardyO</p> <p>FolderPath: Inbox</p>
Supported values	<ul style="list-style-type: none"><li>■ Off. Do not warn when a folder has Default or Anonymous permissions set.</li><li>■ On (default). Warn when a folder has Default or Anonymous permissions set.</li></ul>
Legacy name	WarnWhenDefOrAnonPerms

## Warn when mailbox not under quota after archiving run (Exchange Archiving General setting)

Description	<p>Controls whether a warning is entered in to the event log when too few archivable items were available to take a mailbox below the quota-free level setting.</p>
Supported values	<ul style="list-style-type: none"><li>■ Off. Never log a warning if too few items were available to reduce the mailbox to the required usage level.</li><li>■ On (default). Log a warning if too few items were available to reduce the mailbox to the required usage level.</li></ul>
Legacy name	WarnNotEnoughArchivedForQuota



# Exchange desktop policy advanced settings

These settings control advanced aspects of Exchange desktop policy configuration.

There are four categories of Exchange desktop policy advanced settings:

- [Outlook \(Exchange desktop policy advanced settings\)](#)
- [OWA \(Exchange desktop policy advanced settings\)](#)
- [Vault Cache \(Exchange desktop policy advanced settings\)](#)
- [Virtual Vault \(Exchange desktop policy advanced settings\)](#)

## Outlook (Exchange desktop policy advanced settings)

The Outlook settings enable you to control the behavior of the Enterprise Vault Outlook Add-In. Except where noted, none of the settings has any effect in the Enterprise Vault Client for Mac OS X.

The Outlook settings are:

- [Add server to intranet zone \(Exchange Outlook setting\)](#)
- [Allow script in public folders \(Exchange Outlook setting\)](#)
- [Allow script in shared folders \(Exchange Outlook setting\)](#)
- [Allow shortcut copy \(Exchange Outlook setting\)](#)
- [Automatically delete IE file cache \(Exchange Outlook setting\)](#)
- [Automatically re-enable Outlook add-in \(Exchange Outlook setting\)](#)
- [Behavior when Archive Explorer closes \(Exchange Outlook setting\)](#)
- [Deploy forms locally \(Exchange Outlook setting\)](#)
- [Folder properties visible \(Exchange Outlook setting\)](#)
- [Force form reload on error \(Exchange Outlook setting\)](#)
- [Forward original item \(Exchange Outlook setting\)](#)
- [Launch Archive Explorer \(Exchange Outlook setting\)](#)
- [Limit automatic re-enabling of add-in \(Exchange Outlook setting\)](#)
- [Mailbox properties visible \(Exchange Outlook setting\)](#)
- [Mark PST files \(Exchange Outlook setting\)](#)
- [Message properties visible \(Exchange Outlook setting\)](#)
- [Outlook Add-In behavior \(Exchange Outlook setting\)](#)

- [Policy lookup locations \(Exchange Outlook setting\)](#)
- [Printing behavior \(Exchange Outlook setting\)](#)
- [PST Import pause interval \(Exchange Outlook setting\)](#)
- [PST Import work check interval \(Exchange Outlook setting\)](#)
- [PST search interval \(Exchange Outlook setting\)](#)
- [Public Folder operations \(Exchange Outlook setting\)](#)
- [Remove PST entries \(Exchange Outlook setting\)](#)
- [Remove server from intranet zone \(Exchange Outlook setting\)](#)
- [Reply behavior \(Exchange Outlook setting\)](#)
- [RPC over HTTP connection \(Exchange Outlook setting\)](#)
- [RPC over HTTP Proxy URL \(Exchange Outlook setting\)](#)
- [RPC over HTTP restrictions \(Exchange Outlook setting\)](#)
- [Search behavior \(Exchange Outlook setting\)](#)
- [Shortcut download progress \(Exchange Outlook setting\)](#)
- [Soft deletes \(Exchange Outlook setting\)](#)
- [Use proxy settings \(Exchange Outlook setting\)](#)
- [Web Application URL \(Exchange Outlook setting\)](#)

## Add server to intranet zone (Exchange Outlook setting)

Description	<p>Adds the listed servers to the Internet Explorer local intranet zone.</p> <p>If you use this setting, users are not prompted for their logon details when they search their archives or view or restore archived items.</p> <p>The change applies to the current user only, so other users of the same computer are unaffected.</p> <p>If the user does not have permission to modify Internet Explorer, the security settings are not changed and no error is generated.</p> <p>You cannot use this setting if you have applied Federal Desktop Core Configuration (FDCC) group policy objects (GPO) to Windows XP and Vista computers in your organization. On FDCC-compliant desktops users cannot change settings in the local intranet zone on their computers. For instructions on how you can configure Internet Explorer for these users, see the section <i>Publishing Enterprise Vault server details to FDCC compliant computers</i> in the <i>Installing and Configuring</i> manual.</p>
Supported values	<p>■ A text string. Defines the computers to be added to the Internet Explorer local intranet zone. The string can contain wildcard characters, domain names, DNS aliases, or IP addresses.</p> <p>To specify multiple computers, separate the names using a semicolon (;).</p> <p>The syntax is as follows:</p> <pre>computer1[;computer2][;computer3]...</pre> <p>Some examples of text strings are as follows:</p> <pre>webserver.mycorp.com *.mycorp.com mywebserver;*.mycorp.com</pre>
Legacy name	AddServerToIntranetZone

## Allow script in public folders (Exchange Outlook setting)

Description	Controls whether the Outlook Add-In automatically sets the Allow Script In Public Folders setting. This setting is required in order for the Outlook Add-In to open shortcuts that are in public folders.
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Supported values	<ul style="list-style-type: none"><li>■ Force off. The Outlook Add-In cannot open shortcuts that are in public folders.</li><li>■ Force on (default). The Outlook Add-In can open shortcuts that are in public folders.</li><li>■ Keep user's setting. The user's Outlook setting of Allow Script In Public Folders is not changed.</li></ul>
Legacy name	AllowScriptPublicFolders

### Allow script in shared folders (Exchange Outlook setting)

Description	Controls whether the Outlook setting Allow Script In Shared Folders is automatically set by the Outlook Add-In. This setting is required in order for the Outlook Add-In to be able to open shortcuts that are in shared folders.
Supported values	<ul style="list-style-type: none"><li>■ Force off. The Outlook Add-In cannot open shortcuts that are in shared folders.</li><li>■ Force on (default). The Outlook Add-In can open shortcuts that are in shared folders.</li><li>■ Keep user's setting. The user's Outlook setting of Allow Script In shared Folders is not changed.</li></ul>
Legacy name	AllowScriptSharedFolders

### Allow shortcut copy (Exchange Outlook setting)

Description	Controls the behavior when a user tries to copy a shortcut. It is possible to make Enterprise Vault restore the original item, rather than copy the shortcut. This can prevent any confusion that could arise if an archived item is later deleted, leaving orphaned shortcuts that no longer work.
Supported values	<ul style="list-style-type: none"><li>■ Off (default). When a user tries to copy a shortcut, a message is displayed explaining that the item cannot be copied, but it can be copied after the item is restored.</li><li>■ On. The user is allowed to copy the shortcut. (This is the same behavior as in Enterprise Vault versions before 6.0.) If the user later deletes the shortcut and the corresponding archived item, any copies of the shortcut will no longer work.</li></ul>
Legacy name	AllowCopyShortcut

## Automatically delete IE file cache (Exchange Outlook setting)

Description	Controls whether the Enterprise Vault add-in to Outlook automatically deletes a user's Temporary Internet files if the Internet Explorer cache is preventing archived items from being displayed.
Supported values	<ul style="list-style-type: none"> <li>■ Do not delete files (default). Temporary Internet files are never deleted.</li> <li>■ Delete files and tell user. The Temporary Internet files are deleted and a message informs the user that they have been deleted.</li> <li>■ Delete files silently. The Temporary Internet files are deleted and the user is not informed.</li> <li>■ Ask user. The user is asked whether the Temporary Internet files should be deleted.</li> </ul>
Legacy name	AutoDeleteIECache

## Automatically re-enable Outlook add-in (Exchange Outlook setting)

Description	Controls whether the Enterprise Vault Outlook Add-In is automatically re-enabled if it has been disabled.
Supported values	<ul style="list-style-type: none"> <li>■ Do not re-enable. The Outlook Add-In is never automatically re-enabled if it has been disabled.</li> <li>■ Re-enable and tell user (default). The Outlook Add-In is automatically re-enabled if it has been disabled and a message informs the user that this has happened.</li> <li>■ Re-enable silently. The Outlook Add-In is automatically re-enabled if it has been disabled and the user is not informed.</li> <li>■ Ask user. The user is asked whether the Outlook Add-In should be re-enabled.</li> </ul>
Legacy name	AutoReEnable

## Behavior when Archive Explorer closes (Exchange Outlook setting)

Description	Controls whether there is a forced refresh of the view when exiting from Archive Explorer on Outlook 2003. This overcomes a problem with some screens not refreshing properly.
Supported values	<ul style="list-style-type: none"> <li>■ No refresh. No forced refresh.</li> <li>■ Refresh (default). Force a refresh.</li> </ul>

Legacy name

UseFolderSwitchOnAEClose

### Deploy forms locally (Exchange Outlook setting)

Description	<p>Controls how the Enterprise Vault Exchange forms are deployed to users' Personal Form Libraries.</p> <p>This setting enables you to control the deployment of Enterprise Vault Exchange forms in an environment in which there is no Organizational Forms library.</p> <p>If you choose to deploy forms locally, the forms are automatically updated when you upgrade to a later version of Enterprise Vault.</p>
Supported values	<div><div>■</div>Never. Never deploy the Enterprise Vault Exchange forms to users' Personal Form Libraries.</div> <div><div>■</div>When no Org Forms. Deploy to users' Personal Form Libraries when there is no Organization Forms Library.</div> <div><div>■</div>Always (default). Always deploy forms locally.</div> <div><div>■</div>Delete. Delete locally-deployed forms. This may be useful if, for example, your Exchange Server environment changes so that an Organizational Forms Library becomes available. This setting enables you to remove all locally-deployed forms from users' computers.</div> <div><p>When upgrading to a later Enterprise Vault version, you do not need to use this option to delete existing local forms. The forms are automatically upgraded.</p></div>
Legacy name	DeployFormsLocally

### Folder properties visible (Exchange Outlook setting)

Description	<p>Controls whether folder properties show the Enterprise Vault property tab.</p> <p>If you have locked all the Enterprise Vault settings, you may want to hide the property tab too.</p> <p>By hiding the property tab, you are in effect locking all the settings, because users cannot get to the tab page to change them.</p>
Supported values	<div><div>■</div>Hide tab. Enterprise Vault folder properties are hidden.</div> <div><div>■</div>Show tab (default). Enterprise Vault folder properties are shown.</div>
Legacy name	FolderPropertiesVisible

## Force form reload on error (Exchange Outlook setting)

Description	<p>Controls whether the Outlook registry entry ForceFormReload is written to force Outlook to reload forms on error.</p> <p>Note that this registry entry applies to all Outlook forms, so changing this setting may affect other applications.</p> <p>See the following Microsoft articles for more information:</p> <ul style="list-style-type: none"> <li>■ <a href="http://support.microsoft.com/kb/839804">http://support.microsoft.com/kb/839804</a> (Outlook 2003)</li> <li>■ <a href="http://support.microsoft.com/kb/919596">http://support.microsoft.com/kb/919596</a> (Outlook 2007)</li> </ul>
Supported values	<ul style="list-style-type: none"> <li>■ Remove entry. Remove the registry entry. This means that Outlook does not reload forms on error.</li> <li>■ Write entry (default). Write the registry entry. This forces Outlook to reload forms on error.</li> </ul>
Legacy name	SetForceFormReload

## Forward original item (Exchange Outlook setting)

Description	Controls the behavior when a user forwards a shortcut. The default is to forward the archived item, but it is possible to forward the contents of the shortcut itself.
Supported values	<ul style="list-style-type: none"> <li>■ Shortcut. Forward the shortcut.</li> <li>■ Original (default). Forward the archived item. Items of type IPM.Document or IPM.Appointment cannot be forwarded. If a user tries to forward one of these an explanatory message is displayed.</li> </ul>
Legacy name	ForwardOriginalItem

## Launch Archive Explorer (Exchange Outlook setting)

Description	<p>Controls whether Archive Explorer appears integrated with the Outlook window or appears in a separate Web browser window.</p> <p>Note that there is also an equivalent registry value that you can set on individual computers.</p> <p>To set the registry value, create a DWORD value that is called LaunchAEInBrowser under the following registry key on the user's computer:</p> <pre>HKEY_CURRENT_USER\SOFTWARE\KVS\Enterprise Vault\Client</pre> <p>Give LaunchAEInBrowser a value of 1 to force Archive Explorer to appear in a separate browser window, or 0 to make Archive Explorer appear integrated with the Outlook window.</p>
Supported values	<ul style="list-style-type: none"><li>■ In Outlook (default). Archive Explorer appears integrated with the Outlook window.</li><li>■ Separate browser. Archive Explorer appears in a separate Web browser window.</li></ul>
Legacy name	LaunchAEInBrowser

## Limit automatic re-enabling of add-in (Exchange Outlook setting)

Description	Controls the maximum number of times in any seven-day period that the Outlook Add-In can re-enable itself as an Outlook add-in.
Supported values	<ul style="list-style-type: none"><li>■ An integer specify the maximum number of times that the Outlook Add-In can re-enable itself in any seven-day period. The default is 3.</li></ul>
Legacy name	MaxAutoReEnables



## Mailbox properties visible (Exchange Outlook setting)

Description	<p>Controls whether the mailbox properties show the Enterprise Vault property tab.</p> <p>If you have locked all the Enterprise Vault settings, you may want to hide the property tab too.</p> <p>By hiding the property tab, you are in effect locking all the settings, because users cannot get to the tab page to change them.</p> <p>The Enterprise Vault mailbox properties tab is not available in Outlook 2010.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Hide tab. Mailboxes hide the Enterprise Vault property tab.</li> <li>■ Show tab (default). Mailboxes show the Enterprise Vault property tab.</li> </ul>
Legacy name	MailboxPropertiesVisible

## Mark PST files (Exchange Outlook setting)

Description	<p>Controls whether the Enterprise Vault client marks PST files with details of the owning account. This is useful if you are migrating the contents of PST files to Enterprise Vault.</p> <p>When marking is switched on then, when Outlook starts, the Enterprise Vault client tries to open every PST that is listed in the user's Outlook profile. Users are prompted for passwords to password-protected PSTs and receive error messages for any PSTs that are inaccessible.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Off. The Enterprise Vault client does not mark PST files</li> <li>■ On (default). The Enterprise Vault client marks PST files with details of the owning account.</li> </ul>
Legacy name	MarkPSTs

## Message properties visible (Exchange Outlook setting)

Description	<p>Controls whether individual message properties show the Enterprise Vault property tab. If you have locked all the Enterprise Vault settings, you may want to hide the property tab too.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Hide tab. Messages hide the Enterprise Vault property tab.</li> <li>■ Show tab (default). Messages show the Enterprise Vault property tab.</li> </ul>

Legacy name

MessagePropertiesVisible

## Outlook Add-In behavior (Exchange Outlook setting)

Description	<p>Controls whether the Enterprise Vault Outlook Add-In is in full mode or light mode.</p> <p>In full mode, there are no functional restrictions on the behavior of the Outlook Add-In.</p> <p>In light mode, the following restrictions apply:</p> <ul style="list-style-type: none"><li>■ Users have no access to the Enterprise Vault properties of folders.</li><li>■ When users archive items manually, they cannot specify the destination archive and retention category.</li><li>■ When users restore archived items, they cannot choose the destination folder. The Outlook Add-In only restores items to the folders where the shortcuts are.</li></ul>
Supported values	<ul style="list-style-type: none"><li>■ Full. The Outlook Add-In is in full mode.</li><li>■ Light (default). The Outlook Add-In is in light mode.</li></ul> <p>If you decide to set Outlook Add-In behavior to Light, and your existing policies allow users to change Enterprise Vault folder settings, you may want to run Policy Manager to return all folders to your site settings. See the <i>Utilities</i> guide for more information on Policy Manager.</p> <p>If the Outlook Add-In version is earlier than Enterprise Vault 10.0.1, the Outlook Add-In behavior setting controls whether the Outlook Add-In behaves in exactly the same way as the HTTP-Only Outlook Add-In. In this case, the values have the following meanings:</p> <ul style="list-style-type: none"><li>■ Full. Outlook Add-In behavior is unchanged.</li><li>■ Light (default). The Outlook Add-In behaves in exactly the same way as the HTTP-Only Outlook Add-In.</li></ul>
Legacy name	UseSelfInstallFunc

## Policy lookup locations (Exchange Outlook setting)

**Description** You can set Enterprise Vault Outlook Add-In registry values on a user's computer. If there is an equivalent policy value in the Exchange desktop policy in the Administration Console, the registry value overrides the Exchange desktop policy.

**Policy lookup locations** lets you control the use of registry values on users' computers to override the Exchange desktop policy. You can specify the following types of policy lookup:

- Look only in the Exchange desktop policy.
- Look in the registry first. If there is no registry value, use the policy value in the Exchange desktop policy.

For information about the Outlook Add-In registry values, see the *Registry Values* guide.

Supported values	<div><div><div>■ Policy only. The Outlook Add-In looks only in the Exchange desktop policy.</div><div>■ Policy, registry HKLM. The Outlook Add-In looks in the following registry key:<div><div>HKEY_LOCAL_MACHINE</div><div>\SOFTWARE</div><div>\KVS</div><div>\Enterprise Vault</div><div>\Client</div></div></div></div><div><div>If the policy value is not in this registry key, the Outlook Add-In uses the policy value in the Exchange desktop policy. If there is no equivalent policy value in the Exchange desktop policy, the Outlook Add-In uses the registry value default.</div><div>■ Policy, registry HKLM, registry HKCU (default). The Outlook Add-In looks in the following registry keys, in this order. Only the Vault Cache and Virtual Vault registry values can be located in the second of these registry keys.</div></div><div><div>HKEY_LOCAL_MACHINE</div><div>\SOFTWARE</div><div>\KVS</div><div>\Enterprise Vault</div><div>\Client</div></div><div><div>HKEY_CURRENT_USER</div><div>\SOFTWARE</div><div>\KVS</div><div>\Enterprise Vault</div><div>\Client</div><div>\VaultCacheStoreID</div></div><div><div>HKEY_CURRENT_USER</div><div>\SOFTWARE</div><div>\KVS</div><div>\Enterprise Vault</div><div>\Client</div></div><div><div>If the policy value is not in these registry keys, the Outlook Add-In uses the policy value in the Exchange desktop policy. If there is no equivalent policy value in the Exchange desktop policy, the Outlook Add-In uses the registry value default.</div></div></div>
Legacy name	RestrictPolicyLookup

## Printing behavior (Exchange Outlook setting)

Description	Controls the behavior when a user prints a shortcut. The default is to print the contents of the archived item, rather than the shortcut.
Supported values	<ul style="list-style-type: none"> <li>■ Shortcut. Print the contents of the shortcut.</li> <li>■ Archived item (default). Print the contents of the archived item.</li> </ul>
Legacy name	PrintOriginalItem

## PST Import pause interval (Exchange Outlook setting)

Description	<p>When using client-driven PST migration, this controls the amount of time the Outlook Add-In waits between completing the import of one PST file and starting the import of the next.</p> <p>This is also the time that the Outlook Add-In waits after Outlook is started before continuing with PST file import.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Integer. When importing PST files, the number of minutes to wait between PST files and the number of minutes to wait after Outlook starts before continuing PST file import.</li> </ul> <p>The default is 1 (minute).</p>
Legacy name	PSTImportPauseInterval

## PST Import work check interval (Exchange Outlook setting)

Description	The number of minutes client-driven PST migration waits, having completed its work, before checking for more work.
Supported values	<ul style="list-style-type: none"> <li>■ Integer. An integer value specifying the number of minutes to wait before checking for more work.</li> </ul> <p>The default is 60.</p>
Legacy name	PSTImportNoWorkPauseInterval

## PST search interval (Exchange Outlook setting)

Description	When using client-driven PST migration, this controls the amount of time that the Outlook Add-In waits after searching a user's computer for PST files before searching again.
Supported values	<ul style="list-style-type: none"> <li>■ Integer. Indicates the number of days to wait between searches.</li> </ul> <p>The default is 7 (days).</p>

Legacy name

PSTSearchInterval

## Public Folder operations (Exchange Outlook setting)

Description	<div>Controls whether users can do the following:</div> <ul style="list-style-type: none"><li>■ Manually archive from public folders.</li><li>■ Manually restore from public folders</li><li>■ In public folders, delete shortcuts and their corresponding archived items</li></ul>
Supported values	<ul style="list-style-type: none"><li>■ Off (default). Users can archive, restore, or delete in public folders. Users must be enabled for mailbox archiving and must have Editor, Publishing Editor, or Owner permissions on the folders that they want to modify.</li><li>■ On. Users cannot archive, restore, and delete in public folders.</li></ul>
Legacy name	DisablePublicFolderOps

## Remove PST entries (Exchange Outlook setting)

Description	<div>Controls whether PST file entries are removed from users' profiles when the migration of the corresponding PST files is complete.</div> <p>You can combine the values as required. For example, to remove PST entries for PST files that are hidden (4) or read-only (2), you would set Remove PST Entries to 6.</p>
Supported values	<ul style="list-style-type: none"><li>■ 0 (default). Do not remove the profile entry after migrating a PST file.</li><li>■ 1. Remove the profile entry if the PST file has been deleted from the user's computer.</li><li>■ 2. Remove the PST entry if the PST file is read-only.</li><li>■ 4. Remove the PST entry if the PST file has the Hidden file attribute set.</li></ul>
Legacy name	RemovePSTEntries

## Remove server from intranet zone (Exchange Outlook setting)

Description	<p>Removes the listed servers from the Internet Explorer local intranet zone.</p> <p>The effect of this is that, unless you set up appropriate access, users are prompted for their user names and passwords when they search their archives or view or restore archived items.</p> <p>The change applies to the current user only, so other users of the same computer are unaffected.</p> <p>If the user does not have permission to modify Internet Explorer the security settings are not changed and no error is generated.</p>
Supported values	<p>■ A text string. Defines the computers to be removed from the Internet Explorer local intranet zone. The string can contain wildcard characters, domain names, DNS aliases, or IP addresses. To specify multiple computers, separate the names using semicolons (;).</p> <p>The syntax is as follows:</p> <pre>computer1[;computer2][;computer3]...</pre> <p>Some examples of text strings are as follows:</p> <pre>webserver.mycorp.com *.mycorp.com mywebserver;*.mycorp.com</pre>
Legacy name	RemoveServerFromIntranetZone

## Reply behavior (Exchange Outlook setting)

Description	Controls the behavior when a user replies to a shortcut. The default is to include the contents of the archived item, but it is possible to include the contents of the shortcut itself.
Supported values	<p>■ Shortcut. Include the contents of the shortcut in the reply. (This is the same behavior as in Enterprise Vault versions before 6.0.)</p> <p>■ Original (default). Include the contents of the archived item.</p>
Legacy name	ReplyToOriginalItem

## RPC over HTTP connection (Exchange Outlook setting)

Description	Controls the connection to use when the Outlook Add-In contacts the Enterprise Vault Web Access Application using RPC over HTTP.
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Supported values	<ul style="list-style-type: none"><li>■ Use proxy (default). With Exchange Server 2003, clients connect to the Web server on the Exchange RPC proxy server. In an Exchange Server 2007 or later environment, Outlook Anywhere clients connect to the Enterprise Vault Web Access application on the Enterprise Vault proxy server.</li><li>■ Direct. Connect directly to the Enterprise Vault Web Access application on the Enterprise Vault server that hosts the archive.</li></ul>
Legacy name	RPCOverHTTPUseDirectConnection

### RPC over HTTP Proxy URL (Exchange Outlook setting)

Description	<p>Enables you to specify an alternative URL for Enterprise Vault clients to contact when Outlook is configured to use RPC over HTTP.</p> <p>If <b>RPC over HTTP connection</b> is set to <b>Use proxy</b>, then Exchange Server 2003 RPC over HTTP clients connect to the virtual directory, EnterpriseVaultProxy, on the Exchange RPC proxy server. In an Exchange Server 2007 or later environment, Outlook Anywhere clients connect to the virtual directory, EnterpriseVault, on the Enterprise Vault proxy server.</p> <p>If you change the name of the virtual directory, then you can use this setting to specify the alternative URL. For example, if you change the virtual directory name to EVProxy, then you use the <b>RPC over HTTP Proxy URL</b> setting to specify the URL</p> <p><code>HTTP://Web_server/EVProxy</code></p> <p>where <i>Web_server</i> is the name of the proxy server.</p>
Supported values	<ul style="list-style-type: none"><li>■ A URL. Alternative URL for Enterprise Vault clients to contact when Outlook is configured to use RPC over HTTP.</li></ul>
Legacy name	RPCOverHTTPProxyURL

### RPC over HTTP restrictions (Exchange Outlook setting)

Description	<p>Controls the behavior of the Enterprise Vault Outlook Add-In when Outlook is configured to use RPC over HTTP.</p> <p>On a default installation, the Outlook Add-In is disabled for use with RPC over HTTP.</p>
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Supported values	<ul style="list-style-type: none"> <li>■ None. All Enterprise Vault client Add-In functionality is available when using RPC over HTTP.</li> <li>■ Disable User Extensions (default). Connecting to Enterprise Vault using RPC over HTTP is not enabled in the Enterprise Vault client.</li> <li>■ Disable Vault Cache. Vault Cache is disabled when using RPC over HTTP.</li> <li>■ Disable PST Import. Client-side PST migration is disabled when using RPC over HTTP.</li> <li>■ Disable Vault Cache and PST Import. Both Vault Cache and client-side PST migration are disabled when using RPC over HTTP.</li> </ul>
Legacy name	RPCOverHTTPRestrictions

## Search behavior (Exchange Outlook setting)

Description	<p>Controls the behavior of the <b>Search Vaults</b> menu option and the <b>Search Vaults</b> button.</p> <p>This setting affects users of the Enterprise Vault Outlook Add-In only. For users of the Enterprise Vault Client for Mac OS X, the Enterprise Vault Web Access application always opens in a separate Web browser window.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Separate browser. The search always uses the Enterprise Vault Web Access application in a separate Web browser window.</li> <li>■ In Outlook (default). The search is always the new-style page that appears in Outlook if the user has the prerequisite software. If the user does not have the prerequisite software, the page appears in a separate Web browser window.</li> </ul>
Legacy name	UseNewStyleSearch

## Shortcut download progress (Exchange Outlook setting)

Description	<p>Controls the display of the progress window that appears when a user opens a shortcut and the item is being downloaded to the user's computer.</p> <p>This setting is effective in both Outlook and Entourage.</p>
Supported values	<ul style="list-style-type: none"> <li>■ 0. Do not display download dialog at all.</li> <li>■ An integer greater than zero. Show the progress dialog after this number of seconds. Default is 1 (second).</li> </ul>
Legacy name	DownloadShortcutHideProgress

## Soft deletes (Exchange Outlook setting)

Description	<p>Controls the behavior when a user deletes a shortcut and an archived item. The default is to perform a permanent deletion of the shortcut; that is, a deletion that is not recoverable in Exchange. If the permanent deletion fails, a recoverable deletion is performed.</p> <p>In Outlook 2003/2007, the permanent deletion always fails when Outlook is in Cached Exchange Mode.</p> <p>If recoverable deletion is unacceptable, set the value to Off.</p>
Supported values	<ul style="list-style-type: none"><li>■ On (default). Allow recoverable deletion.</li><li>■ Off. Do not allow recoverable deletion and display an error message instead.</li></ul>
Legacy name	NoSoftDeletes

## Use proxy settings (Exchange Outlook setting)

Description	Controls whether the Outlook Add-In uses the proxy settings on the client computer.
Supported values	<ul style="list-style-type: none"><li>■ Use proxy settings (default).</li><li>■ Ignore proxy settings.</li></ul>
Legacy name	InternetOpenTypeDirect

## Web Application URL (Exchange Outlook setting)

Description	<p>Specifies the address of the Web Access application in one or more different vault sites. This setting enables shortcuts from the specified vault sites to work.</p> <p>For example, you need to use this setting in the following cases:</p> <ul style="list-style-type: none"><li>■ When you want users to be able to access archived items from mailbox shortcuts in other vault sites</li><li>■ When Exchange Public Folder tasks from more than one vault site process a public folder hierarchy</li></ul>
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- Supported values ■ The URLs of Web Access applications in other vault sites. Enter one or more addresses in the following format:
- ```
[site1_dns_alias]=URL; [site2_dns_alias]=URL
```
- where:
- *site1\_dns\_alias* and *site2\_dns\_alias* are the DNS aliases of other vault sites.
  - *URL* is the address of the Web Access application in the vault site.
- If you specify multiple addresses, separate them with semicolons (;). The overall length of the string cannot exceed 255 characters. For example:
- ```
[site1.server.com]=http://site1.server.com/EnterpriseVault;[site2...
```

Legacy name      WebAppURL

## OWA (Exchange desktop policy advanced settings)

The OWA settings let you control the behavior of OWA 2003 or later clients. The OWA settings are:

- [Archive confirmation \(Exchange OWA setting\)](#)
- ['Archive Explorer' in Basic OWA client \(Exchange OWA setting\)](#)
- ['Archive Explorer' in Premium OWA client \(Exchange OWA setting\)](#)
- [Archive subfolders \(Exchange OWA setting\)](#)
- [Basic archive function \(Exchange OWA setting\)](#)
- [Basic restore function \(Exchange OWA setting\)](#)
- [Client connection \(Exchange OWA setting\)](#)
- [Delete shortcut after restore \(Exchange OWA setting\)](#)
- [Forward mode \(Exchange OWA setting\)](#)
- [Location for restored items \(Exchange OWA setting\)](#)
- [Open mode \(Exchange OWA setting\)](#)
- [OWA 'Archive Policy' context menu option \(Exchange OWA setting\)](#)
- [Premium archive function \(Exchange OWA setting\)](#)
- [Premium restore function \(Exchange OWA setting\)](#)
- [Reply mode \(Exchange OWA setting\)](#)

- 'Reply To All' mode (Exchange OWA setting)
- Restore confirmation (Exchange OWA setting)
- 'Search Vaults' in Basic OWA client (Exchange OWA setting)
- 'Search Vaults' in Premium OWA client (Exchange OWA setting)
- View mode (Exchange OWA setting)
- Web Application alias (Exchange OWA setting)

### Archive confirmation (Exchange OWA setting)

Description	Specifies whether there is a confirmation prompt when a user tries to archive an item manually.
Supported values	<ul style="list-style-type: none"><li>■ Off. No confirmation.</li><li>■ On (default). Prompt for confirmation.</li></ul>
Legacy name	OWA2003ArchiveConfirmation

### 'Archive Explorer' in Basic OWA client (Exchange OWA setting)

Description	Controls whether the <b>Archive Explorer</b> option is available on the navigation bar of the OWA Basic client.
Supported values	<ul style="list-style-type: none"><li>■ Off. The <b>Archive Explorer</b> option is hidden.</li><li>■ On (default). The <b>Archive Explorer</b> option is available.</li></ul>
Legacy name	OWA2003ArchiveExplorerFromBasicNavbar

### 'Archive Explorer' in Premium OWA client (Exchange OWA setting)

Description	Controls whether the <b>Archive Explorer</b> option is available on the navigation bar of the OWA Premium client.
Supported values	<ul style="list-style-type: none"><li>■ Off. The <b>Archive Explorer</b> option is hidden.</li><li>■ On (default). The <b>Archive Explorer</b> option is available.</li></ul>
Legacy name	OWA2003ArchiveExplorerFromPremiumNavbar

## Archive subfolders (Exchange OWA setting)

Description	For manual archiving, controls whether subfolders are archived if they are included in a user's selection.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Subfolders are not archived.</li> <li>■ On. Subfolders are archived.</li> </ul>
Legacy name	OWA2003ArchiveSubFolders

## Basic archive function (Exchange OWA setting)

Description	Controls whether users of the OWA Basic client are allowed to choose archiving settings, such as retention category and destination archive, when archiving items manually.
Supported values	<ul style="list-style-type: none"> <li>■ Basic (default). Users cannot change settings when archiving. The archive settings on Outlook folders are used, which may be set by the user in Outlook or by the administrator.</li> <li>■ Enhanced. Users can select archiving settings when they perform manual archives.</li> </ul>
Legacy name	OWA2003BasicArchiveFunction

## Basic restore function (Exchange OWA setting)

Description	Controls whether the OWA context menu for the OWA Basic client has a <b>Restore</b> option.
Supported values	<ul style="list-style-type: none"> <li>■ Basic (default). There is no <b>Restore</b> option on the context menu.</li> <li>■ Enhanced. There is a <b>Restore</b> option on the context menu.</li> </ul>
Legacy name	OWA2003BasicRestoreFunction

## Client connection (Exchange OWA setting)

Description	<p>Controls the connection to use when OWA clients or Outlook clients using RPC over HTTP contact the Enterprise Vault Web server.</p> <p>In an Exchange Server 2003 environment, the default setting value is <b>Use proxy</b>. This means that OWA 2003 clients and Outlook in RPC over HTTP mode route all Enterprise Vault requests through the front-end/back-end Exchange Servers. Changing this setting to <b>Direct</b> in an Exchange Server 2003 environment has the following effect:</p> <ul style="list-style-type: none"><li>■ OWA 2003 clients connect directly to the Enterprise Vault Web server URL for Archive Explorer and archive search requests.</li><li>■ Outlook clients in RPC over HTTP mode connect to the Enterprise Vault server directly for all Enterprise Vault requests.</li></ul> <p>When OWA 2003 clients access mailboxes through an Exchange Server 2007 CAS, the clients always attempt to contact the Enterprise Vault server directly for Archive Explorer and archive search requests, irrespective of the value of this setting.</p> <p>In an Exchange Server 2007 or later environment, OWA clients always attempt to contact the Enterprise Vault server directly for Archive Explorer and archive search requests, irrespective of the value of this setting. By default, Outlook Anywhere clients always attempt to contact the Enterprise Vault server directly for all Enterprise Vault requests.</p> <p>In an Exchange Server 2007 or later environment, <b>Use proxy</b> has the following effect:</p> <ul style="list-style-type: none"><li>■ OWA clients continue to contact the Enterprise Vault server directly for Archive Explorer and archive search requests, irrespective of the value of the setting.</li><li>■ Outlook Anywhere clients first attempt to connect to the default Enterprise Vault Web server. If the URL cannot be contacted, then the clients attempt to contact an Enterprise Vault proxy server using the RPC over HTTP proxy URL configured in the advanced Outlook settings in the desktop policy. The Enterprise Vault proxy server routes the requests to the Enterprise Vault server that hosts the archive.</li></ul>
Supported values	<ul style="list-style-type: none"><li>■ Use proxy (default)</li><li>■ Direct</li></ul>
Legacy name	OWAClientUseDirectConnection

## Delete shortcut after restore (Exchange OWA setting)

Description	Controls whether a shortcut is deleted when it is used to restore the corresponding archived item.
Supported values	<ul style="list-style-type: none"> <li>■ Retain. The shortcut is not deleted when the archived item is restored.</li> <li>■ Delete (default). The shortcut is deleted when the archived item is restored.</li> </ul>
Legacy name	OWA2003RestoreDeleteShortcut

## Forward mode (Exchange OWA setting)

Description	Controls the behavior when a user chooses to forward an Enterprise Vault shortcut. It is possible to forward either the shortcut itself, or the archived item. The recipients cannot access the archived item unless they have access to the archive.
Supported values	<ul style="list-style-type: none"> <li>■ Shortcut. The shortcut contents are forwarded.</li> <li>■ Archived item (default). The archived item is forwarded.</li> </ul>
Legacy name	OWA2003ForwardMode

## Location for restored items (Exchange OWA setting)

Description	Controls the destination for an item that is restored using a shortcut. The destination can be either of the following: <ul style="list-style-type: none"> <li>■ The current location (the same folder as the shortcut).</li> <li>■ The Enterprise Vault Restored Items folder.</li> </ul>
Supported values	<ul style="list-style-type: none"> <li>■ Current location (default). Restore to the same folder as the shortcut.</li> <li>■ Restored items. Restore to the Restored Items folder.</li> </ul>
Legacy name	OWA2003RestoreToRestoredItems

## Open mode (Exchange OWA setting)

Description	Controls the behavior when a user opens an Enterprise Vault shortcut.
Supported values	<ul style="list-style-type: none"> <li>■ Shortcut. The shortcut itself is opened.</li> <li>■ Archived item (default). The archived item is opened.</li> </ul>

Legacy name

OWA2003OpenMode

## OWA 'Archive Policy' context menu option (Exchange OWA setting)

Description	<p>In Exchange Server 2010 the OWA archive policy enables users to archive items to the secondary Exchange Server mailbox. This setting lets you hide the OWA archive policy options in OWA 2010 Premium clients. Setting the value to <b>On</b> removes the OWA archive policy option from the following menus:</p> <ul style="list-style-type: none"><li>■ Folder context menu</li><li>■ Item context menu (non-conversation view)</li><li>■ Item context menu (conversation view)</li><li>■ Conversation <b>Actions</b> menu</li></ul>
Supported values	<ul style="list-style-type: none"><li>■ On. The option is not displayed in the menus.</li><li>■ Off (default). The option is displayed on the menus.</li></ul>
Legacy name	OWA2010HideOWAArchivePolicy

## Premium archive function (Exchange OWA setting)

Description	<p>Controls whether users of the OWA Premium client are allowed to choose archiving settings, such as retention category and destination archive, when archiving items manually.</p>
Supported values	<ul style="list-style-type: none"><li>■ Basic. Users cannot change settings when archiving. The archive settings on Outlook folders are used, which may be set by the user in Outlook or by the administrator.</li><li>■ Enhanced (default). Users can select archiving settings when they perform manual archives.</li></ul>
Legacy name	OWA2003PremiumArchiveFunction

## Premium restore function (Exchange OWA setting)

Description	<p>Controls whether users of the OWA Premium client are allowed to choose archiving settings, such as retention category and destination archive, when archiving items manually.</p>
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Supported values	<ul style="list-style-type: none"> <li>■ Basic. Users cannot change settings when archiving. The archive settings on Outlook folders are used, which may be set by the user in Outlook or by the administrator.</li> <li>■ Enhanced (default). Users can select archiving settings when they perform manual archives.</li> </ul>
Legacy name	OWA2003PremiumRestoreFunction

### Reply mode (Exchange OWA setting)

Description	Controls the behavior when a user chooses to reply to an Enterprise Vault shortcut.
Supported values	<ul style="list-style-type: none"> <li>■ Shortcut. The shortcut is replied to.</li> <li>■ Archived item (default). The archived item is replied to.</li> </ul>
Legacy name	OWA2003ReplyMode

### 'Reply To All' mode (Exchange OWA setting)

Description	Controls the behavior when a user selects a shortcut and chooses <b>Reply to All</b> .
Supported values	<ul style="list-style-type: none"> <li>■ Shortcut. The shortcut is replied to.</li> <li>■ Archived item (default). The archived item is replied to.</li> </ul>
Legacy name	OWA2003ReplyToAllMode

### Restore confirmation (Exchange OWA setting)

Description	Controls whether the user is asked for confirmation after choosing to restore an archived item.
Supported values	<ul style="list-style-type: none"> <li>■ Off. The item is restored without asking the user for confirmation.</li> <li>■ On (default). There is a confirmation prompt before an item is restored.</li> </ul>
Legacy name	OWA2003RestoreConfirmation

### 'Search Vaults' in Basic OWA client (Exchange OWA setting)

Description	Controls whether the archive search option is available in the OWA Basic client.
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- Supported values
- Off. The archive search option is not available.
  - On (default). The archive search option is available.

Legacy name      OWA2003SearchFromBasicNavbar.

## 'Search Vaults' in Premium OWA client (Exchange OWA setting)

Description      Controls whether the archive search option is available in the OWA Premium client.

- Supported values
- Off. The archive search option is not available.
  - On (default). The archive search option is available.

Legacy name      OWA2003SearchFromPremiumNavbar

## View mode (Exchange OWA setting)

Description      Controls whether when a user clicks **Open the Original Item** in the banner of a custom shortcut, the original item is rendered by OWA (and looks like an Outlook message), or by Enterprise Vault (and looks like a Web browser page).

- Supported values
- Enterprise Vault. Enterprise Vault renders the original item.
  - OWA (default). OWA renders the original item.

Legacy name      OWA2003ViewMode

## Web Application alias (Exchange OWA setting)

Description      Specifies the name of the virtual directory for anonymous connections, EVAnon. This is synchronized to the hidden settings in each mailbox.

- Supported values
- A text string. The name of the virtual directory to use for anonymous connections.

Legacy name      OWASWebAppAlias

## Vault Cache (Exchange desktop policy advanced settings)

The Vault Cache advanced settings let you control the behavior of Vault Cache.

The Vault Cache settings are:

- [Archive Explorer connection mode \(Exchange Vault Cache setting\)](#)

- Download item age limit (Exchange Vault Cache setting)
- Lock for download item age limit (Exchange Vault Cache setting)
- Manual archive inserts (Exchange Vault Cache setting)
- Message Class exclude (Exchange Vault Cache setting)
- Message Class include (Exchange Vault Cache setting)
- Offline store required (Exchange Vault Cache setting)
- Pause interval (Exchange Vault Cache setting)
- Per item sleep (Exchange Vault Cache setting)
- Preemptive archiving in advance (Exchange Vault Cache setting)
- Root folder (Exchange Vault Cache setting)
- Root folder search path (Exchange Vault Cache setting)
- Search across all indexes (Exchange Vault Cache setting)
- Show Setup Wizard (Exchange Vault Cache setting)
- Synchronize archive types (Exchange Vault Cache setting)
- WDS search auto-enable (Exchange Vault Cache setting)

### Archive Explorer connection mode (Exchange Vault Cache setting)

Description	Controls whether Archive Explorer respects the connection state when Outlook is in Cached Exchange Mode. This setting has no effect unless Cached Exchange Mode is being used.
Supported values	<div><ul style="list-style-type: none"><li>■ Respect connection (default). Archive Explorer checks the Outlook connection state each time Archive Explorer starts. If a connection is available, online Archive Explorer is used; if there is no connection, offline Archive Explorer is used.</li><li>■ Always offline. Offline Archive Explorer is always used.</li></ul></div>
Legacy name	ForceOfflineAEWithOutlookCacheMode

### Download item age limit (Exchange Vault Cache setting)

Description	<p>Specifies the maximum age of items, in days, at which items are considered too old to be initially downloaded to the Vault Cache.</p> <p>For example, if <b>Download item age limit</b> is set to 30 then items up to 30 days old are downloaded. If <b>Download item age limit</b> is set to 0 then all items are downloaded.</p>
Supported values	<ul style="list-style-type: none"><li>■ 0. No age limit. All items are downloaded.</li><li>■ Integer. The maximum age, in days, of items that will be downloaded. All items up to this age will be downloaded.</li></ul>
Legacy name	OVDownloadItemAgeLimit

### Lock for download item age limit (Exchange Vault Cache setting)

Description	Controls whether users can change the download age limit.
Supported values	<ul style="list-style-type: none"><li>■ On. Locked.</li><li>■ Off. Not locked.</li></ul>
Legacy name	OVLlockDownloadItemAgeLimit

### Manual archive inserts (Exchange Vault Cache setting)

Description	Controls whether an item that is manually archived is also automatically added to the Vault Cache.
Supported values	<ul style="list-style-type: none"><li>■ On (default). Automatically add manually archived items to the Vault Cache.</li><li>■ Off. Do not add to the Vault Cache.</li></ul>
Legacy name	OVNoManualArchiveInserts.

### Message Class exclude (Exchange Vault Cache setting)

Description	A list of message classes that the Vault Cache never processes. Use semi-colons to separate the classes.
Supported values	<ul style="list-style-type: none"><li>■ Text string. A list of message classes to exclude, separated by semi-colons.</li></ul>
Legacy name	OVMessageClassExclude

## Message Class include (Exchange Vault Cache setting)

Description	A list of message classes that the Vault Cache always processes. Use semi-colons to separate the classes.
Supported values	<ul style="list-style-type: none"> <li>■ Text string. A list of message classes to include, separated by semi-colons.</li> </ul>
Legacy name	OVMessageClassInclude

## Offline store required (Exchange Vault Cache setting)

Description	<p>Controls whether Vault Cache can be enabled when no offline store is present.</p> <p>Users have offline store (OST) files if Outlook Cached Exchange Mode is enabled. If a user does not have an OST file, Enterprise Vault cannot perform preemptive caching.</p> <p>If there is no preemptive caching, there is an increased load on Vault Cache content synchronization for newly archived items. The increased load is only a consideration if the Vault Cache content strategy is <b>Store all items</b>.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Yes (default). An offline store is required for Vault Cache to be enabled.</li> <li>■ No. An offline store is not required for Vault Cache to be enabled.</li> </ul>
Legacy name	OVRequireOfflineStore

## Pause interval (Exchange Vault Cache setting)

Description	The number of minutes to wait before Enterprise Vault starts searching for items that need to be added to the Vault Cache.
Supported values	<ul style="list-style-type: none"> <li>■ An integer value. The default is 3 (minutes).</li> </ul>
Legacy name	OVPauseInterval

## Per item sleep (Exchange Vault Cache setting)

Description	The delay, in milliseconds, that will be used between items when updating the Vault Cache.
Supported values	<ul style="list-style-type: none"> <li>■ Integer. The number of milliseconds to use between items when updating the Vault Cache Default is 100 (milliseconds).</li> </ul>

Legacy name

OVPerItemSleep

## Preemptive archiving in advance (Exchange Vault Cache setting)

Description

The Outlook Add-In copies items from the user's Outlook .OST file to the Vault Cache before the items are due to be archived. The process is known as preemptive caching. Preemptive caching takes place on the user's computer. It reduces the number of items that need to be downloaded from the mailbox archive to the Vault Cache when the two are synchronized.

Preemptive caching obeys the settings in the Exchange mailbox policy's archiving rules.

The Outlook Add-In uses the **Preemptive archiving in advance** value when it determines the age of items on which to perform preemptive caching. To determine the age, it deducts the **Preemptive archiving in advance** value from the **Archive items when they are older than** value in the Exchange mailbox policy's archiving rules.

For example, you do not change **Preemptive archiving in advance** from its default value. You set the **Archive items when they are older than** mailbox policy setting to six weeks. The Outlook Add-In deducts the **Preemptive archiving in advance** default value of seven days from six weeks, and preemptively caches the items that are five weeks old or older.

Note that if you use an archiving strategy that includes quotas, it is difficult to predict the age at which items are archived. It is then usually advantageous to preemptively cache items as soon as possible. Enterprise Vault therefore uses 0 days as the age at which to perform preemptive caching if both of the following are true:

- The mailbox policy uses an archiving strategy that is based on quota or age and quota.
- You do not change the **Preemptive archiving in advance** setting from its default value.

Supported values

■ An integer, specifying a number of days. The default is 7.

Legacy name

OVPremptAdvance

## Root folder (Exchange Vault Cache setting)

Description

The location in which to place Vault Caches. This value is used when a user enables Vault Cache. Changing this value has no effect on existing Vault Caches.

Supported values	<ul style="list-style-type: none"> <li>■ Path. A path to a folder that Enterprise Vault can create on the user's local computer. If you do not specify Root Folder, Enterprise Vault uses an Enterprise Vault subfolder in the user's Application Data folder.</li> </ul>
Legacy name	OVRootDirectory

## Root folder search path (Exchange Vault Cache setting)

Description	<p>Enables you to supply a list of possible locations for the Vault Cache. The first such location that is valid on a user's computer is the one that will be used at the time the Vault Cache is created. This enables you to specify a list that is likely to be suitable for computers with different configurations.</p> <p>For example, if you specify <code>E:\vault</code>; <code>C:\vault</code> then the Vault Cache would be created in <code>E:\vault</code> if that was valid on the user's computer and, if it was not valid, then in <code>C:\vault</code>.</p> <p>If none of the locations is valid, the one specified by Root folder is used, if possible.</p> <p>See <a href="#">“Root folder (Exchange Vault Cache setting)”</a> on page 166.</p>
Supported values	<ul style="list-style-type: none"> <li>■ A text string. A semicolon-separated list of possible locations for the Vault Cache.</li> </ul>
Legacy name	OVRootDirectorySearchPath

## Search across all indexes (Exchange Vault Cache setting)

Description	If offline Archive Explorer fails to find an item in its index, it can also perform a search across all indexes, which may be slow. This setting controls whether this fallback search is allowed.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Do not allow a search across all indexes.</li> <li>■ On. Allow the fallback search.</li> </ul>
Legacy name	EnableStoreTrawling

## Show Setup Wizard (Exchange Vault Cache setting)

Description	<p>Controls whether the client shows the Vault Cache setup wizard.</p> <p>The setup wizard does the following:</p> <ul style="list-style-type: none"> <li>■ Summarizes what Vault Cache does and what is about to happen.</li> <li>■ Asks whether the user wants to start a download automatically after the initial scan has finished. The default is to start the download.</li> </ul> <p>If the wizard is turned off, Vault Cache waits for the amount of time that is specified in <b>Pause interval</b> and then automatically begins looking for items to download.</p> <p>See <a href="#">“Pause interval (Exchange Vault Cache setting)”</a> on page 165.</p>
Supported values	<ul style="list-style-type: none"> <li>■ 0. Do not show the setup wizard.</li> <li>■ 1 (default). Show the setup wizard.</li> </ul>
Legacy name	OVSetupWizard

## Synchronize archive types (Exchange Vault Cache setting)

Description	Controls what is synchronized by Vault Cache.
Supported values	<ul style="list-style-type: none"> <li>■ Default mailbox. Synchronize the primary mailbox only.</li> <li>■ All mailbox archives. Synchronize the primary mailbox archive, and any delegate mailbox archives to which the user has access.</li> <li>■ All mailbox and shared archives. Synchronize the primary mailbox archive, and any delegate or shared mailbox archives to which the user has access.</li> </ul>
Legacy name	OVSynArchiveTypes

## WDS search auto-enable (Exchange Vault Cache setting)

Description	<p>Controls whether the Vault Cache search plug-in for Windows Desktop Search is automatically enabled for users.</p> <p>This plug-in, which is installed with the Outlook Add-In, enables users to search their Vault Cache using Windows Desktop Search.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Force off. Disable this feature.</li> <li>■ Force on. Enable this feature.</li> <li>■ Keep user’s setting. Retain the user’s setting for this feature.</li> </ul>



Legacy name      OVWDSAutoEnable

## Virtual Vault (Exchange desktop policy advanced settings)

The Virtual Vault settings let you control the behavior of Virtual Vault.

The Virtual Vault settings are:

- [Max archive requests per synchronization \(Exchange Virtual Vault setting\)](#)
- [Max attempts to archive an item \(Exchange Virtual Vault setting\)](#)
- [Max data archived per synchronization \(Exchange Virtual Vault setting\)](#)
- [Max delete requests per synchronization \(Exchange Virtual Vault setting\)](#)
- [Max item size to archive \(Exchange Virtual Vault setting\)](#)
- [Max item updates per synchronization \(Exchange Virtual Vault setting\)](#)
- [Max total size of contentless operations \(Exchange Virtual Vault setting\)](#)
- [Max total size of items to archive \(Exchange Virtual Vault setting\)](#)
- [Show content in Reading Pane \(Exchange Virtual Vault setting\)](#)
- [Threshold number of items to trigger synchronization \(Exchange Virtual Vault setting\)](#)
- [Threshold total size of items to trigger synchronization \(Exchange Virtual Vault setting\)](#)
- [Users can archive items \(Exchange Virtual Vault setting\)](#)
- [Users can copy items to another store \(Exchange Virtual Vault setting\)](#)
- [Users can copy items within their archive \(Exchange Virtual Vault setting\)](#)
- [Users can hard delete items \(Exchange Virtual Vault setting\)](#)
- [Users can reorganize items \(Exchange Virtual Vault setting\)](#)

## Max archive requests per synchronization (Exchange Virtual Vault setting)

Description	<p>Controls the maximum number of archive requests during a Vault Cache synchronization. Any remaining requests are made at the next synchronization.</p> <p>When a user stores unarchived items in Virtual Vault, the archive operation does not take place until after the next Vault Cache header synchronization.</p> <p>No limit or a high value can increase the time that is required to complete a Vault Cache synchronization. This effect is a consideration if the additional load affects the Enterprise Vault server.</p> <p>Also, until the items that a user has stored in Virtual Vault are archived in the online archive, moved and copied items exist only on the user's computer. You can set two thresholds that trigger automatic Vault Cache synchronization based on the number or total size of pending archive items in Virtual Vault.</p> <p>See <a href="#">“Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>See <a href="#">“Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p>
Supported values	■ An integer value. The default is 0 (no limit).
Legacy name	OVMaXItemArchivesPerSync

## Max attempts to archive an item (Exchange Virtual Vault setting)

Description	<p>Specifies how many times Enterprise Vault tries to archive an item.</p> <p>The archive operation is tried this number of times before the item is listed in the Virtual Vault Search folder named Could Not Archive.</p>
Supported values	■ An integer value. The default is 3.
Legacy name	OVIteMArchiveAttempts

## Max data archived per synchronization (Exchange Virtual Vault setting)

Description	<p>Controls the maximum amount of data in megabytes that can be uploaded during a Vault Cache synchronization. Any remaining data is uploaded at the next synchronization.</p> <p>No limit or a high value can increase the time that is required to complete a Vault Cache synchronization. This effect is a consideration if the additional load affects the Enterprise Vault server.</p> <p>Also, until the items that the user stores in Virtual Vault have been archived in the online archive, moved and copied items exist only on the user's computer. You can set two thresholds that trigger automatic Vault Cache synchronization based on the number or total size of pending archive items in Virtual Vault.</p> <p>See <a href="#">“Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>See <a href="#">“Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>The value of this setting must be greater than or equal to the value of <b>Max item size to archive</b>. If not, the value of <b>Max item size to archive</b> is used.</p>
Supported values	■ An integer value. The default is 512 (MB). The value 0 specifies no limit.
Legacy name	OVMaxToArchivePerSyncMB

## Max delete requests per synchronization (Exchange Virtual Vault setting)

Description	<p>Controls the maximum number of delete requests during a Vault Cache synchronization. Any remaining requests are made at the next synchronization.</p> <p>Deletion requests use relatively few resources on the Enterprise Vault server.</p>
Supported values	■ An integer value. The default is 0 (no limit).
Legacy name	OVMaxItemDeletesPerSync

## Max item size to archive (Exchange Virtual Vault setting)

Description	<p>Controls the maximum size in megabytes of an item that can be moved or copied into Virtual Vault.</p> <p>If this value is similar to the value of <b>Max total size of items to archive</b>, a full synchronization can consist of one item.</p> <p>The <b>Max item size to archive</b> value may be used automatically for <b>Max data archived per synchronization</b> or <b>Max total size of items to archive</b>. It is used if the value of those settings is less than the <b>Max item size to archive</b> value.</p> <p>You can set two thresholds that trigger automatic Vault Cache synchronization based on the number or total size of pending archive items in Virtual Vault.</p> <p>See <a href="#">“Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>See <a href="#">“Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p>
Supported values	■ An integer value. The default is 256 (MB). The value 0 specifies no limit.
Legacy name	OVMMaxMessageSizeToArchiveMB

## Max item updates per synchronization (Exchange Virtual Vault setting)

Description	<p>Controls the maximum number of property change requests during a Vault Cache synchronization. Any remaining requests are made at the next synchronization.</p> <p>Update requests use relatively few resources on the Enterprise Vault server.</p>
Supported values	■ An integer value. The default is 0 (no limit).
Legacy name	OVMMaxItemUpdatesPerSync

## Max total size of contentless operations (Exchange Virtual Vault setting)

Description	<p>Controls the maximum total size in megabytes of copy and move operations when items have no content in Vault Cache. This setting does not apply to documents that are placed directly in the mailbox. It only applies to standard Outlook mail types, for example, mail items, calendar items, tasks, and contacts.</p> <p>This setting only applies when two or more items with no content are involved in the operation. Retrieval of one item is allowed regardless of its size.</p>
Supported values	■ An integer value. The default is 64 (MB). The value 0 specifies no limit.
Legacy name	VVDenyMultiContentlessOpsAboveMB

## Max total size of items to archive (Exchange Virtual Vault setting)

Description	<p>Controls the maximum total size in megabytes of pending archive data in Vault Cache.</p> <p>Pending archive data consists of items that the user has moved or copied into Virtual Vault. These items are pending archive until Vault Cache synchronization has successfully uploaded and archived them.</p> <p>The value of this setting must be greater than or equal to the value of <b>Max item size to archive</b>. If not, the value of <b>Max item size to archive</b> is used.</p> <p>You can set two thresholds that trigger automatic Vault Cache synchronization based on the number or total size of pending archive items in Virtual Vault.</p> <p>See <a href="#">“Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>See <a href="#">“Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p>
Supported values	■ An integer value. The default is 512 (MB). The value 0 specifies no limit.
Legacy name	OVMMaxTotalToArchiveMB

## Show content in Reading Pane (Exchange Virtual Vault setting)

Description	<p>Controls whether the content of an item that is selected in Virtual Vault is shown in the Outlook Reading Pane.</p> <p>If the item itself is a document, it is not displayed in the Reading Pane. A message in the Reading Pane advises the user to open the item to read the item's contents.</p>
Supported values	<ul style="list-style-type: none"><li>■ Never show content. The Reading Pane always shows only the selected item's header. A banner provides a link to open the original item.</li><li>■ When in Vault Cache (default). The Reading Pane shows the selected item's header. If the item is in Vault Cache, it also shows the content. If the content is not shown, a banner provides a link to open the original item. When the Vault Cache content strategy is <b>Store only items that user opens</b>, the effect of this value is that the Reading Pane only shows the content of previously opened items.</li><li>■ Always show content. The Reading Pane always shows the header and content of the item that is selected in Virtual Vault.</li></ul> <p><b>Show content in Reading Pane</b> can only have the value <b>Always show content</b> if the following conditions apply:</p> <ul style="list-style-type: none"><li>■ You have upgraded from an earlier release.</li><li>■ In the earlier release, <b>Show content in Reading Pane</b> had the value <b>Always show content</b>.</li></ul> <p><b>Always show content</b> is not available in the <b>Modify Setting</b> dialog. So if <b>Always show content</b> is the current value and you change it, you cannot go back to it.</p>
Legacy name	VVReadingPaneContent

## Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)

Description	<p>Specifies the total number of pending archive items in Virtual Vault that triggers automatic Vault Cache synchronization.</p> <p>Pending archive data consists of items that the user has moved or copied into Virtual Vault. These items are pending archive until Vault Cache synchronization has successfully uploaded and archived them.</p> <p>If you enable this setting, consider how it interacts with other settings, as follows:</p> <ul style="list-style-type: none"> <li>■ <b>Max item size to archive</b> and <b>Max total size of items to archive</b> can prevent the user from adding items to Virtual Vault, so that the threshold is never reached.</li> <li>■ <b>Max archive requests per synchronization</b> may have a value that is lower than the value of <b>Threshold number of items to trigger synchronization</b>. In this case, automatic synchronization may occur but not all the pending archive items are archived.</li> </ul>
Supported values	<ul style="list-style-type: none"> <li>■ 0 (default). The threshold is inactive.</li> <li>■ Non-zero integer. The total number of pending archive items in Virtual Vault that triggers automatic Vault Cache synchronization.</li> </ul>
Legacy name	VVAutoSyncItemThreshold

## Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)

Description	<p>Specifies the total size in megabytes of pending archive items in Virtual Vault that triggers automatic Vault Cache synchronization.</p> <p>Pending archive data consists of items that the user has moved or copied into Virtual Vault. These items are pending archive until Vault Cache synchronization has successfully uploaded and archived them.</p> <p>If you enable this setting, consider how it interacts with other settings, as follows:</p> <ul style="list-style-type: none"> <li>■ <b>Max item size to archive</b> and <b>Max total size of items to archive</b> can prevent the user from adding items to Virtual Vault, so that the threshold is never reached.</li> <li>■ <b>Max data archived per synchronization</b> may have a value that is lower than the value of <b>Threshold total size of items to trigger synchronization</b>. In this case, automatic synchronization may occur but not all the pending archive items are archived.</li> </ul>
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Supported values	<ul style="list-style-type: none"><li>■ 0 (default). The threshold is inactive.</li><li>■ Non-zero integer. The total size in megabytes of pending archive items in Virtual Vault that triggers automatic Vault Cache synchronization.</li></ul>
Legacy name	VVAutoSyncItemsSizeThresholdMB

## Users can archive items (Exchange Virtual Vault setting)

Description	<p>Controls whether users can archive items manually by adding new items to Virtual Vault using standard Outlook actions. Examples of these standard Outlook actions are drag and drop, move and copy, and Rules.</p> <p><b>Note:</b> No safety copies exist for these items.</p> <p>If you disable this setting, users can still create folders if <b>Users can reorganize items</b> is enabled.</p> <p>If you enable this setting, consider setting the thresholds that trigger automatic Vault Cache synchronization.</p> <p>See <a href="#">“Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>See <a href="#">“Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p>
Supported values	<ul style="list-style-type: none"><li>■ Yes (default). Users can archive items manually in Virtual Vault.</li><li>■ No. Users cannot archive items manually in Virtual Vault.</li></ul>
Legacy name	VVAllowArchive

## Users can copy items to another store (Exchange Virtual Vault setting)

Description	<p>Controls whether users can copy and move items from a Virtual Vault to another message store.</p> <p>If users can copy or move items out of Virtual Vault and the content is available in Vault Cache, the items are retrieved from Vault Cache.</p> <p>If the Vault Cache content strategy is <b>Do not store any items in cache</b>, the items are retrieved from the online archive. In this case, use the Virtual Vault advanced setting <b>Max total size of contentless operations</b> to control the maximum total size of view, copy, and move operations.</p>
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Supported values	<ul style="list-style-type: none"> <li>■ Yes (default). Users can copy and move items to another message store.</li> <li>■ No. Users cannot copy and move items to another message store.</li> </ul>
Legacy name	VVAllowInterStoreCopyAndMove

## Users can copy items within their archive (Exchange Virtual Vault setting)

Description	<p>Controls whether users can copy items within their archive.</p> <p>If users can copy items within their archive and the content is available in Vault Cache, the items are retrieved from Vault Cache.</p> <p>If the Vault Cache content strategy is <b>Do not store any items in cache</b>, the items are retrieved from the online archive. In this case, use the Virtual Vault advanced setting <b>Max total size of contentless operations</b> to control the maximum total size of view, copy, and move operations.</p> <p>If you enable this setting, consider setting the thresholds that trigger automatic Vault Cache synchronization.</p> <p>See <a href="#">“Threshold number of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p> <p>See <a href="#">“Threshold total size of items to trigger synchronization (Exchange Virtual Vault setting)”</a> on page 175.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Yes. Users can copy items within their archive.</li> <li>■ No (default). Users cannot copy items within their archive.</li> </ul>
Legacy name	VVAllowIntraStoreCopy

## Users can hard delete items (Exchange Virtual Vault setting)

Description	<p>Controls whether users can hard delete items from Virtual Vault.</p> <p>For this setting to take effect, the option <b>Users can delete items from their archives</b> must be enabled on the <b>Archive Settings</b> tab in the <b>Site Properties</b> dialog box.</p> <p>If you disable this setting, users can still move items to the Deleted Items folder if <b>Users can reorganize items</b> is enabled.</p>
Supported values	<ul style="list-style-type: none"> <li>■ Yes (default). Users can hard delete items from Virtual Vault.</li> <li>■ No. Users cannot hard delete items from Virtual Vault.</li> </ul>

Legacy name      VVAllowHardDelete

## Users can reorganize items (Exchange Virtual Vault setting)

Description	<p>Controls whether users can reorganize items in Virtual Vault.</p> <p>This setting can enable users to move items between folders and to create, move, rename, or delete folders.</p> <p>If folders still exist in the mailbox, users cannot move, rename, or delete them.</p> <p>Users can hard delete only empty folders, unless <b>Users can hard delete items</b> is enabled.</p>
Supported values	<ul style="list-style-type: none"><li>■ Yes (default). Users can reorganize items in Virtual Vault.</li><li>■ No. Users cannot reorganize items in Virtual Vault.</li></ul>
Legacy name	VVAllowReOrg

# Advanced Exchange journal policy settings

This chapter includes the following topics:

- [Editing the advanced Exchange journal policy settings](#)
- [Archiving General \(Exchange journal policy advanced settings\)](#)

## Editing the advanced Exchange journal policy settings

The settings are available in the properties of Exchange journal policies. For details of the various settings, see the individual sections.

To edit the settings for a policy

- 1 In the left pane of the Administration Console, expand the hierarchy until **Policies** is visible.
- 2 Expand **Policies**.
- 3 Expand **Exchange**.
- 4 Click **Journaling**.
- 5 In the right-hand pane, double-click the name of the policy you want to edit. The policy's properties are displayed.
- 6 Click the **Advanced** tab.
- 7 Next to **List settings from**, select the category of settings that you want to modify.
- 8 Edit the settings as required.

You can double-click a setting to edit it, or click it once to select it and then click **Modify**.

# Archiving General (Exchange journal policy advanced settings)

The Archiving General settings enable you to control archiving behavior.

The Archiving General settings are:

- [ClearText copies of RMS Protected items \(Exchange Archiving General setting\)](#)
- [Expand distribution lists \(Exchange Archiving General setting\)](#)
- [Failed DL expansion behaviour \(Exchange Archiving General setting\)](#)
- [Inherited permissions \(Exchange Archiving General setting\)](#)
- [Maximum message size to archive in MB \(Exchange Archiving General setting\)](#)
- [Pending shortcut timeout \(Exchange Archiving General setting\)](#)
- [Queue Journal items \(Exchange Archiving General setting\)](#)
- [Reset archive names \(Exchange Archiving General setting\)](#)
- [Return failed items to inbox \(Exchange Archiving General setting\)](#)

## ClearText copies of RMS Protected items (Exchange Archiving General setting)

Description	<p>If journal report decryption is configured on Exchange Server 2010, then two messages are attached to the journal report – the original RMS- protected message and a clear text version. This policy setting controls whether Enterprise Vault uses the clear text message or the RMS-protected message as the primary message during archiving.</p> <p>Enterprise Vault stores both versions of the message and the journal report in the message saveset. However, Enterprise Vault does not currently support the retrieval of the secondary message or the journal report from the archive.</p>
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Supported values	<div><div>■ Treat as Primary (default)</div><div><div>■ The clear text message is returned in response to retrieval requests from Enterprise Vault clients and Symantec Discovery Accelerator.</div><div>As Exchange Server does not decrypt any attachments that have been individually protected, Enterprise Vault cannot preview these attachments.</div><div>■ Enterprise Vault indexes the content and properties of the clear text message, and any attachments that are not encrypted. With this option, single instance sharing between Exchange mailbox and journal archiving is not possible.</div><div>■ Custom filters that process RMS-protected messages must explicitly retrieve the RMS-protected message from the attachments to the journal report message (P1 message).</div></div></div> <div><div>■ Treat as Secondary</div><div><div>■ The RMS-protected message is returned in response to retrieval requests from Enterprise Vault clients and Symantec Discovery Accelerator.</div><div>Enterprise Vault cannot preview these messages unless an application, such as the Enterprise Vault Adapter for Secure Messaging and Rights Management (SMRM), is used to decrypt the messages.</div><div>■ Information available for indexing is restricted to Subject, Recipients, and other message metadata.</div><div>The item can be shared between Exchange mailbox and journal archiving.</div><div>The message content and attachments are not indexed, unless an application, such as the Enterprise Vault Adapter for Secure Messaging and Rights Management (SMRM), is used to decrypt the messages.</div><div>■ Custom filters that do not decrypt RMS-protected messages cannot read the message content.</div></div></div>
Legacy name	ClearTextPrimary

## Expand distribution lists (Exchange Archiving General setting)

Description	Controls whether the Exchange Journaling Task expands distribution lists.
Supported values	<div><div>■ Off. Do not expand distribution lists.</div><div>■ On (default). Expand distribution lists.</div></div>
Legacy name	ExpandDistributionLists

## Failed DL expansion behaviour (Exchange Archiving General setting)

Description	Controls the behavior when an Exchange Journaling Task fails to expand a distribution list.
Supported values	<div><div>■</div> Move to 'Failed DL Expansion' folder. Move the item without archiving it.</div> <div><div>■</div> Archive item (default). Archive the item.</div>
Legacy name	FailedDLExpansion

## Inherited permissions (Exchange Archiving General setting)

Description	Controls whether Enterprise Vault includes inherited permissions when synchronizing permissions between mailboxes and archives.
Supported values	<div><div>■</div> Off (default). Do not synchronize inherited permissions.</div> <div><div>■</div> On. Synchronize inherited permissions.</div>
Legacy name	IncludeInheritedRights

## Maximum message size to archive in MB (Exchange Archiving General setting)

Description	Controls the maximum message size to archive.
Supported values	<div><div>■</div> Integer. An integer value specifying the maximum size of messages that can be archived, in megabytes. Default is 250.</div>
Legacy name	MaxMessageSizeToArchiveMB

## Pending shortcut timeout (Exchange Archiving General setting)

Description	Specifies the number of days to allow items to remain in an archive-pending state before being reset.
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Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Archive-pending shortcuts are never reset.</li> <li>■ 0. When run in report mode, Exchange Mailbox tasks reset all archive-pending shortcuts. When run in normal mode, archive-pending shortcuts are not reset.</li> <li>■ Any integer larger than zero. Archive-pending shortcuts that are older than this number of days are reset. This happens in both normal archiving and in Report Mode.</li> </ul>
Legacy name	PendingShortcutTimeout

## Queue Journal items (Exchange Archiving General setting)

Description	Controls the Exchange Journaling Tasks' use of MSMQ, thus improving performance.
Supported values	<ul style="list-style-type: none"> <li>■ All single threaded. Use if all your tasks are single threaded.</li> <li>■ Multiple threads (default). Improves performance if any Journaling Task uses multiple threads.</li> </ul>
Legacy name	QueueJournalItems

## Reset archive names (Exchange Archiving General setting)

Description	Controls whether, during synchronization, archive names are automatically changed to match mailboxes names.
Supported values	<ul style="list-style-type: none"> <li>■ Off. During synchronization archive names are never changed.</li> <li>■ On (default). During synchronization, archive names are automatically changed if necessary to match mailbox names.</li> </ul>
Legacy name	ResetArchiveNames

## Return failed items to inbox (Exchange Archiving General setting)

Description	Controls whether, when the Journaling task starts, messages that are stored in the failed folders are automatically moved back into the Inbox to be reprocessed.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Do not move items in the failed folders to the Inbox when the task starts.</li> <li>■ On. Move items the failed folders to the Inbox when the task starts.</li> </ul>
Legacy name	MoveFailedItemsToInbox





# Advanced Exchange public folder policy settings

This chapter includes the following topics:

- [Editing advanced Exchange public folder settings](#)
- [Archiving General \(Exchange public folder policy advanced settings\)](#)

## Editing advanced Exchange public folder settings

The settings are available in the properties of Exchange public folder policies. For details of the various settings, see the individual sections.

**To edit the settings for a policy**

- 1 In the left pane of the Administration Console, expand the hierarchy until **Policies** is visible.
- 2 Expand **Policies**.
- 3 Expand **Exchange**.
- 4 Click **Public Folder**.
- 5 In the right-hand pane, double-click the name of the policy you want to edit.  
The policy's properties are displayed.
- 6 Click the **Advanced** tab.
- 7 Next to **List settings from**, select the category of settings that you want to modify.
- 8 Edit the settings as required.

You can double-click a setting to edit it, or click it once to select it and then click **Modify**.

# Archiving General (Exchange public folder policy advanced settings)

The Archiving General settings enable you to control archiving behavior.  
The Archiving General settings are:

- [Archive unexpired Calendar Events \(Exchange Archiving General setting\)](#)
- [Code pages for right-to-left custom shortcuts \(Exchange Archiving General setting\)](#)
- [Do not archive pending reminders \(Exchange Archiving General setting\)](#)
- [Inherited permissions \(Exchange Archiving General setting\)](#)
- [Maximum message size to archive in MB \(Exchange Archiving General setting\)](#)
- [Pending shortcut timeout \(Exchange Archiving General setting\)](#)
- [Set failed messages 'Do Not Archive' \(Exchange Archiving General setting\)](#)
- [Strip attachments to non-shortcut items \(Exchange Archiving General setting\)](#)

## Archive unexpired Calendar Events (Exchange Archiving General setting)

Description	Controls whether unexpired calendar items are archived.
Supported values	<ul style="list-style-type: none"><li>■ Off (default). Unexpired calendar items are not archived.</li><li>■ On. Unexpired calendar items are archived.</li></ul>
Legacy name	ArchiveNonExpiredCalEvents

## Code pages for right-to-left custom shortcuts (Exchange Archiving General setting)

Description	A semicolon-separated list of code pages. Custom shortcuts that use these code pages are always formatted right-to-left.
Supported values	<ul style="list-style-type: none"><li>■ A list of code pages, separated by semicolons. For example, 1255;1256. Default is 1255.</li></ul>
Legacy name	CustomShortcutRTLCodePages

## Do not archive pending reminders (Exchange Archiving General setting)

Description	Controls whether Enterprise Vault archives items that have pending reminders.
Supported values	<ul style="list-style-type: none"> <li>■ Off. Items that have pending reminders are archived.</li> <li>■ On (default). Items that have pending reminders within the next five years are not archived.</li> </ul>
Legacy name	DontArchiveItemsPendingReminder

## Inherited permissions (Exchange Archiving General setting)

Description	Controls whether Enterprise Vault includes inherited permissions when synchronizing permissions between public folders and archives.
Supported values	<ul style="list-style-type: none"> <li>■ Off (default). Do not synchronize inherited permissions.</li> <li>■ On. Synchronize inherited permissions.</li> </ul>
Legacy name	IncludeInheritedRights

## Maximum message size to archive in MB (Exchange Archiving General setting)

Description	Controls the maximum size of messages that are archived.
Supported values	<ul style="list-style-type: none"> <li>■ 0. No restriction on maximum message size.</li> <li>■ Integer larger than 0. The maximum size of messages that are archived, in megabytes. Default is 250.</li> </ul>
Legacy name	MaxMessageSizeToArchiveMB

## Pending shortcut timeout (Exchange Archiving General setting)

Description	Specifies the number of days to allow items to remain in the state of archive-pending, restore-pending, or delete-pending before they are reset.
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Supported values	<ul style="list-style-type: none"><li>■ Off (default). Archive-pending, restore-pending, and delete-pending shortcuts are never reset.</li><li>■ 0. When run in report mode, the archiving tasks reset all archive-pending, restore-pending, and delete-pending shortcuts. When run in normal mode, the shortcuts are not reset.</li><li>■ Any integer larger than zero. Archive-pending, restore-pending, and delete-pending shortcuts that are older than this number of days are reset. This happens in both normal archiving and in report mode.</li></ul>
Legacy name	PendingShortcutTimeout

## Set failed messages 'Do Not Archive' (Exchange Archiving General setting)

Description	<p>If an item cannot be archived, the default archiving task behavior is to reprocess the item on the next archiving run because such items can often be successfully archived on a second try.</p> <p>This setting enables you to change the behavior so items that fail archiving are marked as Do Not Archive and thus are not reprocessed on the next archiving run.</p>
Supported values	<ul style="list-style-type: none"><li>■ Off (default). Failed items are not marked as Do Not Archive.</li><li>■ On. Failed items are marked as Do Not Archive.</li></ul>
Legacy name	SetFailedMsgsDoNotArchive

## Strip attachments to non-shortcut items (Exchange Archiving General setting)

Description	<p>Controls whether attachments are removed from calendar items, meeting items (including requests, responses and cancellations), task and task request items, and contacts after archiving. These items are not changed into Enterprise Vault shortcuts when they are archived. If Enterprise Vault removes an attachment, it replaces it with a link to the attachment.</p>
Supported values	<ul style="list-style-type: none"><li>■ On (default). Attachments are removed from non-shortcut items after archiving.</li><li>■ Off. Attachments are not removed from non-shortcut items after archiving.</li></ul>
Legacy name	StripAttachmentsToNonShortcutItems

# Advanced site properties settings

This chapter includes the following topics:

- [About the advanced site properties settings](#)
- [Editing the advanced site properties settings](#)
- [Site properties advanced settings](#)

## About the advanced site properties settings

The site properties advanced settings control advanced aspects of indexing behavior for an Enterprise Vault site.

The advanced indexing settings that apply to an Enterprise Vault server are available in the computer properties.

See [“About the advanced computer properties settings”](#) on page 197.

## Editing the advanced site properties settings

The advanced settings for the Enterprise Vault site are provided on the **Advanced** tab of the site properties.

### To edit the advanced site properties settings

- 1 In the left pane of the Administration Console, expand the hierarchy until the name of the site is visible.
- 2 Right-click the name of the site. Then click **Properties**. The site properties are displayed.

- 3 Click the **Advanced** tab.
- 4 Edit the settings as required.

## How to apply the new settings for the site properties

To apply the changes that you have made to the Indexing settings in the advanced site properties, you must restart the Indexing service.

## Site properties advanced settings

These settings control advanced aspects of indexing for an Enterprise Vault site.

There is one category of site properties advanced settings:

[Indexing \(site properties advanced settings\)](#)

### Indexing (site properties advanced settings)

The Indexing settings enable you to control advanced indexing behavior.

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**Note:** Do not change the Indexing settings unless your technical support provider advises you to do so.

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The Indexing settings are as follows:

- [Allowed index location characters \(Site Properties Indexing setting\)](#)
- [Index Group server preference for mailboxes \(Site Properties Indexing setting\)](#)
- [Maximum consecutive failed items \(Site Properties Indexing setting\)](#)
- [Maximum update errors \(Site Properties Indexing setting\)](#)
- [Search Cache Permissions \(Site Properties Indexing setting\)](#)
- [Search Max Attempts When Engine Busy \(Site Properties Indexing setting\)](#)
- [Search Max Folders For Specific Folder Optimization \(Site Properties Indexing setting\)](#)
- [Search Specific Folder Optimization \(Site Properties Indexing setting\)](#)
- [Search VSA Can Search All Archives \(Site Properties Indexing setting\)](#)
- [Text limit for custom properties \(Site Properties Indexing setting\)](#)

## Allowed index location characters (Site Properties Indexing setting)

Description	<p>Characters that can be used in index location folder paths.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p> <p>This setting specifies a regular expression that describes which characters are valid in index location folder paths. The default value allows only ASCII characters.</p> <p>The Indexing service validates index locations when it starts. If any index location folder paths contain invalid characters, the locations are listed in an Enterprise Vault event log message. The message lists the locations that were closed earlier, and the locations that have been closed during the current validation.</p> <p>If any locations were closed during the current validation, the Indexing service is stopped. An error is written to the Enterprise Vault event log. The error says that open index locations contained invalid characters, and that the Indexing service will stop.</p>
Supported values	<p>■ A regular expression. The default is:</p> <p><code>[\\x00-\\x7f]+</code></p>

## Index Group server preference for mailboxes (Site Properties Indexing setting)

Description	<p>Specifies the preferred index group server to use for mailboxes.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p> <p>Enterprise Vault allocates the location of an index volume by a process that first selects an Index Server within an Index Server group. The process then selects an index location on that Index Server.</p> <p>This allocation method distributes the index volumes amongst all the available Index Servers, which is suitable for large archives such as journal archives. By default, Enterprise Vault does not use this allocation method for the index volumes for mailbox archives. Instead, it keeps these index volumes together on the same Index Server.</p> <p>This setting lets you override the default so that index volumes for mailbox archives are distributed amongst all the available Index Servers.</p>
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- Supported values
- Local server (default). The index volumes for mailbox archives are kept together on the Index Server that is local to the associated storage server.
  - None. Index volumes for mailbox archives are distributed amongst all the available Index Servers.

## Maximum consecutive failed items (Site Properties Indexing setting)

Description      The maximum number of consecutive items that cannot be fetched from the Storage service before the index volume is marked as failed.

**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

- Supported values
- An integer specifying a number of consecutive items. The default is 25.

## Maximum update errors (Site Properties Indexing setting)

Description      The maximum number of errors that are allowed when making index changes before the index volume is marked as failed.

**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

- Supported values
- An integer specifying a number of errors. The default is 3.

## Search Cache Permissions (Site Properties Indexing setting)

Description      Specifies whether or not user permissions are cached in the Index Query Server.

**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

- Supported values
- On (default). User permissions are cached in the Index Query Server.
  - Off. User permissions are not cached in the Index Query Server.



## Search Max Attempts When Engine Busy (Site Properties Indexing setting)

Description	<p>The maximum number of attempts for searches that fail due to the search engine being temporarily too busy to handle the search.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<ul style="list-style-type: none"> <li>■ An integer specifying a number of search attempts. The default is 3.</li> </ul>

## Search Max Folders For Specific Folder Optimization (Site Properties Indexing setting)

Description	<p>The maximum number of folders a search can target, in order for the search query to benefit from applying the specific folder performance optimization.</p> <p>See <a href="#">“Search Specific Folder Optimization (Site Properties Indexing setting)”</a> on page 194.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so. Changing this value may adversely affect search performance, system performance, or both.</p>
Supported values	<ul style="list-style-type: none"> <li>■ An integer specifying a number of folders. The default is 10.</li> </ul>

## Search Specific Folder Optimization (Site Properties Indexing setting)

Description	<p>Specifies whether or not to apply a performance optimization to searches that target a small number of folders. The <b>Search Max Folders For Specific Folder Optimization</b> setting determines the limit for what is considered small.</p> <p>See <a href="#">“Search Max Folders For Specific Folder Optimization (Site Properties Indexing setting)”</a> on page 193.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p> <p>This setting can improve search performance, particularly in the following cases:</p> <ul style="list-style-type: none"><li>■ When users select folders in Archive Explorer</li><li>■ When users search archives that have a large number of folders; for example, File System Archiving archives</li></ul>
Supported values	<ul style="list-style-type: none"><li>■ On (default). Applies the performance optimization.</li><li>■ Off. Performance optimization is not applied.</li></ul>

## Search VSA Can Search All Archives (Site Properties Indexing setting)

Description	<p>Specifies whether or not the Index Query Server allows the Vault Service account to search all archives.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so. Compliance Accelerator, Discovery Accelerator, and some of the indexing tools in particular require this option to be on, otherwise they fail.</p>
Supported values	<ul style="list-style-type: none"><li>■ On (default). The Index Query Server allows the Vault Service account to search all archives.</li><li>■ Off. The Index Query Server does not allow the Vault Service account to search all archives.</li></ul>

## Text limit for custom properties (Site Properties Indexing setting)

Description	<p>The maximum number of characters available for retrieval from the index for each retrievable custom property.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of characters. The default is 1000.</p>



# Advanced computer properties settings

This chapter includes the following topics:

- [About the advanced computer properties settings](#)
- [Editing the advanced computer properties settings](#)
- [Computer properties advanced settings](#)

## About the advanced computer properties settings

The computer properties advanced settings control advanced aspects of indexing behavior on an Enterprise Vault server.

The advanced indexing settings that apply to the Enterprise Vault site are available in the site properties.

See “[About the advanced site properties settings](#)” on page 189.

## Editing the advanced computer properties settings

The advanced settings for an Enterprise Vault server are provided on the **Advanced** tab of the computer properties.

### To edit the advanced computer properties settings

- 1 In the left pane of the Administration Console, expand the hierarchy until **Enterprise Vault Servers** is visible.
- 2 Click **Enterprise Vault Servers**.
- 3 In the right pane, right-click the name of the server whose properties you want to edit. Then click **Properties**. The computer properties are displayed.

- 4 Click the **Advanced** tab.
- 5 Edit the settings as required.

## How to apply the new settings for the computer properties

To apply the changes that you have made to the Indexing settings in the advanced computer properties, you must restart the Indexing service.

## Computer properties advanced settings

These settings control advanced aspects of indexing on an Enterprise Vault server.

There is one category of computer properties advanced settings:

- [Indexing \(computer properties advanced settings\)](#)

### Indexing (computer properties advanced settings)

The Indexing settings enable you to control advanced indexing behavior on an Enterprise Vault server.

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**Note:** Do not change the Indexing settings unless your technical support provider advises you to do so.

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The Indexing settings are:

- [Create multiple Index Locations \(Computer Properties Indexing setting\)](#)
- [Empty index volume deletion limit \(Computer Properties Indexing setting\)](#)
- [Force Indexing Engine Shutdown \(Computer Properties Indexing setting\)](#)
- [Frequency of checks for failed volumes \(Computer Properties Indexing setting\)](#)
- [Frequency of checks for index volumes to process \(Computer Properties Indexing setting\)](#)
- [Frequency of full checks for index volumes to process \(Computer Properties Indexing setting\)](#)
- [Indexing Engine Query Service Port \(Computer Properties Indexing setting\)](#)
- [Indexing Execution Timeout \(Computer Properties Indexing setting\)](#)
- [Indexing Max Request Length \(Computer Properties Indexing setting\)](#)
- [Indexing memory throttling threshold \(Computer Properties Indexing setting\)](#)
- [Maximum child process shutdown time \(Computer Properties Indexing setting\)](#)

- Maximum child process startup time (Computer Properties Indexing setting)
- Maximum concurrent indexing capacity (Computer Properties Indexing setting)
- Maximum indexing application pool start time (Computer Properties Indexing setting)
- Maximum indexing engine shutdown time (Computer Properties Indexing setting)
- Maximum indexing engine startup time (Computer Properties Indexing setting)
- Maximum item wait time (Computer Properties Indexing setting)
- Maximum items in a file system index volume (Computer Properties Indexing setting)
- Maximum items in a journal index volume (Computer Properties Indexing setting)
- Maximum items in a mailbox index volume (Computer Properties Indexing setting)
- Maximum items in a public folder index volume (Computer Properties Indexing setting)
- Maximum items in a shared index volume (Computer Properties Indexing setting)
- Maximum items in a SharePoint index volume (Computer Properties Indexing setting)
- Maximum items in an index volume (Computer Properties Indexing setting)
- Search HTTP Service Path (Computer Properties Indexing setting)
- Search HTTP Service Port (Computer Properties Indexing setting)
- Search HTTP Service Requires SSL (Computer Properties Indexing setting)
- Search Log Queries (Computer Properties Indexing setting)
- Search Log Results (Computer Properties Indexing setting)
- Search Logs Folder (Computer Properties Indexing setting)
- Search Maximum Threads (Computer Properties Indexing setting)
- Search Minimum Threads (Computer Properties Indexing setting)
- Search Performance Counters Enabled (Computer Properties Indexing setting)

## Create multiple Index Locations (Computer Properties Indexing setting)

Description	<p>Specifies whether Enterprise Vault creates multiple index locations or one index location.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p> <p>On the <b>Index Locations</b> tab in the Indexing service properties, you can add a folder that is used for index storage. By default, Enterprise Vault automatically creates eight index location subfolders beneath the folder that you add.</p> <p>This setting lets you specify that Enterprise Vault creates only one index location subfolder.</p>
Supported values	<ul style="list-style-type: none"><li>■ Yes (default). Enterprise Vault creates eight index location subfolders.</li><li>■ No. Enterprise Vault creates one index location subfolder.</li></ul>

## Empty index volume deletion limit (Computer Properties Indexing setting)

Description	<p>At regular intervals, the Indexing service checks for empty index volumes, and deletes them. This setting configures the maximum number of empty index volumes that the Indexing service can delete in one pass.</p> <p>By default, the Indexing service checks for empty index volumes every 10 hours. The frequency of these checks is defined by the setting <b>Frequency of full checks for index volumes to process</b>.</p> <p>See <a href="#">“Frequency of full checks for index volumes to process (Computer Properties Indexing setting)”</a> on page 201.</p>
Supported values	<ul style="list-style-type: none"><li>■ An integer configuring the maximum number of empty index volumes. The default is 20.</li></ul> <p>This value can be increased, but we recommend that you do not change this advanced setting unless your technical support provider advises you to do so.</p>



## Force Indexing Engine Shutdown (Computer Properties Indexing setting)

Description	Forces indexing engine shutdown. <b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.
Supported values	<div><div>■</div> On (default).</div> <div><div>■</div> Off.</div>

## Frequency of checks for failed volumes (Computer Properties Indexing setting)

Description	The time between the Indexing service's attempts to process failed index volumes, in hours. <b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.
Supported values	<div>■ An integer specifying a number of hours. The default is 6.</div>

## Frequency of checks for index volumes to process (Computer Properties Indexing setting)

Description	The time between the Indexing service's checks for index volumes to process, in hours. <b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.
Supported values	<div>■ An integer specifying a number of hours. The default is 1.</div>

## Frequency of full checks for index volumes to process (Computer Properties Indexing setting)

Description	The time between the Indexing service's full checks for index volumes to process, in hours. <b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.
Supported values	<div>■ An integer specifying a number of hours. The default is 10.</div>

## Indexing Engine Query Service Port (Computer Properties Indexing setting)

Description

The internal communication port for the Indexing Engine Query Service.  
**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values

■ An integer specifying a port number. The default is 7215.

## Indexing Execution Timeout (Computer Properties Indexing setting)

Description

The indexing HTTP runtime execution timeout, in hours.  
**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values

■ An integer specifying a number of hours. The default is 6.

## Indexing Max Request Length (Computer Properties Indexing setting)

Description

The indexing HTTP runtime maximum request length, in kilobytes.  
**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values

■ An integer specifying a number of kilobytes. The default is 76800.

## Indexing memory throttling threshold (Computer Properties Indexing setting)

Description

The maximum memory usage ratio for the indexing engine. If the total virtual memory in use exceeds this ratio multiplied by the RAM, indexing reduces its memory consumption. The normal range is 1.5 to 2.0. Higher ratios may increase disk paging.  
**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values

■ A text value specifying the maximum memory usage ratio. The default is 1.5.

## Maximum child process shutdown time (Computer Properties Indexing setting)

Description	<p>The maximum time the Indexing service waits for each child process to shut down, in minutes.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of minutes. The default is 15.

## Maximum child process startup time (Computer Properties Indexing setting)

Description	<p>The maximum time the Indexing service waits for each child process to start (minutes).</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of minutes. The default is 1.

## Maximum concurrent indexing capacity (Computer Properties Indexing setting)

Description	<p>The maximum total of index volumes and subtasks that can be processed concurrently.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of index volumes and subtasks. The default is 30.

## Maximum indexing application pool start time (Computer Properties Indexing setting)

Description	<p>Maximum time to wait for the Indexing application pool to start, in milliseconds.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of milliseconds. The default is 800.

### Maximum indexing engine shutdown time (Computer Properties Indexing setting)

Description	<p>The maximum time the Indexing service waits for the collection broker and search service to shut down, in minutes.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of minutes. The default is 5.</p>

### Maximum indexing engine startup time (Computer Properties Indexing setting)

Description	<p>The maximum time the Indexing service waits for the collection broker and search service to start (minutes).</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of minutes. The default is 2.</p>

### Maximum item wait time (Computer Properties Indexing setting)

Description	<p>The maximum time the Indexing service waits for an item to be fetched from the Storage service (minutes).</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of minutes. The default is 15.</p>

### Maximum items in a file system index volume (Computer Properties Indexing setting)

Description	<p>The maximum number of items in a file system index volume. The index volume rolls over to a new volume when it contains approximately this number of items.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of items. The default is 5000000.</p>

## Maximum items in a journal index volume (Computer Properties Indexing setting)

Description	<p>The maximum number of items in a journal index volume. The index volume rolls over to a new volume when it contains approximately this number of items.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of items. The default is 5000000.

## Maximum items in a mailbox index volume (Computer Properties Indexing setting)

Description	<p>The maximum number of items in a mailbox index volume. The index volume rolls over to a new volume when it contains approximately this number of items.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of items. The default is 5000000.

## Maximum items in a public folder index volume (Computer Properties Indexing setting)

Description	<p>The maximum number of items in a public folder index volume. The index volume rolls over to a new volume when it contains approximately this number of items.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	■ An integer specifying a number of items. The default is 5000000.

### Maximum items in a shared index volume (Computer Properties Indexing setting)

Description	<p>The maximum number of items in a shared index volume. The index volume rolls over to a new volume when it contains approximately this number of items.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of items. The default is 5000000.</p>

### Maximum items in a SharePoint index volume (Computer Properties Indexing setting)

Description	<p>The maximum number of items in a SharePoint index volume. The index volume rolls over to a new volume when it contains approximately this number of items.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>■ An integer specifying a number of items. The default is 5000000.</p>

### Maximum items in an index volume (Computer Properties Indexing setting)

Description	<p>Reserved for future use.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<p>Reserved for future use.</p>

### Search HTTP Service Path (Computer Properties Indexing setting)

Description	<p>The path part of the URL for the Index Query Server HTTP service, as used by IndexClient.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
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Supported values ■ A text value specifying a path. The default is:  
/enterprisevault/search/indexserversearchservice/

## Search HTTP Service Port (Computer Properties Indexing setting)

Description The port part of the URL for the Index Query Server HTTP service, as used by IndexClient.

**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values ■ An integer specifying a port number. The default is 80.

## Search HTTP Service Requires SSL (Computer Properties Indexing setting)

Description Specifies whether or not the Index Query Server HTTP service requires SSL (HTTPS) connections. If this setting is on, a certificate must be bound to the appropriate port on the Index Query Server HTTP service host.

**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values ■ Off (default).  
■ On.

## Search Log Queries (Computer Properties Indexing setting)

Description Specifies whether or not the Index Query Server logs queries to disk. The Search Logs Folder setting specifies the location for the files.

See [“Search Logs Folder \(Computer Properties Indexing setting\)”](#) on page 208.

**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values ■ Off (default).  
■ On.

## Search Log Results (Computer Properties Indexing setting)

Description	<p>Specifies whether or not the Index Query Server logs results to disk. The Search Logs Folder setting specifies the location for the files.</p> <p>See <a href="#">“Search Logs Folder (Computer Properties Indexing setting)”</a> on page 208.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p>
Supported values	<ul style="list-style-type: none"><li>■ Off (default).</li><li>■ On.</li></ul>

## Search Logs Folder (Computer Properties Indexing setting)

Description	<p>A local folder to store log files that are generated by the Index Query Server.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so.</p> <p>These logs are only written if the <b>Search Log Queries</b> setting or the <b>Search Log Results</b> setting is turned on.</p> <p>See <a href="#">“Search Log Queries (Computer Properties Indexing setting)”</a> on page 207.</p> <p>See <a href="#">“Search Log Results (Computer Properties Indexing setting)”</a> on page 208.</p>
Supported values	<ul style="list-style-type: none"><li>■ A text value specifying a local folder. The default is that no folder is specified and the Vault Service account TEMP folder is used.</li></ul>

## Search Maximum Threads (Computer Properties Indexing setting)

Description	<p>Controls the maximum number of concurrent searches that the server is able to perform.</p> <p><b>Note:</b> Do not change this advanced setting unless your technical support provider advises you to do so. Changing this value may adversely affect search performance, system performance, or both.</p>
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Supported values ■ An integer value specifying a number of threads. The default is 200. The value must be greater than the **Search Minimum Threads** value.  
See [“Search Minimum Threads \(Computer Properties Indexing setting\)”](#) on page 209.

## Search Minimum Threads (Computer Properties Indexing setting)

Description The minimum number of threads that are used to perform searches within the Index Query Server.  
**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values ■ An integer value specifying a number of threads. The default is 4. The value must be less than the **Search Maximum Threads** value.  
See [“Search Maximum Threads \(Computer Properties Indexing setting\)”](#) on page 208.

## Search Performance Counters Enabled (Computer Properties Indexing setting)

Description Specifies whether or not the Index Query Server performance counters are enabled.  
**Note:** Do not change this advanced setting unless your technical support provider advises you to do so.

Supported values ■ On (default).  
■ Off.



# Customizing the Web Access application

This chapter includes the following topics:

- [About customizing the Web Access application](#)
- [General Web Access application configuration](#)
- [Configuring Web Access application search results](#)
- [Web Access application automatic domain authentication](#)
- [Web Access application user interface tweaks](#)
- [Web Access application Archive Explorer interface tweaks](#)

## About customizing the Web Access application

You can modify the behavior of the Web Access application by creating an initialization file that is called `webApp.ini` and placing it into the Enterprise Vault program folder on the computer that runs the Web Access application.

Within `webApp.ini`, each line has the following format:

***setting = value***

where *setting* is the name of the setting and *value* is the value that you want to assign to it.

Note the following:

- Entries in this file are case-sensitive.
- The file must be saved with ANSI encoding.

# General Web Access application configuration

The following general configuration settings are available:

- [AllowNonAsciiFileNames \(Web Access application: general configuration\)](#)
- [DefaultFormatCodepage \(Web Access application: general configuration\)](#)
- [DefaultFormatType \(Web Access application: general configuration\)](#)
- [HTMLNotNotes \(Web Access application: general configuration\)](#)
- [MaxPreviewSize \(Web Access application: general configuration\)](#)
- [Noclient \(Web Access application: general configuration\)](#)
- [URLEncodeFileNames \(Web Access application: general configuration\)](#)
- [ViewMessage\\_Format \(Web Access application: general configuration\)](#)

## AllowNonAsciiFileNames (Web Access application: general configuration)

Description	Determines whether, when you open an archived message attachment whose file name contains non-ASCII characters, those characters are removed or preserved.
Supported values	<ul style="list-style-type: none"><li>■ 0 (default). Removes any non-ASCII characters from the file names of message attachments. When all the characters are non-ASCII, the file name is replaced with "EnterpriseVault".</li><li>■ 1. Preserves any non-ASCII characters in the file names of message attachments.</li></ul>

## DefaultFormatCodepage (Web Access application: general configuration)

Description	<p>Specifies the code page to use if you have set DefaultFormatType to ANSI.</p> <p>If you do not specify a code page, Enterprise Vault sends items to the client in the code page in which they were stored.</p>
Supported values	<ul style="list-style-type: none"><li>■ Code page number. The number that identifies the code page. For a list of the available code pages, see the following article on the Microsoft MSDN site: <a href="http://msdn.microsoft.com/en-us/library/ms537500(VS.85).aspx">http://msdn.microsoft.com/en-us/library/ms537500(VS.85).aspx</a></li></ul>

## DefaultFormatType (Web Access application: general configuration)

Description	<p>Specifies the format in which to return items that are stored as Unicode to the client.</p> <p>If all clients are running Outlook 2003 or later, set DefaultFormatType to Unicode. This prevents unnecessary conversions and possible problems when viewing characters.</p>
Supported values	<ul style="list-style-type: none"><li>■ Unicode (default). Returns archived Unicode items to the client as Unicode.</li><li>■ ANSI. Returns archived Unicode items to the client as ANSI.</li></ul>

## HTMLNotNotes (Web Access application: general configuration)

Description	<p>Specifies how to display the contents of archived Lotus Notes items when users find them with the Enterprise Vault browser search facilities and then, in the Search Results page, click '<b>View whole item</b>' to open the items. You can choose to display the items using the Lotus Notes mail client, or you can display an HTML preview of them.</p> <p>Unlike the HTML preview of a Microsoft Exchange item, the HTML preview of a Lotus Notes item does not include the '<b>Archive Explorer</b>', '<b>Download</b>', '<b>Restore</b>', and '<b>Settings</b>' buttons at the top of the window. Only the '<b>Search</b>', '<b>Delete</b>', and '<b>Help</b>' buttons are visible.</p>
Supported values	<ul style="list-style-type: none"><li>■ 0 (default). Display the contents of archived Lotus Notes items using the Lotus Notes mail client. Users who do not have the client installed receive the message "Page cannot be displayed" when trying to open these items.</li><li>■ 1. Display an HTML preview of the contents of archived Lotus Notes items.</li></ul>

## MaxPreviewSize (Web Access application: general configuration)

Description	<p>Specifies the maximum size of archived files that can be displayed in the Archive Explorer preview pane.</p> <p>MaxPreviewSize applies only to files. It does not apply to messages, which are previewed whatever their size.</p>
Supported values	<ul style="list-style-type: none"><li>■ An integer. The maximum size in kilobytes of archived files that can be displayed in the Archive Explorer preview pane. The default is 512.</li></ul>

## Noclient (Web Access application: general configuration)

Description	Controls whether items are downloaded in their native format, rather than as .MSG format files.
Supported values	<ul style="list-style-type: none"><li>Any integer. Items are downloaded in their native format. If you want to turn off Noclient, remove the entry from the file.</li></ul>

## URLEncodeFileNames (Web Access application: general configuration)

Description	<p>Determines whether, when you open an archived message attachment whose file name contains non-ASCII characters, those characters are rendered in URL-encoded form.</p> <p>It is advisable to render file names in URL-encoded form when the Enterprise Vault client and server use different language code pages—for example, when the client uses a Japanese version of Windows and Outlook, and the server uses English Windows.</p> <p>When the client and server use the same code page, assigning a value of 1 to AllowNonAsciiFileNames should suffice.</p>
Supported values	<ul style="list-style-type: none"><li>0 (default). Leaves the non-ASCII characters in the file names of message attachments in their original form.</li><li>1. Renders the non-ASCII characters in the file names of message attachments in URL-encoded form. Note that, because of Internet Explorer limits on the number of characters in a file name string, multi-byte file names may be truncated to 15 characters when URL-encoded.</li></ul>

## ViewMessage\_Format (Web Access application: general configuration)

Description	<p>Controls the display format that is used when the user's browser does not allow cookies or the user has never chosen a format to use.</p> <p>This affects the following:</p> <ul style="list-style-type: none"><li>Links in custom shortcuts.</li><li>Items that are opened from within Archive Explorer.</li></ul> <p>The user can use the Settings dialog box to override the behavior you specify with ViewMessage_Format.</p>
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- Supported values
- WEB (default). Display the item in a browser window.
  - MSG. Use Outlook to display the item. (Not available on Mac clients.)
  - ASK. Prompt the user for the format to use. (Not available on Mac clients.)

## Configuring Web Access application search results

Most of the following settings let you configure federated searching, a facility that allows users to conduct searches across multiple index volumes simultaneously.

The following settings are available to configure search results:

- [DefaultRankResults \(Web Access application: search result configuration\)](#)
- [FederatedSearchMaxItems \(Web Access application: search result configuration\)](#)
- [FederatedSearchMaxVolSets \(Web Access application: search result configuration\)](#)
- [FederatedSearchTimeout \(Web Access application: search result configuration\)](#)
- [SearchRSS \(Web Access application: search result configuration\)](#)
- [ShowAllMaxResults \(Web Access application: search result configuration\)](#)
- [UseFederatedSearch \(Web Access application: search result configuration\)](#)

### DefaultRankResults (Web Access application: search result configuration)

- |             |   |
|-------------|---|
| Description | Controls the default sort order of results that are returned from an Integrated search.<br><br>For example, to make the Integrated search list the newest items first, enter the following:<br><br>DefaultRankResults = -date |
|-------------|---|

Supported values	Use the following values to sort the items by the required criteria. <ul style="list-style-type: none"><li>■ adat. Archived date, oldest first.</li><li>■ -adat. Archived date, newest first.</li><li>■ anum. Attachment number, cover notes last.</li><li>■ -anum. Attachment number, cover notes first.</li><li>■ auth. Author, alphabetical order.</li><li>■ -auth. Author, reverse alphabetical order.</li><li>■ date. Sent/received date, oldest first.</li><li>■ -date. Sent/received date, newest first.</li><li>■ mdat. Modified date, oldest first.</li><li>■ -mdat. Modified date, newest first.</li><li>■ natc. Number of attachments, least first.</li><li>■ -natc. Number of attachments, most first.</li><li>■ rank. Relevance to search query, most relevant first.</li><li>■ size. Size, smallest first.</li><li>■ -size. Size, largest first.</li><li>■ snum. Sequence number, increasing.</li><li>■ -snum. Sequence number, decreasing.</li><li>■ subj. Subject, alphabetical order.</li><li>■ -subj. Subject, reverse alphabetical order.</li></ul>
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## FederatedSearchMaxItems (Web Access application: search result configuration)

Description	Specifies the maximum number of items to obtain from each index volume. This number also determines the maximum number of results to display in response to a user query. This is because the most relevant results for the query may come from one index volume only.
Supported values	■ An integer. The maximum number of items to obtain from each index volume. The default is 1000.

## FederatedSearchMaxVolSets (Web Access application: search result configuration)

Description	Specifies the maximum number of index volumes to search simultaneously.
Supported values	■ An integer. The maximum number of index volumes. The default is 5.



## FederatedSearchTimeout (Web Access application: search result configuration)

Description	Sets a time limit on how long a federated search can take before it should be ended.
Supported values	■ An integer. The time limit in seconds. The default is 60.

## SearchRSS (Web Access application: search result configuration)

Description	Specifies the maximum number of search results to display initially. Users can click a Show All or Click Here link to view more results.  Use this setting with the ShowAllMaxResults setting.
Supported values	■ An integer. The number of search results to display initially. The default is 100.

## ShowAllMaxResults (Web Access application: search result configuration)

Description	Specifies the maximum number of results that can be displayed when the user clicks the Show All or Click Here link.
Supported values	■ An integer. The maximum number of search results to display. The default is 500.

## UseFederatedSearch (Web Access application: search result configuration)

Description	Controls whether to allow federated searching for everyone who uses the WebApps. For configuration or performance reasons, you may want to turn off this functionality.
Supported values	■ 0. Disable federated searching. ■ 1 (default). Allow federated searching.

# Web Access application automatic domain authentication

You can configure Enterprise Vault so that the Web Access application automatically uses the same domain name as you have specified for IIS basic authentication. This means that users in the default domain do not need to specify a domain name when logging on to the Web Access application. For more information, see the "Postinstallation tasks" chapter of the *Installing and Configuring* manual.

## Web Access application user interface tweaks

The following sections list settings that you can use to control which options are available in the integrated and browser search results user interface.

The following settings are available for the user interface:

- [BSDeleteButton \(Web Access application: user interface\)](#)
- [BSRestoreButton \(Web Access application: user interface\)](#)
- [ISDeleteButton \(Web Access application: user interface\)](#)
- [ISRestoreButton \(Web Access application: user interface\)](#)
- [ISShowRetention \(Web Access application: user interface\)](#)
- [RestoreToPSTOption \(Web Access application: user interface\)](#)

### BSDeleteButton (Web Access application: user interface)

Description	Controls whether browser search displays options that are related to deleting archived items. This setting applies to browser search for both Exchange Server users and Domino Server users.
Supported values	<ul style="list-style-type: none"><li>■ 0. The options are not displayed.</li><li>■ 1 (default). The options are displayed.</li></ul>

### BSRestoreButton (Web Access application: user interface)

Description	Controls whether browser search displays options that are related to restoring archived items. This setting applies to browser search for both Exchange Server users and Domino Server users.
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- Supported values ■ 0. The options are not displayed.  
 ■ 1 (default). The options are displayed.

## ISDeleteButton (Web Access application: user interface)

- Description Controls whether the properties of an item that is found by a search show the "Delete this item from the Vault" option. This setting applies to integrated search in both Outlook and Lotus Notes.
- Supported values ■ 0 (default). The option is not displayed.  
 ■ 1. The option is displayed.

## ISRestoreButton (Web Access application: user interface)

- Description Controls whether the Restore Whole Item icon is displayed in the search results so that users can restore items that are found by searches. This setting applies to integrated search in both Outlook and Lotus Notes.
- Supported values ■ 0. The restore icon is not displayed.  
 ■ 1 (default). The restore icon is displayed.

## ISShowRetention (Web Access application: user interface)

- Description Controls whether the properties of an item that is found by a search show the item's retention category. This setting applies to integrated search in both Outlook and Lotus Notes.
- Supported values ■ 0 (default). The retention category is not displayed.  
 ■ 1. The retention category is displayed.

## RestoreToPSTOption (Web Access application: user interface)

Description	<p>Gives users the option to export items found by a search to PST files. This setting applies to Exchange Server users only.</p> <p>It is possible to grant the option to all users, or to a selected list.</p> <p>This option is intended to be used by just a few users. Local paths refer to the Exchange Mailbox task computer and must already exist. If the user specifies a local path when setting the output destination the PST is saved with that path name on the Exchange Mailbox task computer.</p>
Supported values	<ul style="list-style-type: none"><li>■ All. The option is provided for all users.</li><li>■ A list of user accounts in the format Domain\User1,Domain\User2,...</li></ul>

## Web Access application Archive Explorer interface tweaks

The following sections list settings that you can use to control which options are available in the Archive Explorer user interface.

The following settings are available:

- [ArchiveExplorerDelete \(Web Access application: Archive Explorer interface\)](#)[zzz](#)
- [ArchiveExplorerForward \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerHelp \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerReply \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerReplyAll \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerRestore \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerSaveAs \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerSearch \(Web Access application: Archive Explorer interface\)](#)
- [ArchiveExplorerSettings \(Web Access application: Archive Explorer interface\)](#)

## ArchiveExplorerDelete (Web Access application: Archive Explorer interface)

Description	Controls whether the following are available to a user in Archive Explorer: <ul style="list-style-type: none"> <li>■ The right-click menu option '<b>Delete</b>'</li> <li>■ The right-click menu option '<b>Move to Mailbox</b>'</li> </ul>
Supported values	<ul style="list-style-type: none"> <li>■ 0. The options are not available.</li> <li>■ 1 (Default). The options are shown, provided that you have also selected '<b>Users can delete items from their archives</b>' in Site Properties.</li> </ul>

## ArchiveExplorerForward (Web Access application: Archive Explorer interface)

Description	Controls whether the ' <b>Forward</b> ' option is available when a user right-clicks a message in Archive Explorer.
Supported values	<ul style="list-style-type: none"> <li>■ 0. The option is not available.</li> <li>■ 1 (Default). The option is available only when the user has selected '<b>Microsoft Outlook</b>' under '<b>View archived items using</b>' in the Archive Explorer settings.</li> </ul>

## ArchiveExplorerHelp (Web Access application: Archive Explorer interface)

Description	Controls whether the ' <b>Help</b> ' button and right-click ' <b>Help</b> ' menu option are available in Archive Explorer.
Supported values	<ul style="list-style-type: none"> <li>■ 0. The button and right-click menu option are not available.</li> <li>■ 1 (Default). The button and right-click menu option are shown.</li> </ul>

## ArchiveExplorerReply (Web Access application: Archive Explorer interface)

Description	Controls whether the ' <b>Reply</b> ' option is available when a user right-clicks an item in Archive Explorer.
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- Supported values
- 0. The option is not available.
  - 1 (Default). The option is shown. The option is available only when the user has selected '**Microsoft Outlook**' under '**View archived items using**' in the Archive Explorer settings.

## ArchiveExplorerReplyAll (Web Access application: Archive Explorer interface)

- Description
- Controls whether the '**Reply to All**' option is available when a user right-clicks an item in Archive Explorer.
- Supported values
- 0. The option is not available.
  - 1 (Default). The option is shown. The option is available only when the user has selected '**Microsoft Outlook**' under '**View archived items using**' in the Archive Explorer settings.

## ArchiveExplorerRestore (Web Access application: Archive Explorer interface)

- Description
- Controls whether Archive Explorer shows the following:
- The '**Restore from Vault**' button, which enables users to restore archived items to their mailboxes.
  - The right-click menu option '**Copy to Mailbox**'.
  - The right-click menu option '**Move to Mailbox**'.
- Supported values
- 0. The button and the menu options are not displayed.
  - 1 (Default). The button and the menu options are shown

## ArchiveExplorerSaveAs (Web Access application: Archive Explorer interface)

- Description
- Controls whether the '**Save As**' option is available when a user right-clicks an item in Archive Explorer.
- Supported values
- 0. The option is not available.
  - 1 (Default). The option is shown. The option is available only when the user has selected '**Microsoft Outlook**' under '**View archived items using**' in the Archive Explorer settings.

# ArchiveExplorerSearch (Web Access application: Archive Explorer interface)

Description	Controls whether Archive Explorer shows the ' <b>Search</b> ' button and right-click ' <b>Search</b> ' menu option are available. These options enable users to search from within Archive Explorer.
Supported values	<div><div>■ 0. The button and the menu option are not available.</div><div>■ 1 (Default). The button and the menu option are shown.</div></div>

# ArchiveExplorerSettings (Web Access application: Archive Explorer interface)

Description	<div>Controls whether Archive Explorer shows the '<b>Settings</b>' button, which enables users to specify the following:</div> <div><div>■ The Exchange Server to which items will be restored</div><div>■ The mailbox to which items will be restored</div><div>■ Whether to use Microsoft Outlook or a web browser to view archived items</div></div>
Supported values	<div><div>■ 0. The button is not displayed.</div><div>■ 1 (Default). The button is displayed.</div></div>





# Automatic monitoring

This chapter includes the following topics:

- [About automatic monitoring](#)
- [Monitoring in Site Properties](#)
- [About monitoring using MOM](#)
- [About monitoring using SCOM](#)

## About automatic monitoring

Enterprise Vault provides the following mechanisms that you can use for automatic monitoring:

- If you have installed the Enterprise Vault Operations Manager Web Application, you can use it to remotely monitor the following:
  - The status of Enterprise Vault services and archiving tasks
  - Performance counters for vault stores and Enterprise Vault server disks, memory, and processors
  - Exchange Server journal mailbox target archiving parameters
- See [“About Enterprise Vault Operations Manager”](#) on page 233.
- The **Status** section of the Administration Console lists the results of the automatic monitoring checks.
- The **Monitoring** tab in Site Properties lets you turn on performance monitoring of important aspects of Enterprise Vault. If a monitored item reaches its threshold, a message is logged in the Application Event log and in the **Status** section of the Administration Console.

If you have other tools to monitor the event log you can use those to alert you when monitoring messages are logged.

- If you have Microsoft Operations Manager (MOM), you can use the supplied Enterprise Vault Management Pack to monitor Enterprise Vault operations and performance.
- If you have Microsoft System Center Operations Manager 2007 (SCOM), you can use the supplied Enterprise Vault Management Pack, to monitor Enterprise Vault operations and performance.

## Monitoring in Site Properties

When you enable monitoring in Site Properties you can then select any number of available alerts. When an alert you have selected reaches its threshold level, Enterprise Vault writes an appropriate entry in the Application Event Log. Enterprise Vault also shows the alert in the **Status** section of the Administration Console.

Additionally, when you enable any of the alerts, Enterprise Vault turns on a performance counter for that alert. Thus you can monitor the counter using the Windows Performance Monitor or any other programs that you use to monitor performance counters.

### To enable monitoring

- 1 In the left pane of the Administration Console, right-click the vault site and, on the shortcut menu, click **Properties**.
- 2 Click the **Monitoring** tab of Site Properties.
- 3 Select the items for which you want to receive notifications.

For each item, you can click the following to modify them:

Threshold	This is the level at which Enterprise Vault issues a notification. For example, if Directory Backup has a threshold of 2 Days, then a warning is issued if the Enterprise Vault has not been backed up after 2 Days.
Frequency	This is how often Enterprise Vault checks this item. In the case of performance-related items, this is the frequency with which Enterprise Vault writes the associated performance counter.
Start At	The time at which measuring starts. If you do not select a time, the statistics are collected when the monitoring process starts and then at the interval that is defined in the Frequency column.

- 4 Click **OK**.

## About monitoring using MOM

You must already have a working Microsoft MOM installation before you can install the Enterprise Vault Management Pack.

This section assumes that you have some familiarity with MOM administration. See the MOM documentation if you need help with using MOM.

The Enterprise Vault Management Pack contains rules that enable MOM to monitor critical Enterprise Vault events in the Application Event Log.

It is also possible to use MOM to monitor all the alerts that are on the Monitoring tab in Site Properties. To do so, you start by enabling the monitoring in Site Properties.

See [“Monitoring in Site Properties”](#) on page 226.

Those alerts are written as critical events to the Application Event Log. There are MOM rules defined, and enabled by default, to monitor those same events in the Event Log.

## Installing MOM

The Enterprise Vault installation copies the MOM Management Pack to the MOM subfolder of the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault\MOM`).

The Management Pack is `EnterpriseVault.akm`.

## Configuring MOM

You must do the following:

- Import the Enterprise Vault Management Pack.
- Add operators to the Enterprise Vault Notifications Group, Enterprise Vault Administrators.
- Enabled monitoring in the Enterprise Vault Administration Console.

### To import the Enterprise Vault Management Pack

- 1 Start the MOM Administrator Console.
- 2 In the left pane, right-click **Processing Rule Groups** and, on the shortcut menu, click **Import Management Pack**.
- 3 Select the Enterprise Vault Management Pack, `EnterpriseVault.akm`, and work through the rest of the **Import Options** wizard.

To add operators to the Enterprise Vault notifications group

- 1
- In the left pane of the MOM Administrator Console, expand **Rule Groups**.
- 2
- Click **Notification Groups**.
- 3
- In the right pane, double-click **Enterprise Vault Administrators**.
- 4
- Add the operators who should receive alerts.
- 5
- Click **OK**.

Optional MOM configuration

The Enterprise Vault MOM Management Pack defines many rules for Enterprise Vault monitoring, some of which are enabled by default and some of which are disabled. Review the rules and enable or disable as required.

When you have configured your Enterprise Vault MOM management pack, you may need to configure some of the rules before you can use them.

For example, if you want to use the following rule you must configure it to specify which SQL server to monitor:

Sample value of the performance counter SQL Server - Checkpoint pages / sec is greater than the defined threshold

Note that some MOM rules concern events that are themselves enabled by the Enterprise Vault Administration Console. In the case of these events, they must be enabled in the Administration Console.

Table 12-1 lists the events that can be enabled from the Administration Console that have corresponding MOM rules.

By default, all the events in this table are enabled.

Table 12-1 MOM rules and corresponding events

Event ID	Administration Console name	MOM rule name
41008	New items awaiting backup	Backup warning: Saveset files not backed up or replicated
41011	Vault Store database backup	Backup overdue for vault store SQL database.
41012	Vault Store transaction log backup	Backup overdue for vault store SQL database transaction log.
41013	Vault Store transaction log size	Space allocation warning for vault store SQL database.

**Table 12-1** MOM rules and corresponding events (*continued*)

Event ID	Administration Console name	MOM rule name
41014	Directory database backup	Backup overdue for Enterprise Vault directory database.
41015	Directory transaction log backup	Backup overdue for Enterprise Vault directory database.
41016	Directory transaction log size	Space allocation warning for Enterprise Vault Directory SQL database.
41021	Archived items waiting to be indexed	Backup, indexing, or replication operations not completed.
41022	Deleted items waiting to be deleted from indexes	Delete operations not completed.
41023	Items waiting to be restored	Restoration queue length warning.
41203	Vault Store fingerprint database backup	Backup overdue for Vault Store Group SQL database.
41204	Vault Store fingerprint database log backup	Backup overdue for Vault Store Group SQL database transaction log.
41205	Vault Store fingerprint database log size	Space allocation warning for Vault Store Group Log size.
41256	Vault Store in backup mode	Vault Store(s) in backup mode (All)
41258	Vault Store partition backup scan	Partition(s) not scanned (All)
41260	Partition items secured	Partition(s) contain items that have not been secured for a while (All)
41262	Index location in backup mode	Index locations in backup mode (All)
41264	Tasks in report mode	Task(s) in report mode (All)
41265	Unscheduled task	Task schedule is set to 'Never'

## About monitoring using SCOM

Enterprise Vault includes a management pack for System Center Operations Manager 2007 (SCOM).

The Enterprise Vault Management Pack defines rules that enable SCOM to monitor critical Enterprise Vault events in the Application Event Log.

You must already have a working Microsoft SCOM installation before you can install the Enterprise Vault Management Pack.

You can also use SCOM to monitor all the alerts that are on the **Monitoring** tab in **Site Properties**. To do so, you start by enabling the monitoring in **Site Properties**.

The alerts are written as critical events to the Application Event Log. SCOM monitors the event log for those events. The SCOM monitoring rules are enabled by default.

## Setting up SCOM monitoring for an Enterprise Vault server

This section assumes that you have some familiarity with SCOM administration. See the SCOM documentation if you need help with using SCOM.

### To set up monitoring:

- 1 Use the SCOM management console to add the SCOM monitoring agent to the Enterprise Vault server so that the server is Agent Managed.

Import the Enterprise Vault Management Pack, as follows:

- On the Enterprise Vault server, start Windows Explorer and navigate to the SCOM subfolder of the Enterprise Vault program folder (normally `C:\Program Files\Enterprise Vault (x86)\SCOM`).
- Start the SCOM management console.
- Start the import wizard and import one of the following:
  - `EnterpriseVault.mp`. This is the sealed management pack. The wizard automatically converts the file to a MOM 2005 Backward Compatibility pack.
  - `EnterpriseVault.xml`. This is the unsealed management pack. The wizard automatically converts the file to a MOM 2005 Backward Compatibility pack.

- 2 Enable monitoring in the Enterprise Vault Administration Console, as follows:

- In the left pane of the Administration Console, right-click the vault site and, on the shortcut menu, click **Properties**.

- Click the **Monitoring** tab of **Site Properties**.
  - Select the items for which you want to receive notifications.
  - Click **OK**.
- 3 In the SCOM management console, review the Enterprise Vault alerts and modify them as required.

## Optional SCOM configuration

The Enterprise Vault SCOM Management Pack defines many rules for Enterprise Vault monitoring, some of which are enabled by default and some of which are disabled. Review the rules and enable or disable as required.

When you have configured your Enterprise Vault SCOM management pack, you may need to configure some of the rules before you can use them.

For example, if you want to use the following rule, you must configure it to specify which SQL server to monitor:

```
Sample value of the performance counter SQL Server - Checkpoint pages  
/ sec is greater than the defined threshold
```

Note that some SCOM rules concern events that are themselves enabled by the Enterprise Vault Administration Console. In the case of these events, they must be enabled in the Administration Console.





# Monitoring with Enterprise Vault Operations Manager

This chapter includes the following topics:

- [About Enterprise Vault Operations Manager](#)
- [Accessing Operations Manager](#)
- [Using Operations Manager](#)
- [How to view the monitored data](#)
- [About Enterprise Vault server monitoring](#)
- [About Exchange Server journal mailbox archiving](#)
- [About Domino Server journaling archiving](#)
- [Configuring warning and critical status thresholds with Enterprise Vault Monitoring](#)
- [Configuring the Enterprise Vault monitoring parameters](#)
- [Performing an immediate status check on an Enterprise Vault server](#)

## About Enterprise Vault Operations Manager

Enterprise Vault Operations Manager is a Web application that makes remote monitoring of Enterprise Vault possible from any computer on which Internet Explorer is installed.

Enterprise Vault Operations Manager lets you monitor the following:

- The status of Enterprise Vault services and tasks.

- Performance counters for vault stores, disk space, memory, and processors.
- The status of Exchange Server journal mailbox target archiving targets, including item counts for Inbox, Archive Pending, and failed operations such as Failed DL Expansion.
- The status of Domino Server journaling location archiving targets, including item counts for Inbox, Archive Pending, and failed operations.

Enterprise Vault includes a Monitoring agent on each Enterprise Vault server. The Monitoring agents collect monitoring data at scheduled intervals, typically every few minutes, and store it in the Enterprise Vault Monitoring database.

Operations Manager displays the most recent data collected by the Monitoring agents. It provides summary tables for at-a-glance status assessment, and detailed data to help identify problems or bottlenecks. Status indicators warn when values breach chosen thresholds.

From the Configuration page you can enable or disable monitoring, adjust the monitoring frequency of the Monitoring agents, and set the status indicator thresholds.

There is a mechanism for performing an immediate status check on an Enterprise Vault server, if required.

See [“Performing an immediate status check on an Enterprise Vault server”](#) on page 251.

## Accessing Operations Manager

Enterprise Vault Operations Manager is a separately installable feature. To monitor the Enterprise Vault servers in an Enterprise Vault site, you must have installed the Operations Manager Web application component on at least one Enterprise Vault server in that site.

If you have not already installed Enterprise Vault Operations Manager, you can install it as described in the *Installing and Configuring* manual.

### To access Enterprise Vault Operations Manager

- 1 Enter the following URL in Internet Explorer:

```
http://host_ipaddress/MonitoringWebApp/default.aspx
```

where *host\_ipaddress* is the IP address of the computer that is hosting the Enterprise Vault server on which the Enterprise Vault Operations Manager Web application feature is installed.

Alternatively, if you are accessing Operations Manager from the computer on which it is installed, you can use the following URL, which does not require step 2:

```
http://localhost/MonitoringWebApp/default.aspx
```

- 2 In the Connect to IP *Address* dialog box, enter the user name and password of an account in the host computer's domain. Then click **OK**.

---

**Note:** Any user other than the Vault Service account must be assigned to a suitable role to access Operations Manager. Users can view only the tabs and tables in Operations Manager that are applicable to the role to which they are assigned.

See “[Roles-based administration](#)” on page 26.

---

If the user credentials are valid, Operations Manager displays its site Summary page.

## Using Operations Manager

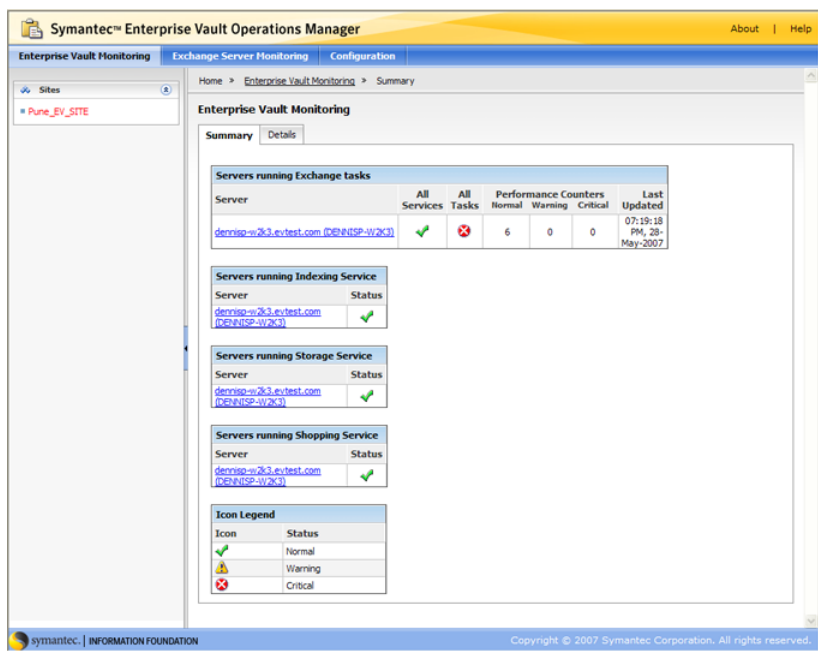
[Figure 13-1](#) shows the Enterprise Vault Operations Manager window, which contains two main panes.

---

**Note:** If your Enterprise Vault Site is configured to use Roles Based Administration, the information you see in Operations Manager will be appropriate to your role.

---

Figure 13-1      A typical Operations Manager screen



**Note:** For online help for Operations Manager, click Help at the top-right of the Operations Manager window.

## Left pane of Operations Manager

The left pane lists the Enterprise Vault sites for which you can view monitoring information. Multiple sites appear in the Sites list if they share the same Enterprise Vault Directory database, provided an Operations Manager is installed on at least one Enterprise Vault server in the site. The first site in the list is the site of the Enterprise Vault server whose Operations Manager you browsed to. To view data for another site, select that site from the Sites list.

To collapse or re-expand the left pane, click the icon on the divider between the panes.

## Menu bar and content pane of Operations Manager

When you select an option from the Operations Manager menu bar, the page for that option appears in the content pane.

The menu bar contains multiple options, depending on your configuration.

Enterprise Vault Monitoring	Displays monitoring data for Enterprise Vault servers.
Exchange Server Monitoring	Displays monitoring data for the Exchange journal mailbox archiving targets of each monitored Enterprise Vault server running Exchange journaling tasks.
Domino Server Monitoring	Displays monitoring data for the Domino journaling location archiving targets on each monitored Enterprise Vault server running Domino journaling tasks.
Configuration	<p>Displays the Configuration page, from where you can do the following:</p> <ul style="list-style-type: none"><li>■ Enable or disable monitoring.</li><li>■ Set the monitoring frequency for the Monitoring agent.</li><li>■ Set the retention period for the Monitoring database data.</li><li>■ Configure the thresholds for the warning and critical status indicators that appear on the Enterprise Vault Monitoring, Exchange Server Monitoring, and Domino Server Monitoring pages.</li></ul>

---

**Note:** The Exchange Server Monitoring and Domino Server Monitoring options are only shown if one or more Enterprise Vault servers in the site are configured to perform Exchange Server or Domino Server journal mailbox archiving tasks, respectively.

---

## How to view the monitored data

The Enterprise Vault Monitoring, Exchange Server Monitoring, and Domino Server Monitoring pages display the monitored data. They use status indicators to flag warning and critical values.

## About Enterprise Vault server monitoring

The Enterprise Vault Monitoring page appears when you first log on to Operations Manager.

## Enterprise Vault Monitoring Summary tab

The Summary tab on the Enterprise Vault Monitoring page provides summary status information for the Enterprise Vault servers in the site.

---

**Note:** The status indicators on this tab reflect snapshot values that are taken at the last monitoring time. Use them only as a guide, not as real-time indicators.

---

The Summary tab displays the data in two sets of tables.

### Task tables (Enterprise Vault Monitoring Summary tab)

Up to four "Servers running *task\_name* tasks" tables appear at the top of the Summary tab. These tables indicate the status of the Enterprise Vault servers running Exchange Server, Domino Server, file server, and SharePoint tasks respectively.

The table for a particular task only appears if at least one Enterprise Vault server in the site is configured to run that task.

The tables show the following information for each Enterprise Vault server running at least one task of the specified type:

All Services	The status of all monitored Enterprise Vault services on the Enterprise Vault server.
All Tasks	The status of all monitored Enterprise Vault tasks on the Enterprise Vault server.
Performance Counters	The number of monitored performance counters at normal, warning, and critical status.
Last Updated	The date and time when the Monitoring agent last monitored this data.

A warning or critical status indicator appears if a value breaches the relevant threshold value for one or more monitored services or tasks.

### Service tables (Enterprise Vault Monitoring Summary tab)

The "Servers running *service\_name* Service" tables appear below the task tables on the Enterprise Vault Monitoring Summary tab. These tables indicate the status of a particular Enterprise Vault service on every Enterprise Vault server that is running that service. The monitored services are the Indexing service, the Storage service, and the Shopping service.

The table for a particular service only appears if at least one Enterprise Vault server in the site is configured to run that service.

To view detailed data for a particular server, click the server's name in the Server column.

See [“Enterprise Vault Monitoring Details tab”](#) on page 239.

## Enterprise Vault Monitoring Details tab

The Details tab on the Enterprise Vault Monitoring page presents detailed monitoring data for the selected Enterprise Vault server. The data includes the status of individual Enterprise Vault services and tasks that are running on the server, and performance counters for vault store status, disk space, memory, and processor use.

To view the details of a different Enterprise Vault server in the current Enterprise Vault site, select the server from the server list at the top of the page.

---

**Note:** The displayed values on this tab represent a snapshot that is taken at the last monitoring time. They are for use only as a guideline, not as real-time indicators.

---

The Details tab displays the data in a series of tables.

### Services table (Enterprise Vault Monitoring Details tab)

The Services table displays the status of the following Enterprise Vault services running on the selected server:

- Indexing Service
- Shopping Service
- Storage Service
- Task Controller Service

### Tasks table (Enterprise Vault Monitoring Details tab)

The Tasks table displays the status of every Enterprise Vault task visible through the Enterprise Vault Administration Console.

### Move Archive Status table (Enterprise Vault Monitoring Details tab)

The Move Archive Status table displays the status of Move Archive operations on the selected server.

For each move operation, the table includes the following information:

- Type. The icon indicates the source archive’s type (Domino mailbox archive, Domino journal archive, Exchange mailbox archive, or Exchange journal archive).
- Source. The name of the source archive.
- Server. The name of the Enterprise Vault server.
- Destination site. The name of the site that hosts the destination vault store.
- Destination. The name of the destination archive for moves to existing archives, or “New archive” in the case of moves to new archives.
- Move status. The current status of the move operation.
- A hyperlink that opens a Move Archive History Details window for the archive.

### Performance counters for "Enterprise Vault::VaultStores" table (Enterprise Vault Monitoring Details tab)

The Performance Counters for "Enterprise Vault::VaultStores" table displays the following data for each monitored vault store counter instance:

Instance Name	The instance name.
Status	The status of this instance, based on the status indicator thresholds.
Value	The value of this instance when the Monitoring agent last monitored it.
Warning Threshold	The configured warning threshold for this counter.
Critical Threshold	The configured critical threshold for this counter.
Last Updated	The date and time when the Monitoring agent last monitored this data.

For Operations Manager to be able to sample and display the vault store performance counters, monitoring needs to be enabled for the site in the Enterprise Vault Administration Console. If site monitoring is not enabled, the table is not shown. To check whether Site Monitoring is enabled, right-click the Site node in



the Administration Console and select Properties. Then, on the Properties dialog, select the Monitoring tab. This tab also specifies the monitoring start time for each counter.

The monitoring of the vault store performance counters begins at the Operations Manager monitoring frequency when the monitoring start time is reached. The start time is specified on the Monitoring tab of the Site Properties dialog box. If you want to monitor the performance counters immediately, change the monitoring start time and restart the Enterprise Vault Admin service.

Table 13-1 shows the monitored counters and possible consequences of raised values.

**Table 13-1** Monitored vault store performance counters

Counter description	Counter name	Consequence of raised values
Number of incomplete backup, indexing or replication operations	Journal Archive Table Size	Indicates a possible issue with backup or replication policies, or with the indexing process. If you have chosen the vault store option to remove safety copies immediately after archive, you may suffer a greater data loss in the event of a hardware failure.
Number of incomplete delete operations	Journal Delete Table Size	Indicates that there are many items pending index deletion. A backlog can indicate that there is a problem with the Indexing service.
Number of incomplete restore operations	Journal Restore Table Size	Indicates that a large number of items are waiting to be restored, implying possible problems with the StorageRestore process.
Number of days since the last backup of the vault store database	Vault Store DB Backup	If the vault store database is not backed up periodically, this may result in data loss or, at minimum, extensive operations to restore Enterprise Vault in the event of hardware failures on the SQL server hosting the database.
Space used in the vault store database transaction log (%)	Vault Store DB Log % Used	Indicates how close the SQL server is to increasing the log file's size by the configured increment for this log file.

**Table 13-1** Monitored vault store performance counters (*continued*)

Counter description	Counter name	Consequence of raised values
Number of days since last backup of vault store database transaction log	Vault Store DB Log Backup	If the vault store database log files are not backed up periodically, this may result in data loss or, at minimum, extensive operations to restore Enterprise Vault in the event of hardware failures on the SQL server hosting the database.
Cumulative size of all the log files in the vault store database	Vault Store DB Log Size	The performance of the SQL server may be adversely affected if there is a shortage of disk space where the transaction logs are stored.
Number of Saveset files awaiting backup or replication	Watchfile Table Size	Indicates a possible problem in backup or replication application policies.

**Performance counters for "LogicalDisk" table (Enterprise Vault Monitoring Details tab)**

This table lists the value of each "% Free Space" counter instance. This shows the percentage of usable disk space that is available on the logical disk drive.

The table also shows the configured warning and critical thresholds for the counter, and the date and time when the Monitoring agent last monitored this data.

**Performance counters for "Memory" table (Enterprise Vault Monitoring Details tab)**

The Performance counters for "Memory" table lists the value of each "Available Mbytes" counter. This shows the amount of physical memory in MB that is available to be allocated to a process, or for system use.

The table also shows the configured warning and critical thresholds for the counter, and the date and time when the Monitoring agent last monitored this data.

### Performance counters for "Processor" table (Enterprise Vault Monitoring Details tab)

The Performance counters for "Processor" table lists the value of each "% Processor Time" counter instance. This shows the percentage of the processor's time spent executing non-idle threads.

The table also shows the configured warning and critical thresholds for the counter, and the date and time when the Monitoring agent last monitored this data.

## About Exchange Server journal mailbox archiving

The Exchange Server Monitoring option is available on the menu bar if at least one of the site's servers is running Microsoft Exchange journaling tasks. Select this option to view data for the Exchange Server Journal mailbox archiving targets.

### Exchange Server Monitoring Summary tab

The Summary tab displays collective status information for the Exchange Server journal mailbox targets of each monitored Enterprise Vault server running Exchange Server journaling tasks.

---

**Note:** The displayed values on this tab represent a snapshot that is taken at the last monitoring time. Use them only as a guide, not as real-time indicators.

---

The "Exchange Server Journal Mailboxes: Overall Status" table displays the following information for each Enterprise Vault server.

Server Name	The name of the Enterprise Vault server.
Inbox Total	Status of Inbox item totals.
Archive Pending	Status of archive pending item totals.
Archivable	Status of archivable item totals.

Failed Operations	<div>Status of failed operations, listed separately as follows:</div> <div><div>■ Copy: The number of items in the Exchange journal mailbox Failed To Copy folder.</div><div>■ Store: The number of items in the Exchange journal mailbox Failed To Store" folder.</div><div>■ DL Expansion: The number of items in the Exchange journal mailbox Failed DL Expansion folder.</div><div>■ External Filter: The number of items in the Exchange journal mailbox Failed External Filter folder.</div></div>
Days Since Last Backup	<div>The number of days since a backup of the vault store was performed.</div> <div>This value is calculated from the age of the oldest item in a pending archive state. It assumes that the Remove Safety Copies property of the vault store in the Administration Console is set to "After Backup". If Remove Safety Copies is set to another value, you need to interpret the value of Days Since Last Backup accordingly. For example, if Remove Safety Copies is set to "After backup (immediate for journaling)" or "Immediate", the value is typically always 0.</div>
Last Updated	<div>The date and time when the Monitoring agent last monitored this data.</div>

A warning or critical status indicator appears if a value breaches the relevant threshold on one or more journal mailbox targets. For example, a warning indicator in the Inbox Total column indicates that when the server was monitored, at least one Inbox total reached the Inbox Total warning threshold, but none reached the critical threshold.

To see detailed data for a particular server, click that server’s name in any of the tables to display the Details tab.

See [“Exchange Server Monitoring Details tab”](#) on page 245.

---

**Note:** The Monitoring agents expose the Exchange journal mailbox parameters as performance counters under the "EnterpriseVault::Exchange Journaling" performance object category. These performance counters can be viewed using tools such as perfmon. However, their values only change at the sampling frequency of the Monitoring agents.

---

## Exchange Server Monitoring Details tab

The Details tab on the Exchange Server Monitoring page shows data relating to each Exchange Server journal mailbox target that is associated with the selected Enterprise Vault server.

To view these details for a different Enterprise Vault server in the current Enterprise Vault site, select the server from the server list at the top of the page.

---

**Note:** The displayed values on this tab represent a snapshot that is taken at the last monitoring time. Use them only as a guide, not as real-time indicators.

---

The Details tab contains several tables of monitoring information: Journal Mailbox Details and Archiving Statistics for Last Hour.

### Journal Mailbox Details (Exchange Server Monitoring Details tab)

The Journal Mailbox Details table shows the following details for each journal mailbox archiving target. The data relates to the last monitoring time, as shown in the table header.

Journal Mailbox	The name of the journal mailbox. The associated archive name is shown in brackets.
Inbox Total	The total number of Inbox items.
Archive Pending	The number of items in a pending archive state.
Archivable	The number of Inbox items that are marked for archiving.
Failed Operations	<div>The number of failed operations, listed separately as follows:<ul style="list-style-type: none"><li>■ Copy: The number of items in the Exchange journal mailbox Failed To Copy folder.</li><li>■ Store: The number of items in the Exchange journal mailbox Failed To Store folder.</li><li>■ DL Expansion: The number of items in the Exchange journal mailbox Failed DL Expansion folder.</li><li>■ External Filter: The number of items in the Exchange journal mailbox Failed External Filter folder.</li></ul></div>

Days Since Last Backup	<p>The number of days since a backup of the vault store was performed.</p> <p>This value is calculated from the age of the oldest item in a pending archive state. It assumes that the Remove Safety Copies property of the vault store in the Administration Console is set to "After Backup". If Remove Safety Copies is set to another value you need to interpret the value of "Days Since Last Backup" accordingly. For example, if Remove Safety Copies is set to "After backup (immediate for journaling)" or "Immediate", the value is typically always 0.</p>
------------------------	--

### Archiving Statistics for Last Hour (Exchange Server Monitoring Details tab)

The "Archiving Statistics for Last Hour" table relates to the journal mailbox items that Enterprise Vault archived in the 60 minutes before the last monitoring time. For each journal mailbox archive, the table shows the following information:

Archive Name	The name of the Enterprise Vault archive
Number of Items	The number of items that Enterprise Vault has archived
Cumulative Original Size	The total original size of the items that were archived
Cumulative Compressed Size	The total compressed size that the archived items occupy.

The Details tab also lists the current threshold values for the warning and critical status indicators.

**Note:** The Monitoring agents expose the Exchange journal mailbox parameters as performance counters under the "EnterpriseVault::Exchange Journaling" performance object category. These performance counters can be viewed using tools such as perfmon. However, their values only change at the sampling frequency of the Monitoring agents.

## About Domino Server journaling archiving

The Domino Server Monitoring option is available on the menu bar if at least one of the site's servers is running Domino journaling tasks. Select this option to view data for the Domino Server journaling location archiving targets.

## Domino Server Monitoring Summary tab

The Summary tab on the Domino Server Monitoring page displays collective status information for the Domino Server journaling location archiving targets of each monitored Enterprise Vault server running one or more Domino journaling tasks.

**Note:** The displayed values represent a snapshot that is taken at the last monitoring time. Use them only as a guide, not as real-time indicators.

The "Domino Server Journal Mailboxes: Overall Status" table displays the following information for each server:

Server Name	The name of the Enterprise Vault server
Inbox Total	Status of Inbox item totals
Archive Pending	Status of archive pending item totals
Archivable	Status of archivable item totals
Failed Operations	Status of the number of failed items
Days Since Last Backup	<p>The number of days since a backup of the vault store was performed.</p> <p>This value is calculated from the age of the oldest item in a pending archive state. It assumes that the Remove Safety Copies property of the vault store in the Administration Console is set to "After Backup". If Remove Safety Copies is set to another value you need to interpret the value of "Days Since Last Backup" accordingly. For example, if Remove Safety Copies is set to "After backup (immediate for journaling)" or "Immediate", the value is typically always 0.</p>
Last Updated	The date and time when the Monitoring agent last monitored this data.

A warning or critical status indicator appears if a value breaches the relevant threshold on one or more Domino journaling location archiving targets. For example, a warning indicator in the Inbox Total column indicates that when the server was monitored, at least one Inbox total breached the Inbox Total warning threshold, but none breached the critical threshold.

To see detailed data for a particular server, click that server’s name in any of the tables to display the Details tab.

See “[Domino Server Monitoring Details tab](#)” on page 248.

**Note:** The Monitoring agents expose the Domino journal mailbox parameters as performance counters under the "EnterpriseVault::Domino Journaling" performance object category. These performance counters can be viewed using tools such as perfmon. However, their values only change at the sampling frequency of the Monitoring agents.

## Domino Server Monitoring Details tab

The Details tab on the Domino Server Monitoring page shows data relating to each Domino Server journaling location archiving target that is associated with the selected Enterprise Vault server.

To view these details for a different Enterprise Vault server in the current Enterprise Vault site, select the server from the server list at the top of the page.

**Note:** The displayed values represent a snapshot that is taken at the last monitoring time. Use them only as a guide, not as real-time indicators.

The Details tab contains two tables of monitoring information: Journaling Location Details, and Archiving Statistics for Last Hour.

### Journaling Location Details (Domino Server Monitoring Details tab)

The Journaling Location Details table shows the following details for each Domino journaling location archiving target. The data relates to the last monitoring time, as shown in the table header.

Journal Mailbox Location	The Domino journaling location for which collective information for all mailboxes is displayed. The associated archive name is shown in brackets.
Inbox Total	The total number of Inbox items.
Archive Pending	The number of items in a pending archive state.
Archivable	The number of Inbox items that are marked for archiving.
Failed Operations	The number of failed operation items.



Days Since Last Backup	<p>The number of days since a backup of the vault store was performed.</p> <p>This value is calculated from the age of the oldest item in a pending archive state. It assumes that the Remove Safety Copies property of the vault store in the Administration Console is set to "After Backup". If Remove Safety Copies is set to another value you need to interpret the value of "Days Since Last Backup" accordingly. For example, if Remove Safety Copies is set to "After backup (immediate for journaling)" or "Immediate", the value will typically always be 0.</p>
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### Archiving Statistics for Last Hour (Domino Server Monitoring Details tab)

The "Archiving Statistics for Last Hour" table relates to items that Enterprise Vault archived in the 60 minutes before the last monitoring time.

For each journal mailbox archive, the table shows the following information:

Archive Name	The name of the Enterprise Vault archive.
Number of Items	The number of items that Enterprise Vault has archived.
Cumulative Original Size	The total original size of the items that were archived.
Cumulative Compressed Size	The total compressed size that the archived items occupy.

The Details tab also lists the current threshold values for the warning and critical status indicators.

**Note:** The Monitoring agents expose the Domino journal mailbox parameters as performance counters under the "EnterpriseVault::Domino Journaling" performance object category. These performance counters can be viewed using tools such as perfmon. However, their values only change at the sampling frequency of the Monitoring agents.

## Configuring warning and critical status thresholds with Enterprise Vault Monitoring

You can set the threshold values for the warning and critical status indicators that appear on the Enterprise Vault Monitoring, Exchange Server Monitoring, and Domino Server Monitoring pages.

#### To configure the performance counter status thresholds

- 1 Select **Configuration** on the Operations Manager menu bar.
- 2 Select the **Performance Counters** tab on the Configuration page.
- 3 To change a displayed threshold value, overtype the current value with the required value. Values must be numeric and greater than zero. Critical values must exceed Warning values, except for **Available Mbytes** and **% Free Space**, where the Critical value must be less than the Warning value.
- 4 Repeat step 3 with the threshold values of other counters, if required.
- 5 Do one of the following:
  - To save your changes, click **Save**. It may take a few seconds for the save to take effect.
  - To return to the values as set when you selected the Performance Counters tab (or last clicked Save), click **Reset**, and then click **Save**.

#### To configure the Exchange or Domino journal mailbox archiving status thresholds

- 1 Select **Configuration** on the Operations Manager menu bar.
- 2 Select the **Exchange Parameters** tab or **Domino Parameters** tab on the Configuration page, as required.
- 3 To change a displayed threshold value, overtype the current value with the required value. Values must be numeric and greater than zero. Critical values must exceed Warning values.
- 4 Repeat step 3 for additional values, if required.
- 5 Do one of the following:
  - To save your changes, click **Save**. It may take a few seconds for the save to take effect.
  - To return to the values as set when you selected the Exchange Parameters tab (or last clicked Save), click **Reset**, and then click **Save**.

#### To reset thresholds to their factory settings

- 1 Select **Configuration** on the Operations Manager menu bar.
- 2 Select the **Performance Counters** tab, **Exchange Parameters** tab, or **Domino Parameters** tab on the Configuration page, as required.
- 3 Click **Reset to factory**.
- 4 Click **Save**.

# Configuring the Enterprise Vault monitoring parameters

You can configure the following:

- Whether monitoring by the Monitoring agents is enabled or disabled.
- The frequency of the scheduled monitoring.
- The period for which Enterprise Vault is to retain data in the Monitoring database.

## To configure the monitoring parameters

- 1 Select **Configuration** on the Operations Manager menu bar.
- 2 Select the **Monitoring Parameters** tab on the Configuration page.
- 3 To enable or disable monitoring by the Enterprise Vault Monitoring agents, check or uncheck **Monitoring Enabled**.
- 4 To change the monitoring frequency, select a new value from the **Monitoring Frequency** list.
- 5 To change the retention time for the monitoring data, select a new value from the **Retain Records For** list.
- 6 Do one of the following:
  - To save your changes, click **Save**. It may take a few seconds for the save to take effect.
  - To return to the values as set when you selected the Monitoring Parameters tab (or last clicked Save), click **Reset**, and then click **Save**.

# Performing an immediate status check on an Enterprise Vault server

If required, you can perform an immediate status check on an Enterprise Vault server, in addition to the scheduled regular monitoring. For example, you may want to do this if the most recent set of data indicates a potential problem, and you want to investigate the current status.

Perform the following procedure on the server on which you require the immediate status check.

**To perform an immediate status check**

- 1** Edit the configuration file `MonitoringAgent.exe.config` using a text editor such as Notepad. The configuration file is located in the Enterprise Vault installation folder (for example `C:\Program Files (x86)\Enterprise Vault`).
- 2** Set the value of **OperationsManagerMonitorObjectChannel** to an appropriate available port number on the Enterprise Vault server.
- 3** Ensure the value of **ExposeMonitor** is set to **true**.
- 4** Stop and restart the Enterprise Vault Admin service, so that Enterprise Vault uses the new configuration settings.
- 5** Open a Command Prompt window and change directory to the Enterprise Vault installation folder (for example `C:\Program Files (x86)\Enterprise Vault`).
- 6** Force the status check by entering the command `ForceMonitoringUtil.exe`.

Within a short time you should see the results of the status check in Operations Manager.

For security reasons you should change the value of **ExposeMonitor** to **false** and then restart the Admin service after you have finished performing the immediate status check.

# Exporting archives

This chapter includes the following topics:

- [About the Export Archive wizard](#)
- [Importing \(migrating\) exported files](#)
- [Starting the export with the Export Archive wizard](#)

## About the Export Archive wizard

Export Archive can only be used with Exchange Server mailbox archiving.

The Export Archive wizard lets you export archived items as follows:

- Archives to PST files.

This is useful when the following apply:

- You want to give a user a personal copy of archived items, perhaps to use when out of the office.
- You want to send individual mailbox archives somewhere for safekeeping.

- Archives to their original mailboxes.

This is useful when the following apply:

- You are transferring mailboxes and want to send the users' archived items too.
- You have been running a pilot installation of Enterprise Vault and now want to copy everything that has been archived back to the original mailboxes.

- A single archive to a chosen mailbox.

This could be useful when the following apply:

- A person takes over an existing role within the company. For example, You could export to the new mailbox everything that was archived from the old mailbox with a particular retention category.
- There is a legal investigation. You may want to copy everything that has been archived from a particular mailbox to a new mailbox, ready for subsequent investigation.

You can export only the items that have been archived from mailboxes, and not the items archived from public folders or SharePoint.

When you export, you can filter the output by date and by retention category. For example, you can export items less than a year old that were archived with a particular retention category.

When you export to PST files, the wizard lets you control the maximum size of the output files. The default maximum of 600 MB is ideal for writing to CD. If a file reaches the maximum size, the wizard automatically creates a numbered sequence of files, none of which exceeds the maximum size.

Folders in PST files can contain a maximum of 16,383 items. This is a PST file limitation. If a folder reaches this limit the Export Archive wizard automatically creates a new folder of the same name but with a number suffix. For example, if folder 'Inbox' is full, the Export Archive wizard automatically creates 'Inbox 1' to hold further items.

For each PST file, the wizard creates a configuration file that you may need if you intend to import the PST file contents back into Enterprise Vault. You can import files that have been exported, so it is possible to move someone's archived items to another Enterprise Vault system.

See [“Importing \(migrating\) exported files”](#) on page 254.

## Importing (migrating) exported files

When you migrate exported PST files to an archive, it is best to locate the destination archive on a different vault store from the original archive. If these archives are on the same vault store, then you must delete the original archive before migrating the PST files. Failure to do this results in duplicate entries in the vault store database.

The following steps summarize the procedure for migrating PST files when the destination archive is on the same vault store as the original archive.

### To migrate PST files to an archive on the same vault store as the original archive

- 1 After you have exported the archive to PST files using the Export Archive wizard, ensure that the export was successful.
- 2 If the destination archive is to be associated with the same mailbox, then disable the mailbox using the Enterprise Vault Administration Console.
- 3 In the Enterprise Vault Administration Console, delete the original archive.
- 4 To create the destination archive, enable the associated mailbox.
- 5 Use PST Migration to import the PST files into the new archive. To fix any broken shortcuts in the mailbox, configure PST migration as follows:
  - Do not create shortcuts to newly-archived items.
  - Import items to the root folder .
  - Merge the folder structures.

## PST configuration files and exported archives

When you export archives to PST files, a configuration file is automatically created for each PST file. This configuration file contains information that is needed if you intend to import the PST file contents back into Enterprise Vault, including the following:

- The retention category that was applied to all the items in the PST file.
- The Vault ID, which is needed to correct the shortcuts that the move has broken.

At the bottom of the configuration file there is a section called [RETENTION\_CATEGORY] that shows details of the retention category that applies to all the items in the corresponding PST file. The [RETENTION\_CATEGORY] section is present only if they were exported with **Split PST files by retention category** selected in the Export Archive wizard. When you import, the wizard tries to match the existing retention categories to the ones in the PST configuration file. If the section is not present, there is no way to determine the original retention category of the items.

### Example PST configuration file with an exported archive

This example configuration file shows that the retention category Personal was used when all the items in JohnSmith\_Export\_0001.pst were archived.

```
[PST]
FILENAME = JohnSmith_Export_0001.pst
DESCRIPTION = John Smith
```

```
CREATED = 22Aug2002 10:01 AM
ORIGIN = EXPORT_ARCHIVE
[MAILBOX]
NAME = John Smith
MAILBOXDN = /O=ACME/OU=LEGAL/CN=RECIPIENTS/CN=JOHNS
EXCHANGESERVER = EXCH01
[USER]
FIRSTNAME = John
LASTNAME = Smith
DEPT = Legal
TITLE = Audit Manager
[VAULT]
NAME = John Smith
DESCRIPTION = Created by Enable Mailbox Wizard
VAULTID =
19A33926632EA274B9822FDBCA82CA09B1110000laguna3.win.kvsinc.com
VAULTSTORENAME = CCV4VS
[RETENTION_CATEGORY]
NAME = Personal
DESCRIPTION = Personal items
PERIOD = 60
PERIODUNITS = MONTHS
```

It is possible that the retention category does not match any retention category in your Enterprise Vault site. In this case you must decide on a suitable action, as follows:

- You can use an existing retention category that most closely matches the retention category in the configuration file.
- You can create a new retention category to match the one in the configuration file. However, this new retention category is then available to all users and you may find that its name is likely to confuse existing users.

## Starting the export with the Export Archive wizard

When you are ready to export archived items to PST files or mailboxes, follow the instructions below to start the Export Archive wizard.



### To start the export

- 1 In the left-hand pane of the Administration Console, right-click the **Archives** icon.
- 2 On the shortcut menu, click **Export**.
- 3 Work through the Export Archive wizard to complete the export.



# Introduction to PST migration

This chapter includes the following topics:

- [Tools for migrating PST files](#)
- [Overview of the PST migration process](#)
- [PST files and marking](#)
- [PST migration tips](#)
- [About Locate and Migrate](#)
- [Client-driven PST migration](#)
- [Migrating PST files in hosted environments](#)

## Tools for migrating PST files

Enterprise Vault provides the following tools for migrating (importing) the contents of PST files to archives:

- **Locate and Migrate.** This tool locates PST files on users' computers, copies them to a central location, and then migrates them. Unless you have only a few PST files to migrate, Locate and Migrate is likely to require least effort on your part.
- **Client-driven PST migration.** This tool lets you configure users' computers to locate PST files automatically and copy them to a central PST holding folder. Enterprise Vault then migrates the PST file contents from the PST holding folder to Enterprise Vault archives.

Client-driven PST migration is useful in the following situations:

- User computers are available on the network only occasionally.
- You do not have permission to access PST files on the user’s computer.
- Users need continual access to their PST files.
- Scripted migration using Policy Manager. This tool is useful for performing bulk migrations of PST files, but you need to collect the PST files in a central location.
- PST Migrator wizard-assisted migration. If you have a small number of PST files, this provides a quick and easy way of migrating them to Enterprise Vault.

## Overview of the PST migration process

The migration process migrates the contents of PST files to archives. If the PST files then continue to have more items stored in them, you need to perform further migrations to archive new items.

If you try to migrate thousands of PST files at the same time, the migration can take a long time to run. The time taken is comparable to the amount of time your Enterprise Vault system would take to archive the same amount of data from mailboxes. We recommend that you experiment with a few PST files and gradually increase the numbers with which you work.

**Table 15-1** Feature comparison of PST migration tools

Feature	PST Migrator wizard	Scripted using Policy Manager	Locate and Migrate	Client-driven migration
Simple to use for just a few PST files	Yes	No	No	No
Locate PST files on users’ computers	No	No	Yes	Yes
Collect users’ PST files in central location	No	No	Yes	Yes
Suitable for migrating large numbers of PST files	No	Yes	Yes	Yes
Can use supplied password to open PST file	No	No	Yes	Yes
Can adjust Exchange Server quotas	No	No	Yes	Yes

**Table 15-1** Feature comparison of PST migration tools (*continued*)

Feature	PST Migrator wizard	Scripted using Policy Manager	Locate and Migrate	Client-driven migration
Use marking in PST to determine archive	Yes	Yes	Yes	No
Use mail profile entry to determine archive	No	No	Yes	Yes
Use name of host computer to determine archive	No	No	Yes	No

Note the following:

- All PST migration tools skip PST files if the vault store that contains the corresponding archive is in backup mode.
- Classes of items that are not eligible for archiving are ignored when you migrate PST files into Enterprise Vault. You can use the **Message Classes** tab in the Exchange PST Migration policy to define the classes of items that will be archived when the policy is applied. You can use the **Exchange Message Classes** tab in Directory properties to edit the list of message classes that appear in policies.
- Enterprise Vault ignores items that were created on a computer that uses a language that is incompatible with that of the Storage service computer. For example, if a PST file contains both Japanese and English items, and the Storage service computer uses Japanese, then the English items are ineligible for archiving. Contact Symantec Corporation if you want to migrate PST files that contain such items.
- If you are importing archived items that have previously been exported by Enterprise Vault, then you may need to deal with unknown retention categories. See [“Importing \(migrating\) exported files”](#) on page 254.
- In the Exchange mailbox policy you can configure Enterprise Vault to change the retention category of items when they are moved within an archive. Items can be assigned a specific retention category during PST migration. You may want such items to retain this retention category if they are moved later to a folder with a different retention category. To prevent Enterprise Vault from changing the retention category, ensure that the policy option, **Include items with Retention Category selected by the user, set by a custom filter, or set by PST migration** is not selected. This option is on the **Moved items** tab of the Exchange mailbox policy properties.

## PST files and marking

By default, when a user starts Outlook, the client writes a marker into each PST file that is listed in the mail profile. The marker indicates the Enterprise Vault site, the default archive, and the default retention category. All the PST migration tools can use the marker to determine the owning mailbox and then migrate the file contents to that mailbox's default archive. Marking PST files can be configured off or on in Exchange Desktop policies using the setting, **Mark PST files**, in the list of advanced Outlook settings.

If marking is switched on, then the Enterprise Vault client does the following when Outlook starts:

- Tries to open every PST that is listed in the user's mail profile. The next time users start Outlook they will be prompted for passwords to password-protected PSTs and will receive error messages for any PSTs that are inaccessible.
- Does not update the PST file marker again except when a different mail profile is used that lists that PST file. This means that Policy Manager assumes that the PST is owned by the last profile that was used to access the file.
- Marks any further PST files that are subsequently added to the mail profile. The marking happens when Outlook is started, so merely opening a PST file and then closing it again is not sufficient to mark that PST.

## PST migration tips

- Migrate a few PST files and then, when you are familiar with the process, increase the numbers.
- Migration is much easier if you have PST files in a few locations, rather than in many. (For this reason, Locate and Migrate copies the PST files to a central location before migrating them).
- Sort out the permissions on the PST files before running Policy Manager, otherwise they will fail.
- There is a Windows server command-line utility, CACLS, which you can use to grant the Vault Service account Full Control access to the PST files.
- When Enterprise Vault archives items, it also converts the contents to HTML and indexes them. There is a default conversion timeout of 30 minutes for this process. Enterprise Vault makes three attempts to convert an item, and so can take up to 90 minutes before failing an item and moving on to the next one. If there are very large, or very complex, items in a PST file, it can take a long time to migrate them all. If you do not need the content of the items to be

indexed, then you can improve performance by lowering the conversion timeout to just a few minutes.

- This change to the conversion timeout also affects normal archiving, so remember to return it to the original value when you have migrated the PST files.
- You can also improve performance by making Enterprise Vault create text rather than HTML versions of certain document types.  
See [“How to control content conversion”](#) on page 356.

#### To change the conversion timeout

- 1 On the Storage service computer, set the string registry entry ConversionTimeout to the timeout, in minutes, that you want to use. The entry must be under the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
```

- 2 Restart the Storage service.

## About Locate and Migrate

Locate and Migrate partially automates the process of migrating the contents of PST files into Enterprise Vault. It can automatically search for PST files on users' computers and move them to a central holding area, from which they can be automatically migrated.

Depending on the configuration options you select there may be some manual intervention required to approve migration of PST files. Additionally, you may need to supply the passwords for password-protected PST files.

Locate and Migrate comprises several Enterprise Vault task types:

- A PST Locator task. This searches your network for computers and PST files. There can be only one PST Locator task in your Enterprise Vault site.
- A PST Collector task. This moves PST files that the PST Locator task has found to a central PST holding folder, ready for them to be migrated. There can be many PST Collector tasks in your Enterprise Vault site.
- A PST Migrator task. This migrates the contents of PST files that are in the PST holding folder to Enterprise Vault archives. There can be many PST Migrator tasks in your Enterprise Vault site.

## How to schedule Locate and Migrate tasks

The various Locate and Migrate tasks run according to schedules that you define, although there is also the Run Now option for each task so that you can run it immediately, if required.

You can schedule the PST Locator task to run during normal office hours. This probably ensures that it will find the maximum possible number of computers and PST files. When the PST Locator task has completed its search for PST files it does no more work, even if its schedule window is still open. It will not scan each computer again for a minimum of one day, although you can increase this period between scans.

The PST Collector task moves PST files to the PST holding area, ready for them to be migrated. You can restrict the number of files in the holding area so that they can all be processed by the PST Migrator task during its scheduled run. This ensures that the period for which items within PST files are unavailable is as short as possible.

On a dual-processor computer a typical rate of PST file migration is approximately 1.5 GB per hour, although this figure depends on many factors, including the type and complexity of items that are imported. Thus, a holding area with 6 GB of PST files would take approximately four hours to process.

## Client-driven PST migration

It is possible to configure the Enterprise Vault Outlook Add-In so that it migrates PST files automatically to a central PST holding folder. The PST Migrator task then processes the PST files and archives the contents.

You need to configure a PST Migrator task on every Enterprise Vault server that hosts a Storage service and manages the archives to which you intend to migrate PST files. When migrating a PST file, the migration process runs on the Enterprise Vault server that manages the destination archive.

Client-driven PST migration can be useful in the following cases:

- You do not have permission to access PST files on the user's computer.
- Users need continual access to their PST files.
- The user's computer is available on the network only occasionally. For example, a user with a laptop computer who visits the office on one day each week.

In summary, the client-driven migration process is as follows:

- You enable mailboxes for client-driven PST migration.



- An explanatory mail message is immediately sent to the newly-enabled mailboxes.
- The next time a user starts Outlook, the computer is scanned for PST files.
- Starting with PST files in the users' profile, each PST file is sent as a series of approximately 10 MB chunks to the PST holding folder.
- The PST Migrator task migrates the chunks to the user's archives.
- When a PST file has been successfully migrated, checks are made to make sure that no more items have been added to it. Provided that there are no more items, the PST file is removed from the user's profile.

Client-driven PST migration does not work if the registry value `PSTDisableGrow` is enabled on users' computers. For information about how to override `PSTDisableGrow`, see the *Setting up Exchange Server Archiving* manual.

## Migrating PST files in hosted environments

For each mail item that Enterprise Vault archives, it creates an XML document that contains the item's sender and recipient data. This document is archived with the item and Enterprise Vault subsequently uses the XML data during indexing.

Enterprise Vault builds the XML data it requires from the sender and recipient information in each item as it is archived. However, if any of the information is not present in the item, Enterprise Vault attempts to establish a connection to the relevant Exchange server's domain controller to gather the information. This process requires that at least one Exchange server is targeted in your site.

If you migrate PST files in environments where no suitable Exchange server is available to provide the information that Enterprise Vault requires, migration performance can be degraded. For example, this would happen in the following circumstances:

- You migrate legacy data from PST files that were created in an old Exchange environment, whose Exchange servers no longer exist.
- You migrate data from PST files in a hosted environment that has no Exchange server.

In cases like these, you should set a registry value to bypass the lookup of addresses during archiving.

### **To bypass Active Directory address lookups**

- 1** On every Enterprise Vault storage service computer, create a new registry DWORD value called BypassAddressLookups under the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Storage
```

- 2** Set BypassAddressLookups to 1.
- 3** Restart the storage service.

This setting allows PST migrations to use only the sender and recipient data it finds in each mail item it archives. Enterprise Vault does not attempt to establish an Active Directory connection to resolve addresses.

# PST migration: scripted

This chapter includes the following topics:

- [Overview of the scripting mechanism for PST migration](#)
- [Undertaking the PST migration process using Policy Manager](#)
- [Preparation for PST scripted migration](#)
- [Output from PST migration](#)
- [Example initialization file for PST scripted migration](#)

## Overview of the scripting mechanism for PST migration

You can perform scripted migrations of the contents of PST files to Enterprise Vault using Policy Manager. For detailed information on Policy Manager, see the *Utilities* manual.

The scripting mechanism enables you to configure how each PST file is processed. For example, for each PST file you can do the following:

- Specify the destination archive.
- Specify whether to create shortcuts to migrated items and, if so, whether to leave them in the PST file or to put them in a specific folder in the user's mailbox.
- Specify which retention category to use for migrated items.
- Control what happens to the PST file itself after the items in it have been migrated.

You write the Policy Manager initialization file, in which you list each of the files whose contents you want to migrate to Enterprise Vault. You can set up default

settings that apply to all PST files and you can override the default settings for individual PST files.

It is possible for you to make Enterprise Vault clients save details of the owner's default archive in each PST file (PST marking). Policy Manager can then use this information to determine the correct archive and mailbox to use for each PST file. If you prefer to not to use this mechanism, or to override it for some PST files, then for individual PST files you can override these values.

When you migrate PSTs using Policy Manager you can use report mode to check all the PST files listed in your initialization file. This mode generates a new copy of the initialization file, with lines that identify any problems. Entries for PST files that cannot be processed are marked so that PST migrator ignores these files.

You can then do either of the following:

- Fix any problems and run the Policy Manager in report mode again to see whether there are any more problems. When the file is error free, you can run it in process mode to process all the files. You can run in report mode as many times as needed. Each time, Policy Manager creates a new initialization file that you can then run normally or use to fix problems.
- Run in process mode immediately. Files that could cause problems have been marked so that Policy Manager ignores them. You can then decide later what to do with these problem files.

Note the following:

- Policy Manager uses only message class and shortcut content settings from the Exchange PST Migration policy. The rest of the settings in the policy are ignored.
- Policy Manager can use the information written into the PST file by PST marking to identify the mailbox and archive associated with the PST file.
- Symantec recommend that you do not use Policy Manager to perform other tasks at the same time as performing PST migrations.
- If you have only a few PST files to migrate, you may find it easier to use the wizard-assisted PST migration tool instead.  
See [“About the PST Migrator wizard”](#) on page 277.

## Undertaking the PST migration process using Policy Manager

In outline, you perform scripted migrations with Policy Manager as follows.

### To undertake the migration process using Policy Manager

- 1 Decide whether to use markers within PST files to determine their ownership. By default, PST files are marked. You can turn off PST file marking in Exchange Desktop policies using the setting, **Mark PST files**, in the list of advanced Outlook settings.

See “[PST files and marking](#)” on page 262.

- 2 Write the Policy Manager initialization file to specify which PST files you want to migrate to Enterprise Vault. In the file, specify that Policy Manager is to run in report mode. Remember to save the initialization file in Unicode format.

- 3 Run Policy Manager in report mode with the initialization file.

Policy Manager does the following:

- Checks all the PST files listed are accessible.
- Creates a new initialization file that shows any problems with the listed PST files, such as files that could not be accessed or are password protected.

The new initialization file has the same name as the original, with a number added to make it unique. For example, if the original script was called `PSTMigration.ini` then the new script would be called

`PSTMigration_1.ini`.

- Creates a log file with the same name as the original initialization file and a file type of `.log`. For example, if the original script was called `PSTMigration.ini` then the log would be called `PSTMigration.log`.

- 4 You can fix problems that are listed in the new initialization file, or you can leave them for later.

- 5 Run Policy Manager with the new initialization file. Policy Manager migrates the file contents and writes a log file with the same name as the initialization file and a file type of `.log`

If any PST files fail the migration process, Policy Manager automatically writes a new script that you can run to process just those failed files.

If necessary, fix any problems and then run the new script to migrate the contents of just those PST files that were not processed before.

## Preparation for PST scripted migration

- Policy Manager only uses a limited number of settings in Exchange PST Migration policies. Enterprise Vault archives items from the PST files according to the following settings in your Enterprise Vault installation:
  - Enterprise Vault archives only the classes of items defined as eligible for archiving on the **Message Classes** tab in Exchange PST Migration properties.
  - The migration obeys registry settings that are set for the Storage service.
  - If you have configured customized shortcuts on the **Shortcut Content** tab of the Exchange PST Migration policy, then the PST Migrator uses these settings. Otherwise the shortcut content settings configured in the Exchange Mailbox policy are used.
- Items can be assigned a specific retention category during PST migration. You may want such items to retain this retention category if they are moved later to a folder with a different retention category. To prevent Enterprise Vault from changing the retention category, ensure that the policy option, **Include items with Retention Category selected by the user, set by a custom filter, or set by PST migration** is not selected. This option is on the **Moved items** tab of the Exchange mailbox policy properties.
- The PST files must not be in use at the time of migration, so make sure that users do not have them open. You may find that it is better to move the PST files.
- The best procedure may be to gather all the PST files into the same place and then to migrate them from there. This will make it easier to generate the initialization file, assign permissions, and to manage files. Note though, that you will have some filename conflicts if there are PST files with the same name. Also, if any PST files are likely to be unmarked you must be sure you know the owners because there will be no identifying information in the PST.
- The Vault Service account must have Full Control access to the PST file.
- The Storage service for the destination vault store must be running.
- PST files that are password protected cannot be processed. You must remove such protection before migrating their contents.
- If you intend to use the automatic PST compaction feature at the end of migrations, you may need some spare disk capacity to provide room for the compaction to take place. You could need as much as the size of the largest PST file, plus approximately 5% of its size. There is no point in compacting the PST files if you are going to delete them.

- Policy Manager migration checks the mailbox storage limit when a mailbox has either Prohibit Send or Prohibit Send & Receive mailbox limits set. If both these limits are set, Policy Manager does not move any item to the mailbox that would exceed the lower limit. If only one of the limits is set, then Policy Manager obeys that limit.

Note that, even if the storage limit prevents items from being moved to the mailbox, the items are still archived in the appropriate archive. In this case you could increase the mailbox quota and then migrate the PST file again to move the items to the mailbox.

## Output from PST migration

When you run Policy Manager with an initialization file containing a [PSTdefaults] section, Policy Manager automatically writes a new initialization file that contains details of any problems that it found.

The new initialization file has the following features:

- There is a [PSTcheckpoint] section at the top of the file, summarizing the results of the run.
- If you had been using process mode then the following apply:
  - All [PST] sections for files that were processed successfully are commented out.
  - There is a JobStatus entry in each [PST] section, indicating for that file, either success or the type of error that occurred.

### [PSTcheckpoint] section PST scripted migration

The contents of the [PSTcheckpoint] section vary according to whether you run the initialization file in report mode or process mode.

#### Report mode [PSTcheckpoint] section

The following [PSTcheckpoint] section results from running an initialization file in report mode. The Generation count of 1 shows that these results are from the first run of the file:

```
[PSTCHECKPOINT]
GENERATION = 1
CREATED = 02Oct2008 10:58:02 AM
SOURCE = E:\EV\pstmigration\pstlist.ini
PSTPROCESSEDCOUNT = 118
```

```
PSTNOTREADYCOUNT = 3
PSTWARNINGCOUNT = 2
```

The following entries are of interest:

- `PSTPROCESSEDCOUNT = 118` shows that the file contains references to 118 PST files.
- `PSTNOTREADYCOUNT = 3` shows that there are three files with problems. The `Report_Error` entries in the individual [PST] sections give you more information. Policy Manager automatically adds `DONOTPROCESS = TRUE` to each of these [PST] sections.
- `PSTWARNINGCOUNT = 2` shows that there are two files with warnings. In this case, these are both marked PST files whose markings are intentionally being overridden. The `Report_Error` entries in the individual [PST] sections gives more information.

Because Policy Manager has added the `DONOTPROCESS = TRUE` entries to each of the problem PST files, you could run this new initialization file in process mode immediately, leaving the problem PSTs to be addressed later. Alternatively, you could fix the problems, remove the `DONOTPROCESS = TRUE` entries, and then run the file again in either report mode or process mode.

## Process mode [PSTcheckpoint] section

The following [PSTcheckpoint] section results from running an initialization file in process mode. The Generation count of 2 shows that these results are from the second run of the file:

```
[PSTCHECKPOINT]
GENERATION = 2
CREATED = 02Oct2008 10:59:36 AM
SOURCE = E:\EV\pstmigration\pstlist.ini
PSTPROCESSEDCOUNT = 115
PSTFAILEDCount = 0
PSTUNPROCESSEDCOUNT = 3
PSTINCOMPLETECOUNT = 0
PSTPARTIALCOUNT = 0
```

The following entries are of interest:

- `PSTPROCESSEDCOUNT = 115` shows that 115 PST files were processed. This is the same initialization file as shown above in the Report mode description. The three problem files have been left with `DONOTPROCESS = TRUE` entries, so Policy Manager has ignored them.



- PSTFAILEDCOUNT = 0 shows that there were no files for which processing could not be tried.
- PSTUNPROCESSEDCOUNT = 3 shows that three files were ignored. These are the three files with DONOTPROCESS = TRUE entries.
- PSTINCOMPLETECOUNT = 0 shows that no PST files were processed only partially. Policy Manager's processing was not interrupted.
- PSTPARTIALCOUNT = 0 shows that there were no PST files with individual items that could not be processed. If there had been such items, Policy Manager would have placed them in the Migration Failed Items folder in the PST files.

## Enterprise Vault event log for PST scripted migration

When you run in process mode, the Enterprise Vault event log also contains one entry for each PST file processed. The entries appear in the Enterprise Vault event log with a source of Migrator Server. For example, the following log entry is for a PST file that contained 560 items and resulted in 560 shortcuts being placed in the mailbox:

```
PST Migration Report
Migration status: Completed
PST file: E:\Vault Test files\TestPSTs\uml.pst
Vault Name: Chris Waterlander
Vault Id:
14F921A913AB6D511AC9F0008C711C6F01110000server2.acme.com
RetentionCategory: Business
Exchange Server\Mailbox:
EV\o=ACME/ou=DEVELOPER/cn=Recipients/cn=ChrisW
Number of folders processed: 43
Number of items archived to vault: 560
Total size of items archived: 137876 KB
Number of items unable to be archived: 0
Number of items moved to mailbox: 560
Elapsed Migration Time: 0:0:6 (hours:minutes:seconds)
```

There is a summary log entry for each PST file that is migrated. The entry lists the number of items that have been archived and also the number of items that have been moved to the mailbox.

Some items may not be eligible for archiving or moving to the mailbox. This is the case if they have a message class that you have specifically excluded from being archived (using the **Message Classes** tab of the Exchange PST Migration policy in the Administration Console), or if they were created on a computer that uses a language incompatible with that of the Storage service computer. For

example, if a PST file contains a mixture of Japanese and English items, and the Storage Service computer uses Japanese, the English items are not eligible for archiving.

## Example initialization file for PST scripted migration

The initialization file must be saved as a Unicode file.

Table 16-1 shows a sample initialization file that sets up migrations for five PST files.

Table 16-1          Sample initialization file

Initialization file section	Notes
[Directory]  directorycomputername = server2  sitename = server2	<ul style="list-style-type: none"><li>■ The directory section is mandatory and must appear at the top of the file.</li><li>■ This section contains the name of the Enterprise Vault directory computer and the site name.</li></ul>
[PSTDefaults]  ServerComputerName = server2  PSTLanguage = Western European  MailboxFolder = EVPM PST Migrations  MigrationMode = Report  ShortcutMode = NoShortcuts  IncludeDeletedItems = false  SetPstHidden = false  SetPstReadOnly = false  CompactPst = true  DeletePst = false  CancelMbxAutoArchive = false	<ul style="list-style-type: none"><li>■ These default options apply to all PST migrations listed in the following [PST] sections unless overridden in those sections.</li><li>■ PST Language is mandatory.</li><li>■ There must only one [PSTDefaults] section and it must appear before the individual [PST] sections.</li><li>■ MigrationMode=Report specifies that this initialization file is to run in report mode.</li><li>■ ShortcutMode=NoShortcuts means that, by default, there will be no shortcuts to the migrated items. Items that cannot be migrated will be left in the PST files, not moved to the mailboxes. You can override this behavior for individual PST files.</li></ul>

**Table 16-1** Sample initialization file (*continued*)

Initialization file section	Notes
<p>[PST]</p> <p>Filename = E:\Migration\Missing.pst</p>	<ul style="list-style-type: none"> <li>■ The [PST] sections must appear after the [PSTDefaults] section</li> <li>■ As a minimum each section must specify the PST filename.</li> <li>■ If an option is unspecified then Policy Manager uses the value in the [PstDefaults] section.</li> <li>■ This marked file is missing and will produce an error when Policy Manager runs.</li> </ul>
<p>[PST]</p> <p>Filename =            \\server3\temp\marked1.pst</p>	<ul style="list-style-type: none"> <li>■ This file is on a remote computer.</li> <li>■ This PST file has been marked by the Enterprise Vault client so that Policy Manager can automatically determine the target archive, the Exchange Server mailbox, and the retention category.</li> </ul>
<p>[PST]</p> <p>Filename = E:\Migration\marked2.pst</p> <p>MailboxDN = /o=ACME/            ou=DEVELOPER/cn=Recipients/            cn=JackH</p> <p>ShortcutMode = MailboxShortcuts</p>	<ul style="list-style-type: none"> <li>■ This PST file has been marked by the Enterprise Vault client so that Policy Manager can automatically determine the target archive, the Exchange Server mailbox, and the retention category.</li> <li>■ The MailboxDN setting is overriding the PST marking. This will result in a warning when the initialization file is processed. The file will be processed correctly, using the specified enabled mailbox and that mailbox's default retention category and archive.</li> <li>■ Policy Manager will create shortcuts to archived items and place them, together with any items that remain in the PST at the end of the migration, into the mailbox.</li> </ul>
<p>[PST]</p> <p>Filename = E:\Migration\marked3.pst</p> <p>ArchiveName = Jack Henry2</p>	<ul style="list-style-type: none"> <li>■ This PST file has been marked by the Enterprise Vault client.</li> <li>■ The ArchiveName setting is overriding the owner entry that the client made. This will result in a warning when the initialization file is processed. The PST file will be processed correctly, using the specified archive and the default retention category from the owning mailbox.</li> </ul>

Table 16-1      Sample initialization file *(continued)*

Initialization file section	Notes
[PST] Filename = E:\Migration\unmarked.pst RetentionCategory = Business	This file has not been marked by an Enterprise Vault client.

# PST migration: wizard-assisted

This chapter includes the following topics:

- [About the PST Migrator wizard](#)
- [Outline of the wizard-assisted PST migration process](#)
- [Preparation for the wizard-assisted PST migration process](#)
- [Migration tips for the wizard-assisted PST migration process](#)
- [How the wizard-assisted PST migration process affects users](#)
- [Starting the wizard-assisted PST migration process](#)

## About the PST Migrator wizard

PST Migrator is a wizard that lets you store the contents of PST files in Enterprise Vault.

The main features of the wizard are as follows:

- You can migrate several PST files at the same time.
- You can either match PSTs to archives manually, or allow PST Migrator to do an automatic correlation based on the permissions set on the PST files. The automatic correlation can save you a lot of time, but it is important that you understand the process and make suitable preparations.
- PST Migrator processes PST files that are on a mapped network drive or in a shared network folder. You cannot use it to search across users' disks, migrating all the PST files that it finds.

- PST Migrator archives only those types of items for which you have enabled archiving. To view or modify the types of items that are archived, start the Administration Console and go to the **Message Classes** tab of the Exchange PST Migration policy properties.
- If you have configured customized shortcuts in the Exchange PST Migration policy, then the PST Migrator uses these settings. Otherwise the shortcut content settings configured in the Exchange Mailbox policy are used.
- You specify the required archiving settings as you work through the wizard.

PST migrator does not use any other settings from the Exchange PST Migration policy.

It is impossible to specify a migration process that suits everybody. For example, you may want to delete PST files after migrating them or you may want to continue using them. PST Migrator provides great flexibility, but you must think carefully about how you want to carry out the migration.

## Outline of the wizard-assisted PST migration process

In outline, you perform wizard-assisted PST migrations as follows.

### To undertake the migration process

- 1 Decide whether to use markers within PST files to determine their ownership. By default, PST files are marked. You can turn off PST file marking in Exchange Desktop policies using the setting, **Mark PST files**, in the list of advanced Outlook settings.  
See “[PST files and marking](#)” on page 262.
- 2 In the Administration Console, right-click the **Archives** container and, on the shortcut menu, click **Import PST**. The PST Migration wizard starts.
- 3 Select a vault store to use. You cannot select a vault store that is in backup mode.
- 4 Add to the list the PST files that you want to migrate to Enterprise Vault. You can select PST files from multiple mapped drives or network drives, but note that the Enterprise Vault Storage service must be able to access them.
- 5 Select how to match PST files with destination archives. You can choose either automatic correlation, or manual.
- 6 Specify the default retention category to use for items from PST files that do not have marking information, or if you have chosen not to use marking information.

- 7 Each PST file is listed together with the associated mailbox and destination archive, if known. It is important that you check the list of matches before beginning the migration. You can select or change the destination archive for a PST file, or remove PST files from the list, if necessary.
- 8 Each PST file is listed together with the retention category that will be applied to the items when they are archived. If required, you can change the retention category for individual PST files. You can choose an existing retention category or create a new one.
- 9 Specify whether PST Migrator is to create shortcuts for the items it archives. You can configure PST Migrator to do either of the following:
  - Archive the items and delete the original items from the PST without creating shortcuts.
  - Create shortcuts in the PST files and delete the original items after they have been archived. You might select this if users will still have access to the PST files at the end of the migration. The users must move the shortcuts to their mailboxes before they will work.
  - Create shortcuts in the associated mailboxes and delete the original items from the PST files after they have been archived.
- 10 Specify the required folder structure that the PST Migrator is to create in the mailbox for shortcuts to migrated items. You can specify a mailbox folder that is to correspond with the root folder in the PST file. Where there are several PST files to migrate, you can choose to merge the folder structures or keep them separate.
- 11 Select the language of the PST files to be migrated.
- 12 Specify whether PST Migrator is to migrate the **Deleted Items** folder in the PST files, or leave it in the PST file.

If calendar items are to be archived, specify whether PST Migrator is to migrate unexpired calendar items.
- 13 Specify what to do with each PST file after it has been processed. You can select the following:
  - Leave the file as it is.
  - Delete the file.
  - Compact the file to free up disk space.
  - Set permission on the file to read-only to prevent users adding items to the file.

- Hide the file. If you are not migrating all the PST files at the same time, this can help you to see how many PST files are left to migrate. The next time you run PST Migrator the hidden PST files will not be visible, provided that you have set your desktop so that it does not show hidden files.
- 14 Specify whether PST Migrator is to create a report file for the migration. Report files are created in the `Reports` subfolder of the Enterprise Vault installation folder.
- 15 Start the migration.

During the migration, the PST Migrator writes two events to the Enterprise Vault event log for each PST file, one when it starts processing the file, and another when it has finished.

If an item cannot be migrated, it is moved to a folder called PST Migration Failed Items in the PST file.

## Preparation for the wizard-assisted PST migration process

- The PST files must not be in use at the time of migration, so make sure that users do not have them open. You may find that it is better to copy PST files so that users can continue using the original files while you migrate the contents of the copies.
- The Vault Service account must have Full Control access to the PST file. If you are performing PST migration using a different account, then both the account and the Vault Service account must have Full Control access to the PST file.
- The Storage service for the destination vault store must be running.
- PST Migrator's automatic correlation rejects any PST file that has more than one user account with write permission, leaving you to do the correlation manually. You may find it easier to set the permissions appropriately before running PST Migrator.
- PST Migrator does not migrate PST files that are password protected. You must remove such protection before running PST Migrator.
- Items can be assigned a specific retention category during PST migration. You may want such items to retain this retention category if they are moved later to a folder with a different retention category. To prevent Enterprise Vault from changing the retention category, ensure that the policy option, **Include items with Retention Category selected by the user, set by a custom filter, or set by PST migration** is not selected. This option is on the **Moved items** tab of the Exchange mailbox policy properties.



- If PST files are scattered in different locations on users' disks, you may find it easier to move them all to a central location before you run PST Migrator.
- If you have PST files that must be migrated to different vault stores, the quickest way to sort them is probably to use the automatic correlation within PST Migrator and remove those that do not correlate.  
See [“Migration tips for the wizard-assisted PST migration process”](#) on page 281.
- If you intend to use the automatic PST compaction feature at the end of migrations, you may need some spare disk capacity to provide room for the compaction to take place. You could need as much as the size of the largest PST file, plus approximately 5% of its size.
- PST Migrator checks the mailbox storage limit when a mailbox has either Prohibit Send or Prohibit Send & Receive mailbox limits set. If both these limits are set, PST Migrator does not migrate items that would exceed the lower limit. If only one of the limits is set, then PST Migrator obeys that limit.  
If a PST file fails migration because the mailbox is full, you can modify the appropriate mailbox storage limit and then migrate the PST file again.

## Migration tips for the wizard-assisted PST migration process

- Migrate a few PST files and then, when you are familiar with the process, increase the numbers.
- Migration is much easier if you have PST files in just a few locations, rather than in many.
- Sort out the permissions on the PST files before running PST Migrator, otherwise they will just fail.
- There is a Windows server command-line utility, CACLS, which you can use to grant the Vault Service account Full Control access to the PST files.
- You can run more than one instance of PST Migrator. There is no point in running more instances than you have processors. For example, if you have two processors, then do not run more than two instances of PST Migrator. If the computer is also archiving at the same time, then reduce the number of PST Migrator instances.
- When Enterprise Vault archives items, it also converts the contents to HTML and indexes them. There is a default conversion timeout of 10 minutes for this process. Enterprise Vault makes three attempts to convert an item, so can take up to 30 minutes before failing an item and moving on to the next one.

**Migration tips for the wizard-assisted PST migration process**

If there are very large, or very complex, items in a PST file, it can take a long time to migrate them all. If you do not need the content of the items to be indexed, then you can improve performance by lowering the conversion timeout to just a few minutes.

This change to the conversion timeout also affects normal archiving, so remember to return it to the original value when you have migrated the PST files.

To change the conversion timeout, perform the following steps in the order listed:

- On the Storage service computer, set the following string registry value to the timeout, in minutes, that you want to use:

```
HKEY_LOCAL_MACHINE
\Software
\Wow6432Node
\KVS
\Enterprise Vault
\ConversionTimeout
```

- Restart the Storage service.

- If you have PST files in the same location that you want to go to different vault stores, the quickest way to do this is as follows:
  - Run PST Migrator and select the first archive store that you want to use.
  - Select all the PST files, including those that should go to other vault stores.
  - Select automatic correlation. PST Migrator will open the vault store and match PST files to archives within that vault store. All other PST files will not be matched.
  - Click the **Archive** heading on the screen to sort by destination archive. This puts at the top of the list all the PSTs that could not be matched to archives.
  - Drag-select all the PSTs that could not be matched to archives and then click **Remove**.
  - On the PST Migrator screen that asks **What do you want to do with PSTs after all items are successfully migrated from each?**, select **Hide them**.
  - At the end of the migration, PST Migrator hides the PST files that were migrated. The next time you run PST Migrator, these PST files will not appear in the list of PST files available for migration. The files appear hidden only if you have set your desktop so that it does not show hidden files.

- Repeat the process, running PST Migrator again, this time choosing a different vault store.
- When you have worked through all the vault stores, you may have some PST files left that failed to migrate. Run PST Migrator again and manually select the correct archive for each PST
- If you run PST Migrator on a computer that is not running the Storage service for the vault store, then you cannot choose PSTs on a local disk. You can, however, choose PSTs from a mapped network drive or a shared network folder, so you could, for example, map a network drive to your local disk.

## How the wizard-assisted PST migration process affects users

- You can migrate the contents of PST files, choosing to create shortcuts to migrated items, as follows:
  - If you create shortcuts in mailboxes, then PST Migrator duplicates the folder structure of the PST files under a new, top-level folder in the mailboxes.
  - If you create shortcuts in PST files to which users still have access, then the users must move the shortcuts to their mailboxes before the shortcuts will work.
- If users store new items in a PST file that has been migrated, you can run the migration again at any time, again creating shortcuts to migrated items. PST Migrator will migrate the new items.
- You can delete PST files at the end of the migration. If you do this then, obviously, the files are no longer available to users.
- If a user has configured Outlook to deliver new mail to a PST file rather than to the mailbox, there will be errors when Outlook next starts, as follows:
  - If the PST file no longer exists, there is an error as soon as Outlook starts and the user is then given the option to create a new PST file.
  - If the PST file still exists but is read-only, then there will be an error as soon as the user tries to access the PST or tries to create a mail message. The best solution is for users to make sure, before you perform the migration, that mail is not being delivered to PST files.

## Starting the wizard-assisted PST migration process

When you have completed the preparatory steps, you are ready to start the PST migration.

### To start the migration

- 1 In the left-hand pane of the Administration Console, expand the view until **Archives** is visible.
- 2 Right-click **Archives** and, on the shortcut menu, click **Import PST**. The PST Migration wizard starts.
- 3 Work through the wizard.

# PST Migration: Locate and Migrate

This chapter includes the following topics:

- [Preparations for setting up PST Locate and Migrate](#)
- [How to edit the Exchange PST Migration policy](#)
- [Configuring the PST holding folder for Locate and Migrate](#)
- [Creating and configuring the PST Locator, PST Collector, and PST Migrator tasks](#)
- [Accounts that manage PST migration Locate and Migrate](#)
- [Migrating PST files using PST Locate and Migrate](#)
- [Running the PST Locator task to find domains and computers](#)
- [Selecting computers for PST searching](#)
- [Excluding network shares from PST migration](#)
- [Running the PST Locator task to find PST files](#)
- [Editing PST file properties](#)
- [Running the PST Collector task](#)
- [Running the PST Migrator task](#)
- [Troubleshooting PST migration](#)

## Preparations for setting up PST Locate and Migrate

You need to set up the PST Locator, PST Collector, and PST Migrator tasks, Exchange PST Migration policies and the PST holding folder before you can start to migrate PST files.

To set up PST Locate and Migrate you need to make the following preparations:

- Decide whether to use PST marking. PST marking is enabled by default, and provides automatic association of a default archive and retention category with a mailbox. The archive and retention category can be overridden manually during the PST migration process, if required. You can turn off PST file marking in Exchange Desktop policies using the setting, **Mark PST files**, in the list of advanced Outlook settings.

See [“PST files and marking”](#) on page 262.

- Create or edit Exchange PST Migration policies. These policies are listed under **Policies > Exchange** in the Administration Console. Both PST Locate and Migrate and Client-driven PST migration use the configuration settings in Exchange PST Migration policies. The settings control characteristics of the PST migration, such as whether to create shortcuts, which retention category to use, and how to process the PST files after the contents have been migrated.

See [“How to edit the Exchange PST Migration policy”](#) on page 287.

The policy is applied to users by means of provisioning groups. A provisioning group enables you to apply an Exchange PST Migration policy to individual users or to a group of Exchange Server users. How to set up Exchange provisioning groups is described in *Setting up Exchange Server Archiving*.

- Configure the network share that is to be used as the central PST holding folder. This folder is configured in Enterprise Vault site settings. The PST Collector task copies PST files to the PST holding folder. The PST files are held in this folder until the PST Migrator task stores the contents of each PST file in its associated archive.

See [“Configuring the PST holding folder for Locate and Migrate”](#) on page 288.

- Create and configure PST Locator, PST Collector, and PST Migrator tasks. Typically, the PST Locator, PST Collector, and PST Migrator tasks run according to the schedule that you define in the task properties. A **Run now** option for each task lets you run the task immediately if required.

See [“Creating and configuring the PST Locator, PST Collector, and PST Migrator tasks”](#) on page 289.

- You may want to use accounts other than the Vault Service account to manage PST migration objects in the Administration Console. In particular, you may want the PST Locator task to run under a domain administrator account to ensure access to computers in the domain.

See [“Accounts that manage PST migration Locate and Migrate”](#) on page 294.

- Items can be assigned a specific retention category during PST migration. You may want such items to retain this retention category if they are moved later to a folder with a different retention category. To prevent Enterprise Vault from changing the retention category, ensure that the policy option, **Include items with Retention Category selected by the user, set by a custom filter, or set by PST migration** is not selected. This option is on the **Moved items** tab of the Exchange mailbox policy properties.

## How to edit the Exchange PST Migration policy

To customize the way PSTs are migrated for a group of users, you can edit the settings in the Exchange PST Migration policy that is associated with the provisioning group to which the users' mailboxes belong. Exchange PST Migration policies are listed under **Policies > Exchange** in the Administration Console.

The Exchange PST Migration policy properties include settings to define the following:

- Whether to create shortcuts for migrated items, and where to create them.
- Custom shortcuts.
- Whether to adjust Exchange Server quotas to accommodate the additional shortcuts in mailboxes.
- The default retention category .
- The classes of items to migrate.
- Whether to migrate the Deleted Items folder, and unexpired calendar items.
- The folder structure to create for shortcuts in the mailbox and Archive Explorer.
- The Windows code page to use if the PST Migrator creates folders in the user's mailbox.
- How to process PST files after successful migration.

When items have been migrated, the original items in the PST files are not deleted. If you want to delete the user's PST file after successful migration, choose to do so on the **Post Migration** tab of the PST Migration policy.

# Configuring the PST holding folder for Locate and Migrate

You configure the PST holding folder in Enterprise Vault site properties. The folder that you select must be a network share. The accounts that are used to configure the folder, or run the PST Locator, PST Collector and PST Migrator tasks on all Enterprise Vault servers in the site must have access to the PST holding folder. The access permission that is required is shown in [Table 18-1](#).

**Table 18-1** Access required to the PST holding folder

Account	Access required
Account used to configure the PST holding folder	Read. Access can be removed after configuration, if required.
Log on account used by PST Locator task	Delete.
Log on account used by PST Collector task	Delete.
Log on account used by PST Migrator task	Delete.

**To configure the PST holding folder**

- 1 In the left pane of the Administration Console, display the Enterprise Vault Site Properties.
- 2 On the **General** tab, next to **PST Holding Folder**, click **Change**.  
A prompt asks whether you want to browse Regular or Hidden shares.
- 3 Select the type of share that you intend to specify for the PST holding folder, and then click **OK**.
- 4 In the **Browse for Folder** dialog, expand **Entire Network** > **Microsoft Windows Network**. Expand the required domain and then the server on which the share is located. The list of shares that are displayed contain shared folders to which the account has access.
- 5 Select the folder you want to use for the PST holding folder and then click **OK**.
- 6 Click **OK** to close Site Properties.

## Determining the size of the PST holding folder for Locate and Migrate

In Enterprise Vault site properties you can specify a maximum size, in gigabytes, for the PST holding folder. The size that is specified applies to each PST Collector task. For example, if you specify the maximum folder size as 5 GB, and there are



two PST Collector tasks configured, then the total maximum size of the PST holding folder is 10 GB.

The PST Migrator task should empty the PST holding folder during its scheduled daily run. If PST files remain in the PST holding folder, they are not migrated until the next scheduled run starts. As PST files are set to read-only during migration, users cannot access to these PST files for an extended period.

You can use one of the following techniques to ensure that the PST Migrator task empties the PST holding folder:

- Set a suitable maximum size for the PST holding folder that ensures the PST Migrator task is able to empty the folder during its scheduled daily run.
- Set a small maximum size for the PST holding folder, and then schedule the PST Collector task so that it keeps the folder full. Set the schedule for the PST Collector task so that it ends before the end of the PST Migrator task schedule. This approach ensures that the PST Migrator task has time to empty the folder during its scheduled run.
- When the PST Migrator task runs it generates a report file. You can use the information in this report to determine the average number of PST files that the task can migrate during its scheduled run. In the properties of the PST Collector task you can then specify a maximum number of PST files that can be stored in the PST holding folder.

## Creating and configuring the PST Locator, PST Collector, and PST Migrator tasks

To use the PST Locate and Migrate tool, you create and configure the following tasks:

- **PST Locator task.** This task searches your network for domains, computers, and PST files. There can be only one PST Locator task in each Enterprise Vault site. (The PST Locator task is not required for Client-driven PST migration).
- **PST Collector task.** This task copies the PST files to a central PST holding folder. There can be many PST Collector tasks in each Enterprise Vault site, but only one PST Collector task per Enterprise Vault server. You need to configure a PST Collector task on each Enterprise Vault server that hosts archives to which you intend to migrate PST files. (The PST Collector task is not required for Client-driven PST migration).
- **PST Migrator task.** This task migrates the contents of the PST files to Enterprise Vault archives. There can be many PST Migrator tasks in each Enterprise Vault site, but only one per Enterprise Vault server. You need to configure a PST

Migrator task on each Enterprise Vault server that hosts archives to which you intend to migrate PST files.

**To create a PST Locator task**

- 1 In the Administration Console, expand your site until the **Enterprise Vault Servers** container is visible.
- 2 Expand **Enterprise Vault Servers** and then expand the server on which you want to add the PST Locator task.
- 3 Right-click **Tasks** and then, on the shortcut menu, click **New > PST Locator task**.

The New PST Locator task wizard starts.

- 4 Work through the wizard to create the task.

**To create a PST Collector task**

- 1 In the Administration Console, expand your site until the **Enterprise Vault Servers** container is visible.
- 2 Expand **Enterprise Vault Servers** and then expand the server on which you want to add the PST Collector task.
- 3 Right-click **Tasks** and then, on the shortcut menu, click **New > PST Collector task**.

The New PST Collector task wizard starts.

- 4 Work through the wizard.

**To create a PST Migrator task**

- 1 In the Administration Console, expand your site until the **Enterprise Vault Servers** container is visible.
- 2 Expand **Enterprise Vault Servers** and then expand the server on which you want to add the PST Migrator task.

- 3 Right-click **Tasks** and then, on the shortcut menu, click **New > PST Migrator task**.

The New PST Migrator task wizard starts.

- 4 Work through the wizard.

In this wizard you need to supply the location of a folder that the task can use to hold temporary copies of the PST files during migration. This folder must be on a local drive. The account under which the PST Migrator task runs must have full access to the folder.

---

**Note:** Do not change the location of this folder while the PST Migrator task is running, or while Locate and Migrate is processing PST files.

---

After you have created a PST Locator, PST Collector, or PST Migrator task, you can configure each task using the task properties. Double-click the task to display the task properties.

## How to configure the PST Locator task

The PST Locator task properties include the following pages:

- **General.** Properties on this page let you configure how often the task should retry a failed operation, and the number of report files to keep.
- **Settings.** On this page you configure how the task is to search for domains, computers and PST files.
  - Select whether the task is to use NetBIOS or Active Directory to find the domains and computers on which PST files reside.
  - You can configure the task to search computers for PST files using a registry or hard disk search. A registry search uses remote registry calls to search the Outlook profile for PST files. If a PST file is found in a profile, the Exchange mailbox in the profile is noted. If an Exchange mailbox is found, the task tries to determine the archive and the site associated with the primary mailbox referenced in the profile.

A hard disk search scans all the local hard disks on the designated computer for files with an extension of .pst. It does not search the PST holding folder or the temporary migration folder on any computer running a PST Migrator task. On all computers, the recycle bin is not searched.

As there can be very large numbers of PST files on computer hard disks, it is advisable to perform registry searches initially.

- With the default settings, the task does not automatically search any computers for PST files — you need to select the computers to search. If you select the setting **By default search for PSTs on each computer**, the task automatically starts searching every computer it finds. As this process can take a very long time on a large network, use this setting with caution.
- **Domains.** Domains that are found by the task are listed on this page. Only domains that are selected on this page are searched for computers and PST files.
- **Schedule.** It is advisable to schedule the PST Locator task to run during normal office hours, so that it finds the maximum possible number of computers and PST files (when users' computers are switched on and connected to the internal network). As the site schedule is typically set to run tasks during non-office hours, you probably do not want to run this task according to the site schedule.
- **Log On.** The account under which the PST Locator task runs must have appropriate access to the computers that it is to search for PST files. Depending on the type of search that is configured for the task, the account must either be able to scan remotely the registry on each computer, or have access to the drives on each computer.

To ensure that the task has adequate access to all the computers in the domain you can run the task under an account that is a member of the domain administrators ' group. Use the settings on the **Log On** page of the task properties to specify the account.

See [“Accounts that manage PST migration Locate and Migrate”](#) on page 294.

## How to configure the PST Collector task

The PST Collector task properties include the following pages:

- **General.** Properties on this page let you configure how often the task should retry a failed operation, and the number of report files to keep.
- **Settings.** On this page you can configure what happens to the PST files after the task has copied them to the PST holding folder.
  - You can set the maximum number of PST files that this task is allowed to copy to the PST holding folder. This approach is one way of ensuring that the PST Migrator task empties the PST holding folder during its daily scheduled run.

See [“Determining the size of the PST holding folder for Locate and Migrate”](#) on page 288.
  - If you intend to back up the PST files before migrating them, select **Wait for PSTs to be backed up before migrating them** and then select the appropriate option, as follows:

- **The migration status has changed to 'Ready to migrate'.** Select this option to make the PST Migrator task wait until PST files have a migration status of **Ready to migrate**. If you choose this option, you must set this status manually on each PST file.
  - **The file attribute 'Ready for archiving' has been reset.** Select this option to make the PST Migrator task wait until PST files have the Ready For Archiving attribute reset. Backup applications typically perform this action.
  - **Schedule.** As with the PST Locator task, it is advisable to schedule the PST Collector task to run during normal office hours, so that it can access as many computers and PST files as possible (when users' computers are switched on and connected to the internal network). As the site schedule is typically set to run tasks during non-office hours, you probably do not want to run this task according to the site schedule.
  - **Log On.** The account under which the PST Collector task runs must have appropriate access to the computers and PST files to be migrated. To ensure that the task has adequate access to all the computers in the domain you can run the task under an account that is a member of the domain administrators ' group. Use the settings on the **Log On** page of the task properties to specify the account.
- See [“Accounts that manage PST migration Locate and Migrate”](#) on page 294.

## How to configuring the PST Migrator task

The PST Migrator task properties include the following pages:

- **General.** Properties on this page let you configure how often the task should retry a failed operation, and the number of report files to keep.
- **Settings.** This page contains the following configuration settings:
  - The location on a local drive of the temporary files folder that the PST Migrator task uses during the migration process. You specify the location of this folder when you create the PST Migrator task.  
If you have configured building blocks, you must create a temporary files folder with the same folder path on all the Enterprise Vault servers in your building blocks environment. If the PST Migrator task fails over to a different server, it continues to use the same local path for the temporary files folder.
  - The maximum number of PST files to migrate concurrently. Depending on your system configuration and workload, you may find that changing this number improves performance.

- **Schedule.** It is advisable to schedule the PST Migrator task to run during normal office hours, so that it can access as many computers and PST files as possible (when users' computers are switched on and connected to the internal network). Access to the computers and original PST files is required for post migration operations, such as unlocking the PST files, creating shortcuts or deleting the PST files. As the site schedule is typically set to run tasks during non-office hours, you probably do not want to run this task according to the site schedule.
- **Log On.** The account under which the PST Migrator task runs must have appropriate access to the PST holding folder, temporary files folder, and computers and PST files to be migrated. Access to the computers and original PST files is required for post migration operations. To ensure that the task has adequate access to all the computers in the domain you can run the task under an account that is a member of the domain administrators ' group. Use the settings on the **Log On** page of the task properties to specify the account. See [“Accounts that manage PST migration Locate and Migrate”](#) on page 294.

## Accounts that manage PST migration Locate and Migrate

If you want an account other than the Vault Service account to manage PST migration objects in the Administration Console, the account must have either the PST Administrator role or the Power Administrator role. The Vault Service account has access to all objects and functions in the Administration Console.

The accounts under which the PST Locator, PST Collector and PST Migrator tasks run must have appropriate access to the computers to be searched, and the PST files to be processed. The PST Migrator task requires access to the computers and original PST files for post migration operations.

All the tasks also need appropriate access to the PST holding folder.

See [“Configuring the PST holding folder for Locate and Migrate”](#) on page 288.

The PST Migrator task account must have full access to its temporary files folder.

See [“How to configuring the PST Migrator task”](#) on page 293.

Depending on the type of search that has been configured for the PST Locator task, the account must either be able to scan remotely the registry on each computer, or have access to the drives on each computer.

To ensure that the tasks have adequate access to all the computers in the domain you can run the tasks under the accounts that are members of the domain

administrators ' group. Use the settings on the **Log On** page of the task properties to specify the account.

For details of the permissions that the account needs, see the online Help for the **Log On** page. In addition, the account must have either the PST Administrator role or the Power Administrator role.

---

**Note:** It is not advisable to add the Vault Service account to the domain administrators ' group.

---

## Migrating PST files using PST Locate and Migrate

This section outlines how to use PST Locate and Migrate to search for PST files on users' computers and migrate the files to Enterprise Vault archives. The following sections describe the steps in more detail.

You can schedule and run the tasks in different ways depending on your workload, the time available, the number of PST files, and so on. This section assumes that you are interested in testing PST Locate and Migrate with relatively small numbers of PST files, possibly before starting a large-scale migration.

Each time a task runs, it creates a report and places it in the Reports folder, which is a subfolder of the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault\Reports`).

### To migrate PST files using PST Locate and Migrate

- 1 Use **Run now** or schedule a run of the PST Locator task to find available domains. On the **Domains** page in the task properties you then select the domains in which the computers you want to search for PST files are located.

See [“Running the PST Locator task to find domains and computers”](#) on page 296.

- 2 Use **Run now** or schedule another run of the PST Locator task to find the computers in the selected domains. All the computers that the task finds are listed in the Administration Console, under **Personal Store Management > Computers**.

- 3 You can configure the PST Locator task so that it automatically searches for PST files on each computer that it finds. Alternatively, in the Administration Console, under **Personal Store Management > Computers**, you can select the computers that you want the task to search for PST files.

See [“Selecting computers for PST searching ”](#) on page 299.

- 4 Use **Run now** or schedule another run of the PST Locator task, this time to search for PST files on the selected computers. All the PST files that the task finds are listed in the Administration Console, under **Personal Store Management > Files**.

See [“Running the PST Locator task to find PST files”](#) on page 302.

- 5 In the Administration Console you can edit the properties of a PST file, provide passwords for password-protected PST files, and change the migration status of a PST file, if required.

The PST Collector task copies PST files with a status of **Ready to copy** to the PST holding folder. Depending on the configuration options selected, some manual intervention may be required to approve PST files for migration. For example, migration may only be started once the PST files have been backed up, or the ownership of particular PST files may need to be verified. Additionally, you may need to provide passwords for password-protected PST files, or you may want to prevent the migration of particular PST files.

See [“Editing PST file properties”](#) on page 302.

- 6 Use **Run now** or schedule a run of the PST Collector task to copy the selected PST files to the central PST holding folder.

See [“Running the PST Collector task”](#) on page 303.

- 7 Use **Run now** or schedule a run of the PST Migrator task to archive items from the PST files to the associated destination archive.

See [“Running the PST Migrator task”](#) on page 304.

## Running the PST Locator task to find domains and computers

When you first run the PST Locator task, it searches for available domains. You then select the domains to search and rerun the task to find the computers that you want to search for PST files.

When the PST Locator task finds a computer, it attempts to determine if the computer is a NetApp device. Performing this check can slow down the search for computers. You can switch off this check, and later identify the NetApp devices manually in the list of computers.

See [“Switching off NetApp device identification checks by the PST Locator task”](#) on page 298.

Before searching for PST files, you can edit the properties of the computers that have been found to include or exclude specific computers when searching for PST



files. If required, you can also exclude specific network shares from the PST file searches. You can then run the task again to search for PST files on the selected computers.

#### To run the PST Locator task to find domains

- 1 In the **Tasks** listing of the Administration Console, right-click the PST Locator task and then, on the shortcut menu, click **Start**.
- 2 Do either of the following:
  - Right-click the task and, on the shortcut menu, click **Run Now**.
  - Wait for the scheduled run time for the PST Locator task.
- 3 The domains that have been found are then listed on the **Domains** page in the PST Locator task properties.  
Open the PST Locator task properties and select the domains in which the computers that you want to search for PST files are located.
- 4 Click **OK** to close the task properties, and then restart the task to apply the changes.

#### To run the PST Locator task to find computers

- 1 Do either of the following:
  - Right-click the PST Locator task and, on the shortcut menu, click **Run Now**. In the dialog that is displayed, ensure that **Search for new computers** is selected.
  - Wait for the scheduled run time for the PST Locator task.
- 2 The task searches for computers in the domains that you selected in the task properties. Computers that have been found on the network are listed under **Personal Store Management > Computers** in the Administration Console. You can run the task several times to build up a list of computers before beginning the search for PST files.
- 3 In the list of computers select the computers that you want the task to search for PST files.

See [“Selecting computers for PST searching”](#) on page 299.

On a small network, if you want the task to automatically search every computer that it finds, select **By default search for PSTs on each computer** on the **Settings** page of the PST Locator task properties.

You can also exclude specific network shares from the PST file searches.

See [“Excluding network shares from PST migration”](#) on page 301.

## Switching off NetApp device identification checks by the PST Locator task

This section describes how to switch off the automatic identification of NetApp devices by the PST Locator task during the search for computers.

Later you can identify NetApp devices manually by editing the computer properties in the Administration Console.

See [“Selecting computers for PST searching ”](#) on page 299.

To switch off the automatic identification of NetApp devices you configure a setting in the file, `PSTlocatorTask.exe.config`. The file, `PSTlocatorTask.exe.config`, and an example version of the file, `Example PstLocatorTask.exe.config`, are located in the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`). The example file contains examples of the settings that can be configured in `PstLocatorTask.exe.config`.

In releases before Enterprise Vault 8.0 SP3, `PstLocatorTask.exe.config` did not exist on a default system; if required, you created the file using the example file, `Example PstLocatorTask.exe.config`. From Enterprise Vault 8.0 SP3, a stub version of `PSTlocatorTask.exe.config` is created in the following situations:

- During a new installation of Enterprise Vault.
- During an upgrade of Enterprise Vault, if the file did not exist on the previous release.

The stub file contains only the following lines.

```
<configuration>
  <runtime>
    <generatePublisherEvidence enabled="false"/>
  </runtime>
</configuration>
```

The upgrade process does not replace or modify any existing version of `PstLocatorTask.exe.config`. New settings are only added to the example file, `Example PstLocatorTask.exe.config`.

### To switch off the automatic identification of NetApp devices

- 1 On the Enterprise Vault server that runs the PST Locator task, start Windows Explorer and navigate to the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`).
- 2 Copy the file, `PstLocatorTask.exe.config`, to a safe location.

- 3 If `PstLocatorTask.exe.config` is the stub version of the file, then replace this file by copying and renaming the example file, `ExamplePstLocatorTask.exe.config`.
- 4 Open the `PstLocatorTask.exe.config` file in a text editor such as Windows Notepad.
- 5 Search for the following text:

```
<PSTSettings>
```

- 6 Do one of the following:
  - If you have created the file by copying and renaming the example version, then the following lines exist in the entries under `<PSTSettings>`:

```
<!--Determine whether computer is a NetApp Filer: Default: true-->  
<add key="LocateNetAppFilers" value = "true"/>
```

Change the setting value to "false".

- If you created the file on a previous release, then add the following lines under `<PSTSettings>`:

```
<!--Determine whether computer is a NetApp Filer: Default: true-->  
<add key="LocateNetAppFilers" value = "false"/>
```

- 7 Save and close the file.
- 8 In the Administration Console, restart the PST Locator task.

## Selecting computers for PST searching

Computers that have been found on the network are listed under **Personal Store Management > Computers** in the Administration Console. You can select the computers that you want to search for PST files in one of the following ways:

- Select multiple computers at once.
- Edit the properties of individual computers.

---

**Note:** The PST Locator task is unable to perform a hard disk search on a NetApp MultiStore (also known as "vFiler"). A NetApp Filer must be configured with a minimum ONTAPI Management API version of 1.4. The ONTAPI interface is the foundational API for NetApp products. Version 1.4 is provided with the Data ONTAP 7G software release, or later. For the latest information on supported devices and versions of software, see the Enterprise Vault Compatibility Charts at <http://www.symantec.com/docs/TECH38537>.

---

To exclude a computer from PST searching, edit the properties of the computer. You can also exclude specific network shares from PST searching.

See "[Excluding network shares from PST migration](#)" on page 301.

#### To select multiple computers to search

- 1 In the Administration Console, expand **Personal Store Management > Computers** to display a list of the computers that have been found on the network.
- 2 Hold down Ctrl or Shift and highlight the computers that you want to search.
- 3 Right-click and select **Properties** on the menu.
- 4 A dialog asks if you want the PST Locator task to search the selected computers. If the highlighted computers are the ones that you want to search then click **Yes**.
- 5 In the **Search** column, **Yes** is displayed for each computer that you selected.

#### To edit the properties of individual computers

- 1 In the Administration Console expand **Personal Store Management > Computers** to display a list of the computers that have been found on the network.
- 2 Double-click the name of the computer that you want to include when searching for PST files. The computer properties page is displayed.
- 3 To include the computer in PST searching, select **Search this computer when PST Locator task runs**.

To exclude the computer from PST searching, clear the option checkbox.

- 4 If the computer is a NetApp Filer, click the **Settings** tab and check that **This computer is a NetApp Filer** is selected.

This setting is selected automatically when the PST Locator task adds a NetApp Filer. However, if the computer was unavailable when found by the PST Locator task, or was added by the task before Enterprise Vault 7.0 was installed, it is not selected automatically.

- 5 Click **OK** to close the properties.

## Excluding network shares from PST migration

You can exclude specific network shares when searching for PST files by listing them in the configuration file `PstLocatorTask.exe.config`.

### To exclude network shares from PST migration

- 1 On the Enterprise Vault server that runs the PST Locator task, start Windows Explorer and navigate to the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`).
- 2 Do one of the following:
  - If the `PstLocatorTask.exe.config` file exists in the folder, copy it to a safe location.
  - If there is no `PstLocatorTask.exe.config` file, create it by copying and renaming the file `Example PstLocatorTask.exe.config`.
- 3 Open the `PstLocatorTask.exe.config` file in a text editor such as Windows Notepad.
- 4 Search for the following text:

```
<PSTSettings>
```

- 5 Immediately below this heading, add a line to list the network shares that you do not want to search. The syntax is as follows:

```
<add key="SharesToAvoid" value="share_1;share_2;share_3..." />
```

where `share_1`, `share_2`, and so on, comprise a semicolon-separated list of the UNC paths of the network shares. For example, to exclude the shares `\\myComputer\C$` and `\\yourComputer\G$`, you would type the following:

```
<add key="SharesToAvoid"
value="\\myComputer\C$;\\yourComputer\G$" />
```

- 6 Save and close the file.
- 7 In the Administration Console, restart the PST Locator task.

## Running the PST Locator task to find PST files

When you run the PST Locator task this time, it searches for PST files on the computers you selected to search. You can configure the task to search for PST files in the Outlook profiles on a computer (Registry search), or on the computer's hard disks. (Hard disk search).

During a hard disk search, the task does not search the PST holding folder, or the temporary PST migration file folders on any computer running a PST Migrator task. On all computers, the recycle bin folder is not searched.

### To run the PST Locator task to find PST files

- 1 Do either of the following:
  - Right-click the PST Locator task and, on the shortcut menu, click **Run Now**. In the dialog that is displayed, select **Registry search** or **Hard disk search** as required.
  - Wait for the scheduled run time for the PST Locator task.
- 2 The task searches for PST files on the computers that you selected. The PST files that have been found are listed under **Personal Store Management > Files** in the Administration Console. You can filter the PST files with a particular migration status, or for a certain user.
- 3 Before the PST Collector task runs to copy the PST files to the PST holding folder, you must edit the properties of the PST files to provide any missing information and change the status to "Ready to copy".

See ["Editing PST file properties"](#) on page 302.

## Editing PST file properties

The normal status of a PST file that has been found is "Do not migrate". When you are ready for the PST Collector task to copy the file to the PST holding folder, you need to edit the PST file properties in the Administration Console and change the status to "Ready to copy".

If the PST Locator task cannot determine the ownership of the PST file, the associated mailbox, and its corresponding archive, then the PST file status is displayed as "Not ready". You need to edit the properties of the PST file to provide the required information, and change the status to "Ready to copy".

If required, you can use the **Settings** tab in the PST file properties to specify the password for a password-protected file.

### To edit the properties of a PST file

- 1 In the Administration Console listing, double-click the PST file name to display the PST file properties.
- 2 On the **General** page, do one of the following:
  - Next to **Mailbox**, click Browse, and then select the mailbox of the user who owns the PST file. The corresponding archive is automatically chosen.
  - Next to **Destination archive**, click Browse, and then select the mailbox archive of the user who owns the PST file. The corresponding mailbox is automatically chosen.
- 3 On the **Settings** page you can configure the following, if required:
  - Specify a retention category to be used for this PST file.
  - Select the Windows code page to be used when creating folders for this PST file.
  - Specify a password for PST file if it is password-protected.
- 4 When you have completed the required details, change the migration status on the **General** page to **Ready to copy**.

## Running the PST Collector task

The PST Collector task copies PST files from users' computers to the PST holding folder. It copies only the PST files that have a status of "Ready to copy".

The account under which the task runs must have Delete access to the original location of the PST file. The easiest way to ensure the correct access is to run the task using an account in the domain administrators group.

See [“Accounts that manage PST migration Locate and Migrate”](#) on page 294.

### To run the PST Collector task

- 1 In the **Tasks** listing of the Administration Console, right-click the PST Collector task and then, on the shortcut menu, click **Start**.
- 2 Do one of the following:
  - Right-click the task and then, on the shortcut menu, click **Run Now**.
  - Wait for the scheduled run time for the PST Collector task.

## Running the PST Migrator task

The PST Migrator task archives the contents of PST files that are in the PST holding folder to Enterprise Vault archives. There can be many PST Migrator tasks in your Enterprise Vault site. The task archives the contents of PST files that have a status of "Ready to migrate".

If you configured the PST migration to wait for the PST files to be backed up before the PST Migrator task archives the contents (in PST Collector task properties), then the PST file status may be displayed as "Ready to back up". The status changes automatically after the files have been backed up.

### To run the PST Migrator task

- 1 In the **Tasks** listing of the Administration Console, right-click the PST Migrator task and, on the shortcut menu, click **Start**.
- 2 Do one of the following:
  - Right-click the task and then, on the shortcut menu, click **Run Now**.
  - Wait for the scheduled run time for the PST Migrator task.
- 3 When the file contents have been archived, the PST file status is displayed as "Ready for post-processing".

When the PST Migrator task has successfully finished processing the PST file, the file status is displayed as "Complete".

If a problem prevents the task from completing an operation, details are displayed in the **Failure text** box of the PST file properties in the Administration Console. You can also check the report file that is generated during the run.

## Troubleshooting PST migration

You can use the task report files to assist in troubleshooting PST migration failures. Each time a task runs, it creates a report and places it in the Reports folder, which is a subfolder of the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault\Reports`). The report file name takes the following form:

- PSTLocTask\_server\_datetime.txt
- PSTColTask\_server\_datetime.txt
- PSTMigTask\_server\_datetime.txt



If file sharing is not enabled on a user's computer, the PST Locator task is unable to search the registry or files on that computer. Note that Windows does not automatically enable file sharing. If the PST Locator task cannot search the registry or files, this results in errors such as the following in the report file:

```
** 18/07/2005 14:34:21 Hard disk search failure on DEMO : Failed to  
read registry to get list of drives : The network path was not  
found. **
```

```
** 18/07/2005 14:34:21 Registry search failure on DEMO : The network  
path was not found. **
```

These errors are also reported if the Windows firewall is on. If the firewall is on, then you need to create an exception in Windows firewall for "File and Printer sharing", TCP port 139 and 445.



# PST migration: client-driven migration

This chapter includes the following topics:

- [About client-driven PST migration](#)
- [Configuring the PST holding folder for PST client-driven migration](#)
- [Editing the PST migration messages for PST client-driven migration](#)
- [Creating a PST Migrator task for PST client-driven migration](#)
- [Enabling mailboxes for PST client-driven migration](#)

## About client-driven PST migration

This section describes how to configure client-driven PST migration. Enterprise Vault provides other tools for migrating PST files to archives.

See [“Tools for migrating PST files”](#) on page 259.

Client-driven PST migration does not work if the registry value PSTDisableGrow is enabled on users' computers. For information about how to override PSTDisableGrow, see the *Setting up Exchange Server Archiving* manual.

### To set up client-driven PST migration

- 1 Configure PST holding folder.
- 2 Set up the PST migration messages.
- 3 Create a PST Migrator task, and configure temporary files folder.
- 4 Enable mailboxes for client-driven PST migration.

## PST files on network drives for PST client-driven migration

You can configure this facility to migrate PST files stored on Windows-based shares, and on NetApp Filers.

To migrate PST files from a Windows share, the account that runs the Directory service must be a member of one of the following security groups on the file server:

- Administrators
- Server Operators
- Power Users

To migrate PST files from a NetApp Filer, the account that runs the Directory service must be a member of the Administrators group on the NetApp Filer.

If you are using the NetApp Filer autohome feature, see the following technical note:

<http://www.symantec.com/docs/TECH130826>

You cannot migrate files that are hosted on:

- Non-Windows file servers, other than NetApp Filers
- NetApp vFiler devices running a version of Data ONTAP earlier than Data ONTAP 7.3
- Distributed File System (DFS) shares

## Configuring the PST holding folder for PST client-driven migration

The PST holding folder is used as a collecting area for PST files that will be processed by the PST Migrator task. The folder must be a network share, to which the log on account used by the PST Migrator task has Delete access.

The account that you use to configure the PST holding area must have sufficient access to the folder to list it in a selection dialog. Typically, the Vault Service account is used as the log on account by the tasks and when configuring the PST holding folder, but it is possible to specify different accounts.

### To configure the PST holding folder

- 1 In the left pane of the Administration Console, display the Enterprise Vault Site Properties.
- 2 On the **General** tab, next to **PST Holding Folder**, click **Change**.

A prompt asks whether you want to browse Regular or Hidden shares.

- 3 Select the type of share that you intend to specify for the PST holding folder, and then click **OK**.
- 4 In the **Browse for Folder** dialog, expand **Entire Network** > **Microsoft Windows Network**. Expand the required domain and then the server on which the share is located. The list of shares that are displayed contain shared folders to which the account has access.
- 5 Select the folder you want to use for the PST holding folder and then click **OK**.
- 6 Click **OK** to close Site Properties.

## Editing the PST migration messages for PST client-driven migration

When you enable a mailbox for client-driven PST migration, Enterprise Vault automatically delivers a welcome message to that mailbox, explaining that PST files are about to be archived.

A second message is delivered each time a PST file has been successfully migrated.

During the installation, the messages are placed in the following folder beneath the Enterprise Vault Program folder:

```
Enterprise Vault\Languages\Mailbox Messages\lang
```

where *lang* indicates the language used.

The welcome message is in a file called `EnablePSTMigrationMessage.msg`.

The successful migration message is in a file called `PSTMigratedMessage.msg`.

### To set up the PST welcome message

- 1 Decide which language version of `EnablePSTMigrationMessage.msg` you want to use and locate the file.
- 2 Using a computer that has Microsoft Outlook installed, double-click the file `EnablePSTMigrationMessage.msg` in Windows Explorer to edit the message.
- 3 Review the text and make any changes that you require.
- 4 Save the message.
- 5 Copy `EnablePSTMigrationMessage.msg` to the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`) on every Enterprise Vault server in the site.

#### To set up the successful PST migration message

- 1 Decide which language version of `PSTMigratedMessage.msg` you want to use and locate the file.
- 2 Using a computer that has Microsoft Outlook installed, double-click the file `PSTMigratedMessage.msg` in Windows Explorer to edit the message.
- 3 Review the text and make any changes that you require.
- 4 Save the message.
- 5 Copy `PSTMigratedMessage.msg` to the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`) on every Enterprise Vault server in the site.

## Creating a PST Migrator task for PST client-driven migration

If you have configured Locate and Migrate, then you already have a PST Migrator task and can ignore this section. If you have not configured Locate and Migrate then you need to work through this section.

---

**Note:** You need to configure a PST Migrator task on every Enterprise Vault server that hosts a Storage service and manages the archives to which you intend to migrate PST files. When migrating a PST file, the migration process runs on the Enterprise Vault server that manages the destination archive.

---

#### To create a PST Migrator task

- 1 In the Administration Console, expand your site until the **Enterprise Vault Servers** container is visible.
- 2 Expand **Enterprise Vault Servers** and then expand the server on which you want to add the PST Migrator task.

- 3 Right-click **Tasks** and then, on the shortcut menu, click **New > PST Migrator task**.

The New PST Migrator task wizard starts.

- 4 Work through the wizard.

In this wizard you need to supply the location of a folder that the task can use to hold temporary copies of the PST files during migration. This folder must be on a local drive. The account under which the PST Migrator task runs must have full access to the folder.

---

**Note:** Do not change the location of this folder while the PST Migrator task is running, or while client-driven migration is processing PST files.

---

## Enabling mailboxes for PST client-driven migration

Enterprise Vault provides a wizard that lets you enable mailboxes for client-driven migration. You can enable a small number of mailboxes at a time so that at any one time there is a manageable number of PST files to process.

After you have enabled a mailbox for client-driven PST migration, the Enterprise Vault Outlook Add-In starts scanning for PST files when the corresponding user next starts Outlook.

The list of PST files that have been found by all client computers appear in the Administration Console, in the **Files** container under **Personal Store Management**.

The PST files are migrated immediately; you do not need to approve them.

### To enable mailboxes for client-driven PST migration

- 1 In the left pane of the Administration Console, right-click **Personal Store Management** and click **Enable Client-Driven Migrations**.

The Enable Mailbox for Client-Driven Migration wizard starts.

- 2 Work through the wizard.





# NSF migration: scripted

This chapter includes the following topics:

- [About scripted NSF migration](#)

## About scripted NSF migration

Enterprise Vault Policy Manager provides the functionality that is required to run scripted migrations of content from NSF files to Enterprise Vault. For detailed information on Policy Manager, see the *Utilities* manual.

Policy Manager lets you control how each NSF file is processed. For each NSF file you can:

- Specify the destination archive.
- Choose to create shortcuts to migrated items.
- Control whether shortcuts are left in the NSF file or placed in a specific folder in the user's mail file.
- Specify the retention category to apply to the migrated items.
- Control what happens to the NSF file after the items have been migrated.

Policy Manager uses an initialization file, in which you make default migration settings and list the NSF files. You can also override the default migration settings for individual NSF files.

You can run Policy Manager in report mode or in process mode.

In report mode, Policy Manager checks each NSF file listed in the initialization file, to determine whether it can migrate the file's contents. Policy Manager creates a new initialization file, which contains a count of all the files that are not ready for migration. In the new initialization file, any NSF file which cannot be migrated is marked to exclude it when Policy Manager runs in process mode.

In process mode, Policy Manager migrates items from the NSF files listed in the initialization file. Policy Manager also writes a new initialization file when you run it in process mode, and marks the files it has processed successfully. You can use the new file to migrate any failed files when you have corrected the problems that prevented their migration.

If you want to migrate only a small number of NSF files, consider using NSF migrator instead.

See [“About NSF migrator”](#) on page 315.

# NSF migration: wizard assisted

This chapter includes the following topics:

- [About NSF migrator](#)
- [Outline of the NSF migration process](#)
- [About planning for NSF migration](#)
- [How NSF migration affects users](#)
- [Running NSF migrator](#)
- [NSF migration audits](#)

## About NSF migrator

NSF migrator is a wizard, which you can use to migrate the contents of Lotus Domino and Notes NSF files to Enterprise Vault.

The main features of NSF migrator are as follows:

- Selection of vault store. Each time you run NSF migrator, you can choose one vault store into which NSF file content is migrated.
- Matching NSF files to archives. You can configure NSF migrator to match NSF files to archives automatically. This automatic matching is useful when you migrate many NSF files. However, you can still manually match NSF files to archives.
- Selection of retention categories. NSF migrator asks you to choose a default retention category to use during the migration of NSF file content. However, you can still manually select a retention category for each NSF file.

- Creation of shortcuts. NSF migrator can create shortcuts to migrated content. You can choose whether to create these shortcuts in the original NSF files or in user mail files. You can also configure the folder structure that is used to contain the shortcuts.
- Post-migration actions. You can configure what NSF migrator does with the NSF files it has migrated. For example, NSF migrator can automatically delete the NSF files.

## Outline of the NSF migration process

This section describes the choices you must make on each page of the NSF migrator wizard.

Specify the directory computer	When you run NSF migrator from the <b>Start</b> menu, you must enter the name of the Enterprise Vault directory computer that manages the archives to which you want to migrate NSF file content. You do not have to specify the directory computer when you run NSF migrator from within the administration console.
Select a vault store	You can specify only one vault store each time you run NSF migrator. If you want to migrate NSF files to archives in more than one vault store, you must run NSF migrator again. If appropriate, you can run more than one instance of NSF migrator.
Select NSF files	Select the NSF files that you want to migrate. You must use only UNC paths to access the locations that hold the NSF files you plan to migrate.
Match NSF files to archives	Choose which method NSF migrator should use to match NSF files to archives. You can match NSF files to archives individually. Alternatively, NSF migrator can match NSF files to archives automatically, which it does by matching the mail file names in its archives with the owner property stored in each NSF file. This is the quicker option if you are migrating many NSF files. Even if you select this option, you can still manually match any NSF files that fail automatic matching, or change those that are matched.

Select a default retention category	Choose the default retention category that will be used when archiving items from the NSF files. Later in the wizard you can review and change the retention category for each NSF file if necessary. If there is no suitable retention category, you can create one at this point in NSF migrator.
Select archives	Even if you have chosen to match NSF files to archives automatically, NSF migrator may be unable to match all the files. At this point in NSF migrator, you can manually match NSF files to archives. If necessary, you can also change any that have been matched, or remove them completely if appropriate.
Select retention categories	By default, all content from the NSF files is migrated using the default retention category you selected earlier in the wizard. However, at this point you can choose different retention categories for individual NSF files.
Configure shortcuts	NSF migrator can create shortcuts to migrated content, and you can choose whether to create these shortcuts in the original NSF files or in user mail files.
Select a folder structure	You can configure the folder structure that is used to contain the shortcuts in user mail files. For example, for users who have more than one NSF file, NSF migrator can either merge their contents in one folder structure, or create a separate structure for each.
Configure deleted items and calendar items	Choose whether or not NSF migrator should migrate items from the <b>Trash</b> folder in each NSF file. If appropriate, you can also select the <b>Archive calendar items that have not yet expired</b> option.
Post-migration NSF file settings	Finally, you can configure what NSF migrator should do with the NSF files it has migrated. For example, NSF migrator can automatically delete the NSF files.

## About planning for NSF migration

The following sections provide information to help you plan the migration of NSF files, including some tips to help you make the migration more efficient:

- [How to edit the welcome message for NSF migration](#)
- [NSF file locations for NSF migration](#)
- [How to match NSF files to archives for NSF migration](#)
- [Standard mail templates for NSF migration](#)
- [NSF migration failed and ineligible items](#)
- [Item age limit for NSF migration](#)
- [Mail file limits and NSF file access control](#)
- [Users' execution control lists for NSF migration](#)
- [Multiple instances of NSF migrator](#)

## How to edit the welcome message for NSF migration

When NSF migrator completes the migration of each user's items, it automatically sends one of three messages to tell the user that the migration has finished.

[Table 21-1](#) lists the three messages, and describes the circumstances under which each is sent.

**Table 21-1** NSF migration messages

Message	Subject and description
NSFMigratedMessage	<p>Your NSF file (<i>{0}</i>) has been archived.</p> <p>NSF migrator sends this message to users whose items have been archived, when you have chosen not to create shortcuts to the migrated items.</p>
NSFMigratedMessageMailFile	<p>Your NSF file (<i>{0}</i>) has been archived. Shortcuts to the items are in <i>{1}</i>.</p> <p><i>{1}</i> represents the name of the folder that contains the shortcuts.</p> <p>NSF migrator sends this message to users whose items have been archived, when you have chosen to place shortcuts in their mail files.</p>
NSFMigratedMessageNSF	<p>Your NSF file (<i>{0}</i>) has been archived. Shortcuts to the items are in the NSF file.</p> <p>This message is sent to users whose items have been archived, when you have chosen to place shortcuts in the NSF file.</p>

In all three messages, *{0}* represents the name of the NSF file.

These three messages are in a file called `EVMessages.nsf`. This file is in the `\Languages\Mailbox Messages\lang\` folder in the Enterprise Vault program folder, for example `C:\Program Files (x86)\Enterprise Vault\Languages\Mailbox Messages\lang\`, where *lang* represents your language.

The three messages contain placeholder text and you can edit this text if necessary. You should edit the messages in `EVMessages.nsf` using an account that has the **Access to current database** permission, to avoid execution security alerts.

Once you have edited the messages, save `EVMessages.nsf` and copy it to the Enterprise Vault program folder, for example `C:\Program Files (x86)\Enterprise Vault`, on all the Enterprise Vault servers.

## NSF file locations for NSF migration

It can be time-consuming to migrate NSF files that are in many locations, due to the overhead of locating them before you can add them to the list for migration. Consider moving all the NSF files to a central location before you run NSF migrator, so they can all be added to the list in one operation.

---

**Note:** You must use UNC paths to access the locations that hold the NSF files you plan to migrate. This is because the background server process that migrates the content of NSF files is not necessarily on the same computer as the one on which you run the NSF migration wizard.

---

## How to match NSF files to archives for NSF migration

The following procedure describes how to use NSF migrator efficiently when you need to match large numbers of NSF files to archives that are spread across multiple vault stores:

- Run NSF migrator and select the first vault store.
- Add all the NSF files that you plan to migrate, including those that may not have matching archives in the vault store you chose.
- Select the **Automatically assign archives to NSF files** option.
- Later in the wizard, NSF migrator displays all the NSF files that have not been matched in red. In this list, click the **Destination archive** column heading to group all the NSF files with no matching archive.
- Select all these NSF files and click **Remove**.

- When NSF migrator asks what you want to do with the NSF files that it migrates successfully, select either the **Delete it** option, or the **Hide it** option.

NSF migrator then hides or deletes the NSF files it has migrated successfully. If your operating system is configured to hide hidden files, they are not visible when you next run NSF migrator. Once you have repeated this process for all your other vault stores, any NSF files that are left are only those for which automatic matching did not work. You can investigate these files individually and select appropriate archives when you run NSF migrator again.

## Standard mail templates for NSF migration

All NSF files are based on Domino templates. You can use NSF migrator to migrate any NSF files that are based on a list of Domino templates defined in a registry value. NSF migrator treats the templates in this registry value as standard mail templates. For any NSF file that is based on any other Domino template, NSF migrator warns that unexpected results can occur if you continue to migrate the file. However, you can continue and migrate the file if you are sure that it is a mail based file.

The list of standard templates is determined by a registry string value called DominoMailTemplates under the following registry key on all the storage servers:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Agents
```

Table 21-2 contains the default list of the Domino mail templates that NSF migrator treats as standard. If you regularly migrate NSF files that are based on templates that are not in this list, and you do not want to be warned that the files are not based on standard templates, you can add the template names to the comma separated list in DominoMailTemplates. You must do this on all the storage servers.

Table 21-2            Standard mail templates

Template name	File name	Description
dwa7	dwa7.ntf	Domino Web Access (7)
EVdwa7	ev_dwa7.ntf	Domino Web Access (7) w/ Enterprise Vault
EViNotes6	ev_iNotes6.ntf	Domino Web Access (6) w/ Enterprise Vault
EVR6Mail	ev_mail6.ntf	Mail (R6) w/ Enterprise Vault



**Table 21-2** Standard mail templates (*continued*)

Template name	File name	Description
EVR7Mail	ev_Mail7.ntf	Mail (R7) w/ Enterprise Vault
EVR8Mail	ev_mail8.ntf	Mail (R8) w/ Enterprise Vault
EVR85Mail	ev_mail85.ntf	Mail (R85) w/ Enterprise Vault
ExtR50Mail	mail50ex.ntf	Extended Mail (R5.0)
ExtR6Mail	mail6ex.ntf	Extended Mail (6)
ExtR7Mail	mail7ex.ntf	Extended Mail (R7)
iNotes5	inotes5.ntf	iNotes Web Access (R5)
iNotes6	inotes6.ntf	Domino Web Access (6)
iNotes60	inotes60.ntf	iNotes Web Access (R6.0)
StdR50Mail	mail50.ntf	Mail (R5.0)
StdR6Mail	mail6.ntf	Mail (R6)
StdR7Mail	mail7.ntf	Mail (R7)
StdR8Mail	mail8.ntf	Mail (R8)
StdR85Mail	mail85.ntf	Mail (R8.5)

## NSF migration failed and ineligible items

By default, NSF migrator leaves failed and ineligible items, and shortcuts in the NSF files, rather than move them to users' mail files.

You can control this behavior with the following registry DWORD values:

- MoveFailedArchivalNotes
- MoveNotEligibleForArchiveNotes
- MoveShortcutsToMailFile

All these values are under this key:

```
HKEY_LOCAL_MACHINE
\Software
\Wow6432Node
\KVS
```

```
\Enterprise Vault  
\Agents
```

All these values are set to 0 by default.

When `MoveFailedArchivalNotes` is set to 1, NSF migrator moves failed items to users' mail files.

When `MoveNotEligibleForArchiveNotes` is set to 1, NSF migrator moves ineligible items to users' mail files.

When `MoveShortcutsToMailFile` is set to 1, NSF migrator moves shortcuts to users' mail files.

## Item age limit for NSF migration

By default, NSF migrator processes all items in NSF files irrespective of their age. This applies both to items converted to shortcuts, and to other items that are moved to mail files, such as items that are not eligible for migration.

You can control this behavior by specifying an age threshold, as a number of days, in two registry DWORD values, `ShortcutMoveRestrictDays` and `NotesMoveRestrictDays`. Both values are under this key:

```
HKEY_LOCAL_MACHINE  
  \Software  
    \Wow6432Node  
      \KVS  
        \Enterprise Vault  
          \Agents
```

Both values are set to 0 by default, which means no threshold is set. To set thresholds, change the DWORD values to a number of days.

When `ShortcutMoveRestrictDays` is set to a non-zero value, NSF migrator migrates all eligible items and creates shortcuts. Initially, all the shortcuts are in the NSF file. NSF migrator does not move the shortcuts to items older than the specified number of days, from the NSF file to the mail file.

When `NotesMoveRestrictDays` is set to a non-zero value, other items, such as those ineligible for migration, are moved to mail files only if they are within the number of days specified. Otherwise, they remain in the NSF files.

## Mail file limits and NSF file access control

Each user's maximum mail file size must be sufficient for the mail file to contain the shortcuts and other items that NSF migrator places in it. If it is not, the migration fails for this file. You should ensure that mail file limits are set

appropriately before migration. However, if any NSF files fail migration for this reason, you can note the affected mail files, adjust their limits and process the files again.

The Domino archiving user must have sufficient access rights on the NSF files you migrate, otherwise the affected NSF files fail migration. For more information on configuring the Domino archiving user, see the *Symantec Enterprise Vault Installing and Configuring* guide.

## Users' execution control lists for NSF migration

During migration, NSF migrator potentially creates new folders in users' mail files and, as a result, certain actions on these folders are signed by the Domino archiving user. To prevent users seeing execution security alerts when they open the new folders, you must configure affected users' execution control lists to allow **Access to current database** rights to the Domino archiving user. For more information, see the IBM article at [Load Convert -u Changes User Created Folders' Signature to the Mail Server's Name](#).

## Multiple instances of NSF migrator

You can run more than one instance of NSF migrator.

## How NSF migration affects users

This section contains a summary of the changes users see once their NSF files have been migrated

Immediately following successful migration of each NSF file, its owner receives an automatic message saying that the file's content has been migrated to Enterprise Vault.

If you chose to create shortcuts to migrated items, it is these shortcuts the users now see rather than the original items. According to the choices you made, the shortcuts are either in their original NSF files, or beneath the **Folders** view in their mail files.

In the case of shortcuts that are created in user mail files, each user sees one of two folder structures beneath the Folders view:

- One combined folder structure that contains the content from all the user's NSF files.
- A set of folders, named after each of the NSF files. Each folder contains the content from just one NSF file.

If you chose to delete NSF files after successful migration, these files are no longer available to users.

## Running NSF migrator

Before you run NSF migrator for the first time, consider migrating just a small number of files until you are familiar with the process. Once you are comfortable with the process, migrate more files.

Before you run NSF migrator, ensure that:

- The NSF files you are migrating are not in use.
- The vault service account has full access to the NSF files.

To run NSF migrator:

- 1 In the left pane of the Administration Console, right click **Archives** and click **Import NSF**.
- 2 Work through the wizard pages and select appropriate options.

You can also run NSF migrator from **Start > All Programs > Enterprise Vault > NSF Mail Migrator (Import)**.

## NSF migration audits

If you have configured Enterprise Vault auditing and selected one or both of the **NSF Migration** auditing options, successful NSF migration actions are audited.

See [“About auditing”](#) on page 359.

# Enterprise Vault message queues

This chapter includes the following topics:

- [Accessing Enterprise Vault message queues](#)
- [MSMQ queue summary](#)
- [Exchange Mailbox task queues](#)
- [Exchange Journaling task queues](#)
- [Exchange Public Folder task queues](#)
- [Retrieval queues](#)
- [Storage service queues](#)

## Accessing Enterprise Vault message queues

Enterprise Vault uses Microsoft Message Queue (MSMQ) Server to transfer information between Enterprise Vault components.

You must clear all Enterprise Vault queues before you carry out any Microsoft Exchange maintenance. If you check or repair the Microsoft Exchange database when an Exchange Mailbox task still has work outstanding, that work cannot be done.

Normally you should allow the Enterprise Vault tasks and services to clear message queues. If there is a significant build-up of messages on particular queues, it is important to investigate the cause of the problem. In certain circumstances support may advise you to clear specific message queues manually. Detailed instructions on how to do this are given in the following article on the support Web site:

<http://www.symantec.com/docs/TECH38085>

To access the message queues

- 1 If you have yet to install Message Queuing, see the Windows documentation for instructions on how do so with the **Add or Remove Programs** applet in Control Panel.
- 2 In Control Panel, first click **Administrative Tools** and then click **Computer Management**.
- 3 In the left pane of the Computer Management console, first expand **Services and Applications** and then expand **Private Queues**.

## MSMQ queue summary

Table 22-1 gives a brief description of what goes on to each of the Enterprise Vault queues. Here, *server* is the name of the server that the Exchange Mailbox task is processing, and *queue* is a number that uniquely identifies the queue.

Table 22-1 Summary of MSMQ queues

Queue name	Contains information about
Enterprise Vault Exchange Mailbox task for <i>server queue A1</i>	Pending items to update. Also failed operations.
Enterprise Vault Exchange Mailbox task for <i>server queue A2</i>	Individual items to process. Used for manual archive requests and whenever Enterprise Vault cannot directly communicate with the Storage Archive queue of the Storage service.
Enterprise Vault Exchange Mailbox task for <i>server queue A3</i>	Mailboxes to process. Used if you start archiving using the Run Now option in the Administration Console.
Enterprise Vault Exchange Mailbox task for <i>server queue A4</i>	Individual items to process. Only used for retries when Enterprise Vault cannot directly communicate with the Storage Archive queue of the Storage service.
Enterprise Vault Exchange Mailbox task for <i>server queue A5</i>	Mailboxes to process. Used during scheduled archive runs.  This queue is not processed outside the scheduled archiving times, so you cannot use Run Now to clear a backlog on this queue.

**Table 22-1** Summary of MSMQ queues (*continued*)

Queue name	Contains information about
Enterprise Vault Exchange Mailbox task for <i>server queue A6</i>	<p>Requests to update folders with items that have been moved inside a mailbox.</p> <p>Enterprise Vault compresses the moved and copied item data that is placed in requests on queue A6. It also limits message storage on this queue to 100 MB. A compressed request to update 1,000 items occupies approximately 50 KB. So, about 2,000 requests can be placed on the queue.</p> <p>When the queue is full, further requests are rejected. These moved and copied items have to wait for another shortcut processing run.</p>
Enterprise Vault Exchange Mailbox task for <i>server queue A7</i>	Synchronization requests.
Enterprise Vault Journaling task for <i>server queue J1</i>	Pending items to update. Also failed operations.
Enterprise Vault Journaling task for <i>server queue J2</i>	Items to process.
Enterprise Vault Journaling task for <i>server queue J3</i>	Instructs the Exchange Journaling task to examine the journal mailbox for new messages. Up to 500 new messages are marked as archive pending, and a message is placed on queue J2 for each such message.
Enterprise Vault Journaling task for <i>server queue J4</i>	Synchronization requests.
Enterprise Vault Public Folder task for <i>server queue P1</i>	Pending items to update. Also failed operations.
Enterprise Vault Public Folder task for <i>server queue P3</i>	Folders to process. Used if you start archiving using the Run Now option in the Administration Console.
Enterprise Vault Public Folder task for <i>server queue P5</i>	<p>Folders to process. Used during scheduled archive runs.</p> <p>This queue is not processed outside the scheduled archiving times, so you cannot use Run Now to clear a backlog on this queue.</p>
Enterprise Vault Exchange Mailbox task for <i>server queue R1</i>	Notifications of item retrieval requests.

Table 22-1 Summary of MSMQ queues (continued)

Queue name	Contains information about
Enterprise Vault Exchange Mailbox task for <i>server queue</i> R2	Retrieval requests.
Enterprise Vault restore spool admin queue	Items that the Storage service has retrieved and that are now ready for the Exchange Mailbox task to process (for retrieval).
Enterprise Vault storage archive for <i>server</i>	Items to be stored in vault stores.
Enterprise Vault storage restore for <i>server</i>	Items to be retrieved from vault stores.

## Exchange Mailbox task queues

Table 22-2 describes the queues that the Exchange Mailbox task uses. Here, *server* is the name of the server that the Exchange Mailbox task is managing, and *queue* is a number that uniquely identifies the queue.

Table 22-2 Exchange Mailbox task queues

Queue name	Messages placed on the queue
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A1	Update Shortcut, Operation Failed.
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A2	Process Item (Explicit Archives).
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A3	Process Mailbox, Process System (Run Now), Check System, Check Mailbox.
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A4	Only used for retries where Enterprise Vault cannot communicate directly with the Storage Archive queue.
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A5	Process Mailbox, Process System (Schedule only).
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A6	Process Moved Items in Folder.
Enterprise Vault Exchange Mailbox task for <i>server queue</i> A7	Synchronization requests.



Table 22-3 provides more information on the messages that the Exchange Mailbox task may place in queues A1 through A7.

**Table 22-3** Messages in the Exchange Mailbox task queues

Message	Notes
Operation Failed	<p>Informs the Exchange Mailbox task that an error has occurred and that it should change the message from archive pending back into a message. The message is reprocessed later. This message is sent if an error occurs during archiving and storage.</p>
Process Item	<p>Asks the Exchange Mailbox task to archive a specific message from the Exchange server to the Storage service. The item in Exchange is turned into a shortcut when the storage returns an Update Shortcut message.</p> <p>Process Item messages are produced by a user explicitly archiving an item (placed on A2) or by retry requests for items that failed during normal processing. Retry requests from Run Now are placed on the A2 queue, whereas those from scheduled archiving are placed on the A4 queue.</p>
Process Mailbox	<p>Asks the Exchange Mailbox task to examine a mailbox and find any messages that match the archiving criteria. The items are placed on the Storage Archive queue for storage processing.</p>
Process Moved Items in Folder	<p>Asks the Exchange Mailbox task to update the items that have been moved or copied to the specified folder.</p> <p>Process Moved Items in Folder messages are only placed on queue A6.</p>
Process System	<p>Asks the Exchange Mailbox task to determine which mailboxes on the Exchange server are eligible for archiving. The Exchange Mailbox task reads the list of all provisioned mailboxes and sends a Process Mailbox message (on the same queue) for each mailbox.</p> <p>A Process System message is placed immediately on queue A3 if the administrator selects Run Now from the task properties, or it is placed on queue A5 at the start of a scheduled archive period (provided that there are no other Process System messages that are already waiting to be done).</p>

**Table 22-3** Messages in the Exchange Mailbox task queues *(continued)*

Message	Notes
Synchronize System	<p>Synchronization requests for an Exchange Mailbox task are placed on the A7 queue. When synchronization is run, a Synchronize System request is placed on this queue. This generates a Synchronize Mailbox request for each mailbox that needs to be synchronized. Having multiple Synchronize Mailbox requests means that multiple threads can service the requests.</p> <p>The A7 queue is processed at all times but is always the lowest priority task. This means that scheduled background archives always take precedence over synchronization requests.</p>
Update Shortcut	<p>Informs the Exchange Mailbox task that it can turn an archive pending item into a shortcut. It occurs after a message has been stored by the Storage service, and backed up.</p>

Notes on the Exchange Mailbox task queues

- Each queue has a suffix of *Apriority number*, where A1 is the highest priority. The message queues are treated as FIFO (First In, First Out), and new messages are always added to the end of the queue.
- The Exchange Mailbox task processes the queues in order of priority. The task scans through each queue, starting with the highest priority. If it finds a message on a queue, it processes the message and then starts the scan again from the highest priority queue. Therefore, queues A2 through A7 are not processed until queue A1 is empty. When A1 is empty, A2 requests are processed before A3 requests.

However, queues A4 and A5 are special queues that are used by the archiving schedule only. The Exchange Mailbox task processes messages on the A5 queue only during a scheduled archive period. Outside the scheduled periods, messages on these queues are ignored until the next schedule period.
- Using performance monitor, you can monitor the changes in the queues to assess the progress of the task.

For example, at the start of a scheduled period, the number of messages on queue A5 rises (to the number of enabled mailboxes on the Exchange server). These are Process Mailbox messages. The Exchange Mailbox task takes the first message off queue A5, finds all the eligible messages in the mailbox, and changes them to archive pending. A Process Item message is then placed on

the Storage Archive queue of the Storage service for each message to be archived.

- After the vault store has been backed up, Update Shortcut messages are placed on queue A1. The messages are processed immediately because the queue has a higher priority.
- Queue A3 performs the same function as queue A5, but for an immediate process system. This queue also performs shortcut expiry and deletion. Explicit user archives from the Outlook client extension are placed on queue A2.
- Queue A5 is only processed during a scheduled period, but queues A1 through A3, A6, and A7 are always processed. If a queue has not been processed for more than 10 minutes, and there are no messages in a higher priority queue, there may be a problem with the task. Check the Enterprise Vault event log on the Exchange Mailbox task computer for any additional information.
- Monitoring queue A1 indicates that a backup has correctly updated shortcuts. However, if A1 is being used during normal use (before a backup), this may indicate a problem with tasks. Check the Enterprise Vault event log for errors.

## Exchange Journaling task queues

Table 22-4 describes the queues that the Exchange Journaling task uses. Here, *server* is the name of the server that the Exchange Journaling task is managing, whereas *queue* is a number that uniquely identifies the queue.

**Table 22-4** Exchange Journaling task queues

Queue name	Messages placed on the queue
Enterprise Vault Journaling task for <i>server queue</i> J1	Post Process Archived Item, Operation Failed.
Enterprise Vault Journaling task for <i>server queue</i> J2	Process Item.
Enterprise Vault Journaling task for <i>server queue</i> J3	Process Mailbox.
Enterprise Vault Journaling task for <i>server queue</i> J4	Synchronize System.

Table 22-5 provides more information on the messages that the Exchange Journaling task may place in queues J1 through J4.

**Table 22-5** Messages in the Exchange Journaling task queues

Message	Notes
Operation Failed	<p>Informs the Exchange Journaling task that an error has occurred and that it should do the following:</p> <ul style="list-style-type: none"> <li>■ Change the message from archive pending back into a message. The message is reprocessed later.</li> <li>■ Move the message to the Failed to Store folder.</li> </ul> <p>This message is sent if an error occurs during archiving and storage.</p>
Post Process Archived Item	<p>Informs the Exchange Journaling task to delete an archive pending item from the journal mailbox. It occurs after a message has been stored by the Storage service, and backed-up.</p>
Process Mailbox	<p>Asks the Exchange Journaling task to examine the journal mailbox, finding any messages that have arrived. Up to 500 new messages are turned into archive pending, and a message is placed on the Storage Archive queue of the Storage service for each message to be archived.</p> <p>The process mailbox message is issued every minute onto queue J3. This allows for continuous scanning of the journal mailbox while the Journaling task is running.</p>
Synchronize System	<p>Synchronization requests for an Exchange Journaling task are placed on the J4 queue. When synchronization is run, a Synchronize System request is placed on this queue. This generates a Synchronize Mailbox request for each mailbox that needs to be synchronized. Having multiple Synchronize Mailbox requests means that multiple threads can service the requests.</p> <p>The J4 queue is processed at all times but is always the lowest priority task. This means that scheduled background archives always take precedence over synchronization requests.</p>

## Notes on the Exchange Journaling task queues

- Each queue has a suffix of *Jpriority number*, where J1 is the highest priority. The message queues are treated as FIFO (First In, First Out), and new messages are always added to the end of the queue.
- An Exchange Journaling task processes the queues in order of priority. The task scans through each queue, starting with the highest priority. If it finds a message on a queue, it processes the message and then starts the scan again from the highest priority queue. Therefore, if there are messages on queue J1, queue J2 and J3 are not processed until queue J1 is empty.
- Monitoring queue J1 will indicate that a vault store backup is correctly deleting the messages. However, if J1 is being used during normal use (before a backup), this may indicate a problem with tasks. Check the Enterprise Vault event log for errors.
- Monitoring queue J3 will indicate that at least every minute a process mailbox message is on the queue (a new message will only be added if the queue is empty). There should never be more than one message on this queue. The message should appear on the queue and then disappear as soon as queue J1 is clear. Any new messages in the journal mailbox will be processed.
- If a queue has not been processed for more than 10 minutes, and there are no messages in a higher priority queue, there may be a problem with the tasks. Check the Enterprise Vault event log on the Exchange Journaling task computer for any additional information.

## Exchange Public Folder task queues

[Table 22-6](#) describes the queues that each Exchange Public Folder task uses. Here, *server* is the name of the server that the Public Folder task is managing, whereas *queue* is a number that uniquely identifies the queue.

**Table 22-6** Exchange Public Folder task queues

Queue name	Messages placed on the queue
Enterprise Vault Public Folder task for <i>server queue</i> P1	Update Shortcut, Operation Failed.
Enterprise Vault Public Folder task for <i>server queue</i> P3	Process Folder, Process Folders (Run Now), Check Folders, Check Folder.
Enterprise Vault Public Folder task for <i>server queue</i> P5	Process Folder, Process Folders (Schedule only).

Note that Enterprise Vault has not used queues P2 and P4 since version 3.6.

Table 22-7 provides more information on the messages that the Exchange Public Folder task may place in queues P1, P3, and P5.

Table 22-7 Messages in the Exchange Public Folder task queues

Message	Notes
Operation Failed	Informs the Exchange Public Folder task that an error has occurred and that it should change the message from archive pending back into a message. The message is reprocessed later. This message is sent if an error occurs during archiving and storage.
Process Folder	Asks the Exchange Public Folder task to examine a specific folder and find any messages that match the archiving criteria. These messages are then turned into archive pending, and a message is placed on the process item queue for each message to be archived.
Process Folders	<p>Asks the Exchange Public Folder task to determine which folders on the Exchange Server are eligible for archiving. The Exchange Public Folder task reads the list of all the public folders that are hosted on the Exchange server and sends a Process Folder message (on the same queue) for each top-level folder that is eligible.</p> <p>Process Folders messages are placed immediately on queue P3 if the administrator selects Run Now from the task properties, or it is placed on queue P5 at the start of a scheduled archive period (provided that there are no other process folders messages already waiting to be done).</p>
Update Shortcut	Instructs the Exchange Public Folder task to turn an archive pending item into a shortcut. It occurs after a message has been stored by the Storage service, and backed up.

## Notes on the Exchange Public Folder task queues

- Each queue has a suffix of *Ppriority number*, where P1 is the highest priority. The message queues are treated as FIFO (First In, First Out), and new messages are always added to the end of the queue.
- The Exchange Public Folder task processes the queues in order of priority. The task scans through each queue, starting with the highest priority. If it finds a

message on a queue, it processes the message and then starts the scan again from the highest priority queue. Therefore, if there are messages on queue P1, the other queues are not processed until queue P1 is empty.

However, the P5 queue is a special queue only used during the public folder archiving schedule. The Exchange Public Folder task processes only messages on queue P5 during a scheduled archive period. Outside of the schedule, any messages on these queues are ignored.

- Queue P3 performs the same function as queue P5, but for an administrator Run Now. This queue also performs shortcut expiry and deletion.
- Queue P5 is only processed during a scheduled period, but queues P1 and P3 are always processed. If a queue has not been processed for more than 10 minutes, and there are no messages in a higher priority queue, there may be a problem with the task. Check the Enterprise Vault event log on the Exchange Public Folder task computer for any additional information.
- Monitoring queue P1 will indicate that a backup has correctly updated shortcuts. However, if P1 is being used during normal use (before a backup), it may indicate a problem with tasks. Check the Enterprise Vault event log for errors.

## Retrieval queues

Table 22-8 describes the queues with which the Exchange Mailbox task carries out retrieval. Here, *server* is the name of the server that the Exchange Mailbox task is processing, whereas *queue* is a number that uniquely identifies the queue.

Table 22-8                  Retrieval queues

Queue name	Messages placed on the queue
Enterprise Vault Exchange Mailbox task for <i>server queue</i> R1	Item Ready, Operation Failed.
Enterprise Vault Exchange Mailbox task for <i>server queue</i> R2	Restore Item, Update Basket.
Enterprise Vault Storage Spool	Message content. The messages on this queue are items restored from the Storage service. The Exchange Mailbox task reads the messages as it processes the queue R1.

Table 22-9 provides more information on the messages that the Exchange Mailbox task may place in queues R1 and R2 when it carries out retrieval.

Table 22-9 Messages in the Retrieval queues

Message	Notes
Item Ready	This message informs the Exchange Mailbox task that a previously requested message is now available on the storage spool queue. The Exchange Mailbox task collects the message from the storage spool queue and places it into the mailbox. The Storage service generates these messages as required.
Operation Failed	This message informs the Exchange Mailbox task there was a problem restoring the message. If the retrieval was started from the Web application, the Exchange Mailbox task updates the basket to indicate the item was not restored.
Restore Item	This message is a request to restore an item from the Storage service back into Exchange Server. The Exchange Mailbox task prompts for the message from the Storage service and places it into the mailbox. Messages are placed on this queue from both the user extension and the Web page restore functions.
Update Basket	<p>When a restore succeeds or fails, the retrieval task tries to update the shopping basket directly. If this fails, the retrieval task posts an Update Basket request so that it is tried again.</p> <p>This message instructs the Exchange Mailbox task to update a Web basket with the successful restoration of an item.</p>

Notes on the retrieval queues

- Each queue has a suffix of *Rpriority\_number*, where R1 is the higher priority. The message queues are treated as FIFO (First In, First Out), and new messages are always added to the end of the queue.
- The Exchange Mailbox task processes the queues in order of priority. The task scans through each queue, starting with the highest priority. If it finds a message on a queue, it processes the message and then starts the scan again from the highest priority queue. Therefore, if there are messages on queue R1, queue R2 is not processed until queue R1 is empty.
- If a queue has not been processed for more than 10 minutes, and there are no messages in a higher priority queue, there may be a problem with the task.



Check the Enterprise Vault event log on the Exchange Mailbox task computer for any additional information.

## Storage service queues

Table 22-10 describes the queues that the Storage service uses.

Table 22-10      Storage service queues

Queue name	Messages placed on the queue
Enterprise Vault storage archive	Store Item.
Enterprise Vault storage restore	Restore an Item.

Table 22-11 provides more information on the messages that the Storage service may place in the queues.

Table 22-11      Messages in the Storage service queues

Message	Notes
Restore an Item	The Exchange Mailbox task places a message in the Storage Restore queue, requesting an item to be restored from an archive. When the Storage service has located the item, it places it in the Storage Spool queue and notifies the Exchange Mailbox task on queue R1.
Store Item	<p>The Exchange Mailbox task places a compressed email message on the Storage Archive queue, to be stored in an archive. If the compressed message is larger than 4 MB, it is divided into 4-MB chunks (each labeled with a part number, such as "Part 1 of 5"). The message is reconstructed by the Storage service before storing.</p> <p>The Exchange Mailbox task places all emails to be stored onto the appropriate Storage service archive queue. Multiple Storage services may be configured, so the Exchange Mailbox task must select the correct Storage service for the vault store in which the archive resides.</p>

## Notes on the Storage service queues

- Monitoring the storage archive queue will indicate the Storage service is processing items. If the number of items in this queue does not change for at least 30 minutes, there is likely to be a problem. Check the Enterprise Vault event log on the storage computer for any errors and, if necessary, restart the Storage service.
- When all the vault stores on an Enterprise Vault server are in backup mode, the Storage Archive queue is not processed.
- Monitoring the restore queue will indicate the number of restores required by the users. Again, if the number of items on the queue does not change, there is likely to be a problem.

# Customizations and best practice

This chapter includes the following topics:

- [Mailbox archiving strategies](#)
- [Public folder archiving best practice](#)
- [About performance tuning](#)

## Mailbox archiving strategies

This section covers the following:

- [About mailbox archiving strategies](#)
- [Notes on archiving based on age](#)
- [Notes on archiving based on quota or age and quota](#)
- [Notes on archiving items from Exchange managed folders](#)
- [Archiving items only if they have attachments](#)
- [How to customize the Enterprise Vault settings for a journal mailbox](#)
- [Disabling archiving for mailboxes](#)

## About mailbox archiving strategies

You define an archiving strategy for a mailbox policy on the **Archiving Rules** tab. You can base the archiving strategy for an Exchange Mailbox Policy on one of the following:

- **Age:** items are archived when they have not been modified for the time that you specify.  
The age of a mail message is taken from the date when it was received or sent. The age of a document is taken from the date when it was last modified.
- **Quota:** archiving keeps a percentage of each user's Exchange mailbox storage limit free.
- **Age and quota:** Enterprise Vault performs age-based archiving first. If age-based archiving does not make the required percentage of mailbox storage limit free, quota-based archiving continues until the required percentage is reached.

Archiving based on age and archiving based on quota or age and quota are the main strategies for selection of items to archive. You can also configure the policy so that Enterprise Vault archives large items first. Archiving large items first operates in addition to the main archiving strategy. Archiving large items first has the following advantages:

- Initial archiving performance is improved.
- Mailbox space is recovered by archiving relatively few items.

You can also select the following options:

- Items younger than an age that you specify are never archived.
- Only messages with attachments are archived.

## Notes on archiving based on age

Archiving based on age is the default archiving strategy.

When you configure archiving based on age, the following recommendations apply:

- Consider a policy that uses the setting "Start with items larger than" so that archiving has the greatest benefits early on.
- Larger, less frequent runs make backups easier. For example, it is easier to do one large run on Friday and then a full backup of the Enterprise Vault system than daily archives and backups.

## Notes on archiving based on quota or age and quota

You can choose archiving based on quota on its own, or as part of the archiving by age and quota option. The same configuration and best practice considerations apply.

You need to decide first whether you need to base archiving on quota. The default strategy of archiving based on age is more efficient, and avoids the possibility of archiving too many items.

Consider archiving based on age and quota when archiving by age only or quota only do not give the results you want. When archiving is based only on age, it may not archive enough items to keep some mailboxes within their quota. When archiving is based only on quota, some mailboxes may not come close to the Exchange mailbox storage limit. In this case, Enterprise Vault does not even archive older items.

Enterprise Vault calculates the amount of data it needs to archive to achieve the quota percentage target. It bases the calculation on estimates of the size of shortcuts. The estimates take account of any items that already have a status of pending archive. For information about how the estimates are calculated, see the following TechNote on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH64654>

You can use the following registry values to override the values that Enterprise Vault uses in the shortcut size estimates:

- ShortcutCalcAverageBodySize
- ShortcutCalcBannerSize
- ShortcutCalcBaseItemSize
- ShortcutCalcBodySizeMultiplier
- ShortcutCalcOverride
- ShortcutCalcRecipientSize

See *Enterprise Vault Registry Values*.

See “[Recommendations for quota-based archiving](#)” on page 341.

## Recommendations for quota-based archiving

When you configure archiving based on quota, or on age and quota, consider the recommendations given here. These recommendations help you to avoid setting the quota percentage too high for your Enterprise Vault configuration. If the quota percentage is too high, Enterprise Vault may archive too many items as it tries to achieve the quota target.

The recommendations are as follows:

- Review your shortcut settings and consider using smaller shortcuts. With smaller shortcuts, Enterprise Vault saves more space in a mailbox for each

item that it archives. The result is that Enterprise Vault needs to archive fewer items to achieve the percentage of free space that you require.

If you use large shortcuts when the average item is small, Enterprise Vault saves less space for each item that it archives.

To find out the average shortcut size, run the Exchange Mailbox Archiving task in **Report** run mode.

You specify the settings that determine what information is left in a shortcut on the mailbox policy **Shortcut Content** tab.

- Consider making shortcuts expire earlier. When shortcuts expire earlier, you save mailbox space and avoid archiving too many items. You set the age at which Enterprise Vault deletes shortcuts on the mailbox policy **Shortcut Deletion** tab.
- Specify that Enterprise Vault starts by archiving large items. Enterprise Vault then archives items that use the most mailbox space first.
- Start with a low quota percentage, and increase it gradually until you get the results you require.
- Make sure that there is enough archiving each night so that users have sufficient space for the following day.
- Check the mailbox policy Advanced settings **Archive deleted items** and **Archive Exchange Managed Folders**.

Items in the Deleted Items folder are included in the Exchange Server mailbox storage limit calculation. By default Enterprise Vault does not archive items from the Deleted Items folder. So items in the Deleted Items folder can prevent Enterprise Vault from reaching the quota percentage target.

Managed folders are also included in the Exchange Server mailbox storage limit calculation. By default Enterprise Vault archives from managed folders, but you can configure it so that it does not archive from managed folders. In this case, Enterprise Vault may not be able to achieve the quota percentage target.

- Check the mailbox policy Advanced setting **Strip attachments to non-shortcut items**. By default, Enterprise Vault removes attachments from calendar, meeting, task, and contact items after it archives these items. If attachments are not removed from these items, then archiving them does not save space in the mailbox.

Further points to note are as follows:

- If no Microsoft Exchange storage limit applies to a mailbox, Enterprise Vault cannot process the mailbox with quota-based archiving.
- In Exchange, you can specify the maximum space that a mailbox can occupy before the user is prohibited from sending or receiving messages. If you archive

by quota and this storage limit has been exceeded, then Enterprise Vault cannot process the mailbox with quota-based archiving.

The solution is to remove or raise the limit, archive until a suitable storage level is reached, and then reimpose the limit if necessary. Enterprise Vault normally keeps users within quota, so you may decide to remove the limit.

## Notes on configuring archiving based on age and quota with a script

You can use an Enterprise Vault Policy Manager script to configure your archiving strategy for a mailbox.

For information about Policy Manager, see the *Utilities Guide*.

An example script is shown here. This script applies settings for archiving based on age and quota to a mailbox. It also configures a special folder to override the mailbox-level settings.

The first part of the script configures the mailbox as follows:

- Archive items that are older than three months.
- Archive items that are larger than 4 MB immediately.
- If necessary, continue quota-based archiving until 30% of the mailbox storage limit is free. Quota-based archiving starts with any items that are larger than 1 MB and more than one day old.
- Create shortcuts, and delete the original items.

The second part of the script configures a mailbox folder that is named `\Inbox\Special Project` as follows:

- Archive items that are older than 0 days.
- Do not create shortcuts, and delete the original items.

You might want to configure a special folder as shown here as an alternative to manual archiving. Users can move items into the folder, and Enterprise Vault automatically archives the items soon afterwards.

The example script is as follows:

```
[directory]
directorycomputername=evserver
sitename=evsite

[mailbox]
distinguishedname=/o=First Organization/ou=First Administrative Group/
cn=Recipients/cn=recipient_1
```

```
; Using Age & Quota based archiving
;
[filter]
name=AGEANDQUOTA

; Quota settings
; Archive to 30% of quota is available
; Start with large items >1MB that are more than 1 day old
UsePercentageQuota=true
PercentageQuota=30
UseInactivityPeriod=true
QMinimumAgeThresholdPeriod=1
QMinimumAgeThresholdUnits=Days
QPrioritizeItemsOver=1024
QPrioritizeLargeItems=true

; Age settings
; Archive all items older than 3 months
; Archive all items >4MB immediately.
UseInactivityPeriod=true
InactivityPeriod=3
InactivityUnits=Months
ALargeItemThresholdPeriod=0
ALargeItemThresholdUnits=Days
APrioritizeItemsOver=4096
APrioritizeLargeItems=true

; Create shortcuts and delete the original item
;
CreateShortcut=true
DeleteOriginal=true

; Do not archive unread items
Unreadmail=false

; Special case zero day folder to override Age & Quota settings
;
[filter]
name=ZeroDaysNoShortcut

; Archive Items after 0 days, delete the original and
; do not leave a shortcut
```



```
;
UseInactivityPeriod=true
UsePercentageQuota=false
InactivityPeriod=0
InactivityUnits=Days
CreateShortcut=false
DeleteOriginal=true
Unreadmail=true

; Set the mailbox to use Age & Quota based archiving as
; defined in the policy above
;
[folder]
name=MailboxRoot
filtername=AGEANDQUOTA
Overridearchivelocks=true

; Apply the ZeroDaysNoShortcut policy to a special project folder
;
[folder]
name=\Inbox\Special Project
filtername=ZeroDaysNoShortcut
Overridearchivelocks=true
```

## Notes on archiving items from Exchange managed folders

Exchange Server 2010 and Exchange Server 2007 let you set up Exchange managed folders and apply managed content settings to them. The managed content settings let you control the retention of items of the specified message class.

Enterprise Vault can apply special retention categories to items that it archives from managed folders. These managed folder retention categories are based on settings that are synchronized from Exchange managed content settings. Managed folder retention categories are created and updated automatically. They have a different icon and different properties from normal retention categories. You can change the name and description of a managed folder retention category, but not its retention period. Synchronization with Exchange managed content settings prevents Enterprise Vault managed folder retention category settings from conflicting with the managed content settings.

For example, the managed content settings may specify that items in the managed folder are deleted after 180 days. If synchronization with managed content settings is active, Enterprise Vault automatically creates a managed folder retention category. Enterprise Vault gives the managed folder retention category the same

name as the managed content settings. Enterprise Vault sets the retention period so that archived items expire at the same time that they are due to expire from Exchange.

In the Enterprise Vault Exchange mailbox policy, the advanced setting **Archive Exchange Managed Folders** controls whether Enterprise Vault archives items from managed folders.

The possible values of **Archive Exchange Managed Folders** are as follows:

Off	Enterprise Vault does not archive items from managed folders. Users cannot archive items manually from managed folders.
Normal	<p>Enterprise Vault treats managed folders in the same way as any other folder.</p> <p>The value Normal lets users modify the contents of managed folders in Virtual Vault, provided the Virtual Vault policy settings allow such operations. For example, users can move items as follows:</p> <ul style="list-style-type: none"> <li>■ From the mailbox to a managed folder in Virtual Vault</li> <li>■ From a managed folder in Virtual Vault to another Virtual Vault folder</li> </ul>
Managed	Default value. Enterprise Vault archives items from managed folders and uses managed folder retention category settings that are synchronized from Exchange.

The Enterprise Vault Exchange Provisioning task performs the synchronization with Exchange managed content settings. Synchronization is automatic when there is an Exchange 2010 or Exchange 2007 server in the domain. So the Exchange Provisioning task performs synchronization and creates managed folder retention categories even if you have not set **Archive Exchange Managed Folders** to Managed.

If synchronization fails, it causes the entire Provisioning task to fail. To prevent synchronization, you can place a configuration file in the Enterprise Vault server installation folder.

See [“Preventing synchronization with Exchange managed folders”](#) on page 349.

When archiving from managed folders is active, users of the Enterprise Vault Outlook Add-In in full mode see the following:

- They cannot specify a retention category or an archive when they archive items manually from managed folders.

- The Enterprise Vault tab in the folder properties does not include the **Change** option.
- Enterprise Vault always creates shortcuts and deletes the original items.

Enterprise Vault auditing records details of creation, modification, and deletion of Exchange managed content settings.

See [“Requirements for synchronized archiving from Exchange managed folders”](#) on page 347.

See [“Configuring auditing”](#) on page 360.

## Requirements for synchronized archiving from Exchange managed folders

To archive items from an Exchange managed folder and synchronize managed content settings with a managed folder retention category, all the following conditions must apply:

- In the Enterprise Vault Exchange mailbox policy, the advanced setting **Archive Exchange Managed Folders** must be set to **Managed**.
- The item's message class must match the **Message type** setting in one set of managed content settings that are defined for the managed folder. (In Exchange, you can define multiple sets of managed content settings for a single managed folder. Each set of managed content settings can specify a different message type.)
- The managed content settings must define the action to take at the end of the retention period as **Delete and Allow Recovery** or **Permanently Delete**.
- The Enterprise Vault filter that applies to the managed folder must be the system default.  
See [“Setting the system default filter on Exchange managed folders”](#) on page 347.
- The Vault Service account must have the Exchange View-Only Administrator role assigned to it. For details of how to assign this role, see *Installing and Configuring Enterprise Vault*.

See [“Notes on archiving items from Exchange managed folders”](#) on page 345.

See [“Preventing synchronization with Exchange managed folders”](#) on page 349.

## Setting the system default filter on Exchange managed folders

One requirement for synchronizing managed content settings is that the Enterprise Vault filter applied to the managed folder must be set to **Use the system default**. If the filter on a managed folder is set to **Use custom settings**, Enterprise Vault does not apply managed content settings.

Custom settings on a managed folder may be inherited, or set with Enterprise Vault Policy Manager.

If necessary, you can use the PowerShell cmdlet `Remove-EVExchangeFolderPolicy` to remove all existing custom settings from managed folders. You can then use Policy Manager to set managed folders to use the system default filter.

For information about Policy Manager, see the *Utilities Guide*.

#### To remove Policy Manager policies from managed folders

- 1 Click **Start > Programs > Enterprise Vault > Enterprise Vault Management Shell**.

- 2 In the Enterprise Vault Management Shell window, enter the following command if you want to see detailed help for

```
Remove-EVExchangeFolderPolicy:
```

```
Get-Help Remove-EVExchangeFolderPolicy -detailed
```

- 3 Enter the `Remove-EVExchangeFolderPolicy` command with the required parameters.

For example:

- To remove any Enterprise Vault filter settings from managed folders in a mailbox, enter the following command:

```
Remove-EVExchangeFolderPolicy -PrimarySMTPAddress  
user_name@domain -ManagedFolders
```

where `user_name@domain` is the name of the mailbox.

- If the managed folders are on Exchange Server 2010, you can run the following script to remove any Enterprise Vault filter settings from managed folders in all mailboxes on a specified Exchange Server 2010. On the Enterprise Vault server, the installed version of Windows PowerShell must be at least Windows PowerShell 2.0.

Run the script in the Enterprise Vault Management Shell window.

```
$Session = New-PSSession -ConfigurationName Microsoft.Exchange  
-ConnectionUri http://Exchange_server/PowerShell/  
-Authentication Kerberos -Credential Exchange_administrator
```

```
Import-PSSession $Session -CommandName Get-Mailbox
```

```
$UserList = Get-Mailbox |  
where-object{$_.ServerName -like "Exchange_server"}  
foreach($Entry in $UserList)
```

```
{ $Address = $Entry.PrimarySMTPAddress;
Remove-EVExchangeFolderPolicy -PrimarySMTPAddress $Address }
```

where *Exchange\_server* is the name of the Exchange Server 2010, and *Exchange\_administrator* the name of the Exchange administrator account.

### To set a managed folder to use the system default filter

- 1 Create a Policy Manager initialization file that contains the following [Folder] section:

```
[Folder]
NAME=\Managed Folders\managed_folder
filtername = systemdefault
overridearchivelocks=true
```

where *managed\_folder* is the name of the managed folder that you want to use the system default filter.

- 2 Run Policy Manager with the initialization file.

See [“Requirements for synchronized archiving from Exchange managed folders”](#) on page 347.

## Preventing synchronization with Exchange managed folders

The Enterprise Vault Exchange Provisioning task performs synchronization with managed folders. The task checks for Exchange 2010 and Exchange 2007 servers in the domain. The task also checks for new managed folders, and for new or changed managed content settings in existing managed folders.

You can prevent the Exchange Provisioning task from synchronizing with managed folders by using a configuration file in the Enterprise Vault server installation folder.

The configuration file setting that is described in this section only prevents synchronization with managed folders and their managed content settings. Enterprise Vault does not create new managed folder retention categories, or update existing managed folder retention categories. Archiving from managed folders continues if the necessary conditions apply.

You may want to prevent or temporarily suspend synchronization in the following circumstances:

- You have problems with synchronization, possibly because permissions on the Exchange server are not set correctly.
- You do not require Enterprise Vault to synchronize managed content settings with managed folder retention categories.

### To prevent synchronization with managed folders

- 1 In the Enterprise Vault installation folder, take a backup copy of the file, `EvExchangePolicySyncTask.exe.config`. The installation folder is typically `C:\Program Files (x86)\Enterprise Vault`.
- 2 Open the file with a text editor.
- 3 Add the following lines to the **<configuration>** section in the file:

```
<appSettings>
    <add key="SkipManagedFolderSynch" value="true" />
</appSettings>
```

- 4 Save and close the file.
- 5 The change will take effect the next time the Exchange Provisioning task runs.

## Archiving items only if they have attachments

Enterprise Vault can be configured so that a mailbox or public folder item is archived only if the item has an attachment, assuming all other archiving criteria are met. This is not the same as archive attachments only.

The advantages of archiving only items with attachments are as follows:

- A significant performance improvement, since many fewer items are being archived.
- Fewer problems generally, because fewer items are being archived. For example, users open fewer archived items, there are fewer problems archiving items, and so on.
- Normally, using the "leave cover note text" option means Exchange store growth for messages without attachments. However, if you set this and also configure Enterprise Vault to archive items only if they have attachments, then Enterprise Vault leaves cover note text only for items that do have attachments. This means that there is always a space gain.

The disadvantages of archiving only items with attachments are as follows:

- You cannot use this method if you are archiving for legal reasons because you cannot be sure of what will be archived.
- Users will not be sure of where to find older items. Should they search in the mailbox or in Enterprise Vault?
- Such a policy may be harder for users to understand than a simple age-based one.

---

**Note:** If you decide to archive only items with attachments, consider having occasional archiving runs with it turned off and with an age-based policy of, say, two years. This ensures that any really old items are eventually archived, even though they have no attachments. This frees space in the Exchange database. You could do this using, for example, a simple, scheduled SQL script running once each month.

---

#### To enable archiving only items with attachments

- 1 Start the Administration Console.
- 2 In the left pane, expand the vault site.
- 3 Expand **Policies** and then **Exchange**.
- 4 Click the **Mailbox** container.
- 5 In the right pane, double-click the Exchange Mailbox Policy you want to modify.
- 6 Click the **Archiving Rules** tab.
- 7 Select **Archive messages with attachments only**.
- 8 Click **OK**.

## How to customize the Enterprise Vault settings for a journal mailbox

You can customize the journal mailbox so that items are archived to different archives and with different retention categories.

By default, Enterprise Vault uses the same archive and retention category for every item that is archived from a journal mailbox. If this is not what you want, you can customize the journal mailbox and send items to different archives with different retention categories.

You can override the parent folder settings by changing the Enterprise Vault properties for a folder. If a folder contains other folders then, by default, those folders inherit the properties of the parent folder. However, you can change the settings for individual folders.

By default, all folders in the journal mailbox have the Enterprise Vault property Use Parent Folder Settings selected. This means that all folders inherit the same settings, retention category, and archive that are set up for the journal mailbox. Until you change the values for a particular folder, Enterprise Vault archives all items with the same retention category and stores them in the same archive.

To modify the settings, use Microsoft Outlook or Microsoft Exchange Client to do the following:

- Define rules to redirect mail to the appropriate folders within the journal mailbox. The Exchange Journaling task will then archive items from those folders.
- Set the mailbox and folder properties in the journal mailbox.

The journal mailbox is enabled with the following settings:

- Vault: from the Journal Mailbox Target properties
- Retention Category: from the Journal Mailbox Target properties

The following tables list the Enterprise Vault settings that you can change to modify the behavior of the Exchange Journaling task, together with those that the Exchange Journaling task ignores.

Table 23-1      Journal mailbox settings

Setting	Comment
Vault	Can be changed from the default.
Retention Category	Can be changed from the default.
Do not archive this folder	Ignored.
Archive items older than	Ignored (always 0 days).

Table 23-2      Journal mailbox folder settings

Setting	Comment
Vault	Overrides parent folder
Retention Category	Overrides parent folder
All other settings	Ignored (uses mailbox settings)

Table 23-3      Journal mailbox message settings

Setting	Comment
Do not archive this item	Ignored
Retention Category	Ignored (uses folder setting)

## Disabling archiving for mailboxes

There may be occasions when you want to disable archiving for a mailbox. If you disable archiving for a mailbox, you can later enable it again at any time.



### To disable archiving for one or more mailboxes

- 1 In the left pane of the Administration Console, expand **Enterprise Vault Servers**.
- 2 Expand the name of the computer that runs the Exchange Mailbox task.
- 3 Click **Tasks**.
- 4 In the right pane, click the Mailbox Archiving task.
- 5 On the **Tools** menu, click **Disable Mailboxes**.
- 6 When the Disable Mailbox wizard starts, follow the on-screen instructions to select the mailboxes that you want to disable.

## Public folder archiving best practice

When setting up Public Folder archiving, consider the following:

- When you specify a public folder root path then, by default, all folders underneath that path are archived.
- If you want a setting to be applied to a whole section of a public folder tree, use Enterprise Vault Policy Manager.
- An Exchange Public Folder task takes its settings from the site that the Exchange Public Folder task is in and applies those settings to every folder under its root path.

If you change any archiving policy using Outlook, the change applies only to that folder, even if the folder is the root path.

So, for example, you could have three root paths archived under one site and you want to change the policy for one of those paths. You could use the Enterprise Vault folder properties in Outlook. However only that folder and not its subfolders will have the new archive policy. If you want to have folder policy inheritance you must use Policy Manager to set up the policy. Policy Manager will set the new policy on all subfolders.

- Any new public folder is archived using the site settings until you change the settings for that folder. The new folder does not inherit any settings from its parent.

For example, if you set a particular part of the public folder tree as Do Not Archive, any new folder created in there will archived until you change its settings. The same is true for a folder move.

To correct this you would run Policy Manager every day to ensure that the correct folder policies are being applied.

- If you use Policy Manager to apply settings to a folder and its subfolders, Policy Manager applies those settings to all folders underneath the folder you specify.

So, for example, if there is a lower-level folder that has a different policy, you need to run Policy Manager to reapply the correct policy to the lower-level folder.

For a complicated folder hierarchy you can may have a Policy Manager entry for each folder. To be safe you'd have a policy setting that archives only very old items, perhaps as old as 10 years. By doing this you turn off archiving for new folders that have not yet had a Policy Manager policy applied to them.

- "Default" access permissions are not applied to vaults. Thus, anyone accessing a shortcut in a Public Folder using the default permission cannot access archived items. However, using a registry entry you can configure View online so that there is no permission check for public folders. This means that anyone with access to the shortcut has access to the archived item.
- It is best to make Enterprise Vault archive the home server for the public folder because this reduces complications of replication and bandwidth. However, this might mean that you need extra Enterprise Vault servers.
- If there is public folder replication then, when a user opens a shortcut, View Online goes to the vault server where the item is located.
- To view items, a user's mailbox must be enabled for Enterprise Vault archiving. Consider where users may be when viewing these archived items in Public Folders. Will those users have Enterprise Vault? Will their mailboxes be enabled?

## About performance tuning

Knowing how well Enterprise Vault is performing helps you decide whether it is necessary to change the configuration by adding or moving components, or by modifying existing components.

Hierarchical Storage Management (HSM) software, if available, may provide the following information to help you improve the performance of Enterprise Vault:

- The time newly-archived items wait to be backed-up. If this is too long, the Archiving Agent and the Storage service will have many uncompleted archive requests.
- The time newly-archived items wait to be moved to offline storage. If this is too short, and items are being moved offline quickly, then more recalls from offline storage may be generated.
- The number of times an archived item is restored from online storage. If too many items are being restored too many times, they may be being archived too soon. If the same items are being continually transferred between the Microsoft Exchange Server store and Enterprise Vault, you may need to increase

the size of the Microsoft Exchange Server message store relative to the size of the Enterprise Vault online store.

- The number of times an archived item is recalled from offline storage. If too many items are being recalled too many times, the online storage area may be too small.
- The time taken to recall items from offline storage. This time is dependent on the HSM but can be used to give Enterprise Vault users expected recall times.

## Moving the Windows Temp folder

Enterprise Vault services write temporary files to the Windows Temp folder. If the Temp folder is on the system disk, this can cause the following problems:

- There may not be much space on the system disk. This means that Enterprise Vault services may stop because they have run out of temporary storage space.
- Performance may be affected because of the access needed to both system files and temporary files.

We recommend that, on every computer that is running an Enterprise Vault service, you move the Windows Temp folder to a disk other than the system disk.

### To move the Windows Temp folder

- 1 Log on as the Vault Service account.
- 2 Create the new Temp folder that you are going to use.
- 3 On the Windows desktop, right-click **My Computer** and then click **Properties**.
- 4 Click the **Advanced** tab and then click **Environmental Variables**.
- 5 In the **User variables** section, click the TEMP variable.
- 6 Modify the value so that it points to the new folder that you created.
- 7 In the **User variables** section, click the TMP variable.
- 8 Modify the value so that it points to the new folder that you created.
- 9 Click **OK**.
- 10 Restart the computer.

## Improving performance on Storage service computers

This section includes the following topics:

- [How to control content conversion](#)
- [How to deal with items that stay a long time on the Archive Queue](#)

- [How to exclude items from content conversion](#)

## How to control content conversion

Enterprise Vault converts Microsoft Excel and Microsoft Word documents to HTML. If Enterprise Vault performs many such conversions, or if the documents are complex, you may suffer performance problems. In such cases, you can significantly improve performance by making Enterprise Vault convert the documents to text instead of HTML.

Enterprise Vault provides the following registry values with which you can use control whether Enterprise Vault converts documents to text instead of HTML:

- To convert Excel documents to text instead of HTML, set the following registry key to 1:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\ConvertExcelToText
```

- To convert Word documents to text instead of HTML, set the following registry key to 1:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\ConvertWordToText
```

- To list a number of file types that must be converted to text, edit the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\TextConversionFileTypes
```

This registry key contains a list of file types, separated by periods, of the file types that are converted to text. The list must end in a period.

For example, if the list is currently `.PPT.POT.PPS.ZIP.` and you want to add file type `XYZ`, you would change the list to the following:

```
.PPT.POT.PPS.ZIP.XYZ.
```

## How to deal with items that stay a long time on the Archive Queue

One reason for items to stay on the Microsoft Message Queue Enterprise Vault Storage Archive queue for a long time is that they really are taking a long time to be converted. When the maximum time for the conversion is reached, the item is archived but no HTML version is created. The item is archived and a message is written to the Windows Application Event Log.

If many items are taking longer than the default 10 minutes allowed, you can change the timeout value. To change the timeout, edit the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\ConversionTimeout
```

The units for this key are minutes.

## How to exclude items from content conversion

If you decide that some types of items are causing problems when they are being converted, you can exclude them from being converted. The item attributes are indexed in the usual way and the item is archived in its native format but not converted to HTML. The user will not be able to preview an item that has not had its content converted to HTML.

To exclude items from conversion, add the item's file extension to the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\ExcludedFileTypesFromConversion
```

The format for the key is as follows:

```
.filetype[.filetype].
```

For example, to exclude \*.JPG and \*.CAD files from conversion, set the key to the following:

```
.JPG.CAD.
```

The registry key lists all the file types that are not currently converted.

# Auditing

This chapter includes the following topics:

- [About auditing](#)
- [Creating the auditing database](#)
- [Configuring auditing](#)
- [Viewing the audit log](#)
- [Tuning auditing](#)

## About auditing

Enterprise Vault auditing records activity in a number of different categories. All auditing is disabled by default, but you can enable it and specify the categories that you want to audit.

The auditing database can optionally be on a computer that is running Enterprise Vault services. However, it must be hosted by the same SQL Server as the Enterprise Vault Directory database.

The process of setting up auditing is as follows:

- Create the auditing database.
- Configure auditing on each Enterprise Vault server.

The following sections describe these activities in detail.

## Creating the auditing database

This section describes how to use the Administration Console to create the auditing database. If, having created the database, you ever want to roll over to a new

database, you cannot use the Administration Console to do so; see the support article [How to rollover an auditing database](#) for instructions.

#### To create the auditing database

- 1 In the left pane of the Administration Console, right-click the Enterprise Vault Directory and then, on the context menu, click **Enable Auditing**.
- 2 Under **Audit Database location**, click **Browse** to display the available locations for the auditing database.
- 3 If you want to create a new folder for the auditing database, click **New Folder**.
- 4 Click the location to use for the auditing database, and then click **OK**.
- 5 Under **Transaction log location**, click **Browse** to display the available locations for the auditing database transaction log.
- 6 If you want to create a new folder for the transaction log, click **New Folder**.
- 7 Click the location to use for the log, and then click **OK**.
- 8 Click **OK** to close the Configure Auditing dialog box.
- 9 Wait a few moments for Enterprise Vault to create the database.
- 10 When Enterprise Vault displays a message confirming that it has created the auditing database, click **OK** to dismiss the message.

## Configuring auditing

Enterprise Vault auditing records data in a number of different categories. You can specify whether auditing is enabled or disabled for each category. All categories can record summary audit data, but some can also record detailed data.

#### To configure auditing

- 1 In the Administration Console, expand the tree in the left pane until the Enterprise Vault Servers container is visible.
- 2 Click the **Enterprise Vault Servers** container.
- 3 Right-click the computer whose auditing you want to enable or disable and then, on the context menu, click **Properties**.
- 4 Click the **Auditing** tab.



- 5 If you want to enable or disable all auditing, check or uncheck **Audit entries based on the following categories**. Otherwise, check or uncheck the required audit categories.

View	Records details of viewing archived items, either as HTML or in their original formats.
Delete	Records details of archived items being manually deleted. Enterprise Vault does not audit deletions that result from expiry.
Restore	Records details of archived items being restored.
Archive	Records details of items being archived, either manually or on a scheduled run.
PST Migration	Records details of items being migrated from PST files.
NSF Migration	Records details of items being migrated from NSF files.
Admin Activity	Records details of configuration changes made in the Administration Console, such as adding a new service, creating archives, or enabling mailboxes.
Advanced Search	Records details of searches performed using Outlook or the Web Access application, including the terms used and the number of items found.
Get Online XML	Records details of document retrieval into SharePoint Portal Server.
Saveset Status	(For support use only.) Records whether a saveset file is available.
SPS Archive	Ignored in this version of Enterprise Vault.
User	Records details of your own auditing entries, which you can add by calling a COM object that is served from the Admin Service. See below for VBS and ASP examples of how to do this.
View Attachments	Records details of viewing archived items from within SharePoint Portal Server.
FS Archive	Records details of storage events from File System Archiving.
Domino Archive	Any Domino archiving activity.
Domino Restore	Any Domino restore activity.

Exchange Synchronization	Records details of creation, modification, and deletion of Exchange managed content settings. Enterprise Vault records relevant details when it is configured to archive from Exchange managed folders and to synchronize with their managed content settings.
Archive Folder Updates	Records the save set ID and source and destination folders of archived items being moved to a different mailbox folder.
Retention Category Updates	Records details of changes to the retention category of archived items.
Subtask Control	Records the creation and modification of subtasks, such as the subtasks that control Move Archive operations.
Move Archive	Records details of individual Move Archive operations.
Undelete	Records when deleted items are recovered using the option <b>Recover items</b> on the <b>Deleted Items</b> tab of archive properties. Shortcuts recovered using FSAUndelete utility are also recorded.
Indexing operations	Records when the indexing subtasks for managing index volumes start and stop. Also records any critical errors that the subtasks encounter when processing indexes. The <b>Manage Indexes</b> wizard enables you to manage index volumes.

- 6 Click **OK** to save the changes you have made.
- 7 Restart the services on the computer.

## How to record details of your own auditing entries

You can record details of your own auditing entries by calling a COM object that is served from the Admin Service. The following examples show how to do this.

### VBS example (auditing entries)

```
,  
' Script to add data to the audit log via the use of WScript - the  
' root object of the Windows Script Host object model hierarchy.  
' The Admin Service must be started on the current computer.  
,  
  
' Run this script by typing the following:  
' WScript.exe Audit.vbs  
' CScript.exe Audit.vbs
```

```
,
Dim AuditIt
' Echo a line to the console stating that we are about to add an
' entry to the audit log.
WScript.Echo "About to add an entry to the audit log"
' Create an instance of the Audit COM object that is served by the
' Admin Service. The id of the object is AdminService.EVAdminAudit.
Set AuditIt = WScript.CreateObject("AdminService.EVAdminAudit")
' Audit the following values to the audit log.
' Parameter one is the category of the operation.
' Parameter two is the sub category
' Parameter three is the identifier of the object being audited.
' Parameter four is the status of the operation.
' Parameter five is the field to add any information required.
,
AuditIt.Audit "Test Category", "Test Sub Category", "ObjectId",
"SUCCESS", "Info"
WScript.Echo "Finished the audit."
```

## ASP example (auditing entries)

```
<%@ LANGUAGE = VBScript %>
<% Option Explicit %>
<!--
Run this script by placing it in a virtual directory called, for
example, Test, and then using a URL
http://localhost/test/Audit.asp
-->
<%
Dim AuditIt
Response.Write "Starting "
' Echo a line to the console stating that we are about to add an
' entry to the audit log.
Set AuditIt = Server.CreateObject("AdminService.EVAdminAudit")
' Audit the following values to the audit log.
' Parameter one is the category of the operation.
' Parameter two is the sub category.
' Parameter three is the identifier of the object being audited.
' Parameter four is the status of the operation.
' Parameter five is the field to add any information required.
,
AuditIt.Audit "Test Category", "Test Sub Category", "ObjectId",
"SUCCESS", "Info"
```

```
Response.Write "Completed"  
%>
```

## Viewing the audit log

Enterprise Vault comes with the Audit Viewer utility, which lets you view and filter the data that is logged in the auditing database. For more information on Audit Viewer, see the *Utilities Guide*.

You can also view the audit log by following the instructions below.

### To view the audit log

- 1 On the Windows **Start** menu, click **All Programs > Microsoft SQL Server > Query Analyzer**.
- 2 At the top of the SQL Query Analyzer window, select the EnterpriseVaultAudit database.
- 3 Type the following command in the Query window:

```
SELECT * FROM EVAuditView ORDER BY AuditDate DESC
```

- 4 Press F5 to run the command.

## Tuning auditing

Each computer on which you enable auditing has a limited number of connections that it can make to the auditing database. These connections are reused as needed. Auditing uses a pool of connections to the auditing database. You can make Enterprise Vault log the level of usage of these connections and then, if necessary, you can modify the number of connections as required.

### To turn connection information logging on or off

- 1 In the Administration Console, expand the tree in the left pane until the **Enterprise Vault Servers** container is visible.
- 2 Click the **Enterprise Vault Servers** container.
- 3 Right-click the computer whose logging you want to enable or disable and then, on the context menu, click **Properties**.
- 4 Click the **Auditing** tab.
- 5 Click **Advanced**.
- 6 Check or uncheck **Log database information** to turn logging on or off.

- 7 Click **OK**.
- 8 Restart the Enterprise Vault services on the computer.

## Modifying the number of connections when auditing

When an Enterprise Vault service that has auditing turned on stops, it logs an event that shows the number of connections it used and the maximum number of connections available to it. You can use this information to decide whether to change the connection pool sizes.

### To change the connection pool sizes

- 1 In the Administration Console, expand the tree in the left pane until the **Enterprise Vault Servers** container is visible.
- 2 Click the **Enterprise Vault Servers** container.
- 3 Right-click the computer whose logging you want to enable or disable and then, on the context menu, click **Properties**.
- 4 Click the **Auditing** tab.
- 5 Click **Advanced**.
- 6 Set the number of connections for each Enterprise Vault service.
- 7 Click **OK**.
- 8 Restart the Enterprise Vault services on the computer.



# Backing up Enterprise Vault

This chapter includes the following topics:

- [About Enterprise Vault backups](#)
- [About Enterprise Vault backup mode](#)
- [Backup of Enterprise Vault data](#)
- [About backup mode cmdlets](#)
- [Generating PowerShell backup commands for your environment](#)
- [Using PowerShell cmdlets in backup scripts](#)

## About Enterprise Vault backups

Enterprise Vault requires an effective backup strategy to prevent data loss, and to provide a means for recovery in the event of a system failure. When you plan this strategy, remember that Enterprise Vault components can be distributed across multiple systems. The resources on which Enterprise Vault depends may be remote from Enterprise Vault services and tasks.

This section describes:

- Enterprise Vault's backup mode which lets you place vault stores and index locations in backup mode while you take backups.
- The databases you must back up.
- The data locations and index locations you must back up.
- The use of Enterprise Vault's backup mode PowerShell cmdlets in your backup scripts.

For additional information about Enterprise Vault backups, see the following technical note on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH172279>

## About Enterprise Vault backup mode

Enterprise Vault lets you place vault stores and index locations in backup mode for the duration of a data backup. Enterprise Vault does not write any data into vault store partitions or index locations while they are in backup mode. However, services to users are maintained while vault stores and index locations are in backup mode. Users can continue to search, and retrieve items from their archives.

You can set backup mode on vault stores and index locations in the Enterprise Vault administration console. When your backup is complete, you can use the administration console to clear backup mode.

You can also use PowerShell cmdlets in the Enterprise Vault Management Shell to set, clear, and report on vault store and index location backup mode. When you use the PowerShell cmdlets to set and clear backup mode, Enterprise Vault maintains a count of the number of requests for each vault store and index location to support the use of concurrent backup scripts.

See [“About backup mode cmdlets”](#) on page 372.

To manage backup mode on vault stores, your user account must be assigned the storage administrator role. To manage backup mode on index locations, your user account must be assigned the power administrator role.

See [“Roles-based administration”](#) on page 26.

In the administration console, you can set and clear vault store backup mode in the following places:

- The context menu on the Enterprise Vault site
- The context menu on any vault store group
- The context menu on any vault store

You can set and clear index location backup mode in the following places:

- The context menu on the Enterprise Vault site
- The context menu on any Enterprise Vault server
- The index service properties page

When you set and clear backup mode on index locations and vault stores, events are written to the Enterprise Vault event log. The indexing service also writes an event when it starts, if any index locations are in backup mode. This event lists all the index locations that are in backup mode.



The following examples show how to use backup mode in the administration console. The first example is a procedure to set backup mode on all the vault stores in a vault store group. The second example is a procedure to find the current backup mode settings for index locations on a server called EVServer.domain1.local.

#### To set backup mode on all the vault stores in a vault store group

- 1 In the left pane of the administration console, expand the **Vault Store Group** container.
- 2 Right-click the vault store group whose vault stores you want to place in backup mode, and click **Set State > Set Backup Mode on all Vault Stores**.

The **Backup Mode** column in the right pane now shows that backup mode is set on all the vault stores in the vault store group.

#### To see the current backup mode settings for index locations, and to change these settings

- 1 In the left pane of the administration console, browse to **Enterprise Vault Servers > EVServer.domain1.local > Services**.
- 2 In the right pane, right-click **Enterprise Vault Indexing Service** and click **Properties**.
- 3 Click the **Index Locations** tab.
- 4 The **Backup Mode** column shows the current backup mode settings for all the index locations on the server. You can change the setting for any of these locations.

## Backup of Enterprise Vault data

You must back up the following Enterprise Vault data and databases:

- [Enterprise Vault system databases backup](#)
- [Fingerprint databases backup](#)
- [Vault store partitions and vault store databases backup](#)
- [Backing up index locations](#)

### Enterprise Vault system databases backup

To make a complete Enterprise Vault system backup, you must back up the following system databases:

- `EnterpriseVaultDirectory`. You must back up this database immediately after you back up one or more vault store databases. See “Vault store partitions and vault store databases backup” on page 370.
- `EnterpriseVaultMonitoring`
- `EnterpriseVaultAudit`, if you have enabled Enterprise Vault auditing.
- Each FSA Reporting database you have set up, if you use FSA Reporting.

The following document on the Symantec support web site describes procedures which you can use to back up your Enterprise Vault SQL databases if you do not use a third party SQL backup tool:

<http://www.symantec.com/docs/TECH74666>

---

**Note:** Every Enterprise Vault server must also have a complete system and file backup. This backup must include the registry because all Enterprise Vault services store information in the registry. You should consider taking this system and file backup at the same time you back up the Enterprise Vault system databases.

---

## Fingerprint databases backup

Each vault store group usually has a fingerprint database which holds the data that enables Enterprise Vault single instance storage.

Each fingerprint database is called `EVVSG_vaultstoregroup_n_m`, where *vaultstoregroup* is the name of the vault store group with its spaces removed. *n* and *m* are internally generated integers.

You should also set backup mode on the corresponding vault store group, and back up all its vault stores at the same time you back up the fingerprint database.

See “About Enterprise Vault backup mode” on page 368.

The following document on the Symantec support web site describes procedures which you can use to back up your Enterprise Vault SQL databases if you do not use a third party SQL backup tool:

<http://www.symantec.com/docs/TECH74666>

## Vault store partitions and vault store databases backup

Each vault store has a database which is called `EVvaultstore_n`, where *vaultstore* is the name of the vault store with its spaces removed, and *n* is an internally generated integer.

Back up the vault store databases at the same you back up the vault store partitions.

---

**Note:** After you back up a vault store database or back up a group of vault store databases, immediately back up the directory database (EnterpriseVaultDirectory).

---

Before you back up the vault store databases and vault store partitions, place the vault stores in backup mode.

See [“About Enterprise Vault backup mode”](#) on page 368.

## Removal of Enterprise Vault safety copies after backup

When Enterprise Vault detects that a vault store partition has been backed up, it is free to remove the safety copies of the items it archived previously. Enterprise Vault can detect that partitions have been backed up by inspecting the archive attribute on individual files if your backup software clears the archive attribute after backup. Alternatively, can use a trigger file mechanism.

For more information about the relationship between backup software and the detection of partition backups, see “About Enterprise Vault safety copies” in *Installing and Configuring*.

## Backing up index locations

Each Enterprise Vault indexing service can store its indexes in multiple locations, and you must back up all these locations. On each Enterprise Vault server, the index locations are listed on the **Index Locations** tab of the **Enterprise Vault Indexing Service** properties page.

The following procedure shows how to find the index locations you need to back up on a server called EVServer.domain1.local.

---

**Note:** To find a complete list of all the index locations to back up, you must complete this procedure on all the Enterprise Vault servers that run an indexing service.

---

### To find a complete list of the index locations you must back up

- 1 In the left pane of the administration console, browse to **Enterprise Vault Servers > EVServer.domain1.local > Services**.
- 2 In the right pane, right-click **Enterprise Vault Indexing Service** and click **Properties**.
- 3 Click the **Index Locations** tab and note the index locations that you must back up.

Before you back up index locations, you must place them in backup mode.

See [“About Enterprise Vault backup mode”](#) on page 368.

---

**Note:** For Enterprise Vault 10.0 and later, you must ensure that all the indexing services in your environment are running before you set backup mode on index locations.

---

While index locations are in backup mode, users can continue to search their archives. In environments where it is not necessary to maintain this functionality during the backup window, you can stop all the indexing services while you take backups. If you do this, you do not have to set backup mode on index locations.

## About backup mode cmdlets

Enterprise Vault provides a set of PowerShell cmdlets which you can use to set and clear backup mode on the following:

- Vault stores
- Vault store groups
- Index locations

You can run these cmdlets directly in the Enterprise Vault Management Shell, and use them in your backup scripts. For example, use the cmdlets in a pre-backup script to set backup mode on index locations and vault stores before the backup is taken. After the backup has completed, use the cmdlets in a post-backup script to clear backup mode.

For each index location and vault store, Enterprise Vault maintains a count of the number of set requests and clear requests, to support the use of concurrent backup scripts. Enterprise Vault increments the count by 1 on each request to set backup mode, and decrements the count by 1 on each request to clear backup mode.

When you use concurrent backup scripts, Enterprise Vault does not clear backup mode from a vault store or an index location until all the scripts that have set backup mode, have also cleared backup mode.

---

**Note:** When you use the administration console to clear backup mode from an index location or vault store, Enterprise Vault ignores the backup mode count and forcibly clears backup mode.

---

To run PowerShell cmdlets directly, first run the Enterprise Vault Management Shell

- ◆ Click **Start > Programs > Enterprise Vault > Enterprise Vault Management Shell**.

PowerShell opens and loads the Enterprise Vault snap-in which makes the backup mode cmdlets available in the shell.

The Enterprise Vault Management Shell provides the following backup mode cmdlets:

Cmdlet	Description
Get-IndexLocationBackupMode	Reports the current backup mode settings on index locations.
Set-IndexLocationBackupMode	Increments the backup mode count on index locations.
Clear-IndexLocationBackUpMode	Decrements the backup mode count on index locations.
Get-VaultStoreBackupMode	Reports the current backup mode settings on vault stores.
Set-VaultStoreBackupMode	Increments the backup mode count on vault stores.
Clear-VaultStoreBackupMode	Decrements the backup mode count on vault stores.

Help is available for all the cmdlets. For example, the following command shows the detailed help for `Clear-VaultStoreBackupMode`:

```
Get-Help Clear-VaultStoreBackupMode -detailed
```

You can also generate PowerShell backup mode commands that are based on the configuration of your environment and ready for use in your backup scripts.

See [“Generating PowerShell backup commands for your environment”](#) on page 376.

## Index location backup mode cmdlet syntax

The syntax is the same for all three index location backup mode cmdlets. For example:

```
Set-IndexLocationBackupMode [-EVServerName] <String> [[-IndexRootPath]
<String>] [-EVSiteName <String>] [<CommonParameters>]
```

The following examples show how `Set-IndexLocationBackupMode` is used to increment the backup mode count on index locations:

- `Set-IndexLocationBackupMode EVServer`  
This command increments the backup mode count on all the index locations that are associated with server `EVServer`.
- `Set-IndexLocationBackupMode EVServer -IndexRootPath f:\indexing\index0`  
This command increments the backup mode count on index location `f:\indexing\index0`.
- `Set-IndexLocationBackupMode EVServer -EVSiteName Site1`  
This command increments the backup mode count on all the index locations in `Site1`.

In all cases, you must specify the name of the server that owns the index location or site so the cmdlet can find its ID.

If you know the ID of the index location, site or server, you can use the following syntax to increment the backup mode count:

```
Set-IndexLocationBackupMode [-EntryId <String>] [<CommonParameters>]
```

For example:

```
Set-IndexLocationBackupMode -EntryId
1F3C7910CD579234AB8EB207F0ECEBCE91210000EVServer.Domain1.local
```

This command increments the backup mode count on the object that has the specified ID. Specify the ID of an index location to increment the backup mode count on that index location. Specify the ID of a server or a site to increment the backup mode count on all its associated index locations.

`Clear-IndexLocationBackupMode` uses the same syntax to decrement the backup mode count on index locations. It also has an additional parameter which you can use to forcibly clear backup mode from index locations. For example:

```
Clear-IndexLocationBackupMode Server-Win2k3 -ForceClearBackupMode 1
```

This command forcibly clears backup mode from all the index locations associated with server `Server-Win2k3`. `Clear-IndexLocationBackupMode` ignores the existing backup mode count and sets it to 0.

`Get-IndexLocationBackupMode` also uses the same syntax to report current backup mode settings.

## Vault store backup mode cmdlet syntax

The syntax is the same for all three vault store backup mode cmdlets. For example:

```
Clear-VaultStoreBackupMode [-Name] <String> [-EVServerName] <String>  
[-EvObjectType] <EVObjectType> [<CommonParameters>]
```

The following examples show how `Clear-VaultStoreBackupMode` is used to decrement the backup mode count on vault stores and vault store groups:

- `Clear-VaultStoreBackupMode VS1 EVServer VaultStore`

This command decrements the backup mode count on vault store VS1.

- `Clear-VaultStoreBackupMode VSG1 EVServer VaultStoreGroup`

This command decrements the backup mode count on all the vault stores in vault store group VSG1.

- `Clear-VaultStoreBackupMode Site1 EVServer Site`

This command decrements the backup mode count on all the vault stores in Site1.

In all cases you must provide the name of the server that owns the vault stores or site, and specify the object type. These parameters allow the cmdlet to find the correct ID.

You must provide the parameters in the order that is shown if you omit the parameter names. However, if you provide parameter names, you can use them in any order. For example:

```
Clear-VaultStoreBackupMode -EVServerName EVServer -EVObjectType  
VaultStore -Name VS1
```

If you know the ID of the vault store, vault store group or site, you can use the following syntax to decrement the backup mode count:

```
Clear-VaultStoreBackupMode -EntryId <String> [<CommonParameters>]
```

For example:

```
Clear-VaultStoreBackupMode -EntryId  
1f3c7910cd579234ab8eb207f0ecebce91210000EVServer.Domain1.local
```

This command decrements the backup mode count on the object that has the specified ID. Specify the ID of a vault store to decrement the backup mode count on that vault store. Specify the ID of a vault store group or a site to decrement the backup mode count on all its associated vault stores.

`Clear-VaultStoreBackupMode` uses the same syntax to decrement the backup mode count on vault stores. It also has an additional parameter which you can use to forcibly clear backup mode from vault stores. For example:

```
Clear-VaultStoreBackupMode Server-Win2k3 -ForceClearBackupMode 1
```

This command forcibly clears backup mode from all the vault stores associated with server `Server-Win2k3`. `Clear-VaultStoreBackupMode` ignores the existing backup mode count and sets it to 0.

`Get-VaultStoreBackupMode` also uses the same syntax to report current backup mode settings.

## Generating PowerShell backup commands for your environment

Enterprise Vault includes a PowerShell script called `Transform-Backup.ps1`, which you can use to generate PowerShell backup mode commands for your environment.

`Transform-Backup.ps1` generates an HTML file that contains a set backup mode command, and a clear backup mode command for each of the following entities in your environment:

- Enterprise Vault site (all vault stores)
- Vault store group
- Vault store
- Enterprise Vault site (all index locations)

You can use any of the commands from the HTML file that are appropriate to your backup regime.

For example, if you back up all the data associated with an entire Enterprise Vault site in one operation, your pre-backup script should include the command to set backup mode on the site's vault stores, and the command to set backup mode on the site's index locations.

When the backup operation is complete, your post-backup script should include the command to clear backup mode from the site's vault stores, and the command to clear backup mode from the site's index locations.

`Transform-Backup.ps1` is in the `Templates` folder beneath the Enterprise Vault installation folder (for example `C:\Program Files (x86)\Enterprise Vault\Reports\Templates`).

Before you run the script, you must set the PowerShell script execution policy, to allow only signed scripts to run. You only have to do this once.



### To set the PowerShell script execution policy

- 1 Click **Start > Programs > Enterprise Vault > Enterprise Vault Management Shell** to run the Enterprise Vault Management Shell.
- 2 Run the following command:

```
Set-ExecutionPolicy -executionPolicy AllSigned
```

When you have set the PowerShell script execution policy, you can run `Transform-Backup.ps1` to generate the backup mode commands for your environment.

### To run the script

- 1 If you closed the Enterprise Vault Management Shell, click **Start > Programs > Enterprise Vault > Enterprise Vault Management Shell**.
- 2 Change directory to the `Reports\Templates` folder beneath the Enterprise Vault installation folder.
- 3 Enter the following command to run the script:

```
.\Transform-Backup.ps1
```

- 4 At the following prompt:

```
Do you want to run software from this untrusted publisher?
```

Choose `R` to run the script once.

At the end of the script, the HTML file generated by `Transform-Backup.ps1` opens automatically in your default web browser.

## Using PowerShell cmdlets in backup scripts

Enterprise Vault's backup mode PowerShell cmdlets are designed to be used in your backup scripts to control backup mode. For example, you can set backup mode on vault stores and index locations before you take a backup, and clear backup mode again after the backup is complete.

This section describes how to use Enterprise Vault's backup mode PowerShell cmdlets in your backup scripts.

---

**Note:** Enterprise Vault and Microsoft Windows PowerShell 1.0 must be installed on your server to run these cmdlets.

---

In your backup scripts, you can use a single command to:

- Run a new instance of Windows PowerShell

- Load the Enterprise Vault PowerShell snap-in
- Run the appropriate cmdlet to control backup mode

On 64-bit Windows operating systems, you must run the Enterprise Vault PowerShell snap-in under the 32-bit version of PowerShell. The 32-bit version of PowerShell is installed in %SystemRoot%\SysWow64\WindowsPowerShell\v1.0.

For example, you can use the following command at the start of your backup script, or in a pre-backup script, to set backup mode before you take a backup. This command runs PowerShell and loads the Enterprise Vault PowerShell snap-in, then runs the `set-vaultstorebackupmode` cmdlet, to set backup mode on the vault store group called Express Vault Store Group:

```
%SystemRoot%\SysWow64\WindowsPowerShell\v1.0\powershell -psconsolefile
"C:\Program Files (x86)\Enterprise Vault\EVShell.pscl" -command "&
{set-vaultstorebackupmode -name 'Express Vault Store Group'
-evservername EVserver -evobjecttype vaultstoregroup}"
```

After your backup is complete, you should run a similar command in your script to clear backup mode. For example:

```
%SystemRoot%\SysWow64\WindowsPowerShell\v1.0\powershell -psconsolefile
"C:\Program Files (x86)\Enterprise Vault\EVShell.pscl" -command "&
{clear-vaultstorebackupmode -name 'Express Vault Store Group'
-evservername EVserver -evobjecttype vaultstoregroup}"
```

# Failover in a building blocks configuration

This chapter includes the following topics:

- [About Enterprise Vault services in building blocks configurations](#)
- [Updating service locations after failover](#)

## About Enterprise Vault services in building blocks configurations

In a building blocks configuration, each Enterprise Vault server operates as a discrete unit providing the following Enterprise Vault functionality for a particular set of users:

- Archiving and retrieval of data. Each building blocks server includes a Directory service and the required archiving tasks and services.
- Storage of data. Each building blocks server includes a local Storage service. The storage and index files must be stored on a file system that is shared with the associated building blocks servers.
- Web access. Each building blocks server includes the Web access application, which provides users with an interface to search and retrieve archived items. This can only be accessed correctly if there is a non-specific URL in the site properties, for example, /EnterpriseVault

The failover functionality of building blocks (**Update Service Locations**) passes the duties of the failed server to another building blocks server. If a required service or task does not yet exist on the new active server, then Update Service Locations creates it.

The building blocks system also contains a number of shared system components. These include the following:

- SQL databases for directory and archive data. These are typically deployed on a dedicated SQL server, allowing the inherent scalability and high availability features of SQL to be fully exploited.
- Centralized storage. Vault store partition data and index locations are shared by each of the building blocks servers.

A building block server may or may not include an Indexing service, depending on the indexing configuration used. The following indexing configurations are supported in building blocks:

- Both the active and failover servers are Index Servers that belong to the same Index Server Group.
- Both the active and failover servers are ungrouped Index Servers.
- Neither the active nor failover servers host an Indexing service.
- The active server is an ungrouped Index Server, and the failover server does not host an Indexing service. On failover, an ungrouped Indexing service is created on the failover computer.

---

**Note:** If the active server hosts an Indexing service, then the failover server must have an Enterprise Vault server cache configured.

---

For an introduction to Index Servers, Index Server Groups and Enterprise Vault building blocks, see *Introduction and Planning*.

The planning of building block configurations is beyond the scope of this manual. Contact your Symantec solution provider if you need a highly-available installation of Enterprise Vault.

## Updating service locations after failover

This section describes the procedure to follow when an Enterprise Vault server that is part of a building blocks solution has failed or been replaced.

Before you use this procedure it is essential that you have configured a working building blocks solution. The failover will not work unless you have already run Update Service Locations on the correctly-configured Enterprise Vault site.

**To update service locations after failover**

- 1 Change the DNS alias of the failed Enterprise Vault server so that it maps to a working server. You must make this change on all the remaining servers in the Enterprise Vault site.

The method you use to do this depends on the procedures within your organization, as follows:

- Using a host file. Update the host files on all the remaining server computers in the Enterprise Vault site.
  - Using DNS zones. Update the DNS zones to reflect the new alias, and clear the DNS cache using the command line `ipconfig /flushdns`.
- 2 Start the Administration Console on any of the servers in the Enterprise Vault site.
  - 3 In the left pane, expand the tree until the **Enterprise Vault Servers** container is visible.
  - 4 Right-click the **Enterprise Vault Servers** container and, on the shortcut menu, click **Update Service Locations**.

You are prompted for the password for the Vault Service account.

- 5 Enter the password for the Vault Service account and click **OK**.

Enterprise Vault updates the service locations and creates new services as necessary.

At the end of the update a summary screen appears, listing the services on each computer in the site.

- 6 If the Update Service Locations has created any services, start them.



# Recovery

This chapter includes the following topics:

- [About using EVSVR as part of the recovery procedure](#)
- [Recovering Enterprise Vault using full system backups](#)
- [Recovering Enterprise Vault using data-only backups](#)
- [Recovery of an Enterprise Vault component](#)
- [Recovery of Enterprise Vault in a VCS cluster](#)
- [Recovery of Enterprise Vault in a Windows Server failover cluster](#)

## About using EVSVR as part of the recovery procedure

Enterprise Vault comes with a command-line utility, EVSVR, with which you can verify the consistency of the information in your vault store partitions and databases, and repair any errors. As part of any recovery procedure, we strongly recommend that you run EVSVR on multiple occasions to identify and resolve any issues:

- Before you undertake the recovery procedure, run EVSVR to identify the issues.
- When either of the following situations arises, run EVSVR again to verify that you have resolved the issues:
  - You have completed the recovery procedure.
  - The recovery procedure requires you to put your environment into normal operation (for example, in order to archive or rearchive items).

You may need to use EVSVR to make your environment consistent before you can resume normal operations.

For guidelines on how to run EVSVR, see the *Utilities* manual.

# Recovering Enterprise Vault using full system backups

If you have chosen to make an application backup of your complete Enterprise Vault environment (systems, services, and tasks), you can restore it by following the steps below.

See [“About Enterprise Vault backups”](#) on page 367.

See [“About using EVSVR as part of the recovery procedure”](#) on page 383.

## To recover Enterprise Vault using full system backups

- 1 Restore your full system backups.
- 2 If services are missing from the service control panel, use one of the following procedures to run the Enterprise Vault Configuration wizard to reconstruct the service information.
  - If you are recovering all the Enterprise Vault servers that run a Directory service and you are restoring the first one of these servers, use *Recovery procedure 6*.  
See [“Recovery procedure 6: Recreating services and tasks on the first Directory service computer”](#) on page 390.
  - When you recover subsequent servers including other servers that run a Directory service, use *Recovery procedure 7*.  
See [“Recovery procedure 7: Recreating services and tasks on Enterprise Vault servers”](#) on page 392.

## Carrying out an environment recovery procedure

If a disaster occurs, follow these steps to recover an Enterprise Vault environment.

---

**Note:** Unless otherwise stated, do not start any Enterprise Vault service until all the steps of this recovery procedure have been completed.

---

## To recover an Enterprise Vault environment

- 1 Restore file system backups.
- 2 Restore the following Enterprise Vault SQL databases:
  - EnterpriseVaultDirectory
  - EnterpriseVaultMonitoring
  - EnterpriseVaultAudit
  - Each FSA Reporting database you have set up, if you use FSA Reporting.



- Each fingerprint database
  - Each vault store database
- 3 Restore vault store partitions to their original locations.
  - 4 Restore index volumes to their original locations.
  - 5 Repeat archiving operations that took place after your last backup completed.
  - 6 Cancel all pending items from mailboxes.

## Recovering Enterprise Vault using data-only backups

Use the following recovery procedures when you have backed up only Enterprise Vault data, including the registry, and have not backed up the system disks on your Enterprise Vault servers.

The procedures described in this section require backups of the following Enterprise Vault SQL databases:

- `EnterpriseVaultDirectory`
- `EnterpriseVaultMonitoring`
- `EnterpriseVaultAudit`
- Each FSA Reporting database you have set up, if you use FSA Reporting.
- Fingerprint databases
- Vault store databases

You must also have backups of the following Enterprise Vault data:

- Vault store partitions
- Index locations

You can use these procedures when you need to recover only one Enterprise Vault server, or to recover multiple servers.

To recover each server, you need to know which Enterprise Vault services it was running before the disaster occurred. If you are unsure which Enterprise Vault services were running on each server, run the SQL script `ServiceLocations.sql`, which is installed in the Enterprise Vault installation folder, for example `C:\Program Files (x86)\Enterprise Vault`.

---

**Note:** Before you can run the script you must first restore your Enterprise Vault Directory database.

---

## Recovery procedure 1: Installing software on the servers

All the data relating to your previous Enterprise Vault installation needs to be recovered onto new servers. For each server that has failed you need to set up a new computer. Ideally, set up each computer with the same name as the original computer that it is replacing.

---

**Note:** If this is not possible the recovery steps tell you what to do to accommodate a change in computer name.

---

Build each new system, starting with the installation of Windows and then all the prerequisites for Enterprise Vault. Refer to the Enterprise Vault documentation if you are not sure which prerequisite software you must install on each computer.

When you have set up the correct prerequisite software on each server, install Enterprise Vault on the server.

Note the following:

- Install Enterprise Vault on each new server, into the same folder as on the original server.
- Install the same version of Enterprise Vault as is being used in your current environment.

Do not run the Enterprise Vault Configuration wizard at the end of completing the installation of the Enterprise Vault software.

## Recovery procedure 2: Restoring Enterprise Vault databases

Restore the following Enterprise Vault SQL databases:

- `EnterpriseVaultDirectory`
- `EnterpriseVaultMonitoring`
- `EnterpriseVaultAudit`
- Each FSA Reporting database you have set up, if you use FSA Reporting.
- Fingerprint databases
- Vault store databases

If you have restored `EnterpriseVaultMonitoring` or the FSA Reporting databases to a SQL server other than the one that previously hosted them, you must update the Directory database.

**To update the monitoring settings in the Directory database**

- ◆ On the SQL server that hosts the Directory database, run the following SQL script:

```
USE EnterpriseVaultDirectory
UPDATE MonitoringSettings
SET SQLServer = 'SQL_server_name'
```

where *SQL\_server\_name* is the name of the new SQL server.

**To update the FSA reporting settings in the Directory database**

- 1 On the SQL server that hosts the Directory database, run the following SQL script to determine which SQL server hosted each FSA Reporting database:

```
USE EnterpriseVaultDirectory
Select SQLServer, DatabaseName From FSAREportingDatabase
```

- 2 Run the following SQL script:

```
USE EnterpriseVaultDirectory
UPDATE FSAREportingDatabase
SET SQLServer = 'SQL_server_name'
WHERE DatabaseName = 'FSA_reporting_database_name'
```

where:

- *SQL\_server\_name* is the name of the new SQL server.
- *FSA\_reporting\_database\_name* is the name of the FSA Reporting database that you restored.

## Recovery procedure 3: Renaming servers

Ideally, you should set up each server with the same name as the original server that it is replacing. However, if this is not the case, you must perform the following extra procedure.

---

**Warning:** If you are running Enterprise Vault in a clustered environment, do not perform this operation unless Symantec Support advises you to do so.

---

**To set up a server with a different name than the old server**

- 1 Repeat the following steps for each server that you are recovering:
  - Run SQL Query Analyzer and connect to the server that is running the Enterprise Vault Directory service.

- Enter and run the following SQL command:

```
USE EnterpriseVaultDirectory
UPDATE ComputerEntry
SET ComputerNameAlternate = 'Name of new server'
WHERE ComputerNameAlternate = 'Name of old server'
```

- 2 Check that the DNS alias you set up for the old server points to the name of the new server. If you are unsure what the DNS alias is, run the following SQL query against the EnterpriseVaultDirectory database.

```
USE EnterpriseVaultDirectory
SELECT ComputerName FROM ComputerEntry
```

- 3 If you are recovering the system that provided the vault site alias (usually the first server that was added to the site), then you need to update the vault site alias to point to the new server. To do this, perform the following steps in the order listed:

- Run SQL Query Analyzer and connect to the server running the Enterprise Vault Directory service.
- Enter and run the following SQL command:

```
USE EnterpriseVaultDirectory
SELECT SiteEntryId
FROM SiteEntry
```

The value returned contain the vault site alias at the end of a long string of numbers. For example, if the command returns the following then the vault site alias is `sitealias`:

```
10354B15D38FE5B41BAAC212490EBA5351d10000sitealias
```

- In DNS, change the DNS alias entry so that it points at the new server.

## Recovery procedure 4: Copy or move the Enterprise Vault data files

You now need to restore the backups of the Enterprise Vault data files to their locations on the Enterprise Vault servers.

Depending on the original Enterprise Vault components that existed on the servers you are recovering you must restore only the following data files:

- If you are restoring a server that used to run a Storage service, or a server that is configured in a cluster, you need to restore onto this server the saveset files for any vault stores managed by the original Storage service.

- If you are restoring a server that used to run an Indexing service, or a server that is configured in a cluster, you need to restore onto this server the indexing data files managed by the original Indexing service.
- If you are restoring a server that used to run a Shopping service, or a server that is configured in a cluster, you need to restore onto this server the shopping files managed by the original Shopping service.

The Enterprise Vault data should be restored to the locations where they existed on the original servers. For example, if you are recovering the server running the Indexing service and the indexing data was originally stored in the following location:

```
I:\Indexing
```

then this indexing data should be restored to the same location on the new server.

To reorganize and move any SQL database devices on the disks, you can perform the procedures as listed in the following Microsoft Knowledge Base article:

<http://support.microsoft.com/?kbid=181602>

This must be correct before you start any of the Enterprise Vault services, otherwise some cleanup operations may occur, resulting in information loss.

## Recovery procedure 5: Clearing the directory database entries

You can clear the directory database entries for all of the Enterprise Vault servers in your environment, or for selected servers.

The SQL query that is provided in this section clears the entries in the database for all the Enterprise Vault servers. If you have multiple Enterprise Vault servers in your environment, you may want to recover only some of the servers. The following technical note provides alternative SQL scripts that let you specify the servers for which you want to clear directory entries:

<http://www.symantec.com/docs/TECH127004>

**To clear the directory database entries for all of the Enterprise Vault servers**

- 1 Run SQL Query Analyzer and connect to the server running the Enterprise Vault Directory service.
- 2 Enter and run the following SQL command:

```
USE EnterpriseVaultDirectory
UPDATE StorageServiceEntry
SET StorageArchive = '', StorageRestore = '',
StorageReplayIndex = '', StorageSpool = ''
UPDATE RetrievalTask
SET RetrievalSpoolQueue = ''
UPDATE ArchivingRetrievalTask
SET MessageQueue = ''
UPDATE RetrievalTask
SET MessageQueue = ''
UPDATE JournalTask
SET MessageQueue = ''
UPDATE PublicFolderTask
SET MessageQueue = ''
```

## Recovery procedure 6: Recreating services and tasks on the first Directory service computer

If you are recovering all the Enterprise Vault servers that run a Directory service, you must use this procedure when you recover the first of these servers. When you recover the subsequent servers including other servers that run a Directory service, use the procedure described in *Recovery procedure 7*.

See [“Recovery procedure 7: Recreating services and tasks on Enterprise Vault servers”](#) on page 392.

The Enterprise Vault Configuration wizard is able to detect missing services and tasks provided that the server name is identical to that in the original installation, or you have correctly followed *Recovery procedure 3*.

See [“Recovery procedure 3: Renaming servers”](#) on page 387.

**To recreate services and tasks on the first Directory service computer**

- 1 On the Windows **Start** menu, click **All Programs > Enterprise Vault > Enterprise Vault Configuration**.
- 2 Select **Yes** to create a new Directory service, and then click **Next**.
- 3 Enter the details of the Vault Service account, and then click **Next**.

The Enterprise Vault Configuration wizard does the following:

- Converts the login for the Enterprise Vault Admin service so that it runs under the Vault Service account.
  - Adds the Vault Service account to the local Administrators group on the computer.
  - Grants the user rights **Log on as a service** and **Debug programs** to the Vault Service account.
  - Creates and starts the Enterprise Vault Directory service.
- 4 When prompted for the name of the SQL Server that will host the directory database, enter the name of SQL Server used to host the directory database for the original configuration of Enterprise Vault, and then click **Next**.
  - 5 The Enterprise Vault Configuration wizard checks that the SQL Server exists and can connect to it. As long as you have recovered the Directory service database, the Enterprise Vault Configuration wizard now recreates the services and tasks installed on the Directory service computer.
  - 6 To recreate the Enterprise Vault services on the Directory service computer, enter the password of the Vault Service account.
  - 7 When the repair has finished, a success message is displayed.
  - 8 If the Enterprise Vault Configuration wizard does not display a message, do not continue to run the wizard. Close the wizard and do the following:
    - Check that all previous steps have been successful, repeat any missed steps and then run the Enterprise Vault Configuration wizard again.
    - Create a String registry value called UseLanManNameForSCM under the following registry key:

On a 32-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\KVS
\Enterprise Vault
\Admin
```

On a 64-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Admin
```

- Give UseLanManNameForSCM a value of 1.
- Run the Enterprise Vault Configuration wizard again.

- If you are sure you have followed all steps correctly and setting the registry key does also not help, contact your Enterprise Vault Support Representative for further assistance.

## Recovery procedure 7: Recreating services and tasks on Enterprise Vault servers

If you are recovering all the Enterprise Vault servers that run a Directory service, for the first one you must use *Recovery procedure 6*.

See [“Recovery procedure 6: Recreating services and tasks on the first Directory service computer”](#) on page 390.

When you recover the subsequent servers including other servers that run a Directory service, use the procedure described in this section.

The Enterprise Vault Configuration wizard is able to detect missing services and tasks provided that the server name is identical to that in the original installation, or you have correctly followed *Recovery procedure 3*.

See [“Recovery procedure 3: Renaming servers”](#) on page 387.

### To recreate services on other Enterprise Vault servers

- 1 Make sure the server running the Directory service is available on the network and the Directory service is started.
- 2 Make sure the Admin service is started on the local computer.
- 3 Run the Enterprise Vault Configuration wizard on the server by clicking **Start > Programs > Enterprise Vault > Enterprise Vault Configuration**.
- 4 When asked whether you want to create a directory or use an existing one, select **No, use existing remote Vault Directory** and enter the name of the server running the Directory service.
- 5 Enter the password of the Vault Service account. This is necessary to recreate the Enterprise Vault services on the computer.
- 6 The Enterprise Vault Configuration wizard recreates the Enterprise Vault services and tasks that used to run on the server and displays a message to indicate success.
- 7 If the Enterprise Vault Configuration wizard does not display a success message, do not continue to run the wizard. Close the wizard and then do the following:
  - Check that all previous steps have been successful, repeat any missed steps, and then run the Enterprise Vault Configuration wizard again.



- Create a String registry value called UseLanManNameForSCM under the following registry key:

On a 32-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\KVS
\Enterprise Vault
\Admin
```

On a 64-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Admin
```

- Give UseLanManNameForSCM a value of 1.
- Run the Enterprise Vault Configuration wizard again
- If you are sure you have followed all steps correctly and setting the registry key does also not help, contact your Enterprise Vault Support Representative for further assistance.

## 8 Start all the Enterprise Vault services.

The message queues should automatically be recreated on the new server. If the Storage service is configured to start multiple processes, it may stop during message queue creation. This is because of a conflict between the processes creating the queues. To fix the problem, restart the Storage service.

If the Indexing service finds any inconsistency in the index metadata, it automatically synchronizes the metadata. You may see the following events:

```
Event 41395 Index Volume metadata upgrade required
Event 41372 Index Volume metadata synchronization started
```

During the synchronization the Indexing service logs progress events every 10 minutes. At the end of the synchronization, one of the following events is logged:

```
Event 41373 Index Volume metadata synchronization completed
Event 41377 Index Volume metadata synchronization completed
```

The index synchronization may take some time. For example, an Enterprise Vault recommended specification server takes approximately 10 minutes to process 5,000 index volumes.

If any other index housekeeping is required there will be other progress messages every few minutes.

## Recovery procedure 8: Checking the Web Access application settings

You must now ensure that the port and protocol settings for the Web Access application are correct.

### To check the Web Access application settings

- 1 Open the Administration Console.
- 2 Expand the **Enterprise Vault** and **Directory** containers.
- 3 Right-click the **Site** entry, and then select **Properties**.
- 4 View the General page. Check that the port and protocol set for accessing the Web Access application virtual directory, **/EnterpriseVault**, match the settings on the default web site in IIS.

## Recovery procedure 9: Checking registry entries

Check that the Enterprise Vault registry entries are all set correctly on the newly-recovered servers.

The main registry entries are under the following key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
```

Additionally, you may have set registry entries under HKEY\_CURRENT\_USER when logged in as the Vault Site account. If so, restore these entries on each server too, under the following key:

```
HKEY_CURRENT_USER
\Software
\Wow6432Node
\KVS
\Enterprise Vault
```

## Recovery of an Enterprise Vault component

[Table 27-1](#) describes how to restore individual Enterprise Vault components.

See [“About using EVSVR as part of the recovery procedure”](#) on page 383.

**Caution:** Only perform this operation if you are advised to do so by Symantec support.

**Table 27-1**      How to recover Enterprise Vault components

To recover this component	Do this
Directory service SQL database	<div><div>1</div>Ensure that the Enterprise Vault Admin services on all computers are stopped. To do this, use Windows Manager to stop the Enterprise Vault Admin service on each computer.</div> <div><div>2</div>Restore the SQL databases.</div> <div><div>3</div>Start the Directory service.</div>

Table 27-1      How to recover Enterprise Vault components *(continued)*

To recover this component	Do this
Index file locations	<div><div><div>1</div><div>Restore the system backup of the computer running the Indexing service.</div></div><div><div>2</div><div>Ensure that the service is stopped.</div></div><div><div>3</div><div>Restore all the Indexing files to their original locations; ensure that all the backed-up files are restored, and that no other files remain in the indexing folders. Do not try to restore individual files because this leads to inconsistent indexes that may be unusable.</div></div><div><div>4</div><div>Restore the backups of any other Enterprise Vault services that run on this computer.</div></div></div> <p>When correctly restored, the Indexing service can use the restored indexes. However, there may be indexing entries lost from archive operations carried out since the last backup. The Storage service will automatically reconstruct the affected indexes.</p> <p>If the Indexing service finds any inconsistency in the index metadata, it automatically synchronizes the metadata. You may see the following events:</p> <pre>Event 41395 Index Volume metadata upgrade required Event 41372 Index Volume metadata synchronization started</pre> <p>During the synchronization the Indexing service logs progress events every 10 minutes. At the end of the synchronization, one of the following events is logged:</p> <pre>Event 41373 Index Volume metadata synchronization completed Event 41377 Index Volume metadata synchronization completed</pre> <p>The index synchronization may take some time. For example, an Enterprise Vault recommended specification server takes approximately 10 minutes to process 5,000 index volumes.</p> <p>If any other index housekeeping is required there will be other progress messages every few minutes.</p>
Shopping service files	<div><div><div>1</div><div>Restore the system backup of the computer running the Shopping service.</div></div><div><div>2</div><div>Ensure that the Shopping service is stopped.</div></div><div><div>3</div><div>Restore the backup of the shopping data to its original location.</div></div><div><div>4</div><div>Restore the backups of any other Enterprise Vault services that run on this computer.</div></div><div><div>5</div><div>Start the Shopping service. Users should be able to use their existing shopping baskets and create new shopping baskets.</div></div></div>

**Table 27-1** How to recover Enterprise Vault components (*continued*)

To recover this component	Do this
Vault store files	<ol style="list-style-type: none"> <li>1 Restore each system running a Storage service.</li> <li>2 Restore the vault store files into their original locations.</li> <li>3 Restore the vault store's SQL database.</li> <li>4 Restore the backups of any other Enterprise Vault services that run on the restored Storage service computer.</li> <li>5 Run the EVSVR utility to verify the consistency of the information in your vault store partitions and databases, and repair any errors.</li> </ol> <p>See the <i>Utilities</i> manual for more information.</p>
Vault store or fingerprint databases	<ol style="list-style-type: none"> <li>1 Restore the computer running the Storage service and replace the vault store files.</li> <li>2 Restore the following databases: <ul style="list-style-type: none"> <li>■ Vault store or fingerprint databases</li> <li>■ Directory database</li> <li>■ Master and msdb databases</li> </ul> </li> <li>3 Restore the backups of any other Enterprise Vault services that run on the restored Storage service computer.</li> <li>4 Run the EVSVR utility to verify the consistency of the information in your vault store partitions and databases, and repair any errors.</li> </ol> <p>See the <i>Utilities</i> manual for more information.</p>

## Recovery of Enterprise Vault in a VCS cluster

This section outlines how to repair an Enterprise Vault VCS cluster in which one or all of the nodes needs rebuilding. See the *Installing and Configuring* manual and *Solutions Guide* for Veritas Storage Foundation and High Availability Solutions for more information on how to perform the following steps.

The *Installing and Configuring* manual also describes how to implement a disaster recovery solution using Veritas Storage Foundation HA with the Veritas Volume Replicator (VVR) and Global Cluster Option (GCO).

See [“About using EVSVR as part of the recovery procedure”](#) on page 383.

## Recovery scenario 1: One of the cluster nodes needs rebuilding

If one of the Enterprise Vault nodes in the cluster needs rebuilding, the failover node should automatically take its place. Follow the steps below to rebuild the inoperable node and make it available again as the new failover node.

### To repair a single node in the cluster

- 1 Install Windows and all other prerequisite software.
- 2 If necessary, install VCS and configure the node as part of the cluster.
- 3 If necessary, install Enterprise Vault.
- 4 Run the Enterprise Vault Cluster Setup wizard. You must modify the existing service group so that the node is a member of it.
- 5 Run the Enterprise Vault Configuration wizard on the failover node. You must choose to add the node as a failover node for an existing clustered server.

## Recovery scenario 2: All the cluster nodes need rebuilding

If all the cluster nodes need rebuilding, but you have backup copies of the SQL Server databases and the Indexing and saveset data for Enterprise Vault, you can follow the steps below to rectify the situation.

### To repair all the nodes in the cluster

- 1 Rebuild all the computers and restore the SQL databases.  
See [“Recovery procedure 2: Restoring Enterprise Vault databases”](#) on page 386.
- 2 Recreate the cluster in VCS with the same number of disks, and mount the shared disk with the same drive letters as before.
- 3 Restore the Indexing and Enterprise Vault store data to disks using the same drive letters as before.  
See [“Recovery procedure 4: Copy or move the Enterprise Vault data files”](#) on page 388.
- 4 Install Enterprise Vault on all the nodes in the cluster.
- 5 For each Enterprise Vault server in the cluster, perform the following steps in the order listed:
  - Run the Enterprise Vault Cluster Setup wizard to recreate the service groups. Use the same virtual server names as before.
  - Run the Enterprise Vault Configuration wizard on the primary node. Choose to configure a new Enterprise Vault server with cluster group. The wizard detects the existing virtual server name and performs a repair.

When the repair is complete, a wizard page is displayed with which you can create the service resources. Do not bring the resources online when given the option to do so.

- Run the Enterprise Vault Configuration wizard on the failover node. Choose to add the node as a failover node for an existing clustered server.
- 6 Clear the Directory database entries.  
See [“Recovery procedure 5: Clearing the directory database entries”](#) on page 389.
- 7 Check the Web Access application URL.  
See [“Recovery procedure 8: Checking the Web Access application settings”](#) on page 394.
- 8 Bring the cluster resources online and test that failovers work as planned.

## Recovery of Enterprise Vault in a Windows Server failover cluster

This section outlines how to repair Enterprise Vault in a Windows Server failover cluster when one or all of the nodes needs rebuilding. For detailed instructions on how to perform individual steps, see the *Installing and Configuring* manual.

### Recovery scenario 1: One of the cluster nodes needs rebuilding

If one of the Enterprise Vault nodes in the cluster fails, the failover node should automatically take its place. The steps below outline how to rebuild the inoperable node and, assuming an any-to-any configuration, make it available as the new failover node.

#### To repair a single node in the cluster

- 1 Install Windows and all other prerequisite software.
- 2 Install Enterprise Vault.
- 3 Use Failover Cluster Manager to add the node to the cluster. Replace the old node with the new node as the following:
  - A possible owner of each resource in the failed-over resource group.
  - A preferred owner of the failed-over resource group.
- 4 Run the Enterprise Vault Configuration wizard on the new node, selecting the option to add the node as a failover node for an existing clustered server.

## Recovery scenario 2: All the cluster nodes need rebuilding

If all the cluster nodes need rebuilding, but you have backup copies of the SQL Server databases and the Indexing and saveset data for Enterprise Vault, you can follow the steps below to rectify the situation.

### To repair all the nodes in the cluster

- 1 Rebuild all the computers and restore the SQL databases.  
See [“Recovery procedure 2: Restoring Enterprise Vault databases”](#) on page 386.
- 2 Recreate the cluster using Failover Cluster Manager. Use the same number of disks, and mount the shared disks with the same drive letters as before.
- 3 Restore the Indexing and Enterprise Vault store data to disks using the same drive letters as before.  
See [“Recovery procedure 4: Copy or move the Enterprise Vault data files”](#) on page 388.
- 4 Recreate the resource groups, including the prerequisite resources, using the original virtual server names.
- 5 Install Enterprise Vault on all the nodes in the cluster.
- 6 Run the Enterprise Vault Configuration wizard on each primary node. Choose to configure a new Enterprise Vault server with cluster support. The wizard detects the existing virtual server name in the Enterprise Vault Directory database’s ComputerEntry table, and performs a repair.  
  
When the repair is complete, a wizard page is displayed, with which you can recreate the Enterprise Vault service resources and Server Instance resource. Do not bring the resources online when given the option to do so.
- 7 Run the Enterprise Vault Configuration wizard on each failover node. Choose to add the node as a failover node for an existing clustered server.
- 8 Clear the Directory database entries.  
See [“Recovery procedure 5: Clearing the directory database entries”](#) on page 389.
- 9 Check the Web Access application URL.  
See [“Recovery procedure 8: Checking the Web Access application settings”](#) on page 394.
- 10 Bring the cluster resources online and test that failovers work as planned.



# Ports used by Enterprise Vault

This appendix includes the following topics:

- [About the ports used by Enterprise Vault](#)
- [Firewall settings for Enterprise Vault programs](#)

## About the ports used by Enterprise Vault

On all Enterprise Vault servers you need to open the normal ports that are required for authentication within a Windows domain. For example, Kerberos (port 88), DNS (port 53 UDP), Active Directory (port 445).

Enterprise Vault servers and the servers with which they communicate may require other ports to be open, depending on the functionality that you require.

Enterprise Vault servers use DCOM for communication between software components. DCOM is based on the Remote Procedure Call (RPC) protocol, which uses the RPC end-point mapper port (port 135) for connection set up and then ports are dynamically allocated from the range of dynamic RPC ports.

See <http://www.symantec.com/docs/TECH69642> for information on configuring Enterprise Vault for restricted DCOM access.

See [“Firewall settings for Enterprise Vault programs”](#) on page 401.

## Firewall settings for Enterprise Vault programs

[Table A-1](#) lists the ports that are required by specific Enterprise Vault programs.

**Table A-1** Firewall settings for Enterprise Vault programs

Server	Inbound ports	Target program	Comments
Enterprise Vault server	TCP 135	svchost.exe component RPCSS service	RPC Endpoint Mapper. Obtain RPC (DCOM) connection.
Enterprise Vault server	RPC dynamic ports.	svchost.exe component Winmgmt service	RPC (DCOM) connection ports for WMI.
Enterprise Vault server	RPC dynamic ports.	Directoryservice.exe	Remote Administration Console access.
Enterprise Vault server	RPC dynamic ports.	AdminService.exe	Access server properties from Administration Console.
Enterprise Vault server	RPC dynamic ports.	TaskController.exe	Task management.
Enterprise Vault server	RPC dynamic ports.	AuthServer.exe	User authentication.
Enterprise Vault server	TCP 445	System	Browse shares from remote server. For example, from remote Administration Console
Enterprise Vault server	TCP 5114	System	Communication between Enterprise Vault services.
Enterprise Vault storage server	RPC dynamic ports.	StorageManagement.exe	Create Vault Stores (on storage server).
Enterprise Vault storage server	RPC dynamic ports.	StorageOnlineOpns.exe	Create archives (on storage server).
Enterprise Vault storage server	RPC dynamic ports.	StorageCrawler.exe	Allow remote index servers to retrieve data (from storage server).
Enterprise Vault storage server	RPC dynamic ports.	StorageDelete.exe	Delete Vault Stores/archives (on storage server).
Enterprise Vault storage server	TCP 2103, 2105	mqsvc.exe	Task monitoring of storage message queues.  Ports 2103, and 2105 are incremented by 11 if the initial choice is in use when Message Queuing initializes.
Enterprise Vault storage server	RPC dynamic ports.	EVIndexAdminService.exe	Contact index server.

**Table A-1** Firewall settings for Enterprise Vault programs (*continued*)

Server	Inbound ports	Target program	Comments
Enterprise Vault server with Exchange Server task	TCP 1801	mqsvc.exe (in Windows\System32\)	Message Queue message transfer.
Enterprise Vault server with Exchange Server task	UDP 1801	mqsvc.exe (in Windows\System32\)	Message Queue server discovery.
Enterprise Vault Domino Gateway	RPC dynamic ports.	nserver.exe (in Lotus\Domino\)	Retrieve archived Domino messages.
Enterprise Vault Domino Gateway	TCP 1352	nserver.exe (in Lotus\Domino\)	From Notes client. Retrieve archived Domino messages.
Enterprise Vault Shopping server	RPC dynamic ports.	ShoppingService.exe	Web restore to Exchange Server.
Enterprise Vault with Exchange archiving task.	RPC dynamic ports.	AgentClientBroker.exe	Client restore to Exchange Server.
Web server	TCP 80	System	Web search.
Web server	TCP 443	System	Secure Web search (HTTPS).
Centera	3218 UDP and TCP	Not applicable	Connection to Centera storage device.
Exchange Server	TCP 135	svchost.exe component RPCSS service	RPC Endpoint Mapper. Obtain RPC (DCOM) connection.
Exchange Server (before 2010)	RPC dynamic ports	Store.exe (in Exchange Server\bin\)	Access to Exchange store.
Exchange Server (OWA)	TCP 80	System	HTTP.
Exchange Server (OWA)	TCP 443	System	HTTPS.
Exchange Server 2010 (CAS)	RPC dynamic ports	Microsoft. Exchange.AddressBook. Service.exe	For Exchange archiving task.
Exchange Server 2010 (CAS)	RPC dynamic ports	Microsoft.Exchange. RpcClientAccess.Service.exe	Access to Exchange store.
FSA target server	TCP 135	svchost.exe component RPCSS service	RPC Endpoint Mapper. Obtain RPC (DCOM) connection.

**Table A-1** Firewall settings for Enterprise Vault programs (*continued*)

Server	Inbound ports	Target program	Comments
FSA target server	RPC dynamic ports	svchost.exe component Winmgmt service	RPC (DCOM) connection ports for WMI.
FSA target server	TCP 445	System	SMB file sharing
Enterprise Vault Domino Gateway	TCP 1352	nserver.exe (in Lotus\Domino\)	From Notes client.
Enterprise Vault Domino Gateway	As configured on Domino server. For example, TCP 8080.	nhhttp.exe	For HTTP to Domino server.
Enterprise Vault Domino Gateway	As configured on Domino server.	nhhttp.exe	For HTTPS to Domino server.
Enterprise Vault Domino Gateway	TCP 80	System	For HTTP to IIS.
Enterprise Vault Domino Gateway	TCP 443	System	For HTTPS to IIS.
Domino server	TCP 1352	nserver.exe (in Lotus\Domino\)	From Notes client.
Domino server	TCP 80	nhhttp.exe	HTTP for iNotes.
Domino server	TCP 443	nhhttp.exe	HTTPS for iNotes.
SharePoint server	TCP 80	System.	For HTTP access by SharePoint archiving task.

# Useful SQL queries

This appendix includes the following topics:

- [About the SQL queries](#)

## About the SQL queries

In SQL Query Analyzer, choose a vault store database and then do the following:

- Use the following SQL query to show how much has been archived in a certain period as well as time the first and last items were stored during that period. Replace the dates and times in this example with those you want to use.

```
Select count(*),min(archiveddate),max(archiveddate) from saveset  
where archiveddate >'2002-04-26 18:00' and archiveddate <  
'2002-04-27 5:00'
```

- Use the following SQL Query to obtain the number of different vaults processed in a specified period.

```
Select distinct(vaultidentity) from saveset where  
archiveddate >'2002-04-26 18:00' and  
archiveddate < '2002-04-27 5:00'
```

- Use the following SQL Query to obtain the number of vaults with items stored in them.

```
Select count(*) from vault
```



# Troubleshooting

This appendix includes the following topics:

- [Installation problems](#)
- [Microsoft SQL Server problems](#)
- [Server problems](#)
- [Client problems](#)
- [Problems enabling or processing mailboxes](#)
- [Problems with Enterprise Vault components](#)
- [Techniques to aid troubleshooting](#)
- [About moving an Indexing service](#)

## Installation problems

The problems in this category can include the following:

- [Enterprise Vault servers: installation problems](#)
- [Desktop clients: installation problems](#)

### Enterprise Vault servers: installation problems

This section includes the following topics:

- [Problems when running the installation procedure](#)
- [Configuring Outlook Web Access Extensions after installation problems](#)

## Problems when running the installation procedure

If the Enterprise Vault installation fails when trying to register files, restart your system and run the installation again.

## Configuring Outlook Web Access Extensions after installation problems

Only work through this section if the Setup program displayed an error message informing you that it could not configure the Enterprise Vault Outlook Web Access Extensions for Exchange 2000 Server.

Setup runs the script file `OWASetup.vbs` to configure the Enterprise Vault Outlook Web Access Extensions. If this script fails, you must run it manually.

It is possible that the script failed because you have disabled the Windows Script Host. If so, enable Windows Script Host before running the script.

### To run OWASetup.vbs

- 1 Log on to the Exchange Server computer as Exchange Administrator.
- 2 Use Windows Explorer to navigate to the Enterprise Vault program folder (for example `C:\Program Files (x86)\Enterprise Vault`).
- 3 Double-click `OWASetup.vbs`.

A message informing you that the operation may take some time appears.

- 4 Click **OK**. The number of Exchange Servers and mailboxes that you have determines how long the operation takes to complete.

## Desktop clients: installation problems

If you install the Enterprise Vault Outlook Add-In, and then later remove it and reinstall to a different location, the following problems occur:

- When starting Outlook, the following error message appears:

```
The add-in \original_location\valkyrie.dll
could not be installed or loaded.
```

- Double-clicking a shortcut produces error messages about being unable to load custom forms.

The problem occurs because Outlook maintains a cache file of settings, called `extend.dat`, which contains a pointer to the original location of the Outlook Add-In.

You can stop the problem from occurring by taking the following steps:



- Do not change the location of the Outlook Add-In.
- If you do need to change the location of the Outlook Add-In, run Outlook after you remove it. This forces Outlook to rebuild the `extend.dat` file without the original location of the Outlook Add-In. You can then exit from Outlook and reinstall the Outlook Add-In.

If the problem already exists, the solution is to delete the `extend.dat` file so that it is automatically rebuilt when Outlook is next started. As the location of this file varies, you need to search for it. One copy of the file exists for each user who uses Outlook on the computer, so there can be several copies of the file to delete.

You can also use the `ResetEVClient` command-line tool to fix problems with the Enterprise Vault add-in to Microsoft Outlook. For information on how to use `ResetEVClient`, see the *Utilities* manual.

---

**Note:** `ResetEVClient` deletes `extend.dat` only for the user who runs it.

---

## Microsoft SQL Server problems

The problems in this category can include the following:

- [Error: ODBC SQL Server Driver Connection is Busy](#)
- [Number of SQL Server licenses exceeded](#)
- [How to reset passwords after moving an Enterprise Vault database](#)

### Error: ODBC SQL Server Driver Connection is Busy

Read this section if you see the following MSSQLServer error and Enterprise Vault database error messages in the Windows log:

```
Event ID: 17060 Source: MSSQLServer Type: Error Category:
ODS Error: 17832, Severity: 18, State: 0 Unable to read login
packet(s) . . .
```

```
Event ID: 13344 Source: Enterprise Vault Type: Error
Category: Database An error was detected whilst accessing
the Vault database _EnterpriseVaultDirectory_:
[Microsoft][ODBC SQL Server Driver][DBNMPWTW]Connection is
busy_
```

These errors are caused by a known SQL Server problem. How you fix the problem depends on how you have set up access to SQL. The two most common methods

of access are TCP/IP and named pipes. For more information, see the most up-to-date articles on the Microsoft Support Web site. In particular, you may find the following article useful:

<http://support.microsoft.com/?kbid=109787>

## Number of SQL Server licenses exceeded

The following message is displayed when you have exceeded the number of SQL Server licenses that you have registered:

```
An error was detected whilst accessing the Vault Database
'name': [Microsoft][ODBC SQL Server Driver][SQL Server]Login
failed- The maximum simultaneous user count of n licenses
for this server has been exceeded. Additional licenses
should be obtained and registered using the Licensing
application in the NT Control Panel.
```

If you are running SQL Enterprise Manager remotely, you require an extra SQL Server license.

Enterprise Vault creates and accesses the Vault Directory Database and the vault store databases. The number of licenses depends on your licensing type. For example, if you are using per-server licensing, and both databases are located on the same computer, you require one Client Access License. If the two databases are on different computers, you require two Client Access Licenses.

## How to reset passwords after moving an Enterprise Vault database

If you are using SQL Server for Enterprise Vault only, we do not recommend that you move either the Vault Directory database or the vault store databases.

Instructions in this section are for experienced SQL Server administrators who may need to know what impact moving the databases has on Enterprise Vault.

When you move the databases using the SQL Transfer Database method, the encrypted passwords are not moved. You must therefore set up your Enterprise Vault passwords to these databases again, and point the DSN at the new server.

Using the Administration Console, set the SQL login password for the following:

- The Vault Directory database. You must use the Administration Console that is running on the same computer as the database.
- Each vault store database. Right-click each vault store and then, on the context menu, click Properties. On the General tab, type a new password.

# Server problems

The following sections list errors that you may encounter while running Enterprise Vault.

The problems in this category can include the following:

- [Fixing errors when opening MSMQ dead letter queue](#)

Here are a few tips for making sure that you avoid some common problems:

- It is very important to set up the Vault Service account correctly and to ensure that the Enterprise Vault services run under this account.
- The Vault Service account must have the Microsoft Exchange Server permission Service Account Admin at the Site and Configuration level. See the *Installing and Configuring* manual for detailed information on setting up the Vault Service account.
- When you change the Vault Service account password using Windows, you must update the password in the Vault Directory Database using the Administration Console. The password is encrypted in the Vault Directory Database. See the online help for the Administration Console for more information.

## Fixing errors when opening MSMQ dead letter queue

If you receive the following error message:

```
Error opening MSMQ Dead Letter Queue - Access is Denied for
queue MACHINE=98b76660-4198-11d2-bb6f-0000f8789ea8;DEADXACT
```

then you should grant the Local Administrator group full control of the message queues on all computers running the following:

- Exchange Mailbox Task
- Exchange Public Folder Task
- Exchange Journaling Task
- Storage Service

### To grant full control to the Local Administrator group

- 1 Run Microsoft Message Queue Explorer.
- 2 Expand the required site.
- 3 Select the appropriate computer.
- 4 Right-click the computer and then, on the context menu, select **Properties**.

- 5 On the **Security** tab, click **Permissions**.
- 6 In the Computer Permissions dialog box, select **Add**.
- 7 In the Add Users and Groups dialog box, select the Administrators group in the **List Names From** box.
- 8 Click **Add**, and then click **OK** until you have returned to the main Message Queue Explorer dialog box.

## Client problems

The problems in this category can include the following:

- [Problems logging on to the Enterprise Vault Web Access application](#)
- [MAPIVC.INF problems \(client\)](#)
- [Problems seen by Enterprise Vault users](#)

### Problems logging on to the Enterprise Vault Web Access application

When users start the Enterprise Vault Web Access application from Microsoft Outlook or Microsoft Exchange Client, they may be prompted for both their Windows username and password. If there is no separate box for the domain name, the username must be supplied in the following format:

*domain\_name\username*

When users start the Enterprise Vault Web Access application from Microsoft Outlook or Microsoft Exchange Client, they are prompted for both their Windows user name and password. Normally, Windows passwords have a limit of 14 characters. If a user has set a password containing more than 14 characters, IIS fails to recognize it, and the user cannot log on to use the Enterprise Vault Web Access application. The user must change the password to 14 characters or fewer. This is a known IIS restriction.

### MAPIVC.INF problems (client)

If there is an invalid version of `MAPIVC.INF` in the `%windir%\System32` folder, either of the following problems can occur:

- The Enterprise Vault Outlook client cannot display the contents of shortcuts.
- Outlook displays an error message informing you that it is unable to resolve the conflict between a recently installed program and Microsoft Office or other email-enabled programs.

### To fix MAPISVC problems

- 1 Run the program `fixmapi.exe`, which is normally in the folder `%windir%\System32`. Note that the program does not appear to do anything when you run it.
- 2 Restart the computer.
- 3 Test whether the problem has been fixed.

### If you continue to have problems

- 1 Rename the existing `MAPISVC.INF` in the folder `%windir%\System32`.
- 2 Copy the version of `MAPISVC.INF` supplied with Outlook to the `System32` folder. This file is normally as follows:

```
c:\program files\common
files\system\mapi\1033\nt\MAPISVC.INF
```

- 3 Restart the computer.
- 4 Try the failing operation again.

## Problems seen by Enterprise Vault users

The problems that Enterprise Vault users may encounter include the following:

- [Items can no longer be accessed from shortcuts: user problem](#)
- [Archive Explorer does not show old items: user problem](#)
- [Archived items do not show Enterprise Vault icons: user problem](#)
- [RPC server is unavailable, or call to the retrieval task failed: user problem](#)
- [Out of date vault index data: user problem](#)
- [Timeouts when restoring large baskets: user problem](#)
- [PowerPoint conversions](#)
- [Restored items do not appear in the Restored Items folder: user problem](#)

### Items can no longer be accessed from shortcuts: user problem

If you have changed the protocol or port used for the Web Access application, shortcuts to existing archived items will no longer work.

Shortcuts in Outlook, Entourage, and Lotus Notes can be updated with the new protocol or port information using Synchronize mailboxes in the Enterprise Vault

Administration Console, but customized shortcuts, FSA shortcuts, and SharePoint shortcuts cannot be updated.

For more information see "Customizing the port or protocol for the Web Access application" in *Installing and Configuring*.

### **Archive Explorer does not show old items: user problem**

Archive Explorer uses new indexing properties to find archived items. This means that items archived with Enterprise Vault 3.7 or earlier do not appear in Archive Explorer until you rebuild the archive indexes.

### **Archived items do not show Enterprise Vault icons: user problem**

If an Outlook 2003 user has enabled Use Cached Exchange Mode, Outlook forms are not synchronized by default. This results in archived items not showing Enterprise Vault icons.

**To fix the problem by making Outlook synchronize forms**

- 1 Start Outlook.
- 2 Click **Tools > Send/Receive > Send/Receive Settings > Define Send/Receive Groups**.
- 3 Click **All Accounts Online and Offline**, and then click **Edit**.
- 4 Check **Synchronize Forms**, and then click **OK**.
- 5 Exit from Outlook, and then restart it.
- 6 Open an archived item. This automatically installs the forms.

### **RPC server is unavailable, or call to the retrieval task failed: user problem**

If users receive either message when trying to archive or restore an item, make sure that their DNS Server TCP/IP address in the TCP/IP Properties dialog box is correct.

### **Out of date vault index data: user problem**

The index of items stored in a user's archive may become out of date if, for example, there is a power failure or an out-of-date system backup is restored.

If there is a problem with the index, Enterprise Vault rebuilds it automatically the next time that an item is archived in that archive. This means that there may be a short period when the index contains out-of-date information about the items

that are in the archive. Users searching an archive using the Enterprise Vault Web Access application may not be able to find items until the index is updated.

If you believe that this is the problem, the user can archive an item to force Enterprise Vault to rebuild the index.

### **Timeouts when restoring large baskets: user problem**

There is no limit to the number of items that a user running the Enterprise Vault Web Access application can try to restore from a basket. However, if the number of items in the restoring basket is very large, IIS may time out before all of the items have been restored. If most items have been restored, the user can run the restore again, as Enterprise Vault only tries to restore the items that have not been restored yet. If many of the items were not restored, we recommend that the user creates additional baskets and ensures that there are fewer items in each basket before retrying the restore.

### **PowerPoint conversions**

The Microsoft PowerPoint text conversion applies only to text contained within a slide. Speaker notes text is not converted.

### **Restored items do not appear in the Restored Items folder: user problem**

If the Restored Items folder does not exist, and a user with Outlook 2003 in cached Exchange mode restores items from search results, the Restored Items folder is created and the items are restored.

However, Outlook 2003 shows the newly-created Restored Items folder but does not show the items in it.

The restored items are shown correctly the next time Outlook 2003 is started.

This is caused by a problem with Outlook 2003.

## **Problems enabling or processing mailboxes**

This section describes how to diagnose and fix problems with enabling archiving for mailboxes.

Work through the following checks to correct the problem:

- Is the Exchange Mailbox Task for the Exchange Server running?  
The Exchange Mailbox Task does the work of enabling mailboxes, so it must be running.

- Does the Enterprise Vault mailbox still exist, or has it been created incorrectly? A problem here normally means that, when you try to enable a mailbox, the message "Failed to enable the mailbox" appears.  
See [“Checking the Enterprise Vault system mailbox”](#) on page 416.
- Is the Enterprise Vault mailbox hidden from the address book?  
Use Microsoft Exchange Server Administrator to look at the properties of the Enterprise Vault mailbox. Make sure that, on the Advanced tab, you have not selected the option to hide the mailbox from the address book.
- Is the Microsoft Exchange Information Store service running on the Exchange System?
- On Microsoft Exchange 2000, is the Mailbox Store mounted?
- To enable Microsoft Exchange 2000 mailboxes, the Vault Service account must have permission to modify a user's extensionData attribute. If the account does not have this permission, the message "Insufficient Active Directory Permissions" appears.

#### To check and modify the Vault Service account permissions

- 1 On the Windows **Start** menu, click **All Programs > Administrative Tools > Active Directory Users and Computers**.
- 2 Right-click the domain and then, on the context menu, click **Properties**.
- 3 Click the **Security** tab.
- 4 Click **Advanced**, and then click **Add**.
- 5 Double-click the account to which you want to add the permission.
- 6 In the Permission Entry dialog box, click the Properties tab.
- 7 Next to **Apply onto**, select **User objects**.
- 8 In the **Permissions** list, next to both **Read extensionData** and **Write extensionData**, check **Allow**.
- 9 Click **OK** repeatedly to close the dialog boxes.

## Checking the Enterprise Vault system mailbox

If you suspect that there may be a problem with the Enterprise Vault system mailbox, work through this section.

#### To check the Enterprise Vault mailbox on Exchange 2000

- 1 On the Windows **Start** menu, click **Programs > Administrative Tools > Active Directory Users and Computers**.
- 2 Double-click the user to display the properties.



- 3 Click the **Email Addresses** tab, and check that an email address is present.
- 4 If there is no email address, run the Recipient Update Service as follows:
  - Select the **Recipient Update Services** container, which is under the **Recipients**.
  - Right-clicking the domain and then, on the context menu, click **Update Now**.

#### To create the mailbox when it does not exist

- 1 Right-click the **Users** container and then, on the context menu, click **New > User**.
- 2 In the **Full name** box, type a name such as *EV System mailbox for server*, where *server* is the name of the Exchange server.
- 3 Type a user logon name, and then click **Next**.
- 4 Type a password, and then confirm it.
- 5 Uncheck **Account is disabled**. It does not matter what the other settings are.
- 6 Click **Next**.
- 7 Make sure that the correct server is selected.
- 8 Check **Create an Exchange mailbox**, and then click **Next**.
- 9 Click **Finish** to create the user and mailbox.

Note that it may take some time for the mailbox to be available.

## Problem processing a new mailbox

When processing a newly-created mailbox on Microsoft Exchange 2000 Server or Microsoft Exchange Server 2003, you may receive an error message in the Windows Application Log like the following:

```
Event Type: Error
Event Source: Enterprise Vault
Event Category: Archive Task
Event ID: 3277
Date: 02/02/2008
Time: 4:02:29 PM
User: N/A
Computer: MYSERVER
Description:
The MAPI error MAPI_E_FAILONEPROVIDER (0x8004011D) has occurred
whilst synchronizing the properties of mailbox /o=First
```

Organization/ou=First Administrative Group/cn=Recipients/cn=PST5.  
The mailbox will not be synchronized until the next scheduled run.

The cause of the problem is that the mailbox security descriptor is not read from Active Directory until the user logs on or receives mail.

To fix the problem, log on to the mailbox or send a mail message to it.

For more information, see the following article in the Microsoft Knowledge Base:

<http://support.microsoft.com/?kbid=272153>

## Problems with Enterprise Vault components

This section includes information on the following topics:

- [Troubleshooting: All tasks and services](#)
- [Troubleshooting: File System Archiving](#)
- [Troubleshooting: Directory service](#)
- [Troubleshooting: Exchange archiving or Journaling tasks](#)
- [Troubleshooting: Retrieval task](#)
- [Troubleshooting: Indexing](#)
- [Troubleshooting: Storage service](#)
- [Troubleshooting: Shopping service](#)
- [Troubleshooting: Web Access application](#)
- [Troubleshooting: Enterprise Vault Operations Manager and the Monitoring database](#)
- [Troubleshooting: Enterprise Vault Reporting and FSA Reporting](#)
- [Specific problems](#)
- [Restoring items for users](#)

### Troubleshooting: All tasks and services

This section describes problems with Enterprise Vault tasks and services and covers the following topics:

- [Task or service fails to start: all tasks and services](#)
- [Failed to create MAPI session: all tasks and services](#)
- [Error creating or opening an MSMQ message: all tasks and services](#)

- User does not have access to an archive: all tasks and services
- Tasks or services stop because of low system resources: all tasks and services

## Task or service fails to start: all tasks and services

If an Enterprise Vault task or service fails to start, check that the following are running:

- Enterprise Vault Directory Service
- Either the MSMQ Primary Enterprise Controller or the Message Queuing service
- If connection to the SQL Server is lost, and you need to shutdown Enterprise Vault services, stop the individual services manually, finishing with the Directory service and the Admin service. You should stop the services in this way, rather than stopping the Admin service, and relying on it to stop the other services.

## Failed to create MAPI session: all tasks and services

Except for the Directory service and the Admin service, the Enterprise Vault services and tasks run under the Vault Service account. If you have set up a service or task to run under a different account, or if you have not given the Vault Service account the required Microsoft Exchange Server permissions, an Exchange Journaling task continues to log errors until you stop it.

The Exchange Journaling task continues to try to process the Microsoft Exchange Server Journal mailbox at one-minute intervals. This problem shows up in the Windows Event Viewer as follows:

```
* retry count:
Could not get a MAPI session from the session pool
whilst processing mailbox /o=ACME/ou=Site2000/
cn=Recipients/cn=lvservice
```

and:

```
Could not scan user mailbox
/o=ACME/ou=Site2000/cn=Recipients/cn=lvservice,
unable to get the state of the users mailbox
```

Check the following:

- Is the Exchange Server computer running (private message store)?
- Has the Enterprise Vault mailbox been deleted?
- Have the Vault Service account permissions been set on the Exchange tree?

## **Error creating or opening an MSMQ message: all tasks and services**

- Check that the task or service has permissions to access its MSMQ queues.
- Is the MSMQ Primary Enterprise Controller or Backup Enterprise Controller running?

## **User does not have access to an archive: all tasks and services**

Users require write access to an archive in order to archive, and read access in order to retrieve. This applies even for background archiving. A user must also be the owner of the mailbox or be a member of the local Administrators group on the system that is running the Exchange Mailbox task.

On Exchange 2000, a user can also have access to an archive by using an account that has been granted full access in the mailbox rights attribute. You can set the attribute using the Active Directory Users and Computers snap-in.

## **Tasks or services stop because of low system resources: all tasks and services**

When the Admin service detects that your system is low on resources, it stops Enterprise Vault tasks and services residing on that system. Occasionally, this may result in additional events being logged. The comment in the log states that the task or service could not be stopped in a timely manner. Before restarting the task or service, ensure that all processes associated with the stopped task or service have been terminated.

To check the status of the processes, right-click the Windows taskbar and then, on the context menu, select Task Manager.

## **Troubleshooting: File System Archiving**

File System Archiving automatically configures the Internet Explorer settings so that the Web Access application computer is in the Internet Explorer trusted sites list. File System Archiving checks this setting each time the file server is processed on an archiving run.

If the computer that runs the Placeholder service has incorrect Internet Explorer security settings, users cannot open any placeholder shortcuts. Each attempt to do so produces an entry on the Windows Application log on the placeholder computer, saying that there was an error downloading a file.

### To configure the Internet Explorer security settings

- 1 Log on as the Vault Service account to the computer that is running the Placeholder service.
- 2 On the Windows **Start** menu, click **Settings > Control Panel**.
- 3 Double-click **Internet Options**.
- 4 Click the **Security** tab.
- 5 In the list of zones, click **Local intranet**.
- 6 Click **Sites**.
- 7 Click **Advanced**.
- 8 Enter the name of the Web Access application computer, without the DNS domain, and then click **Add**.
- 9 Click **OK**.
- 10 Click **OK** to close the local intranet settings.
- 11 On the **Security** tab of the Internet Options dialog box, click **Custom Level**.
- 12 Under **User Authentication** in the Security Settings dialog box, select either **Automatic logon only in Intranet zone** or **Automatic logon with current username and password**.
- 13 Click **OK** to close the Security Settings dialog box.
- 14 Click **OK** to close the Internet Options dialog box.

## Troubleshooting: Directory service

The Directory service has a client that runs on every system that runs Enterprise Vault software. The Directory service and client both log events to the Enterprise Vault event log. When you have a problem with the Directory Service, the first step is to look for events to determine where the problem lies.

This section includes information on the following topics:

- [Client problems: Directory service](#)
- [Service problems: Directory service](#)
- [SQL problems: Directory service](#)
- [Security problems: Directory service](#)
- [Setting tracing levels: Directory service](#)

## Client problems: Directory service

- Events in the log may refer to service-related problems that have been reported to the client. If so, check the computer that is running the service.
- The network between the client and service may be down. Run ping from a Command Prompt window to check that the Directory service computer is available. Run the test in both directions.
- Check that the Directory service is running. If it is not, the client cannot make a connection.

## Service problems: Directory service

- Check that prerequisite software is available. The Directory service must have all its prerequisite software. ADO (which is installed as part of MDAC) and SQL must be installed and be operational.
- Check that the EnterpriseVaultDirectory ODBC DSN is set up correctly. The Directory Service depends upon an ODBC System DSN called EnterpriseVaultDirectory. This is added automatically by the Configuration Wizard, but it can be modified by anyone using ODBC from Control Panel. Check that this is configured correctly.
- Check that the SQL passwords match. You may see an event informing you that the SQL login has failed. This is because the Directory service depends upon a SQL login ID called EnterpriseVault and an associated password. Ensure that the passwords match. You can use the Administration Console to set the SQL password in Enterprise Manager and the Directory Service.

## SQL problems: Directory service

- SQL event data is included in Enterprise Vault events. SQL can report an event for several reasons, such as a database that has run out of disk space.
- You should become familiar with SQL Enterprise Manager. This tool lets you manage the SQL Server and the Enterprise Vault Directory database.
- Use SQL Profiler to see what commands have been sent to the SQL database engine.
- SQL may not recognize the SQL command it has been given. You can use SQL Profiler to check the commands. The event logged by the Directory Service tells you the command, but only if SQL returned control back to the Directory service. Start SQL Profiler from within SQL Enterprise Manager.

## Security problems: Directory service

- Create, Update, and Delete must be used by an account that belongs to the local group Administrators on the Directory service computer.
- Any component has permission to read from the Directory service but, to write data, you must have write permissions. The user who tries to modify the data that is maintained by the Directory service must be a member of the local group called Administrators on the Directory Computer.
- SQL database permissions must be correct.
- When the SQL database is created, all the correct permissions are applied to the tables. That is, the SQL login ID EnterpriseVault has access to all of the tables. If someone inadvertently modifies these permissions, access may be denied. The Application Event Log should indicate such a problem.
- The password stored by the Directory must match the password set in SQL. Always use the Administration Console to change the password.

## Setting tracing levels: Directory service

- For problems with tasks and services, use the Vault Administration Console to change the level of tracing. When you are trying to diagnose a problem, set the tracing level higher.
- For problems with clients, create a new DWORD value called Trace Level under the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Directory
```

where the possible values for Trace Level are as follows:

0	None
1	Low
2	Medium
3	High

## Troubleshooting: Exchange archiving or Journaling tasks

This section covers problems with Exchange Mailbox, Public Folder and Journaling tasks.

The archiving task scans through Microsoft Exchange Server mailboxes or public folders and select items for archiving using the selection criteria that you have specified. If you have allowed users to override the selection criteria that you have set, individual users may have set different criteria.

This section includes information on the following topics:

- [Archiving fails completely: Exchange archiving or Journaling tasks](#)
- [Archiving fails partially: Exchange archiving or Journaling tasks](#)
- [Setting permissions on an Exchange Server 2000 computer: Exchange archiving or Journaling tasks](#)
- [Setting up cross-domain archiving: Exchange archiving or Journaling tasks](#)

### Archiving fails completely: Exchange archiving or Journaling tasks

Archiving can fail for any of the following reasons:

- Configuration problems. Check through the Application Event Log to find out whether there are any messages there that help with solving the problem.
- Communication or access problems. Check through the Application Event Log to find out whether there are any messages there that help with solving the problem.
- There may be no archiving schedule set. If you have not set such a schedule, the Exchange Mailbox and Public Folder tasks do not run unless you use Run Now. Check the Application Event Log for entries made by the Exchange Mailbox task. Does archiving work when you use Run Now?  
Try running the Exchange Mailbox or Public Folder task in report mode. This generates a report indicating what would be archived if you did a full run of the Exchange Mailbox task. The archiving criteria that you have set may not match the properties of any items in the enabled mailboxes or public folders.
- No mailboxes have had archiving enabled. This does not apply to an Exchange Journaling task.
- Use tracing so that you can follow the decisions made by the Exchange Mailbox or Journaling task.

If you have just started using Enterprise Vault, it may take several archiving runs before the system reaches a normal state. This is because a new installation may



have more items to archive than can be processed in a single run of the Exchange Mailbox task. Enterprise Vault takes a few items from each mailbox and then, if there is still time in its schedule, goes around again to take more. So some items may have to wait for the next run of the Exchange Mailbox task.

This balancing process ensures that archiving is carried out evenly across all mailboxes. However, it can appear that Enterprise Vault is ignoring some items when, in fact, it is not.

Microsoft Exchange Server can monitor processes for you; see the Microsoft Exchange Server documentation.

## Archiving fails partially: Exchange archiving or Journaling tasks

There are several reasons why archiving fails completely for some Microsoft Exchange Server mailboxes but still works for others, or why not all the items that you expect to be archived are archived.

If Enterprise Vault fails to archive anything from some Microsoft Exchange Server mailboxes then the following may apply:

- The most likely cause is that those mailboxes have not been enabled for archiving.
- It is possible that the clock on the computer that is running the Exchange Mailbox task is wrong by a large amount, such as weeks or days. The Exchange Mailbox task uses the local clock to determine the date and time. If this clock has a very different time from that on the Microsoft Exchange Server computer, archiving is affected. On a test system you might be more aware of this problem and so notice it even if the clocks are only a few minutes different.

If Enterprise Vault is archiving some items from a mailbox and is missing others, the problem could be any of the following:

- The user has overridden the archiving settings so that the items are never going to be archived, or are not yet ready to be archived.
- You have a new Enterprise Vault installation and the system has not yet reached its normal state. It may take several runs of the Exchange Mailbox task before all items that are ready to be archived are actually processed.
- The user has no access to the archive. Check through the Application Event Log to find out if there are any messages that help with solving the problem.
- The user has changed the amount of time before an item is ready for archiving, and items are consequently not yet eligible for archiving.
- The item's message class has not been added to the list of those that Enterprise Vault archives. To add more messages classes, use the Directory Properties: Exchange Message Classes tab.

- The Enterprise Vault mailbox has been deleted.
- The Vault Service Account permissions on the Exchange tree are incorrect. See [“Setting permissions on an Exchange Server 2000 computer: Exchange archiving or Journaling tasks”](#) on page 426.

If items never turn into shortcuts, check the following:

- The Exchange Mailbox task is running.
- The Storage service is running.
- The setting of Remove Safety Copies on the General tab of the Vault Store Properties dialog box. If this is set to After Backup, the messages do not turn into shortcuts until the vault stores have been backed up.

## Setting permissions on an Exchange Server 2000 computer: Exchange archiving or Journaling tasks

Work through this section if you suspect that there may be a problem with Exchange Server permissions.

The Vault Service account must be granted all permissions on the Exchange Server object.

### To set the permissions on an Exchange Server 2000 computer

- 1 Using an account with Exchange administration permissions, click **Start > All Programs > Microsoft Exchange > System Manager**.
- 2 Right-click the appropriate Microsoft Exchange Server computer and then, on the context menu, click **Properties**.
- 3 Click the **Security** tab.
- 4 Click **Add**. The Select Users, Computers, or Groups dialog box appears.
- 5 In the **Look in** box, click the Windows domain in which you created the Enterprise Vault site.
- 6 In the **Name** list, click the Vault Service account.
- 7 Click **Add**.
- 8 Click **OK** to return to the Properties dialog box, with the Vault Service account selected.
- 9 In the **Allow** column of the permissions list, check **Receive As** and **Send As**.
- 10 Click **OK**.

## Setting up cross-domain archiving: Exchange archiving or Journaling tasks

If you plan to add an Exchange Mailbox or Journaling task for an Exchange Server computer that is in a different domain from that of the Enterprise Vault server, you must set the E2KAutoCreateMailboxContainerADsPath registry value before you add the task.

### To set the E2KAutoCreateMailboxContainerADsPath registry value

- 1 Log on to the computer on which you are going to use the Enterprise Vault Configuration Program or Administration Console to add the task for the Exchange Server computer that is in the remote domain.
- 2 Start the Registry Editor.
- 3 Find the following key:

On a 32-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\Software
\KVS
\Enterprise Vault
\Admin
```

On a 64-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\Software
\Wow6432Node
\KVS
\Enterprise Vault
\Admin
```

- 4 If the string value E2KAutoCreateMailboxContainerADsPath does not exist, create it.
- 5 Give E2KAutoCreateMailboxContainerADsPath a value of Users.

You can now add the task for the remote Exchange Server computer. After you have added the task, you can change the value of E2KAutoCreateMailboxContainerADsPath back to the default value of Default or leave it as Users.

## Troubleshooting: Retrieval task

If you encounter problems when restoring items, do the following:

- Check the Application Event Log for more information.
- Check that the Exchange Mailbox task is running.
- Check that the Storage service is running.
- If the items are offline, check that the HSM software is running properly.

- Check that you have the correct archive and Exchange mailbox permissions. To restore items, you must have at least Read access to the archive.

## Troubleshooting: Indexing

Indexing tools are available to enable you to manage indexes and index volumes:

See “About the indexing wizards” on page 101.

Several documents and articles, including the following, are available on the Support Web site to assist in troubleshooting indexing:

- Troubleshooting and monitoring index tasks  
<http://www.symantec.com/docs/TECH160420>
- Troubleshooting index volume error codes  
<http://www.symantec.com/docs/TECH159919>

## Troubleshooting: Storage service

Storage service errors are logged in the Windows Application Event Log under the Storage and Database categories.

This section includes information on the following topics:

- [Storage Service does not start: Storage service](#)
- [Failing to create queues: Storage service](#)
- [Failure to access queues: Storage service](#)
- [Cannot create vault stores: Storage service](#)
- [Cannot perform archive, restore, replay, online operations: Storage service](#)
- [Cannot archive: Storage service](#)
- [Exchange messages stay as Archive pending: Storage service](#)
- [Messages are not restored: Storage service](#)
- [Error creating a vault store: Storage service](#)

### **Storage Service does not start: Storage service**

Do the following:

- Check the Application Event Log for more information.
- Check that the Directory service is running.
- Check that the Indexing service is running.

## Failing to create queues: Storage service

Do the following:

- Check the Application Event Log for more information.
- Check that the MSMQ Primary Enterprise Controller or Backup Enterprise Controller is running.
- Using Message Queue Explorer, check that the entries for the computers running the Exchange Mailbox and Journaling tasks or Storage services have the correct permissions.

### To check the permissions

- 1 On the Windows Start menu, click **All Programs > Administrative Tools > Computer Management**.
- 2 In the left-hand pane, expand the **Computer Management** node and then expand the **Services and Applications** node.
- 3 Right-click **Message Queuing** and then, on the context menu, click **Properties**. The appears.
- 4 In the Message Queuing Properties window, click **Add**.
- 5 In the Select Users, Computers, or Groups window, next to **Look In**, select **Entire Directory**.
- 6 In the list, click **Administrators** and then click **Add**.
- 7 Click **OK** to return to the Message Queuing Properties window.
- 8 Click **Administrators**.
- 9 Under **Permissions**, check **Allow** next to **Full Control**.
- 10 Click **OK**.
- 11 Close Computer Management.

## Failure to access queues: Storage service

Check queue access permissions.

## Cannot create vault stores: Storage service

Do the following:

- Check the Application Event log for more information.
- Check that SQL Server is running.
- Check disk space on the NTFS volumes for the vault store database files.

- Examine SQL logs and trace output for more information about the problem.

### **Cannot perform archive, restore, replay, online operations: Storage service**

Do the following:

- Check the Application Event Log for more information.
- Check that the vault store databases are accessible.
- Check that SQL Server is running.
- Examine SQL logs and trace output for more information about the problem.

### **Cannot archive: Storage service**

Check that the Indexing service is running.

### **Exchange messages stay as Archive pending: Storage service**

Do the following:

- Check the setting of Remove Safety Copies on the General tab of the Vault Store properties dialog box. If it is set to After Backup, the messages do not turn into shortcuts until the vault stores have been backed up. Check that the vault store NTFS volumes are being backed up.
- Check that the Exchange Mailbox task is running.

### **Messages are not restored: Storage service**

Do the following:

- Check that the Exchange Mailbox task is running.
- If you are using HSM software, check that it is running.
- Check the Application Event Log to find out whether Enterprise Vault is reconstructing vault indexes.  
If Enterprise Vault is reconstructing indexes for some archives, it rejects all archive and retrieval operations for those archives until the reconstruction is complete. Other archives are unaffected, so archive and retrieval operations can continue normally for those other archives.

### **Error creating a vault store: Storage service**

If you receive an error when creating a vault store, try restarting the Storage service.

The Application Event Log entries associated with the problem are as follows:

Event ID 13360

An error was detected while accessing the Vault Database  
'FasterVS':

Description:

[Microsoft][ODBC SQL Server Driver][SQL Server]Unable to connect. The maximum number of '30' configured user connections are already connected. System Administrator can configure to a higher value with sp\_configure.

Event ID 13336

Unable to create Device EVFasterVS on path D:\mssql\data

Event ID 13360

An error was detected while accessing the Vault Database  
'FasterVS':

## Troubleshooting: Shopping service

This section includes the following topics:

- [Common problems: Shopping service](#)
- [Poor performance: Shopping service](#)
- [Recovering lost disk space: Shopping service](#)
- [Moving shopping data: Shopping service](#)

### Common problems: Shopping service

If anything goes wrong with Shopping, check first that all the appropriate services have started. All the following must be running for Shopping to work:

- IIS Admin service
- World Wide Web Publishing service
- Enterprise Vault Shopping service
- Enterprise Vault Directory service
- Enterprise Vault Exchange Mailbox task

If all the tasks and services are running, check the Application Event log on the computer that hosts the Shopping service and the computer that hosts the Exchange Mailbox task. Most high-level errors are self-explanatory, and the solution is straightforward.

Table C-1 lists the error messages that you may receive.

Table C-1 Log messages

Message	What to do
The Shopping Service root directory (<...>) does not exist	Create the folder and try again.
Failed to connect to the Shopping Service	Make sure that the Shopping service is started.
Failed to create new basket <i>BasketName</i>  Failed to create file: <i>filespec</i> .  Failed to open file <i>filespec</i>	<p>Check the access permissions on the Shopping folders, as follows:</p> <ul style="list-style-type: none"><li>■ Enterprise Vault\Shopping\. All Enterprise Vault users who use Shopping require Write access to the Shopping folder. One way to ensure that users have this access is to grant the <b>Authenticated Users</b> group Write access to the Shopping folder. You may prefer to grant access to a smaller group that contains only Enterprise Vault users.</li><li>■ Enterprise Vault\Shopping Access. Everyone must have Full Control.</li><li>■ Enterprise Vault\Shopping\Domain. Everyone must have Full Control</li><li>■ Enterprise Vault\Shopping\Domain\user. Both the user (<i>Domain\user</i>) and the Administrators group on the Web Server computer (<i>WebServerComputer\Administrators</i>) must have Full Control.</li></ul>
Failed to open file: <filespec>	Check the access permissions on the file. Both the user ( <i>Domain\user</i> ) and the Administrators group on the Web Server computer ( <i>WebServerComputer\Administrators</i> ) must have Full Control.
Failed to retrieve the Shopping Service directory information	Make sure that the Directory service is started.



If there are no errors in the Application Event Log, or the errors listed do not point to an obvious solution, try stopping and then restarting all the Enterprise Vault tasks and services. If restarting the tasks and services does not fix the problem, try increasing the tracing level to see whether that produces any additional information in the Application Event Log.

## Poor performance: Shopping service

Bigger shopping baskets mean poorer performance and a greater chance of locking problems during retrieval confirmations. There is no enforced limit on the size of a basket but, in general, users should try to keep baskets to a moderate size (typically fewer than a hundred or so items).

## Recovering lost disk space: Shopping service

When a user selects items to restore, a record of these items is kept in a `.des` file on the Shopping Service computer. As the user retrieves more items, the `.des` file gradually increases in size, even if the user deletes all shopping baskets.

**If this size increase becomes a problem, do the following:**

- 1 Ask the affected users to delete all their baskets.
- 2 As an administrator, delete each `.des` file manually.

New, empty `.des` files are created automatically as needed.

## Moving shopping data: Shopping service

We recommend that you do not move the shopping data when users have started shopping. If you do move the data to another volume, all the individual file permissions are lost and must be reapplied manually.

If you move rather than copy the data to somewhere else on the same volume, the file permissions are retained.

**To move the data to another location on the same volume**

- 1 Stop IIS.
- 2 Stop the Shopping service.
- 3 Move the data. (Do not copy it.)
- 4 Change the data location in the Vault Administration Console by performing the following steps in the order listed:
  - In the Administration Console, expand the left pane until the appropriate Vault Site is visible.

- Expand the Vault Site until **Computers** is visible.
  - Expand **Computers**.
  - Expand the computer that runs the Shopping service.
  - In the right pane, double-click the Shopping service that you want to modify.
  - On the **General** tab of the Shopping Service property page, click **Change**.
  - If you are prompted for the password to the Vault Service account, type it and then click **OK**.
  - In the Choose Folder dialog box, select the new folder and then click **OK**.
- 5 Start the Shopping service and IIS.

## Troubleshooting: Web Access application

This section includes the following topics:

- [Users do not see the Web page: Web Access application](#)
- [Web Access application does not work: Web Access application](#)
- [Other problems: Web Access application](#)

### Users do not see the Web page: Web Access application

If the IIS virtual directory settings are wrong, users do not see the Web page. The default URL for the Web Access application is **/EnterpriseVault**; the name of the Web Access application virtual directory in IIS.

Check the Web Access application settings on the General tab of the Site Properties dialog box in the Administration Console. The protocol and port shown must match the protocol and port set for the default web site in IIS which contains the **/EnterpriseVault** virtual directory.

### Web Access application does not work: Web Access application

The following must all be running for the Web Access application to work:

- IIS
- World Wide Web Publishing service
- Enterprise Vault Directory service
- Enterprise Vault Shopping service
- Enterprise Vault Indexing service

Errors that can occur because the services are not started are as follows:

- The message `The Enterprise Vault Service is not available` appears when the Web Access application is first accessed.
- The message `Failed to perform search request` appears when performing a search.
- Shopping baskets are not created.

### Other problems: Web Access application

- English text is displayed instead of text in the language of the Web browser. The language file needs to be in the same folder as the English language file (`en.lan`) and the Active Server Page (`.asp`) files. The language is that of the user's Web browser and not that of the IIS computer. If the correct language file does not exist, English is used. The name of the language file is `language.lan`.
- Incorrect user name/password entry format. The user name must be in the form `domain\username` for the log on to work correctly.
- A message is unexpectedly restored with all attachments. When a user selects an attachment to restore, Enterprise Vault restores the whole message, with all its attachments. This is the correct behavior.
- An item cannot be added to a basket twice. When adding an item that has already been added to a basket, the item is not added again and there is no warning message.
- Error: ASP 0115. If one of the services that the Web Access application is using causes an access violation, this error is logged. Look at the Application Event log on the Web Server system and find out on which service the error occurred and what the error was.
- Error: ASP 0177. This could be the result of either of the following:
  - A Shopping, Indexing, or Storage service has not been registered on the Web Server computer.
  - The wrong permissions have been set on the virtual directory.

## Troubleshooting: Enterprise Vault Operations Manager and the Monitoring database

If you see an error page when attempting to access Enterprise Vault Operations Manager, or when using it to monitor your system, see the following TechNote on the Symantec Support Web site:

<http://www.symantec.com/docs/TECH51287>

The TechNote provides detailed troubleshooting information related to installing and using Operations Manager

For information on troubleshooting the Monitoring database and Monitoring agents, see the following TechNote on the Symantec Support Web site:

<http://www.symantec.com/docs/TECH50809>

## Troubleshooting: Enterprise Vault Reporting and FSA Reporting

If you have problems with installing Enterprise Vault Reporting, or when accessing or viewing its reports, see the following TechNote on the Enterprise Vault Support Web site:

<http://www.symantec.com/docs/TECH51288>

This TechNote gives detailed troubleshooting information for Enterprise Vault Reporting.

If you have problems when configuring or using FSA Reporting, refer to the troubleshooting advice in the following Enterprise Vault TechNote:

<http://www.symantec.com/docs/TECH51475>

## Specific problems

- Enterprise Vault tasks and services do not start (login failure).  
If Enterprise Vault tasks and services do not start and report a login failure, the most likely cause of the problem is that the password that has been supplied for the Vault Service account is wrong. If you supply an incorrect password, there will be login failures from all Enterprise Vault tasks and services.
- Error while enabling mailbox for user  
/o=aaaa/ou=bbbb/cn=Recipients/cn=cccc, error sending enabled message.  
Enterprise Vault cannot send the enable mailbox message. This message is stored in a file called `EnableMailboxMessage.msg` on the Exchange Mailbox task computer.
- Changes to an Enterprise Vault task or service do not take effect.  
For many of the settings that you can change, you must stop and restart the appropriate Enterprise Vault task or service so that it can obtain the new settings. There are some settings that affect more than one task or service, so you may need to stop and restart multiple tasks and services.
- Mailboxes with no associated Windows account are not archived.

This is the correct behavior. The Exchange Mailbox task automatically disables archiving for such mailboxes.

- BCC recipients are missing from a message.  
 If you archive an unsent message with BCC recipients and then restore it, the BCC recipients are missing from the restored message.
- Re-installing the Outlook Add-In to a different folder does not work.  
 If you remove the Outlook Add-In and then install it to a different folder, Outlook may not refresh its cache and so may not recognize the new location.  
 To force Outlook to see the new installation, do the following in the order listed:
  - Exit Outlook.
  - Remove the Enterprise Vault Outlook Add-In from the computer.
  - Start and then exit from Outlook.
  - Reinstall the Enterprise Vault Outlook Add-In.
  - Start Outlook.
- Items cannot be deleted from archives.  
 This may not be a problem at all. There is a five-minute delay before the Index service catches up with a user deleting something from an archive, so users should wait some time before checking that items have been deleted.
- Extra copy of an item when archive fails.  
 If an item cannot be archived for some reason, and you have chosen not to delete the original item after archiving on the Archiving Actions tab of the Enterprise Vault Exchange policy properties, it is possible that the user may have an extra copy of the item.
- User cannot store items in an archive.  
 Following a power or disk failure, Enterprise Vault may need to reconstruct indexes for one or more archives. If Enterprise Vault is reconstructing indexes for some archives, it rejects all archive and retrieval operations for those archives until the reconstruction is complete, so users of those archives cannot archive or retrieve items. A user whose archive index is being reconstructed cannot archive items, but does not receive any error message. Other archives are unaffected by the replay operations, so archive and retrieval operations can continue normally. The solution is to wait until Enterprise Vault has finished reconstructing the indexes.
- Archiving appears to work, but the log shows an error.  
 If the error message is `An error was detected whilst accessing the Vault Database "vaultstore"`, the password to the vault store may have

been changed but the Storage service has not been stopped and restarted. Stop the Storage service and restart it so that the service uses the new password.

■ **Error: RPC Server is Unavailable.**

You can receive a message that an RPC Server is unavailable in the following situations:

- When you are using the Administration Console to add Enterprise Vault tasks or services.
- When you are running the Enterprise Vault Configuration Program to configure your system.
- When you are remotely managing a computer that is running Enterprise Vault tasks and services.

Each Enterprise Vault computer requires a registered IP address, and the DNS properties for the TCP/IP protocol must be defined.

You may see this problem if the computer on which you are configuring the Enterprise Vault tasks and services does not have any WINS servers defined, and you have chosen not to enable DNS for Windows Resolution on the TCP/IP Protocol property page for WINS. You can either use DNS for service control management or enable DNS for Windows resolution.

If this does not solve the problem, set up the Administration Console computer to use LanMan names instead of DNS names to connect to Service Control Manager. To do this, set the following registry string value to 1:

On a 32-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\KVS
\Enterprise Vault
\Admin
\UseLanmanNameForSCM
```

On a 64-bit installation of Windows:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Admin
\UseLanmanNameForSCM
```

- Items never become eligible for archiving, or manual archives do not work, or an item cannot be restored.

All of these problems can happen if an Enterprise Vault server does not have the necessary Windows codepages installed. If you need to install extra languages, see the following article in the Microsoft Knowledge Base:

<http://support.microsoft.com/?kbid=177561>

- Microsoft Message Queue Server: MQIS Initialization Error.

There is a known MSMQ Server problem that results in the following error message:

```
Error: 0xc00e0013 No connection with the Site's
controller.
```

Alternatively, the following error may be logged in the Windows Application Event Log:

```
MQIS Database Initialization Error.
```

These errors may be caused by the lack of, or the misplacement of, the ODBC System Data Source Name (DSN) used to connect SQL Server to the MQIS database. For more information on how to solve this problem, see the following article in the Microsoft Knowledge Base:

<http://support.microsoft.com/?kbid=193510>

## Restoring items for users

There may be occasions when you need to restore items on behalf of users. With suitable permissions, it is possible for you to restore items from any archive to any mailbox.

The account you use to retrieve the items must have the following features:

- Have Domain Admin permissions
- Have permissions to write to the user's mailbox
- Have read permissions on the archive
- Be a member of the local administrators' group on the Enterprise Vault computer that is running the appropriate Exchange Mailbox task.

### To restore an item on behalf of a user

- 1 In the Vault Administration Console, display the properties of the archive that contains the item to restore.
- 2 Click the **Permissions** tab, and then click **Add**.
- 3 Add yourself to the list of users.
- 4 Start the Enterprise Vault Web application, and log on to it as yourself.
- 5 Click the **Search Vault** icon.
- 6 On the Search Archive page, select the archive that contains the item you want to restore.
- 7 Restore the item to the appropriate mailbox.

## Techniques to aid troubleshooting

This section provides information on the following topics:

- [Running on Demand: Run Now](#)
- [How to use Report Mode to test the Exchange Mailbox task](#)
- [Moved Items report from the Exchange Mailbox task](#)
- [Using tracing](#)
- [Using the Deployment Scanner](#)
- [Creating a mail message that contains the Outlook Add-In log](#)
- [How to modify registry settings](#)

### Running on Demand: Run Now

The archiving tasks normally run according to a schedule that you set up. However, you may sometimes want to run a task outside this schedule. On such occasions, you can use Run Now to run the task immediately. Run Now is often useful when you are piloting or demonstrating Enterprise Vault.

**To run an Exchange Mailbox or Public Folder task immediately**

- 1 In the left pane of the Administration Console, expand the Site hierarchy until the **Enterprise Vault Servers** container is visible.
- 2 Expand the **Enterprise Vault Servers** container.
- 3 Expand the computer that runs the task you want to start.
- 4 Click **Tasks**.
- 5 In the right pane, right-click the task that you want to run and then, on the shortcut menu, click **Run Now**.
- 6 Complete the **Run Now** dialog box, and then click **OK**.

### How to use Report Mode to test the Exchange Mailbox task

When you run an Exchange Mailbox task in report mode, the task does not perform the processing that is done in other modes. Instead, it produces a report that shows the archiving and shortcut processing that the task would perform if it ran as a normal scheduled task. The report also includes information that is relevant to archiving based on quota, or based on age and quota.

Hidden mailboxes do not appear in the report.



The report file is in the `Reports\Exchange Mailbox Archiving` subfolder of the Enterprise Vault installation folder (for example `C:\Program Files (x86)\Enterprise Vault\Reports\Exchange Mailbox Archiving`).

The file name is as follows:

`EV_ARCHIVING_exchange_server_yyyymmddhhmmss.TXT`

where *exchange\_server* is the Exchange Server that is associated with the task and *yyymmddhhmmss* is the date and time when the report was generated.

The fields within the file are tab-separated so that you can easily transfer them to a spreadsheet program for analysis.

For each mailbox, the report provides the details that are shown in [Table C-2](#) about the processing that would be performed on a real run of the Exchange Mailbox task.

**Table C-2** Fields in an Exchange Mailbox task report

Field	Description
System Name	The name of the Exchange Server computer for which you have generated the report.
Mailbox name	The legacy distinguished name.
Associated account	The primary Windows account for the mailbox.
Mailbox state	One of the following: New, Enabled, Disabled, or Suspended.
Date	The date on which the mailbox was checked.
Start time	The time at which the check started.
End time	The time at which the check finished.
No of archivable items	<p>An archivable item is one that Enterprise Vault archives when the item meets the archiving criteria. An archivable item must be one of those listed in the message classes that Enterprise Vault archives automatically.</p> <p>Enterprise Vault has a number of standard message classes that it archives, and you can add more as necessary. To view or change the Enterprise Vault message classes, view the properties of the Enterprise Vault Directory and then click the <b>Exchange Message Classes</b> tab.</p>
Total size of archivable items	The total size of items that Enterprise Vault will archive when the items meet the archiving criteria.

**Table C-2** Fields in an Exchange Mailbox task report (*continued*)

Field	Description
No of archivable folders	The number of folders in the mailbox from which Enterprise Vault will archive.
No of items ready to archive	An item that is ready to archive is an archivable item that meets the archiving criteria and so would be archived on a real run of the Exchange Mailbox task. Depending on the number, it could take more than one run of the Exchange Mailbox task to archive this number.
Size of items ready to archive	The total size of items that would be archived on a real run of the Exchange Mailbox task. Depending on the number, it could take more than one run of the Exchange Mailbox task to archive this number.
No of large items	The number of items that are larger than the <b>Start with items larger than</b> setting on the Archiving Rules tab of the Enterprise Vault Exchange policy properties. These items are archived before all others.
Total size of large items	The total size of items that are larger than the <b>Start with items larger than</b> setting on the Archiving Rules tab of the Enterprise Vault Exchange policy properties.
No of messages that would be archived	The number of messages that would be archived on a single, real run of the Exchange Mailbox task.
Size of messages that would be archived	The total size of items that would be archived on a single, real run of the Exchange Mailbox task.
Quota limit	The mailbox storage limit.
Quota used	The used percentage of the mailbox storage limit.
% of Quota free	The unused percentage of the mailbox storage limit.
Space held by existing pending items	The mailbox space that is used by items that have the status Pending Archive.
Average size of shortcut (KB)	The average size of a shortcut in the mailbox.
No of Expired Shortcuts	The number of shortcuts in the mailbox that are ready to be deleted, according to the criteria you have set on the Storage Expiry tab of the Site Properties dialog box.

**Table C-2** Fields in an Exchange Mailbox task report (*continued*)

Field	Description
No of Orphaned Shortcuts	The number of shortcuts in the mailbox that are ready to be deleted because the corresponding items have been deleted from an archive. This value depends on the setting Delete orphaned shortcuts on the Shortcut Deletion tab of the Exchange Mailbox policy properties.
No of Old Shortcuts	The number of shortcuts in the mailbox that are ready to be deleted because they have reached the age at which to delete shortcuts. This value depends on the setting Delete shortcuts in folders on the Shortcut Deletion tab of the Exchange Mailbox policy properties.
No of Folders containing moved items	The number of mailbox folders to which shortcuts have been moved or copied from other folders.
No of moved items identified	The number of shortcuts that have been moved or copied to another mailbox folder. This figure is the total for all the folders in the mailbox.
Archiving policy applied	The Exchange Mailbox policy that applies to the mailbox.

If you have chosen to archive until a percentage of mailbox storage limit is free, then the reporting figures are based on the first quota found when examining the mailbox quota settings in the following order:

- Prohibit send and receive
- Prohibit send
- Issue warning

When using report mode, you may find it helpful to run the Exchange Mailbox task on demand, rather than using the normal schedule. You can do this by using **Run Now**.

See [“Running on Demand: Run Now”](#) on page 440.

## Moved Items report from the Exchange Mailbox task

The Exchange Mailbox task Moved Items report shows information about the numbers of moved and copied shortcuts. The report shows this information for each folder of the mailboxes that Enterprise Vault processes in a run of an

Exchange Mailbox task. The report also includes information about any moved or copied shortcuts whose retention category has been updated.

Enterprise Vault produces the report after the following types of Exchange Mailbox task run:

- A scheduled run
- A run that you start with the Run Now option, in **Archiving and shortcut processing** mode or **Shortcut processing** mode

Hidden mailboxes do not appear in the report.

The report file is in the Reports\Exchange Mailbox Archiving subfolder of the Enterprise Vault installation folder (for example C:\Program Files (x86)\Enterprise Vault\Reports\Exchange Mailbox Archiving).

The file name is as follows:

MovedItemsUpdateSummary\_exchangeserver\_yyyymmdd.txt

where *exchangeserver* is the Exchange Server that is associated with the task and *yyymmdd* is the date when the report was generated.

The fields within the file are tab-separated so that you can easily transfer them to a spreadsheet program for analysis.

For each mailbox folder, the report provides the details that are shown in [Table C-3](#).

**Table C-3** Fields in an Exchange Mailbox task Moved Items report

Field	Description
Mailbox Name	The legacy distinguished name.
Associated Account	The primary Windows account for the mailbox.
Mailbox Folder	The mailbox folder to which the information applies.
Date	The date on which the task processed the mailbox.
Start time	The time at which processing started.
End time	The time at which processing finished.
No. of moved shortcuts	The number of shortcuts that have been moved into this mailbox folder.
No. of copied shortcuts	The number of shortcuts that have been copied into this mailbox folder.

**Table C-3** Fields in an Exchange Mailbox task Moved Items report (*continued*)

Field	Description
No. of shortcuts with updated Retention Category	The number of shortcuts that have had their retention category updated.
No. of failed updates	The number of shortcuts for which an update failed.
Archiving policy applied	The Exchange Mailbox policy that applies to the mailbox.

## Using tracing

The tracing functionality in the Administration Console enables you to select from a number of supplied Dtrace scripts that collect tracing information.

If you log a support call, Symantec Corporation may ask you to run a trace to aid problem diagnosis.

### To enable traces

- 1 In the Administration Console, expand the Enterprise Vault site until the **Enterprise Vault Servers** container is visible.
- 2 Expand the **Enterprise Vault Servers** container.
- 3 Expand the Enterprise Vault server on which you want to run a trace.
- 4 Click the Enterprise Vault server.
- 5 On the **Tools** menu, click **Advanced Features** to select it.

Note that this setting is not remembered; it applies only to the current session of the Administration Console.

- 6 Press F5 to refresh the view. Underneath the server you now see a **Traces** container.

You are now ready to create a new trace. The New Trace wizard asks for the following:

- Which trace category to trace. This is the Enterprise Vault subsystem that in which your problem is likely to be contained. You might pick, for example, "Search and Indexing issues" or "Restoring and Retrieval issues".
- A title for the trace. If you have logged a support call, you may want to include the call number in the trace title. This title is used in the listing of traces in the Administration Console and is also included in the trace log file.

- An optional description of the trace. This is for your own notes.
- The amount of time to run the trace. Trace files can quickly get large, so a few minutes is usually the amount of time to choose.
- A maximum size for the log file. The trace will stop if the log file reaches this maximum size.
- Which folder to use to store the log file.

#### To create a new trace

- 1 In the Administration Console, enable traces as described in this section.
- 2 Right-click the Traces container under the server on which you want to run a trace and, on the shortcut menu, click **New** and then **Trace**. The **New Trace** wizard starts.
- 3 Work through the wizard.

Once you have started the trace, you can view its properties by double-clicking the trace name in the Administration Console. You have options to open or copy the log file, but these are unavailable until the trace is complete.

## Using the Deployment Scanner

If there is a problem you are trying to solve you may find it useful to run the Deployment Scanner to analyze a server's environment. Additionally, if you call Symantec support you may be asked to run the Deployment Scanner.

You can run Enterprise Vault Deployment Scanner from within the Administration Console, as described in this section. Alternatively, you can run the Deployment Scanner from the Enterprise Vault installation folder or from the folder `Symantec Enterprise Vault 10.0\Deployment Scanner` on the Enterprise Vault media. Double-click the file, `Deployment_Scanner.exe`, to start the Deployment Scanner wizard.

#### To enable the Deployment Scanner in the Administration Console

- 1 Start the Administration Console on the server on which you want to run the Deployment Scanner.
- 2 On the **Tools** menu, click **Advanced Features** to select it.

Note that this setting is not remembered: it applies only to the current session of the Administration Console.

You are now ready to run the Deployment Scanner.

### To run the Deployment Scanner from the Administration Console

- 1 In the Administration Console, expand the Enterprise Vault site until the **Enterprise Vault Servers** container is visible.
- 2 Expand the **Enterprise Vault Servers** container.
- 3 Right-click the Enterprise Vault server on which you are running the Administration Console and, on the shortcut menu, click **Deployment Scanner**.
- 4 Work through the Deployment Scanner wizard.

The Deployment Scanner always saves a report in the Enterprise Vault **Reports** folder. Additionally, if you choose the option to gather support information, the report is also stored in the .CAB file with the gathered information, in the folder you select.

## Creating a mail message that contains the Outlook Add-In log

The **Send Log** button in the Outlook Add-In log viewer enables the user to create a mail message that contains the Outlook Add-In log.

### To mail the Outlook Add-In log:

- 1 In Outlook, open the Enterprise Vault diagnostics dialog box. How you open this dialog box depends on the version of Outlook:
  - In Outlook 2003/2007, click **Help**, then **About Enterprise Vault**, and then **Tech Info**.
  - In Outlook 2010, click the **File** tab, then **Enterprise Vault**, and then **Additional support information**.
- 2 Click **Send Log**.

Outlook creates a mail message that contains the text of the log. The Subject is set to **Enterprise Vault Outlook Add-In log file** and the **To** field is left blank.

- 3 Add more information if required, then send the message.

You can use the **SendLogFileMaxSizeMB** and **SendLogFileRecipients** registry values on users' computers to control the behavior of Send Log.

**SendLogFileMaxSizeMB** controls the maximum size of the message (default 5 MB), and **SendLogFileRecipients** specifies default recipients. For more information, see the *Registry Values* manual.

## How to modify registry settings

For the most part you can configure Enterprise Vault with the Vault Administration Console, but there are occasions when you may need to use other tools. This section lists changes to the Windows registry that you can make to change the behavior of Enterprise Vault.

This section includes information on the following topics:

- [Changing the MSMQ timeout](#)
- [Optimizing offline storage by sharing items](#)
- [Controlling content conversions](#)
- [Setting the maximum number of message recipients](#)

### Changing the MSMQ timeout

Enterprise Vault has a timeout value that limits the amount of time that services wait for responses from MSMQ. The occurrence of a timeout usually indicates a problem. However, a timeout can be expected to occur in a few cases, and so a reasonably short wait time is required for the component not to be idle for too long.

If you make the timeout value too short, systems that are heavily loaded can signal timeout errors because they have not had time to complete the request. On the other hand, if you make the timeout value too long, this can slow the overall throughput of Enterprise Vault because timeouts are expected in some circumstances.

The default timeout is 20 seconds, and the maximum value you can set is 300 seconds. If 300 seconds is not sufficient, you must do more investigation into your MSMQ and Enterprise Vault performance.

We recommend that you adjust the timeout value in small steps, such as five seconds, until you have a suitable value.



### To change the timeout value

- 1 Edit the registry on the computer that is running the Enterprise Vault Storage service.
- 2 Edit, or if necessary add, the following DWORD value:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Storage
\QueueTimeout
```

- 3 Set the value to the number of seconds to wait.
- 4 Stop and restart the Storage service and Exchange Mailbox task.

### Optimizing offline storage by sharing items

Some HSM software products do not support the OFFLINE file attribute to indicate that a file has been moved to HSM secondary storage. In such cases, the Storage service assumes that a file is offline when a specific number of days have elapsed since the file was last modified.

To specify the number of days before the Storage service assumes that a file is offline, you use the OfflineDays registry value. The default value is 0, which means that the Storage service assumes that items are always online.

If several users share an item, the Storage service archives another copy of the item. All copies of a shared item are usually archived at the same time so that only one is archived.

### To change the offline setting

- 1 Edit the registry on the computer that is running the Enterprise Vault Storage service.
- 2 Edit, or if necessary add, the following DWORD value:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\OfflineDays
```

- 3 Set the value to the number of days that items stay online. The default value is 0, which stops the Storage service using the secondary offline status checking. If you set OfflineDays to 0, then the offline status is determined by the OFFLINE file attribute setting.

The new setting is used immediately.

## Controlling content conversions

By default, Enterprise Vault stores the compressed text or HTML versions of archived items. This lets users search for items and preview their contents before retrieving them. If you have no requirement for users to search on or preview the contents of items, you can improve performance by turning off content conversion.

### To control content conversions

- 1 Edit the registry on the computer that is running the Enterprise Vault Storage service.
- 2 Edit, or if necessary add, the following DWORD value:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\BypassConversions
```

- 3 Give BypassConversions a value of 0 to perform content conversions or 1 to turn off content conversion.
- 4 Stop and restart the Storage service to make the change take effect.

## Setting the maximum number of message recipients

By default, Enterprise Vault does not archive messages that have more than 5000 recipients but you can control this setting.

To set the maximum number of message recipients:

- ◆ Edit the MaxNumOfRecipients registry value on the Exchange Mailbox task computer. This value is under the following registry key:

```
HKEY_LOCAL_MACHINE
\SOFTWARE
\Wow6432Node
\KVS
\Enterprise Vault
\Agents
```

You can also use the SkipRecipCheckSize registry value to set the minimum size of message that is checked for its number of recipients. The size includes the size of the recipient list itself. The default for SkipRecipCheckSize is 750 KB. Messages that are larger than this are checked for the number of recipients, whereas smaller messages are assumed to have fewer than the maximum number of recipients.

## About moving an Indexing service

The instructions in this section let you do the following:

- Move an Indexing service and all its data to a different computer.
- Combine two or more Indexing services into one.
- Move some of an Indexing service's data to a different Indexing service.

---

**Warning:** We strongly recommend that you do not move an Indexing service because of the amount of work involved and because of the potential for introducing mistakes that take time to rectify.

---

You require a database tool for viewing and changing data stored in the Enterprise Vault Directory service. Some examples of such tools are VisData (a sample application provided with Microsoft Visual Basic) and Query Analyzer (part of Microsoft SQL Server). The following instructions do not include details of how to set up your database tool to access the Vault Directory database.

## Notes on the Indexing data structure of the Vault Directory database

Each Indexing service has an entry in the Directory database, referred to as the `IndexingServiceEntry`. Each `IndexingServiceEntry` contains the ID of a `ComputerEntry` in the Directory database. The `ComputerEntry` contains the name of the computer on which the Indexing service is installed.

An Indexing service has one or more root path locations. These are the folders on the local computer in which the Indexing service stores index data, such as `D:\VaultData\Indexes`.

There is a Vault Directory database entry for each root path location. This is the `IndexRootPathEntry`. Each `IndexRootPathEntry` contains the folder name for the root path location in the `IndexRootPath` field, and the `IndexingServiceID` for the corresponding Indexing service in the `IndexServiceEntryID` field.

An `IndexingServiceEntry` does not contain a list of its `IndexRootPathEntry` records. The link is the other way round; an `IndexRootPathEntry` contains a pointer to its `IndexingServiceEntry`.

Each archive has a Vault Directory database entry. This is the `VaultEntry`. Each `VaultEntry` contains the ID of the `IndexRootPathEntry` where the archive's index data is stored.

## Moving the Indexing service

We recommend that, when moving an Indexing service's data, you move whole root paths intact and do not change the `IndexRootPathEntry` used by individual archives. These instructions describe moving whole root paths.

In the instructions below, the computer from which you are moving the Indexing service is the source computer, whereas the computer to which you are moving the service is the target computer.

### To move the Indexing service

- 1 Install the Enterprise Vault software on the target computer, as described in the *Installing and Configuring Enterprise Vault* manual.
- 2 Configure an Indexing service on the target computer.

You do not need to create root path locations using the Administration Console. Any locations that you create with the Administration Console are not used for the indexes moved to the target computer.

You can also move data to an existing Indexing service, using exactly the same steps below. The moved indexes are placed in new root path locations and do not share existing root path locations.

- 3 Perform the following steps to obtain the Vault Database Directory entry for the Indexing service on the target computer:
  - Search the ComputerEntry records in the directory until you find the entry for the target computer.
  - Note the ComputerEntryId for this entry.
  - Search the IndexingServiceEntry records in the directory for the one that contains this ComputerEntryId.
  - Note the IndexingServiceEntryId of this IndexingServiceEntry record.
  - You use this in [9](#).
- 4 Perform the following steps to find the Directory database entry for the Indexing service on the source computer:
  - Search the ComputerEntry records in the directory until you find the entry for the source computer.
  - Note the ComputerEntryId for this entry.
  - Search the IndexingServiceEntry records in the directory for the one that contains this ComputerEntryId.
  - Note the IndexingServiceEntryId of this IndexingServiceEntry record.
  - You use this in [5](#).
- 5 Perform the following steps to identify all the Indexing service root path locations on the source computer:
  - Search the IndexRootPathEntry records in the directory for those that contain the IndexingServiceEntryId for the source computer.
  - This is the value you obtained in [4](#).
  - Decide which root path locations to move to the target computer. You can choose to move all of them, if you want to move the entire Indexing service to a new computer, or only some of them, if you want to spread the load between two Indexing services.
  - Make a list of all the root path locations that you want to move. This list should record the IndexRootPathEntryID for each root path and the IndexRootPath folder where the index data is stored.
- 6 Perform the following steps to create folders on the target computer corresponding to the root path locations:
  - On the target computer, manually create one folder for each root path on the list that you made in [5](#).

There is normally one root path for each disk used for storing index data. If the target computer has fewer disks than the source computer, this may not be possible. In this case, create multiple folders on the same disk.

There is no harm in this: the important thing is to create as many folders as there are root paths to be moved.

Do not try to combine multiple root paths into one, or to split the data within a root path and store it in multiple root paths.

- Assign one of these folders to each root path on the list that you made in 5.
  - You must create each new folder on the target computer on a disk with enough free space to hold all the data stored within its corresponding root path on the source computer.
  - If using NTFS, modify the security permissions on each folder (and on each file created in the folder) so that it is fully accessible to the Administrators group but not accessible to anyone else.
- 7 Use the Service Control Manager to stop the Indexing services on both the source and target computers.
  - 8 Wait until both services have stopped.
  - 9 For each root path location on the list that you created in step 5, do the following:
    - Recursively copy all the files and subfolders from the root path location on the source computer to the corresponding folder on the target computer (that is, the folder you created in 6).

There must be a one-to-one correspondence between the root path locations on the source computer and the new folders on the target computer. Do not use existing folders on the target computer, and do not copy more than one root path to the same folder.
    - When the data has been safely copied, use your database tool to select the root path's IndexRootPathEntry in the directory, using its ID recorded on the list made in 5.
    - Change the value in the IndexingServiceEntryID field to the ID that you obtained in 3.
    - This associates this IndexRootPathEntry with the Indexing service on the target computer.
    - Change the value in the IndexRootPath field to the name of the folder on the target computer into which the data for this root path has just been copied. Use the full, correct path name for the folder, including the drive letter.

- Ensure that the modified IndexRootPathEntry is written back to the directory.

Do not delete any data from the source computer at this stage.

**10** Perform the following steps to start the Indexing services:

- Start the Indexing service on the target computer.
- Identify all the archives whose data has been moved by searching the directory for all VaultEntry records that contain one of the IndexRootPathEntry IDs on the list created in [5](#).
- Verify that the data has been copied and that the Vault Directory database has been updated correctly. You can do this by using the Web Access application to search each archive.
- When you are sure that the target computer is working correctly, restart the Indexing service on the source computer if it still contains other root paths that were not moved.
- Do not delete the index data from the source computer until you have safely backed it up on the target computer.





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