

# Enterprise Vault 9.0 Archiving from Exchange Server 2010

*Dan Strydom  
Technical Field Enablement  
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# Contents

- Introduction ..... 1
- Documentation and further Deployment Resources ..... 1
- Support for Exchange Server 2010..... 2
- Overview of changes in Exchange Server 2010 ..... 2
- Enterprise Vault System Mailbox Requirements..... 3
- Support for Data Availability Groups (DAG) ..... 4
- Customer Scenario ..... 5
- Journal Archiving Integration ..... 8
- Outlook Web App Integration ..... 10
- Appendix A – Frequently Asked Questions
- Appendix B - New Prerequisites for Exchange Server 2010 and Enterprise Vault 9.0

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[ev-tfe-feedback@symantec.com](mailto:ev-tfe-feedback@symantec.com)

## Introduction

Microsoft Exchange Server 2010 is the latest release in Microsoft's messaging and collaboration software, offers customers many new features and an enhanced client experience. With the release of Enterprise Vault 9.0 Symantec introduced full support for Exchange Server 2010 SP1. Enterprise Vault supports Mailbox, Journal and Public Folder Archiving, as well as support for Outlook Web App and PST Ingestion.

The purpose of this document is to:

- Provide a high-level overview of changes in Exchange Server 2010 that affects customers using Enterprise Vault
- Describe the interaction between Enterprise Vault 9.0 and Exchange Server 2010
- Provide a typical customer scenario that highlights steps required to migrate to Exchange Server 2010 from an earlier release of Exchange, including considerations for Enterprise Vault both pre and post migration.

## Documentation and further Deployment Resources

This whitepaper is not aimed at providing detailed implementation or configuration steps, please refer to the documents listed below. The documents below are located in the Enterprise Vault installation media.

- **EV 9.0 Release Notes** – ReadMeFirst\_en.htm – Ensure that you read this first for the latest information regarding Enterprise Vault 9.0;
- **Introduction and Planning** – Review this for high level Enterprise Vault component architecture. This document is helpful for understanding how Enterprise Vault works at a high level and will help with planning the deployment of an Enterprise Vault environment;
- **Deployment Scanner** – Use this for confirming minimum requirements and prerequisites before installing Enterprise Vault;
- **Installing and Configuring** - This document describes common installation and configuration tasks and provides pointers to component specific "Setting Up..." guides;
- **"Setting Up..." Guides** – Several "Setting Up..." guides are provided for each major component such as File System Archiving, Exchange Server Archiving, etc. These provide component specific installation and configuration guidance;
- **Administrators Guide** – This document provides steps for common administrative tasks.

### Support for Exchange Server 2010

Enterprise Vault 9.0 offers support for Exchange Server 2010 SP1. Only the Exchange Server 2010 SP1 release will be supported, no support will be offered for Exchange Server 2010 OR (Original Release).

In addition to support for Database Availability Groups (DAG) and Client Access Server (CAS) proxying for clients, Enterprise Vault 9.0 also introduced support for archiving of clear text journal copies of rights management protected messages. Full support is also offered for the Outlook Web App interface.

### Overview of changes in Exchange Server 2010

This section will cover some of the changes in Exchange Server 2010 that affects customers using Enterprise Vault 9.0.

Exchange Server 2010 introduces a number of architectural changes including Database Availability Groups (DAG) and Client Access Server (CAS) proxying for clients.

Database Availability Groups are defined as a group of Exchange Servers hosting a set of Exchange Mailbox databases, with each member server hosting a copy of a database within the group. Only one database can be active at a time, and DAGs can spread geographic locations to provide disaster recovery.

To facilitate the automatic re-redirecting of Outlook clients to the correct Exchange Mailbox Server in the event of a database failover, a new access model has been introduced in Exchange Server 2010 whereby email clients (such as Outlook and Enterprise Vault<sup>1</sup>) connect to the CAS servers instead of the traditional direct connection to the Exchange Mailbox Server. The following diagram shows the traditional client connection model used Exchange Server versions prior to Exchange Server 2010.

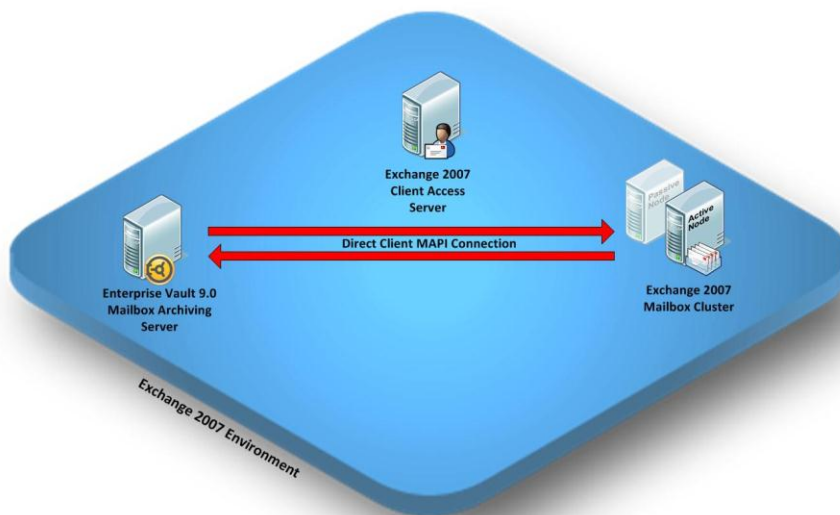
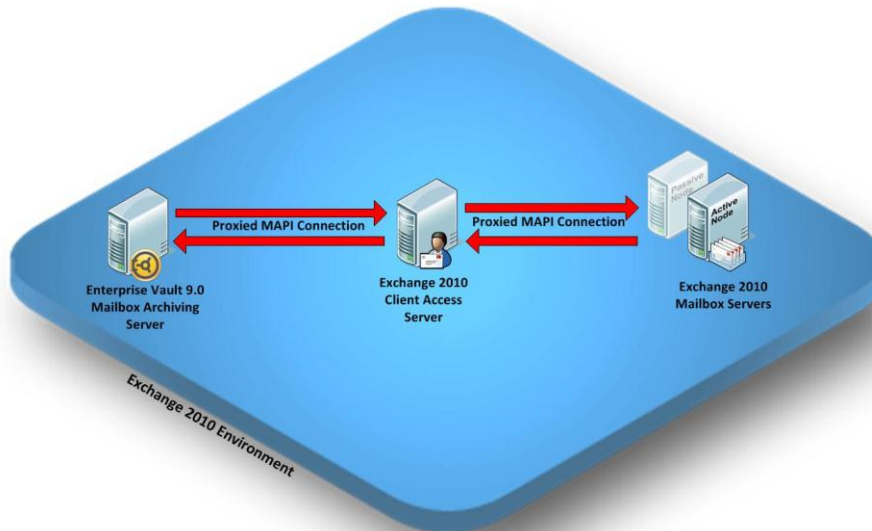


Figure 1 - Older versions of Exchange used a direct MAPI connection

<sup>1</sup> From a connection standpoint Enterprise Vault simply operates as an Outlook client when connecting to an Exchange Mailbox Server

To support the DAG architecture the Exchange 2010 Client Access Server is used to proxy all client connections. Clients no longer connect directly to the Exchange Mailbox servers, and similarly Enterprise Vault will no longer have direct communication with the Exchange Mailbox servers.

The following diagram shows the Exchange Server 2010 client connections being proxied by the Client Access Servers.



**Figure 2 - Exchange Server 2010 Proxied MAPI connection**

In a DAG environment a mailbox can be hosted on any of the Exchange Mailbox Servers within the group, and the CAS server will direct the client connection to the mailbox server hosting the active copy of the database where the mailbox resides. This client re-direct is seamless, without having to change the Outlook profile the user can be redirected to the appropriate server in the event of a database failover.

Enterprise Vault will still target the Mailbox servers in the Vault console, but the Outlook MAPI profile on the Enterprise Vault server will automatically be configured to connect to the CAS server.

## Enterprise Vault System Mailbox Requirements

In Exchange Server 2010 Microsoft introduced client throttling policies to prevent a single user from using too many resources on the Exchange Server. This restriction will prevent Enterprise Vault from achieving optimum archiving throughput, and one of the new pre-requisites for Exchange Server 2010 archiving is to disable this throttling policy for the Vault Service Account<sup>2</sup>.

Before you can disable the throttling policy, you need to ensure that the Vault Service account has an associated Exchange Server 2010 mailbox. Once a mailbox has been created, you can disable throttling for the account's security identifier, see Appendix B for necessary steps.

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<sup>2</sup> Or any other service account used by the Enterprise Vault archiving tasks

Note that in cross-forest environments the service account should have a linked mailbox associated.

### Support for Exchange Server Data Availability Groups (DAG)

When configuring Enterprise Vault to Archive from an Exchange mailbox server, a mailbox archiving task is associated with each mailbox server. Only active copies of databases are archived on that server, Enterprise Vault does not archive from passive database copies.

It is unlikely that the databases will remain active on the Exchange Mailbox server where they were initially attached to when the Mailbox Archiving task were created. For this reason a new tab has been added to the properties pages of any mailbox archiving task that targets an Exchange 2010 server. An example of this is shown in figure 3 and shows that the task is currently able to process mailboxes in 3 mailbox databases A-DB1, B-DB1 and Mailbox Database 0045851297.

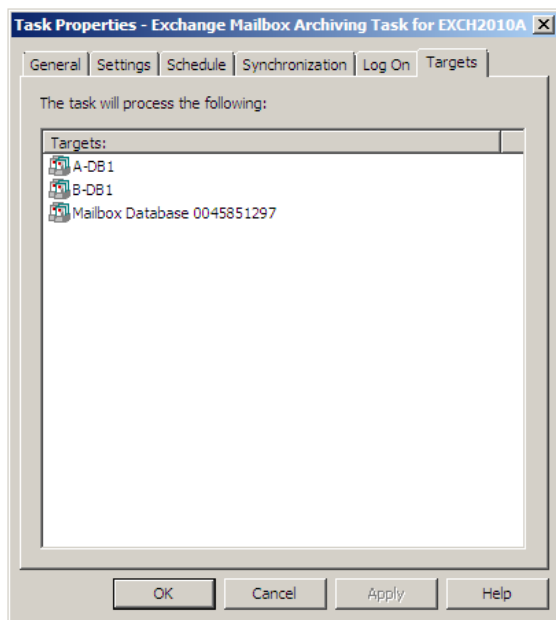


Figure 3 - Mailbox Archiving Task Properties Targets tab

The provisioning task is responsible for keeping the locations of mailboxes up to date, and is able to update the targets list above in the mailbox archiving task. By default the provisioning task runs once a day with the option to run twice a day. It is recommended that the provisioning task is scheduled to run immediately prior to an archive run so the archive task has the most up to date information about the mailboxes it is processing.

In the event of a database failure, Exchange will make another passive copy of the database active on a different Exchange server. The Enterprise Vault mailbox archiving task that processed the failed copy of the database will continue to process the new active copy of the database (the Exchange Client Access server will re-route the MAPI connections) until the Provisioning Task has run. Once the Provisioning Task has run, the Targets container for that task will be updated, and the database that failed over will from that point onwards be processed by the Mailbox Archiving task associated with the new Exchange Mailbox Server.

If an administrator is made aware of a mailbox database failover they should run the provisioning task to update the mailbox locations. If a DAG is failed over to a node that is not added to the Vault console as an archiving target and no Mailbox Archiving task for that server exists, the mailbox will become

orphaned as Enterprise Vault has no means to connect and archive from that mailbox<sup>3</sup>. Should this situation occur the Provisioning Task will detect the mailboxes in this state and will log an event in the “Symantec Enterprise Vault” container within the Vault server’s event log. To fix this behavior the administrator can add the new Exchange server in the Vault administrator console as an archiving target and create a task for that Mailbox server, or alternatively fail the databases back to the original server.

If a MAPI error occurs due to the failover of a database, the archiving task will pause for 1 minute before attempting the connection again. It is expected that in the event of a failover that the new target Exchange Mailbox Server will have the DAG group active within 30 seconds.

Once the failover has occurred, the CAS server will automatically route connections to the new Exchange Server. If the database is still unavailable the task will pause again until the database becomes available. For archiving tasks targeting older versions of Exchange the retry sleep interval is set to 10 minutes.

Additionally a task can now continue to process requests even if the targeted member of the DAG is unavailable (server is down). This functionality only works if the system mailbox for the task is hosted on a database that has more than one copy and has successfully failed over to another server.

### Customer Scenario

This section will focus on a common customer scenario and what the effect of database failover will be at any given time. The customer described in this scenario requires high availability and disaster recovery within their Exchange environment. The Exchange design states that the mailboxes should be evenly spread across two Exchange Mailbox servers in the Primary data center, with a third Exchange Mailbox server in a remote site capable of hosting mailboxes from both primary Exchange mailbox servers.

#### Environment description:

- A Primary Data Centre and a DR Data Center
- 100Mbit LAN Extension between data centers
- 5,000 active Exchange Server 2010 mailboxes
- Mailbox Journaling enabled for all users
- 2 Exchange Mailbox servers in the Primary data center
- 1 Exchange Mailbox server in the DR site
- An existing Enterprise Vault 9.0 environment, consisting of one Mailbox Archiving Server and one Journal Archiving server

#### The Exchange storage databases are set out as follows:

- One Database Availability Group, DAG1
- MailboxServer1, MailboxServer2 and MailboxServer3 are members of DAG1
- Mailbox databases on MailboxServer1 are set to copy to MailboxServer2 and MailboxServer3

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<sup>3</sup> This situation can be avoided by ensuring all potential DAG owners of the mailbox database are added in the Vault console as archiving targets, and associated archiving tasks are created for the nodes. In order to add the server as an archiving target and create the mailbox archiving task, it may be required to perform a temporary database failover to the server you wish to add, in the event of that server not hosting any active databases

## Enterprise Vault 9.0 Archiving from Exchange Server 2010

- Mailbox databases on MailboxServer2 are set to copy to MailboxServer1 and Mailboxserver3
- JournalDatabase1 is hosted on MailboxServer1, and configured to copy to MailboxServer3

The customer is in the process of migrating from Exchange 2007, and at this point they have not moved any mailboxes across to the new environment.

The diagram below details the customer's Exchange 2010 configuration.

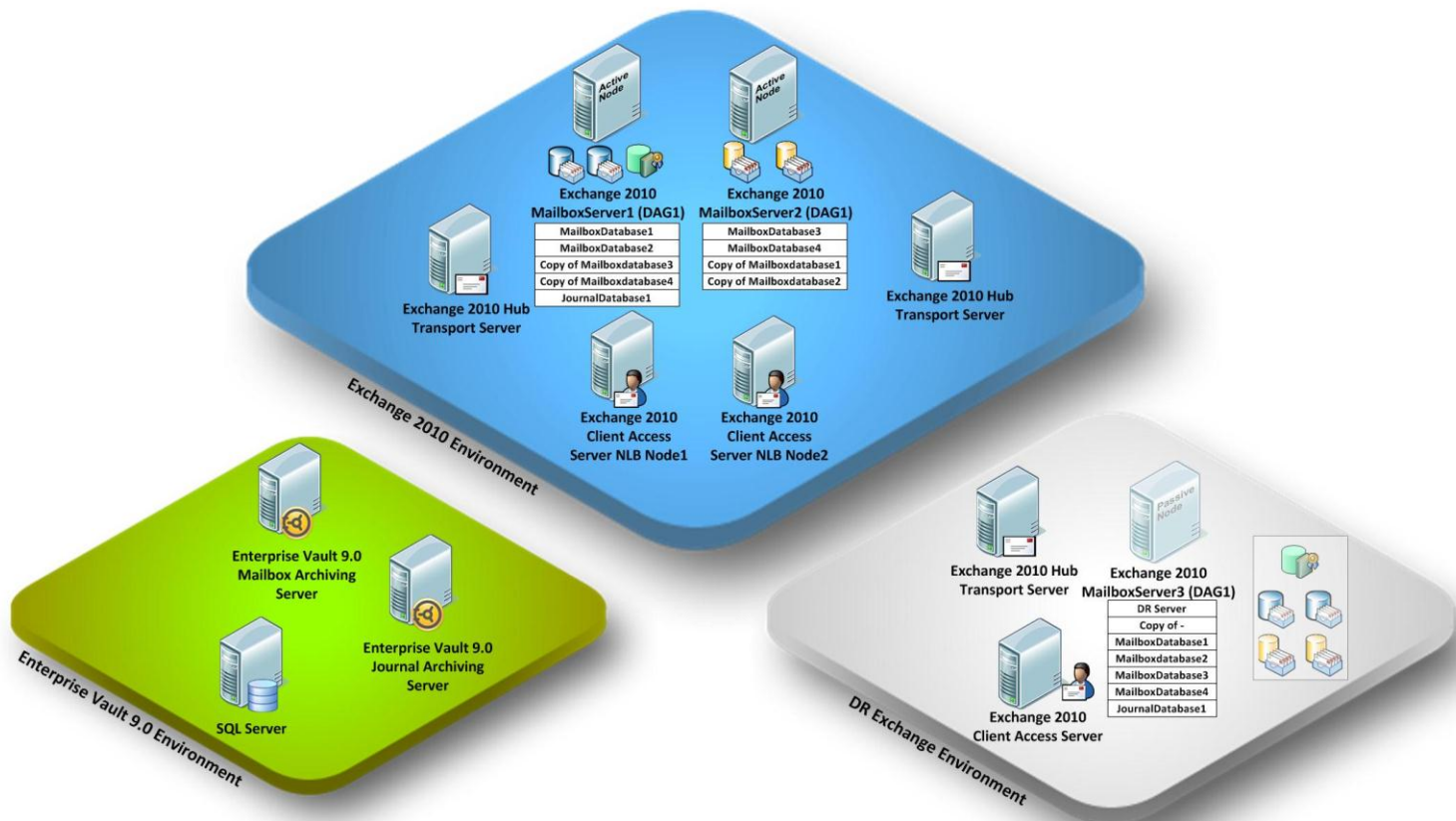


Figure 4 - Customer Scenario

The Enterprise Vault administrator performs the following tasks before any mailboxes can be moved to the new environment:

- Create a mailbox for the Vault Service account if one doesn't already exist.
- The administrator confirms that both Enterprise Vault 9.0 servers have minimum Outlook 2007 SP2 with hotfix KB968858.
- As per best practice recommendation a service mailbox should be created for every Exchange Mailbox server that will potentially host one of the databases. A total of 3 System Mailboxes will therefore be required. The Vault Administrator requests that the following mailboxes are created:
  - zz\_EV\_System-MailboxServer1 to be placed in the MailboxDatabase1 database
  - zz\_EV\_System-MailboxServer2 to be placed in the MailboxDatabase3 database



- zz\_EV\_System\_MailboxServer3 to be placed in the MailboxDatabase4 database
- The administrator runs the required PowerShell scripts, detailed in Appendix B of this document. The scripts can be run from any Exchange 2007/2010 server.

At this point the administrator is able to add MailboxServer1 and MailboxServer2 to the Vault Console as archiving targets and create the Mailbox Archiving tasks, as both servers are hosting active databases. However in order to add the DR Exchange MailboxServer3, MailboxDatabase4 (which hosts the system mailbox for that server) must first be failed over to this server.

The administrator performs the failover of MailboxDatabase4 to MailboxServer3 and adds MailboxServer3 to the Exchange Targets section of the Vault Console and also adds the Mailbox Archiving Task, using zz\_EV\_System\_MailboxServer3 as the system mailbox for the archiving task. The administrator performs a failback so databases are active on MailboxServer2 again.

The Vault console should now show that there are three Mailbox Archiving tasks, one for each Mailbox server potentially hosting Exchange Mailboxes. All three tasks should be started and will remain in the "Running" state.

Configuring Journal archiving tasks and targets should be approached differently. Journal archiving requires that a single target and task are created for each server within the Enterprise Vault console.

For example in the above scenario JournalDatabase1 is active on MailboxServer1, so only a single Journal Archiving Task for MailboxServer1 is required. In the event of a failover to MailboxServer3, the Client Access Server will automatically re-direct MAPI connections to the appropriate server where the database is now active. Enterprise Vault will log a warning event stating that a re-direct is occurring but archiving will continue as normal.

### Journal Archiving Integration

Exchange Server 2010 provides Information Rights Management (IRM), a new feature that allows Outlook and Outlook Web Access users to protect their messages. Exchange Server 2010 also offers the ability to decrypt the IRM protected messages when Journaling is enabled, this feature is known as Journal Report Decryption.<sup>4</sup>

If Journal Report Decryption is enabled, both protected and clear-text messages are put in the Journal mailbox but only the clear text copy is used to build the index for that item. The clear text message is shown when message preview is enabled, and will also be used in Discovery Accelerator Export. With Journal Report Decryption disabled only the protected messages will be archived and only the metadata will be indexed.

The below example shows a Journal message when Journal Report Decryption is enabled, both protected and clear text copy of message are attached.

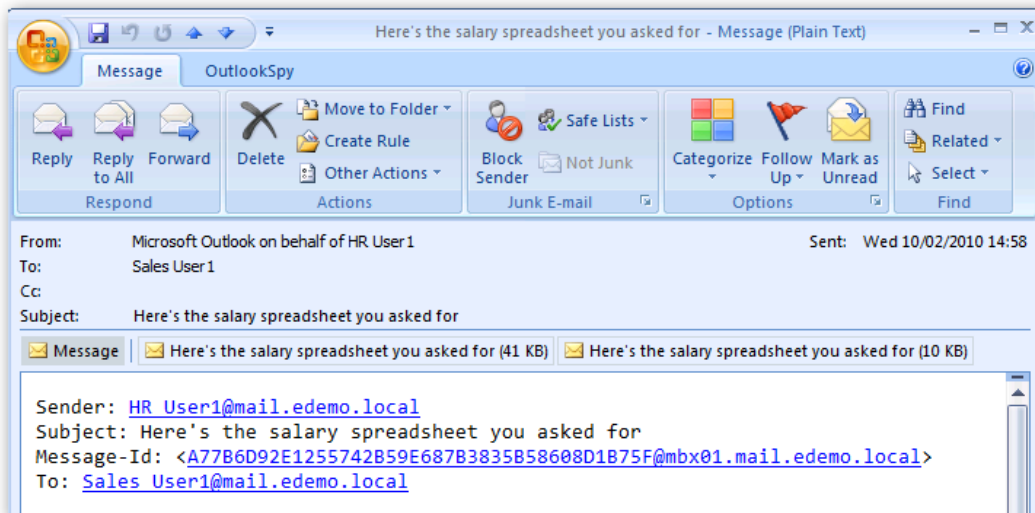


Figure 5 - Example Journal message with decryption enabled

By default Enterprise Vault does not require any additional configuration to support Journal Report Decryption. The following option appears in the Vault Console under the Advanced properties of the Exchange Journal Policy.

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<sup>4</sup> Note that attachments that are RMS protected before they were attached to the email will not be indexed by Enterprise Vault. The EV SMRM adapter may be necessary to decrypt previously encrypted or protected content.

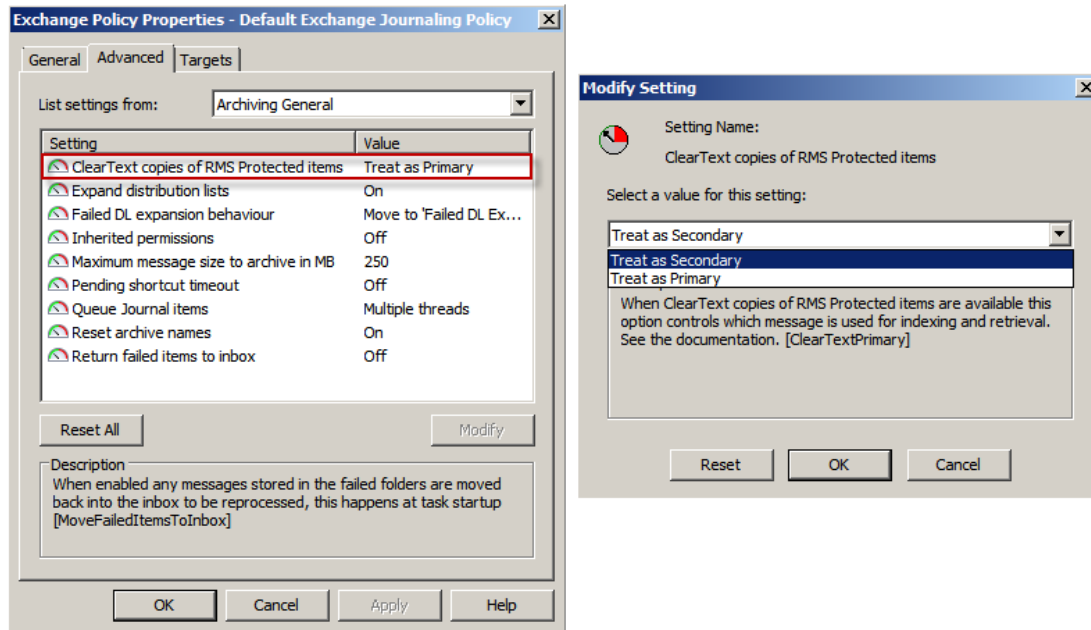


Figure 6 - Vault Administration Console option to index decrypted messages

The option “Treat as Primary” will enable full indexing of RMS Protected items. Selecting “Treat as Secondary” will prevent Enterprise Vault from indexing the body and contents of the protected message. This option should be selected if you use the SMRM adapter (a separate Enterprise Vault module) to perform decryption. Note that Exchange Journal Report Decryption is only available when using Microsoft Exchange Enterprise Client Access licenses; it’s not offered on the Standard Client Access license.

## Outlook Web App Integration

Outlook Web App 2010 support is configured by installing the Enterprise Vault Outlook Web Access extensions on the Exchange server hosting the Client Access Server role. The install package is an MSI file, and similar to Exchange 2007 no installation or configuration is required on the Exchange Mailbox Servers.

The new Enterprise Vault icons are highlighted in the screenshot below, as per previous versions the client functionality is controlled in the Exchange Desktop Policy settings.

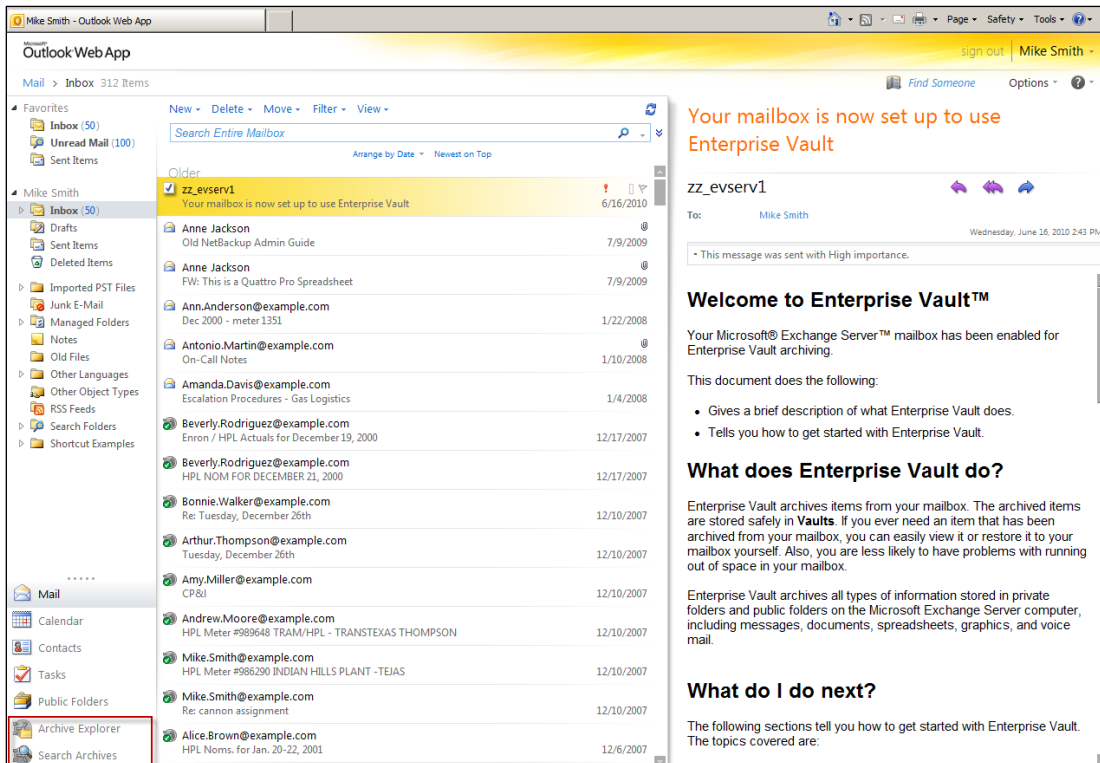


Figure 7 - Outlook Web App integration

Additional context (right-click) functionality has been built into the Outlook Web App interface for Enterprise Vault, an example is show below in figure 8.

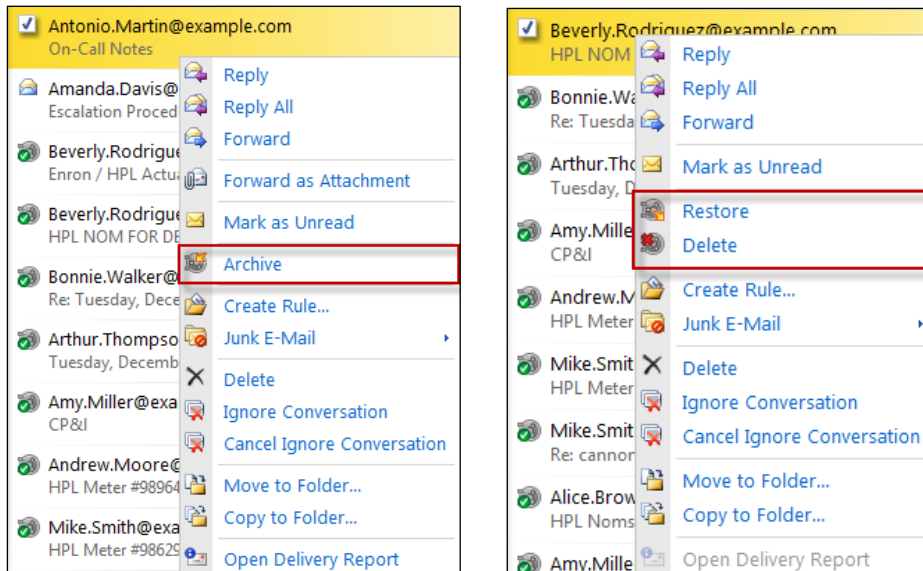


Figure 8 - Vault Context menu functionality within Outlook Web App

## Appendix A – Frequently Asked Questions

1. Is it possible to archive the Secondary Mailbox in Exchange Server 2010?
  - No, it's not possible at this point in time.
  
2. Is Outlook 2010 supported on the Enterprise Vault server?
  - Testing is still under way, please check the Compatibility Charts at <http://www.symantec.com/business/support/index?page=content&id=TECH38537>
  
3. Can the PowerShell scripts be run from any Exchange Server, or does it have to be the Mailbox Server?
  - The scripts can be run from any Exchange 2007/2010 server; it does not have to have the Mailbox Server role installed.
  
4. When migrating from Exchange 2003/2007 to Exchange 2010 what should I do with the original Vault Service Account mailbox?
  - The existing Vault Service account can be used for both Exchange environments but will need to be mail enabled (if not already) and that mailbox should be hosted in the Exchange 2010 environment. Once this has been done the Powershell scripts to disable throttling can be run against the account.
  
5. Do I have to run the Enterprise Vault Provisioning Task after performing an Exchange database fail-over to another Exchange server?
  - Providing all potential Exchange Mailbox Servers have mailbox archiving tasks assigned you don't have to run the provisioning task for archiving to continue. Consideration should however be given to CAS redirection and additional Enterprise Vault server load Refer to FAQ #7 and the Support for Exchange DAG section in this document for more information.
  
6. Can Enterprise Vault be configured to archive from passive Exchange database copies?
  - No, only active databases can be archived.
  
7. Are there any performance issues that might occur when an Exchange database fails over to another server within the DAG?
  - Yes, it is possible that performance would be affected. For example if you have a scenario where you have a 1:1 relationship of 1 Enterprise Vault server per Exchange Mailbox Server and with a DAG configuration similar to that of the customer scenario in this document, if MailboxDatabase1 fails over to MailboxServer2, once the provisioning task has run, the mailboxes in MailboxServer2 will now be processed by the second EV server as that is the server that hosts the archiving task for MailboxServer2. In addition to already archiving mailboxes in MailboxDatabase3 and MailboxDatabase4, the second EV server now has to process mailboxes in MailboxDatabase1 and MailboxDatabase2. In that event the Enterprise Vault server will have more mailboxes to process, and because the storage service associated with archives relating to mailboxes in MailboxDatabase1 and MailboxDatabase2 will reside on the first EV server, archived data will have to be transferred over MSMQ to the first EV server.

## Appendix B - New Prerequisites for Exchange Server 2010 and Enterprise Vault 9.0

In order to archive from an Exchange Server 2010 environment the following pre-requisites are required:

- Minimum version of Outlook on the Enterprise Vault Server<sup>5</sup>  
Outlook 2007 SP2 + KB968858 is the minimum supported Outlook version on the Enterprise Vault server when targeting Exchange Server 2010 SP1.
- The Vault Service Account requires a mailbox with throttling disabled<sup>6</sup>  
The account used to run the archiving tasks (typically the Vault Service Account) will require an associated mailbox. Previously this mailbox was optional, and generally used for testing. New to Exchange Server 2010 are throttling policies which can be used to control the Exchange resources used by a client, this policy must be disabled for the account under which the archiving task runs. A PowerShell script is provided with the Enterprise Vault media that will set the policy setting "RCAMaxConcurrency" to \$Null, effectively disabling throttling. If using PowerShell 2.0 the script can be run remotely, alternatively copy the EVThrottlingPolicy.ps1 to the Exchange Server server.

In the Exchange Server 2010 management shell run:

```
"SetEVThrottlingPolicy.ps1 -user <domain\username>"
```

where domain\username is the account that runs the tasks.

To succeed, the script must be run by a user that has the following minimum management roles: Active Directory Permissions, Exchange Servers and Organization Configuration. By default the Organization Management role group are assigned these roles.

When the cmdlet has been run successfully a new throttling policy will be created with the name "EnterpriseVault\_D0F41A15-9E91-D111-84E6-0000F877D428"

- New Permission requirements for Vault Service Account<sup>7</sup>  
Exchange Server 2010 updates the Active Directory schema with a new permission model. As a result of these changes the permissions for the account that runs the archiving tasks needs to be updated.  
A PowerShell script is provided with the Enterprise Vault media that will automatically apply the appropriate permissions. The script has the following usage:

```
SetEVExchangePermissions.ps1 -User <domain\username> [-Server <ExchangeServerName>] [-Action {Add | Remove}] [-Level {All | Provisioning}] [-Verbose {True | False}]
```

For example:

```
"SetEVExchangePermissions.ps1 -User mydomain\vsa -Server MailboxServer1 -Action Add"
```

This script must be run from Exchange Server 2010 (or Exchange 2007) Management Shell. It can also be run remotely using PowerShell v2.0 and providing the -Server parameter pointing to an Exchange 2010 server. The script must be run as a user who has sufficient permissions to

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<sup>5</sup> For more details refer to the "Installing\_and\_Configuring.pdf" guide section 1.6, page 60

<sup>6</sup> For more details refer to the "Installing\_and\_Configuring.pdf" guide section 1.6, page 63

<sup>7</sup> For more details refer to the "Installing\_and\_Configuring.pdf" guide section 1.6, page 65

execute the Add-ADPermission, Get-ExchangeServer and Get-OrganizationConfig Exchange cmdlets.

The below section summarizes the permissions should the administrator prefer to manually apply the permissions instead of running the PowerShell script.

#### Permissions requirements for account running the Exchange Archiving Tasks

- Container: CN=Configuration -> CN = Services -> CN=Organization -> CN=Administrative Groups -> Databases  
Permission: Mailbox Access Permissions (This object and all descendant objects)
- Container: CN=Configuration -> CN = Services -> CN=Organization -> CN=Administrative Groups -> Servers (if in mixed server mode)  
Permission: Mailbox Access Permissions (This object and all descendant objects)

#### Permissions for account running the Exchange Archiving and Provisioning Tasks

- Container: CN=Configuration -> CN=Services -> CN=Microsoft Exchange  
Permission: Read
- Container: CN=Configuration -> CN=Services -> CN= Microsoft Exchange -> CN =Transport Settings  
Permission: Read
- Container: CN=Configuration -> CN=Services -> CN= Microsoft Exchange -> CN =Transport Settings -> CN= Rules  
Permission: Read
- Container: CN=Configuration -> CN=Services -> CN= Microsoft Exchange -> Organization -> CN = ELC Folders Container  
Permission: Read (with inheritance)
- Container: CN=Configuration -> CN=Services -> CN= Microsoft Exchange -> Organization -> CN = Global Settings  
Permission: Read (with inheritance)
- Container: CN=Configuration -> CN=Services -> CN= Microsoft Exchange -> Organization -> CN= Transport Settings ->CN = Rules -> CN= Journaling  
Permission: Read (with inheritance)
- Container: CN=Configuration -> CN=Services -> CN= Microsoft Exchange -> Organization -> CN= Transport Settings -> CN= Rules -> CN= JournalingVersioned  
Permission: Read (with inheritance)

#### Permissions for Enterprise Vault System Mailbox<sup>8</sup>

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<sup>8</sup> For more details refer to the "Installing\_and\_Configuring.pdf" guide section 1.6, page 65



As per previous versions of Exchange the administrator will still be required to grant Send As permission to Enterprise Vault System Mailboxes. This can be done manually via the Exchange Management console, or by running the following Exchange PowerShell command:

```
Add-ADPermission -Identity <SystemMailbox> -User <TaskAccount> -AccessRights ExtendedRight -  
ExtendedRights "Send As"
```

## About Symantec

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For product information in the U.S., call toll-free +1 (800) 745 6054.

Symantec Corporation  
World Headquarters  
350 Ellis Street  
Mountain View, CA 94043 USA  
+1 (650) 527 8000  
+1 (800) 721 3934  
[www.symantec.com](http://www.symantec.com)

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