EAsE and Integrated Archive Platform (IAP)

HP Outlook Web Access (OWA) Extension on Exchange 2007

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Overview

Microsoft Outlook Web Access 2007 (OWA 2007)

Microsoft Outlook Web Access 2007 (OWA 2007) is a built-in component of the Exchange Server 2007 system that offers rich support for many of Exchange Server's capabilities in a Web-based client. OWA 2007 provides access to a user's mailbox from any desktop connected to the Internet and provides the full set of Outlook features through Microsoft Internet Explorer (IE).

HP Outlook Web Access Extension (OWA Extension)

HP Outlook Web Access Extension for Exchange 2007 (referred to as "OWA Extension" throughout the remainder of this document) provides the same transparent access to a user's mailbox, enabling users to view and open *archived* messages using Outlook Web Access in their Web browser.

When archiving messages using HP Email Archiving software for Microsoft Exchange (EAsE) and Integrated Archive Platform (IAP), a special icon (called a stub or tombstone icon) is displayed in OWA 2007 to show that a message has been archived. OWA Extension enables users to retrieve these tombstoned messages via Internet Explorer

EAsE versions 2.1 and 2.1.1 are bundled with OWA Extension; both installations are supported for Microsoft Exchange Server and OWA 2007 on Windows Server 2003 and 2008.

IMPORTANT NOTE:

OWA Extension is an *optional* feature for customers.

OWA Extension on Exchange 2007 Architecture

The OWA Extension architecture is based upon Exchange Web services, which are an integral part of the Exchange 2007 architecture. OWA Extension is a Web Service Client Application that is installed on the customer's Exchange 2007 server with a Client Access Server (CAS) role (described later in this document). OWA Extension integrates with IIS (which provides client communication) and Exchange Web Services (which provides communication to the previously installed Exchange/OWA 2007 environment). OWA Extension is integrated with IIS when the setup application (`HPOwaSetup.exe`) creates a virtual space named `PERSISTMailItem` within the OWA virtual directory.

Users may then log into the OWA client via Internet Explorer and connect to OWA 2007 and the OWA Extension integration.

The following architecture diagram shows how the OWA Extension application is integrated with the Exchange 2007 architecture.

Figure 1. The OWA Extension application and Exchange 2007 architecture

3
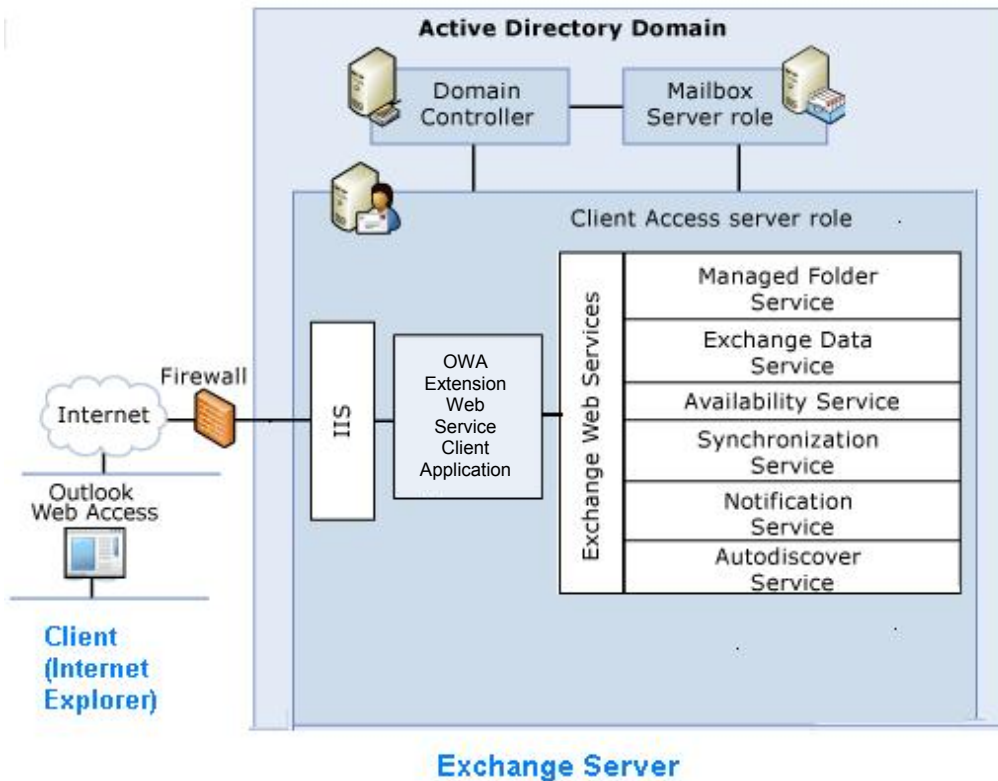
Microsoft Exchange 2007 Server with CAS Role

OWA 2007 and OWA Extension are supported for Exchange Server 2007 SP1 with Client Access Server (CAS) Role on both Windows Server 2003 and 2008. The CAS Role basically accepts connections from a variety of clients to allow them access to the Exchange Server infrastructure. To some extent, the CAS Role shares some similarities with the old front-end (FE) servers in Exchange 2000 and 2003.

Microsoft Exchange 2007 Server Types

Microsoft Exchange 2007 Server types are much different than previous versions of Exchange. OWA Extension can only be installed on Exchange Servers with CAS role as shown in Figure 1 above. An Exchange Server may also be configured as both a CAS role and a Mailbox server, as described in "OWA Extension Supported Configurations" section later in this document.

Exchange 2007 server types are listed below:

- **Client Access Server (CAS)** – Middle-tier server that supports Microsoft Outlook Web Access (OWA), Microsoft Exchange ActiveSync, and Outlook Anywhere client applications, and the POP3 and IMAP4 protocols. CAS also hosts Exchange Web Services. This server **does** require installation of both OWA 2007 and OWA Extension.

- **Mailbox Server** – Back-end server that can host mailboxes and public folders. This server does **not** require installation of OWA 2007 and OWA Extension.

The following Exchange 2007 server types are not relevant to OWA Extension and are only mentioned in the interest of completeness:

- **Unified Messaging Server** – Middle-tier server that combines voice messaging, fax, and e-mail messaging into a single messaging infrastructure. This server does **not** require installation of OWA 2007 and OWA Extension.

- **Hub Transport Server** – E-mail routing server that routes e-mail within the Exchange organization. This server does **not** require installation of OWA 2007 and OWA Extension.

- **Edge Transport Server** – E-mail routing server that typically sits at the perimeter of the topology and routes e-mail into and out of the Exchange organization. This server does **not** require installation of OWA 2007 and OWA Extension.

OWA Extension High-Level Workflow

This section describes the OWA Extension workflow.

When a user opens any mail in OWA 2007, it first checks the `registry.xml` file for any custom message class definitions (see below). If a match is found, control is redirected to the custom page where tombstone retrieval is handled. In the custom page, the mail item's DocRef is read and a DocRef Document Retrieval URL is constructed with the DocRef value along with values provided in `web.config`. The OWA Extension Exchange Web Service (EWS) client then parses the TNEF MIME message for non-mail items, and uses the DocRef Document Retrieval URL to send an HTTP request to retrieve the document from IAP. With this document, a temporary item is created in the RISSTemp folder under Drafts, and the item is displayed to the user.

Figure 2. OWA Extension Workflow
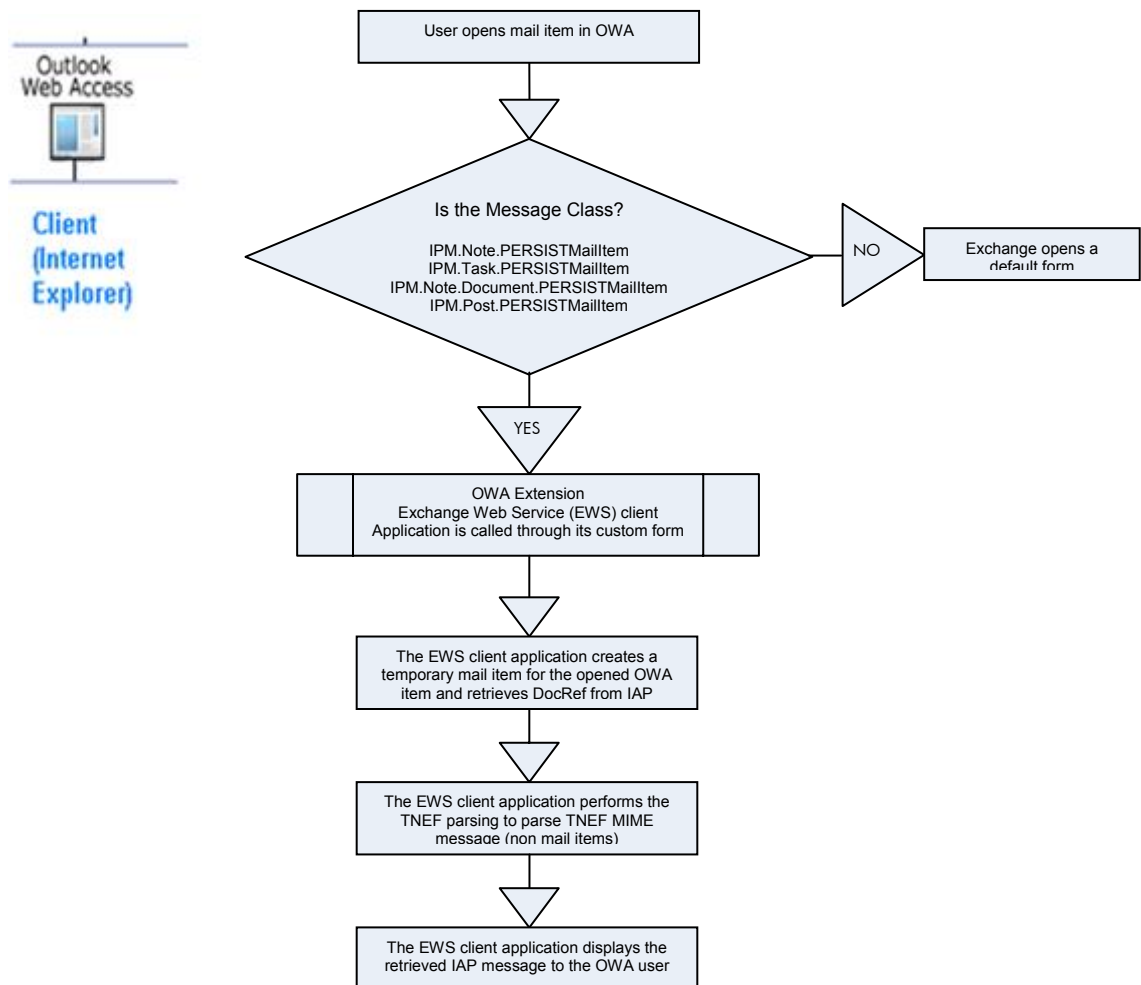
OWA Extension Supported Configurations

The following is a list of Exchange 2007 configurations which are supported with OWA Extension:

- Exchange 2007 CAS server + Exchange 2007 Mailbox server
- Exchange 2007 CAS server + Multiple Exchange 2007 Mailbox servers
- Exchange 2007 CAS, Mailbox server + Exchange 2007 Mailbox server
- Exchange 2007 CAS, Mailbox server + Multiple Exchange 2007 Mailbox servers
- Multiple Exchange 2007 CAS servers + Multiple Exchange 2007 Mailbox servers

Unsupported Configurations

- Exchange 2007 CAS server + Exchange 2003 back-end server
- Exchange 2003 front-end server + Exchange 2007 Mailbox server

OWA Extension Supported Versions

OWA Extension installations are supported for Microsoft Exchange 2000, 2003, and 2007.

The following versions of Microsoft Exchange Server are required to install and use the OWA Extension:

Microsoft Server Software	Service Pack	EAsE 1.5.x	EAsE 2.0	EAsE 2.1.x
Exchange 2007	SP1, Rollup 5 or later			X
Exchange 2003 (Enterprise and Standard Editions)	SP2	X	X	X
Exchange 2000	SP3	X	X	X

OWA Extension is supported **only** with the Microsoft Internet Explorer (IE) browser.

Refer to the *HP Email Archiving software for Microsoft Exchange Versions 2.1.x, 2.0, and 1.5.x Support Matrix* for more details:

http://spock.corp.hp.com/utility/document.aspx?docurl=Shared%20Documents/internal_documents/sw/ilm/rim_ease_2.1_2.0_1.5.x_support_matrix_2009_06_04.pdf

OWA Extension on Exchange 2007 Requirements

- OWA 2007 and Exchange 2007 SP1 or later
- Windows Server 2003 64–bit (SP2) or Windows Server 2008 x64 (SP2)
- .NET Framework2.0 with SP1
- Auto Discover and Exchange Web Services (EWS) must be configured
- Exchange Server must have Client Access Server (CAS) Role configured
- OWA Premium service is required to retrieve tombstoned messages

OWA 2007 Premium Requirement

OWA has two modes of operation: Basic and Premium. The mode of operation and configuration is an enterprise decision and is described in the Microsoft OWA installation manual.

OWA Basic is operationally similar to Premium, but has reduced functionality. OWA Extension will not work with OWA Basic since Basic lacks support for customizations such as custom forms or custom icons.

OWA Premium has the look and feel of Microsoft Outlook and uses extensions that are only available in Microsoft Internet Explorer. As such, OWA Extension is not supported on browsers such as Firefox or Netscape navigator.

For Microsoft Exchange Server 2007, OWA 2007 Premium is required to retrieve tombstoned messages with OWA Extension.

For Microsoft Exchange Server 2003, HP also strongly recommends the use of OWA Premium.

Dependencies

The OWA Extension application depends on the `.NET framework 2.0` libraries. It also depends on the Exchange 2007 library `Microsoft.Exchange.Data.Common.dll`.

ISA Server Support

Microsoft Internet and Security Acceleration (ISA) Server 2006 and Exchange Server 2007 were developed to co-exist and provide an increased level of security for a customer's messaging environment. HP EAsE 2.1.x now supports networks using ISA Server 2006, which provides enhanced security for OWA Extension and other client applications accessed over the Internet. The default ISA Server configuration supports OWA 2007 and OWA Extension. No special configuration is required.

Pre-installation Requirement for Known Issue (Exchange 2007 & Windows Server 2008)

AutoDiscovery is used by OWA Extension to "discover" or find on which mailbox server the user's mailbox resides, and to get information where Exchange Web Service (EWS) is hosted.

There is a known issue with the AutoDiscover Service under EAsE 2.1 OWA Extension installations for Exchange 2007 when installed on Windows Server 2008. Before installing OWA Extension on Exchange 2007 with Windows Server 2008, modify the registry key as documented on page 31 of the *Email Archiving software for Exchange 2.1 Installation Guide* in the "Installing and configuring HP OWA Extension" section:

> http://spock.corp.hp.com/utility/document.aspx?docurl=Shared%20Documents/internal_documents/sw/ilm/rim_ease_2.1_IG_2009_05_13.pdf

IMPORTANT NOTE:

This is **not** an issue with Exchange 2007 installed on Windows Server 2003.

Pre-installation Considerations

The following sections describe information you need to know or consider prior to installing OWA Extension on Exchange 2007.

OWA Extension Core Components

- **IIS Virtual Directory** – OWA Extension components reside in a virtual directory named "`PERSISTMailItem`". This virtual directory points to the location:

  ```
  <Drive>:\Program Files\Microsoft\Exchange
  Server\ClientAccess\Owa\forms\PERSISTMailItem
  ```

- **ASPX pages** – Pages which act as the custom forms; these are stored inside the above virtual directory.

- **Configuration File** – The settings used by OWA Extension are defined in the file `web.config`, which defines the IAP URLs, Exchange Server, and Domain Name and directory information.

- **dll Files** – The dll files required for the application are in stored the folder:

      <Drive>:\Program Files\Microsoft\Exchange
      Server\ClientAccess\Owa\Bin

- **Customization Files** – The files "`PERSISTMailItem.ico`" (an image file) and "`UIExtensions.xml`" (a configuration file) are the icon settings for `IPM.Note.PersistMailItem` message class and are installed in the Exchange path:

      \ClientAccess\Owa\forms\Customization\

OWA Extension User Interface Customization

- **Registry File** – This file defines the custom forms which are used by the different custom message classes defined for OWA Extension. The file contains the path of the aspx page for the four custom classes defined for OWA Extension, which are:

    - IPM.Note.PERSISTMailItem
    - IPM.Task.PERSISTMailItem
    - IPM.Post.PERSISTMailItem
    - IPM.Note.Document.PERSISTMailItem

  This file is installed into the Exchange path:

      \ClientAccess\Owa\forms\PERSISTMailItem\

- **Custom Icon** – The custom classes defined by OWA Extension make use of a custom icon image file to differentiate these items from the default message classes. OWA Extension requires the image file "`PERSISTMailItem.ico`" to exist in the path under the Exchange installation location:

      \ClientAccess\Owa\forms\Customization\

- **HTTP Size Limit** – The OWA Extension application updates the value of HTTP size limit to 50,000. This value is defined on the Exchange server in the file `Web.config`, which exists in folder

      \Exchange Server\ClientAccess\exchweb\ews\

  under the Exchange installation path. This is done to ensure that mail with larger attachments (up to 50 MB) can be retrieved and displayed.

Pre-installation Consideration – Calendar Items in OWA 2007

OWA Extension does **not** support retrieval of tombstoned appointment/ calendar items in OWA 2007. When Exchange Server 2007 is installed, users can *only* retrieve archived calendar items in Outlook.

This is due to a limitation in Microsoft Exchange 2007 – Calendar items are not extensible in OWA 2007. Their functionality cannot be customized, for example, to support an external archive such as the IAP. These types of items are therefore not retrievable from IAP using OWA Extension with OWA 2007.

Microsoft Exchange Server 2000 or 2003 customers who are considering an upgrade to Exchange Server 2007 should be aware of this reduced functionality. Support for archived calendar items **is** available in both OWA 2000 and OWA 2003.

Installing and Configuring OWA Extension

To install OWA Extension, the following must happen:

1. Microsoft Exchange Server 2007 (SP1, Update Rollout 5 or later) must be installed and configured with a CAS role (can also be a Mailbox Server) or on a standalone CAS server.
2. OWA 2007 must be installed and functional **before** installing OWA Extension.
3. The Exchange Administrator must create an archive service account (*HPAEServiceAccount*) with the following privileges necessary to perform the installation:
   - Must be a Domain Admin
   - Must have a mailbox in the domain
   - Must have full access to all other mailboxes
   - Must have permissions for 'send-as' and 'receive-as'
4. The System Administrator must run `HPOwaSetup.exe` on the Exchange Server with CAS role.
5. Enter the "IAP Address" (VIP in BlackBoxConfig.bct) and select "Install" to install OWA Extension binaries in OWA and register forms.

For complete details on installing, configuring, and troubleshooting OWA Extension for Exchange 2000, 2003, and 2007, refer to the *HP Email Archiving software for Microsoft Exchange Version 2.1 Installation Guide*, Chapter 5 ("HP OWA Extension installation and configuration") and Chapter 6 ("Troubleshooting"):

http://spock.corp.hp.com/utility/document.aspx?docurl=Shared%20Documents/internal_documents/sw/ilm/rim_ease_2.1_IG_2009_05_13.pdf

OWA 2003 versus OWA 2007 Installation

The installation script `HPOwaSetup.exe` (for OWA Extension application for Exchange 2007 and OWA 2007) takes the place of `CreateSite.vbs` and `OWASetup` which are used for OWA 2003 on Exchange 2000 and 2003 installations.

With OWA 2003 on Exchange 2000 or 2003, the installation of OWA Extension was different for environments that had a Single/Standalone Exchange Server versus Front-end and Back-end (FE-BE) and Clustered Exchange Servers. A full installation of OWA Extension was required for Single/Standalone Exchange Servers. For FE-BE or Clustered Exchange Servers, a full installation was only required for Back-end Exchange Servers and only a partial install for every Front-end Exchange Server.

This has changed with OWA 2007; OWA Extension installations are required on the Microsoft Exchange 2007 Server (SP1) with CAS Role.

IMPORTANT NOTE:

For OWA Extension for OWA 2003, there is a separate installer on Exchange Server 2003 (which is a legacy feature).

Running OWA Extension on Exchange 2007 Setup

When you first run **HPOwaSetup.exe**, you will see one field marked "Installed" with a green check mark and the rest of the fields marked as "Not Installed" with red X's next to them. This indicates that OWA Extension has **not** been installed.

In the IAP Addresses section, select "Secure Connection" if SSL is configured, then enter the WebUI IP (VIP) in the `http://` field (https:// if Secure Connection) and click the Install button to begin the OWA Extension installation.

Figure 3. Running HPOwaSetup.exe

10
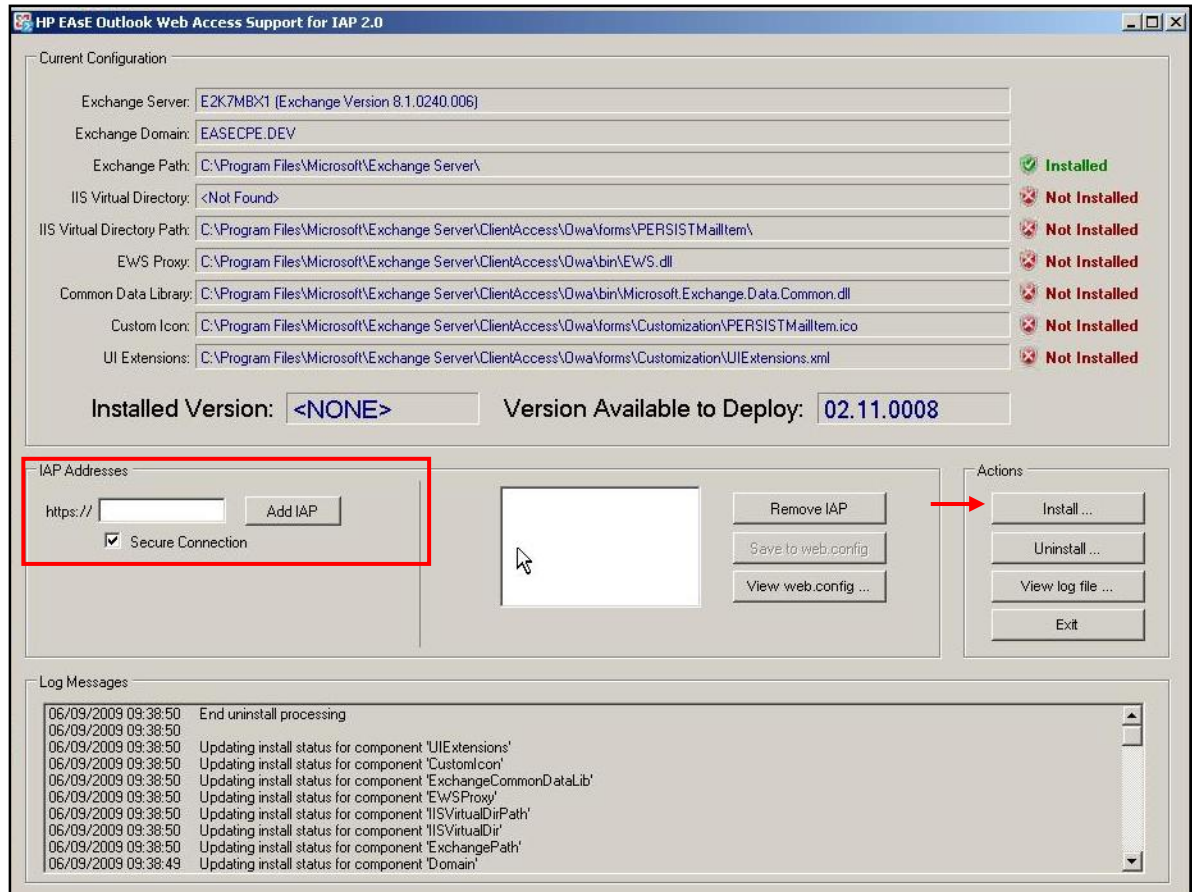
OWA Extension on Exchange 2007 Setup Completion

After OWA Extension is installed successfully, you will see green "Installed" check marks next to each field.

Figure 4. OWA Extension Installed
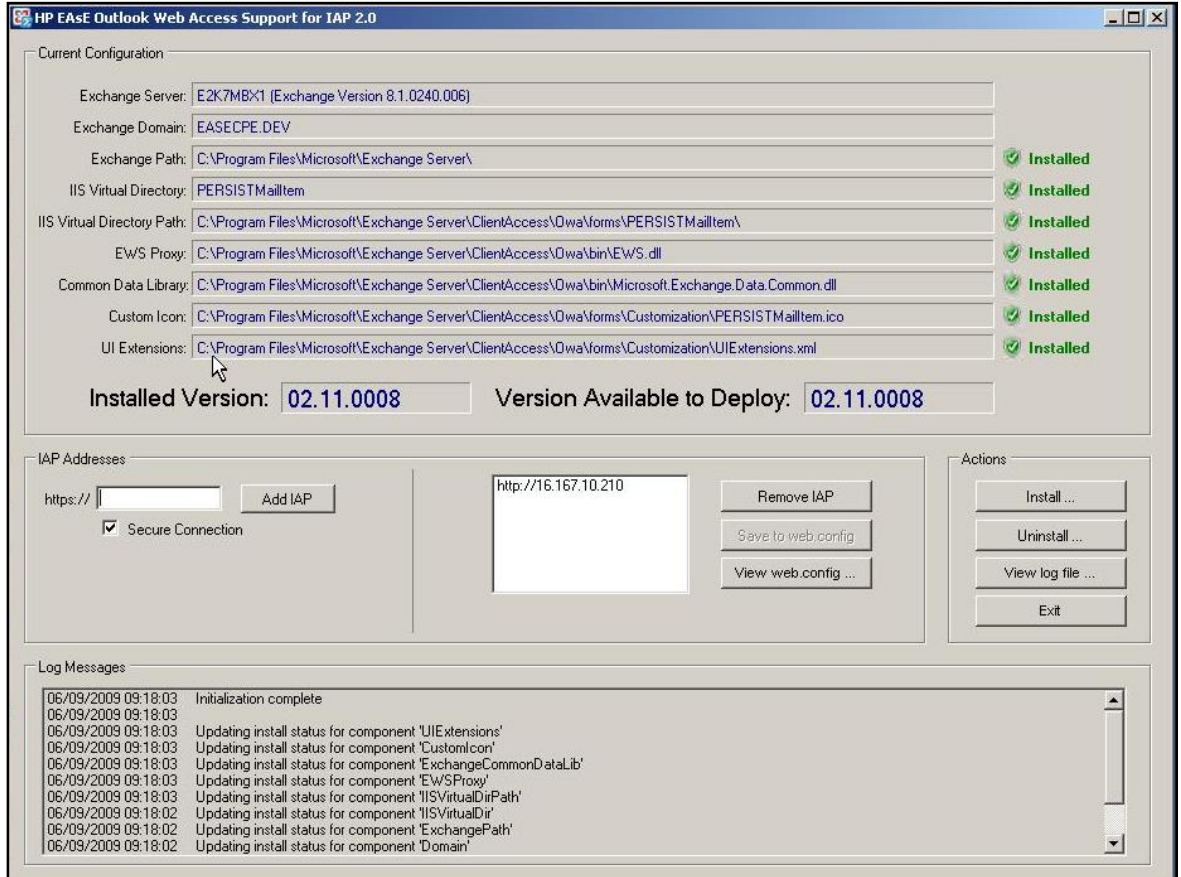
Connecting to OWA 2007 Client to Verify Installation

After the installation completes, connect to an OWA Client via Internet Explorer and sign on as an Exchange mailbox user. Verify that all EAsE-archived messages are marked with tombstones in the user's mailbox. Then open a tombstoned message (and its attachments if they exist) to confirm that the archived message is retrievable.

Figure 5. Opening OWA 2007 Client in Internet Explorer


Figure 6. Opening a Tombstoned Message in OWA 2007 via Internet Explorer
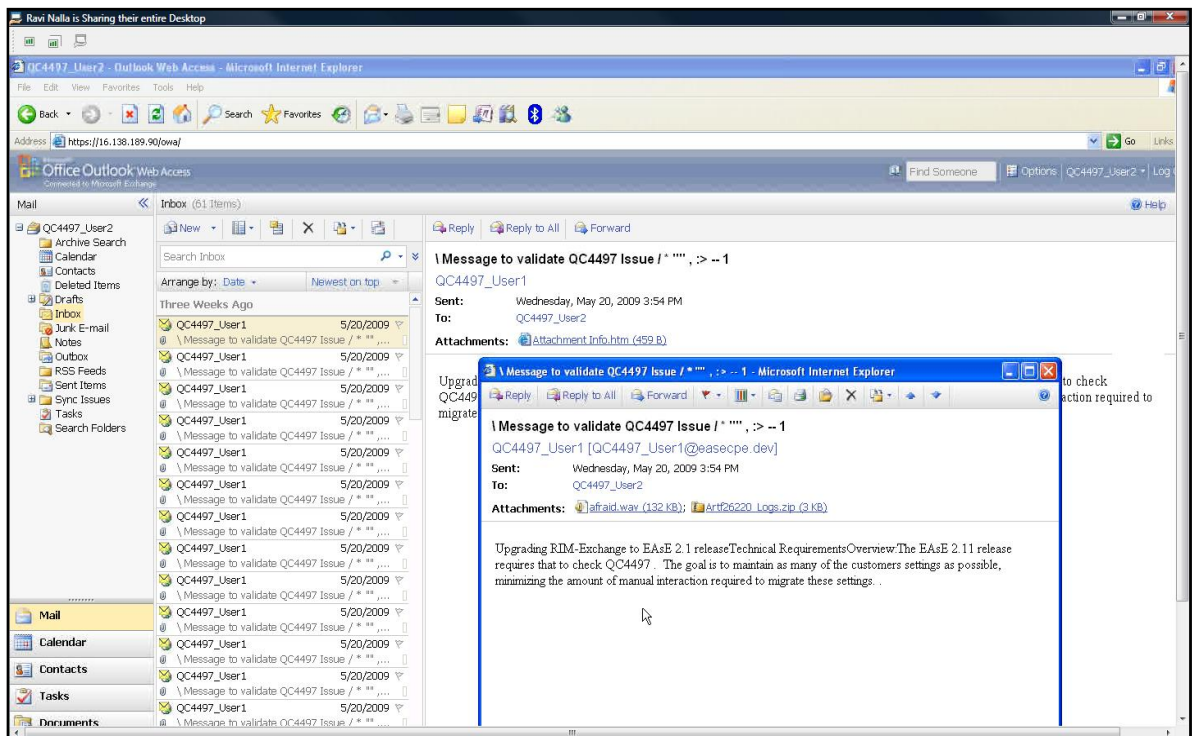
OWA 2003 versus OWA 2007 Tombstones

Note that under OWA 2003, a user does **not** see tombstone icons when initially logging into OWA to view his or her mailbox. The user must manually open each message individually before they can potentially see a tombstone on the upper left corner of the message indicating that the message has been archived by EAsE and IAP.

With OWA 2007, a user sees tombstone icons immediately when logging into OWA to view his or her mailbox. The user no longer has to open individual messages to determine whether the message has been archived.

Figure 7. OWA 2007 with OWA Extension Installation Tombstoned Messages
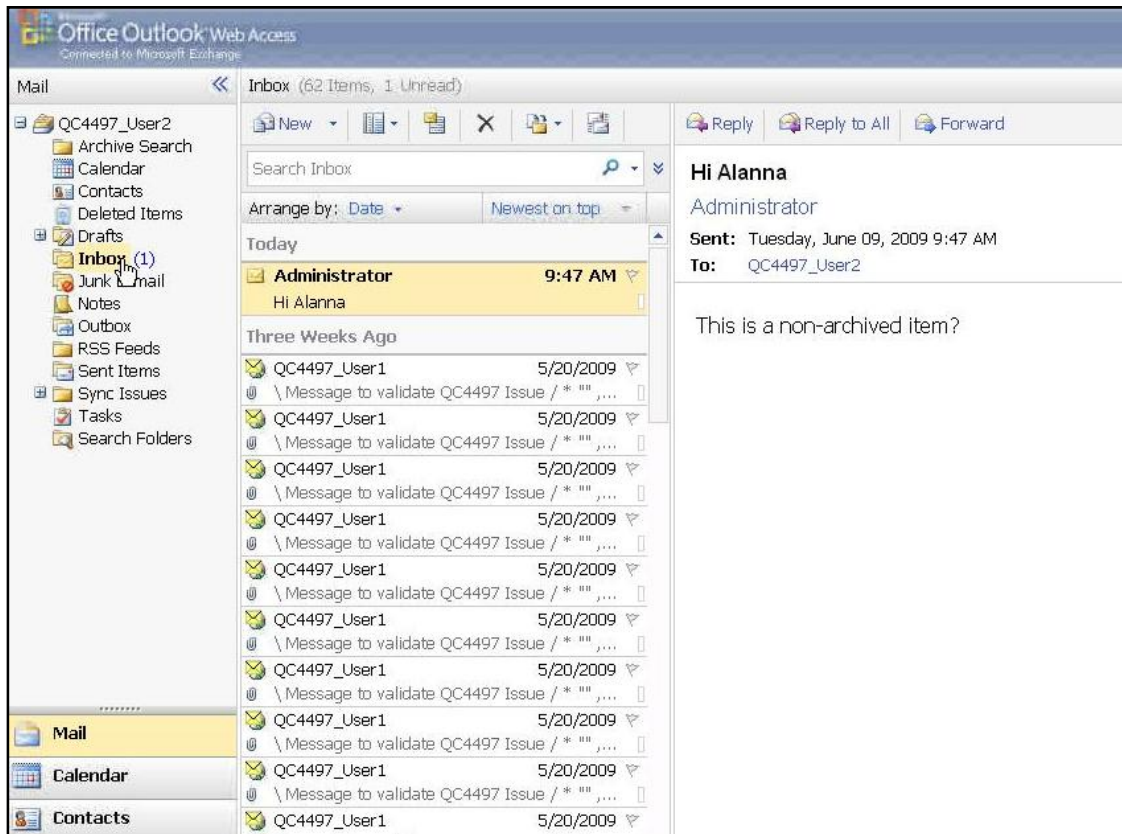
For More Information

Email Archiving software for Microsoft Exchange 2.1, 2.0 & 1.5.x Support Matrix:

http://spock.corp.hp.com/utility/document.aspx?docurl=Shared%20Documents/internal_documents/sw/ilm/rim_ease_2.1_2.0_1.5.x_support_matrix_2009_06_04.pdf

HP Email Archiving software for Microsoft Exchange 2.1 Administrator Guide, 3rd Edition:

http://spock.corp.hp.com/utility/document.aspx?docurl=Shared%20Documents/internal_documents/sw/ilm/rim_ease_2.1_AG_2009_05_13.pdf

HP Email Archiving software for Microsoft Exchange 2.1 Installation Guide, 3rd Edition:

http://spock.corp.hp.com/utility/document.aspx?docurl=Shared%20Documents/internal_documents/sw/ilm/rim_ease_2.1_IG_2009_05_13.pdf

Demo of new features for OWA 2007:

http://www.microsoft.com/exchange/2007/code/OWA/index.html

Feature Comparison between Outlook 2003, Office Outlook 2007, and Outlook Web Access 2007:

http://www.microsoft.com/exchange/2007/evaluation/featurecomparison.mspx

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