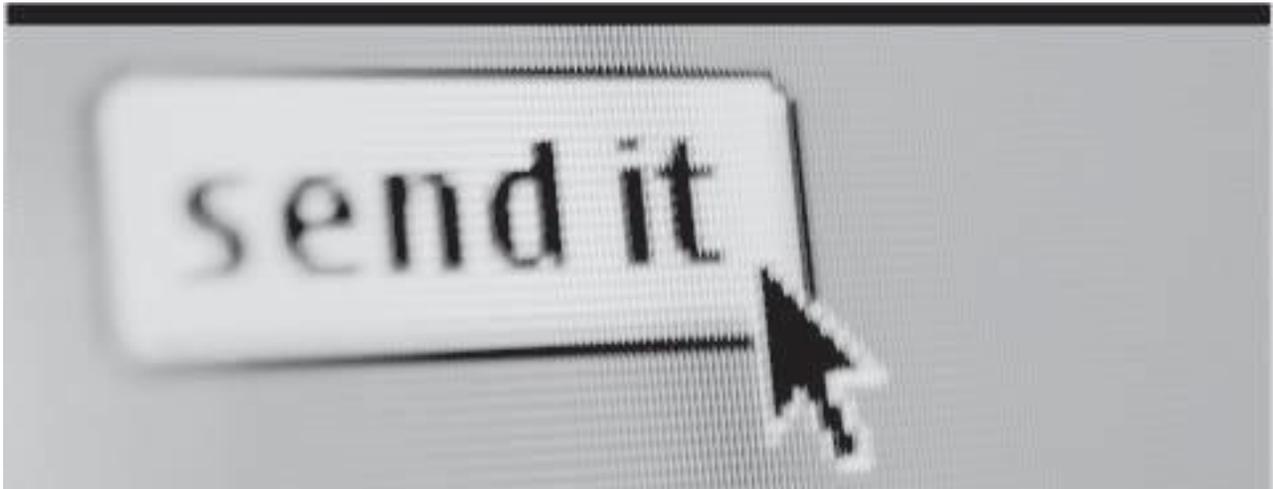


Email Management Services Archive Reviewer Guide

For Exchange Environments



Version 6.24 (1/2015)

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MessageOne

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About This Book

This chapter contains the following sections:

- ["Intended Audience" on page v](#)
- ["Conventions" on page v](#)

1. Intended Audience

This book is intended for EMS Archive Reviewers. Its content assumes that you understand general computer terminology and are comfortable using a web browser and performing tasks in a user interface.

2. Conventions

The documentation uses certain typographical conventions to make references to product elements easier to recognize and understand. These are described in the following table.

Table 5-1 Typographical Conventions

Display Format	Definition	Examples
blue, underscore	A hyperlink to either another location within the document or to a web site.	For more information, see "Conventions" on page v .
bold	Name of a screen, section, pane, box, or option in the user interface. The name of an executable file.	On the Select Permissions page, locate the Access Info pane of the User Account panel. To begin the installation, double-click setup.exe .
<i>Bold italic</i>	The name of a menu, button, or tab.	From the Start menu, select Programs .
serif	An entry you must type manually. A value you type in a box or select from a list. A field value that appears in the user interface.	At the command prompt, type <code>cmd</code> . From the Filter drop-down list, select <code>Starts with</code> . The Source field now reads <code>Imported from File</code> .

1. Overview

The EMS Archive allows you to search messages that have been retained as part of your organization's message archiving policies. If your organization uses Email Continuity, you can search these archived messages even when Email Continuity is not active.

1.1. Accessing the EMS Archive

Archive users can search their personal email archive from both desktop and mobile browsers.

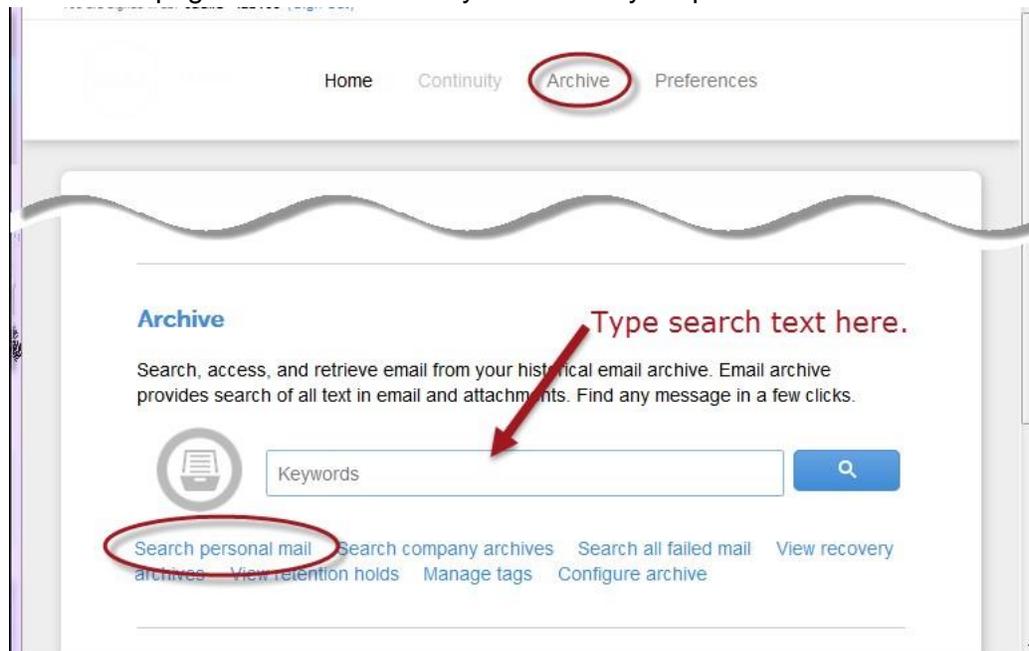
- For instructions to access the personal email archive search from a desktop browser, see ["Task 1.1. Access the EMS Archive to search Personal Email Archive" on page 2](#).
- For instructions to access the personal archive search from a mobile browser, see the *Mobile Webmail User Guide*.

As an Archive Reviewer, you have access privileges beyond the scope of a regular user. You can:

- Search archived email messages as required for human resources and other corporate activities. See ["Task 1.2. Access EMS Archive to search Company Archives" on page 2](#) and [Chapter 2. "Email Archive Searches" on page 13](#)
- If your organization has Expanded Archives Services, Archive Reviewers can search archived *instant messages* in addition to searching email messages. See [Chapter 3. "Instant Message Archive Searches" on page 48](#).
- Each Reviewer may be assigned one or more *Reviewer Groups*, which defines the scope of the messages the reviewer is allowed to search. For example, one Reviewer Group's scope may be emails from users in a specific division or department in a company, and another Reviewer Group's scope may be instant messages received during a specific time frame.
- Create *Retention Holds*, which are collections of messages resulting from archive searches. Placing messages into a Retention Hold causes them to be retained in the archive until an administrator removes the hold. See ["Retention Holds" on page 78](#)
- Generate *Recovery Archives* and *Discovery Archives*, which are collections of messages that meet specific search criteria. These messages can be restored to a designated mailbox by an EMS administrator or exported to a file using Export Manager. See ["Email and Instant Message Archives" on page 82](#)

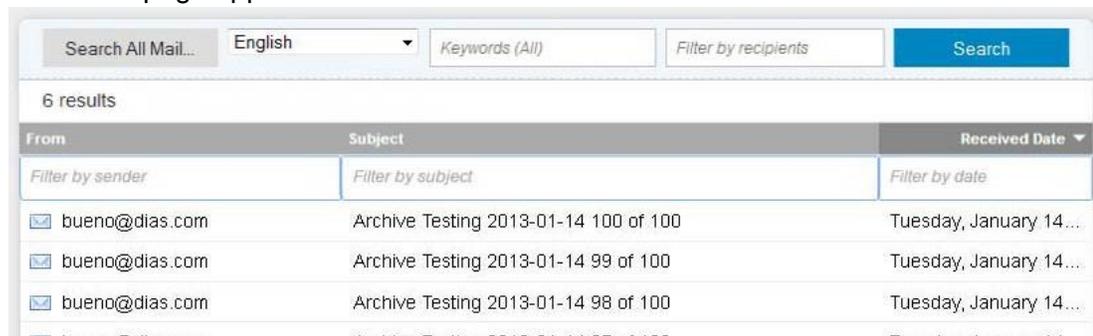
Task 1.1. Access the EMS Archive to search Personal Email Archive

- 1) Log into Email Management Services.
- 2) On the home page there are three ways to access your personal email archive.



- Click the **Archive** link in the menu at the top of the page.
- Click the **Search personal mail** link in the **Archive** section.
- Or type your search term directly in the **Keywords** text box, and click the search button.

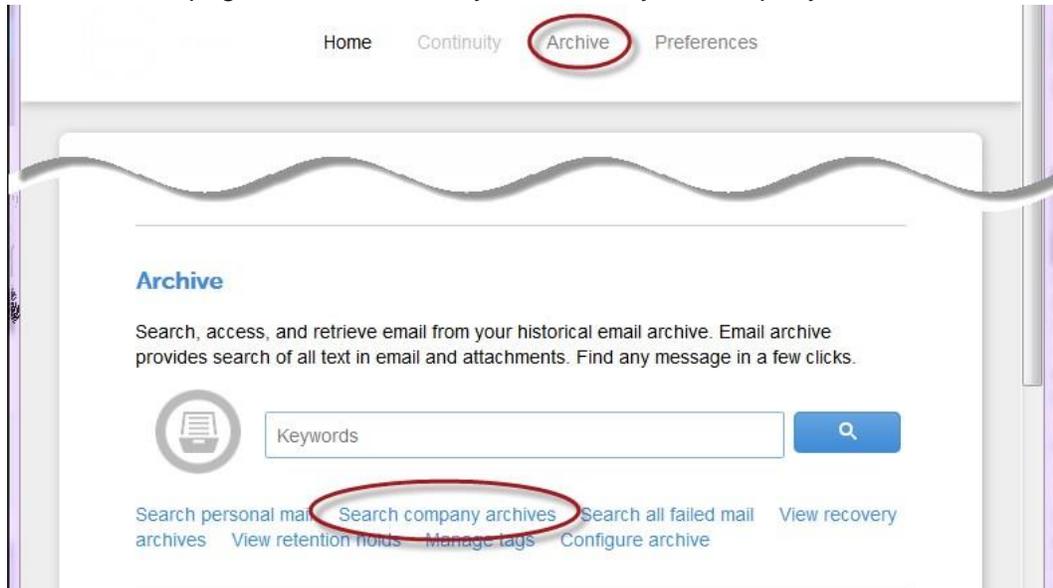
The **Search** page appears.



Task 1.2. Access EMS Archive to search Company Archives

- 1) Log into Email Management Services.

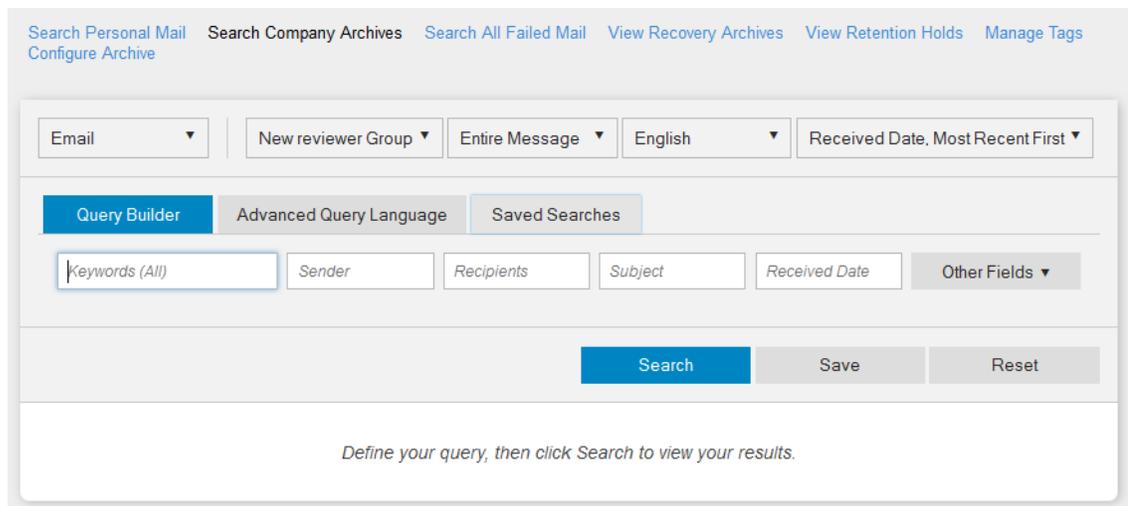
- 2) On the home page there are two ways to access your company's archive.



- Click **Search company archives** in the **Archive** section of the page.
- Click the **Archive** link in the menu at the top of the page. When then **Archive** page appears, click the **Search Company Archives** link.



- 3) The **Search Company Archives** page appears.



- 4) To execute a search, enter search terms into one or more of the text fields and click the **Search** button, or to return all messages leave the search terms blank and click the **Search** button.

1.1.1. Supported Browsers

The following browsers fully support the EMS Archive interface:

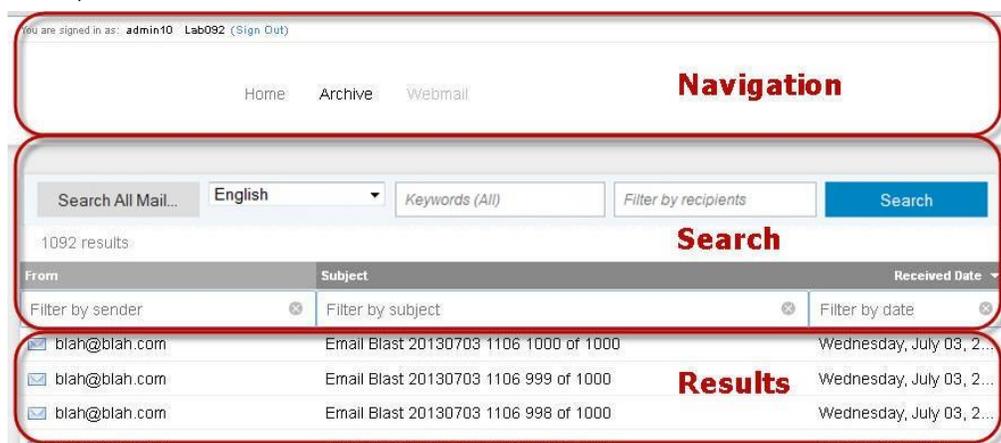
- Firefox version 16 or higher
- Internet Explorer 8, 9 and 10

Other browsers will likely work, but have not been thoroughly tested.

1.2. About the EMS Archive Interface

1.2.1. Search Personal Mail Interface

The personal email archive interface is divided up into three basic sections: navigation, search, and results.



1.2.1.1. Navigation Area

The navigation area contains two sections:

- At the very top of the web page is the sign in line, that displays your username and the **Sign Out** link.
- The second section contains links to navigate to other parts of the EMS Suite.
 - **Home:** Returns to the EMS home page.
 - **Archive:** This link returns to the Archive home page.
 - **Continuity:** This link is available if your organization has Email Continuity. When Email Continuity is Active, this link displays your Webmail user interface. When Email Continuity is *inactive*, this link is grayed out and cannot be clicked.

- **Security:** This link is available if your organization has EMS Security. This link takes you to the EMS Security login page.
- **Help Desk:** If you have EMS Help Desk privileges, this link is displayed and takes you to the EMS User Account Information page.
- **Admin:** If you have EMS Administration privileges, this link is displayed and takes you to the EMS Administration Console home page.
- **Preferences:** This link takes you to the EMS Preferences and contact information page.

1.2.1.2. Personal Mail Search Area

The Personal Mail Search area contains:

- **Search Within Folder:** A button that displays a pop-up window to select the folder the search should be limited to. The label of the button is the currently selected folder. The default behavior is to *Search All Mail*.
- **Search Language:** A drop-down to select the language the search should be based upon. The label of the drop-down is the currently selected language.
- Search entry field:
 - **Keywords (All):** All keywords entered in this field must be in the email metadata and message body, or in one of the attachments.
 - **Filter by recipients:** This field searches the **To** and **Cc** fields of the messages.
- Column-specific search filters, which allow you to narrow the search results by applying keyword filters to individual columns.

1.2.1.3. Results Area

The results area is a scrollable table which displays up to 1,000 results of the query, then asks the user to refine their query. The results table contains the following information for the messages that were returned by the search query:

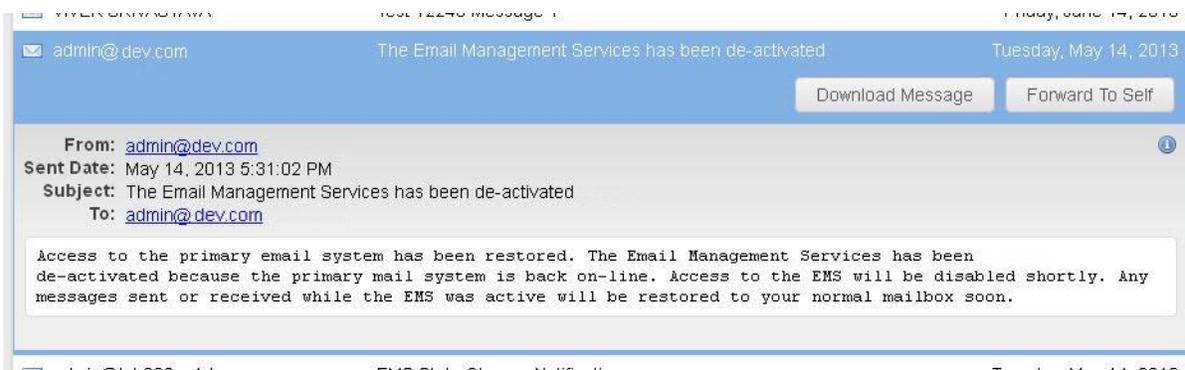
- **From:** either the Sender's email address or the Sender's name if that information is available.
- **Subject:** the Subject of the message.
- **Received Date:** the date the Exchange server received the message.

Search results are initially displayed sorted by **Date Descending** (newest to oldest messages). To sort the search results differently, click on a column header to sort the results by that column. Click on the column header again to reverse the sort order.

When the EMS Archive page is first accessed, or when the search query field is blank, the results of the default search are displayed, which is all messages within the scope of the search.

- For a user searching their personal mail, the default search returns all the messages contained in their personal archive mailbox, which is defined as all messages sent or received by the user that are within the scope of any applied retention policies (retention policies are how administrators determine which messages are to be archived and for how long they are to be kept).
- **Results count** shows the number of messages that were matched in the query.

When a message's row is clicked, its background turns blue and its information is expanded.



The message details pane includes:

- **Download Message** button: Click this button to download the selected message as an EML file, which can either be saved, or opened in Microsoft Outlook.
- **Forward To Self** button: Click this button to forward the selected message to your email address registered with EMS Archive.
- **Message Information** button: : Click this button to display Message ID and Partition ID information. Click again to hide the information.
- **Message header** information: From, Sent Date, To and Cc information are displayed.
- **Attachments** list: The filename of each attachment, and the size of that attachment if the size information is available. Click an attachment name to download it to your computer.
- **Message Body**: The message body is displayed.

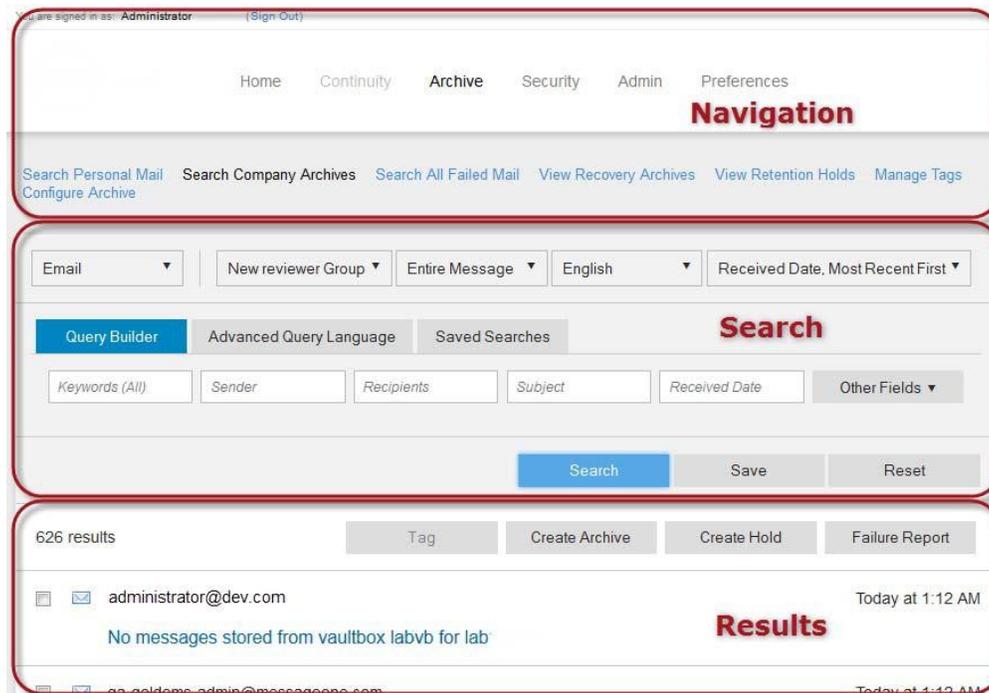
If your company uses Email Continuity and the Email Continuity service is Active, when an email message is selected, the **Download Message** button will be displayed, along with three different buttons.

- **Reply**: Click this button to bring up the EMS **Webmail Reply** window, to reply to the email message's sender.
- **Reply All**: Click this button to bring up the EMS **Webmail Reply to All** window, to reply to the email message sender and all the other recipients.
- **Forward**: Click this button to bring up the EMS **Webmail Forward** window, to forward the message to new recipients.

To collapse the message information, click the selected table row again. You can also control-click on additional table rows to expand multiple messages.

1.2.2. Search Company Archives Interface

The Company Archive interface is divided up into three basic sections: navigation, search, and results.



1.2.2.1. Navigation Area

The navigation area contains three sections:

- At the very top of the web page is the sign in line, that displays your username and the **Sign Out** link.
- The second section contains links to navigate to other parts of the EMS Suite.
 - **Home:** Returns to the EMS home page.
 - **Continuity:** This link is available if your organization has Email Continuity. When Email Continuity is Active, this link displays your Webmail user interface. When Email Continuity is *inactive*, this link is grayed out and cannot be clicked.
 - **Archive:** This link returns to the EMS Archive home page.
 - **Security:** This link is available if your organization has EMS Security. This link takes you to the EMS Security login page.

- **Help Desk:** If you have EMS Help Desk privileges, this link is displayed and takes you to the EMS User Account Information page.
- **Admin:** If you have EMS Administration privileges, this link is displayed and takes you to the EMS Administration Console home page.
- **Preferences:** This link takes you to the EMS Preferences and contact information page.
- The bottom portion of the navigation area displays the various sections within Archive.
 - **Search Personal Mail:** Brings up the search interface for searching your personal mailbox of archived messages.
 - **Search Company Archives:** Brings up the search interface for your company's archives.
 - **Search All Failed Mail:** Brings up the search interface for emails that have failed some step in the archive storage and index process. Email messages will be displayed along with the reason for failure.
 - **View Recovery Archives:** Displays Recovery Archives created in the last 24-hours or in progress.
 - **View Retention Holds:** Displays a list of Retention Holds created in the last 24-hours or in progress.
 - **Manage Tags:** Brings up the **Manage Tags** page that allows you to create, edit, and delete tags for all Reviewer Group you have permission to access.
 - **Configure Archive:** If you have EMS Administration privileges, this link is displayed and takes you to the EMS Administration Console **Historical Mail > Retention Policies** page.

1.2.2.2. Company Archives Search Area

The top row of the Company Archives search area contains three drop-downs:

- **Content Type:** If your organization has Expanded Archives Services, a drop-down is displayed to select the content type for which the search is to be executed: `Email` or `Instant Messages`. The label of the drop-down is the currently selected Content Type.
- **Reviewer Group Scope:** A drop-down to select the scope within which the search is to be executed. The label of the drop-down is the currently selected Reviewer Group.
- **Search Context:** A drop-down to select which parts of the email message are to be included in the query. The label of the drop-down is the currently selected search context.
- **Search Language:** A drop-down to select the language the search should be based upon. The label of the drop-down is the currently selected language.

- **Sort Order:** A drop-down to select the sort order of the search results. The label of the drop-down is the currently selected sort order.

The body of the search area contains three tabs:

- **Query Builder:** If this tab is selected, the central area contains search entry fields and a drop-down which adds additional query fields to the search. See ["Search Email Archive Using the Query Builder" on page 16](#), and if your organization has Expanded Archives Services, ["Search Instant Message Archive Using the Query Builder" on page 48](#).
- **Advanced Query Language:** If this tab is selected, the central area contains the query string that was created by the values entered in the Query Builder search fields or in the Saved Search, or you can enter a search query string of your own. See ["Search Company Archive Using the Advanced Query Language" on page 32](#) and if your organization has Expanded Archives Services, ["Search Instant Message Archive Using the Advanced Query Language" on page 58](#).
- **Saved Searches:** If this tab is selected, the central area contains a list of saved searches. See ["Saved Searches" on page 65](#).

And the lower section of the search area contains

- **Search:** This button executes the search.
- **Save:** This button saves the current query as a *Saved Search*.
- **Reset:** This button clears the entries in all the query fields.

1.2.2.3. Results Area

At the top of the results area is a line that contains:

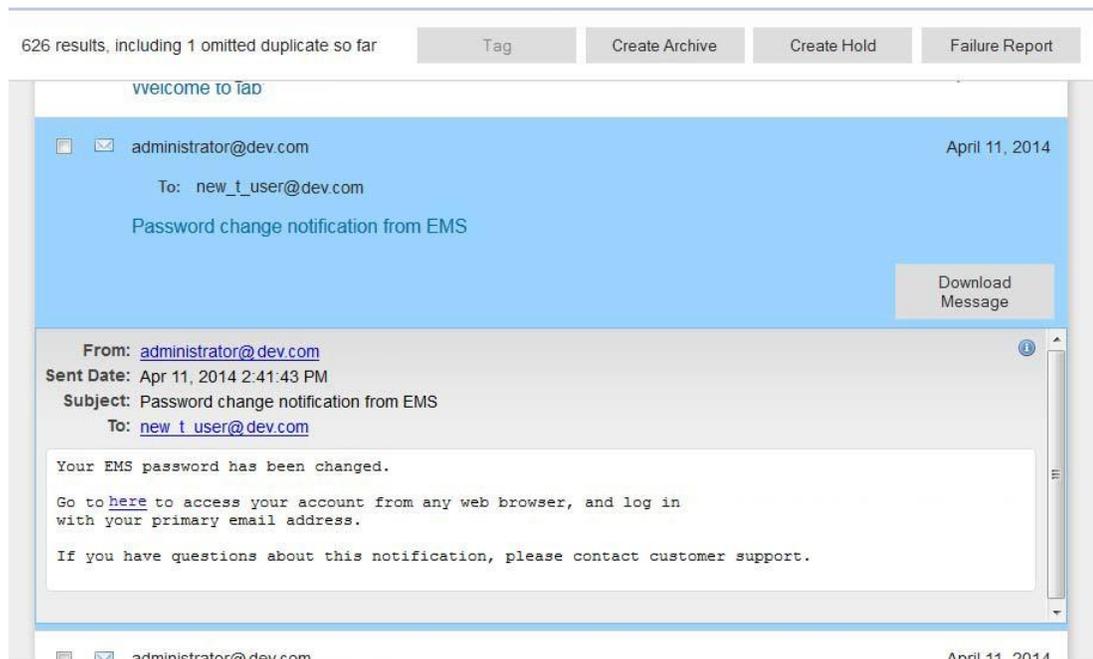
- **Results count** shows the number of messages that were matched in the query.
- **Tag:** This button becomes active when one or more search results are checked, and allows the selected search results to be tagged or untagged.
- **Create Archive:** Click this button to create an archive of the search results, which can be exported. See ["Email and Instant Message Archives" on page 82](#)
- **Create Hold:** Click this button to create a Retention Hold, which prevents the search results from being purged. See ["Retention Holds" on page 78](#)
- **Failure Report:** If your organization is enabled for Failed Message Tracking, this button will display. Click the button to be taken to the Failed Message Report page. See ["Failed Message Tracking Feature" on page 88](#)

Below is a scrollable table that displays up to 1,000 results of the query. When the Archive Search page is first accessed no results are displayed, to save on Data Center resources. Once a search is executed, the results table contains differing information depending on the content type being searched.

Email search results fields:

- **Tag Checkbox:** this checkbox is used to select search results for message tagging.
- **Content Type Icon:** this icon displays the content type of the message, email or instant message, and whether or not the message includes attachments.
- **From:** either the Sender's email address or the Sender's name if that information is available.
- **To/Cc/Bcc:** the Recipients of the message.
- **Subject:** the Subject of the message.
- **Receive Date:** the date the Exchange server received the message.
- **Tags:** a list of tags that have been assigned to the message.

When an email message's row is clicked, its background turns blue and its information shown is expanded.



The message details pane includes:

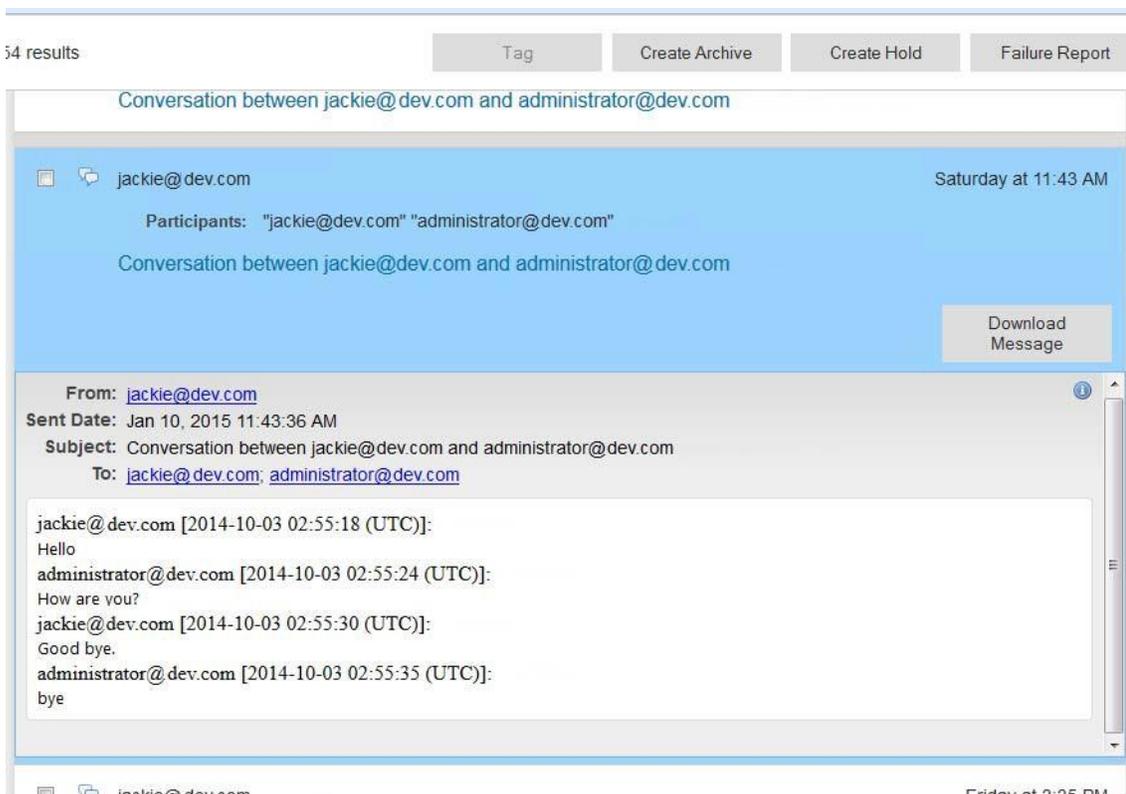
- **Download Message** button: Click this button to download the selected message as an EML file, which can either be saved, or opened in Microsoft Outlook.
- **Message Information** button: : Click this button to display Message ID and Partition ID information. Click again to hide the information.
- **Message header** information: From, Sent Date, To and Cc information are displayed.
- **Email Message Body:** The message body is displayed.
- **Attachments** list: The filename of each attachment, and the size of that attachment if the size information is available. Click an attachment name to download it to your computer.

To collapse the message information, click the selected table row again. You can also control-click on additional table rows to expand multiple messages.

Instant Message search results fields:

- **Tag Checkbox:** this checkbox is used to select search results for message tagging.
- **Content Type Icon:** this icon displays the content type of the message, email or instant message, and whether or not the message includes attachments.
- **Originator:** user that originated the instant message in the archive.
- **Participants:** the names of the participants involved in the instant message conversation.
- **Subject:** the subject of the instant message if available, otherwise labels the participants in the conversation.
- **Start Date:** the date the instant message conversation began.
- **Tags:** a list of tags that have been assigned to the message.

When a message's row is clicked, its background turns blue and its information shown is expanded.



The message details pane includes:

- **Download Message** button: Click this button to download the selected message as an EML file, which can either be saved, or opened in Microsoft Outlook.

- **Message Information** button:  : Click this button to display Message ID and Partition ID information. Click again to hide the information.
- **Message header** information: From (originator), Sent Date (start date), Subject and To (participants) information are displayed.
- **Instant Message Body**: The contents of the instant message conversation is displayed.
- **Attachments** list: The filename of each attachment, and the size of that attachment if the size information is available. Click an attachment name to download it to your computer.

To collapse the message information, click the selected table row again. You can also control-click on additional table rows to expand multiple messages.

1.3. Archive Contents

The messages that are contained in the archives of your company's EMS Archive service are collected based on the retention policies that have been created by the EMS Archive administrators.

- For emails, the initial retention policy scope is determined at the time the Exchange server receives the email message. For instant messages, the retention policy scope is determined by the time the conversation started.
- For emails, when a message is received by the Exchange server but is not within the scope of at least one retention policy, that email message is not captured by EMS Archive and is not available to be searched.
- When retention policy durations are reached or users are moved between groups (depending on how the policies are configured), retention policies applicable to individual messages expire. Messages that are no longer under the scope of a retention policy are purged from the Archive and are not available to be searched.
- When holds are lifted, messages that are not covered by active retention policies are purged and not available to be searched.
- Messages that are members of a Retention Hold, Recovery Archive or a Discovery Archive are exempt from purge until the last applicable hold or archive is deleted, at which point they will return to the control of applicable retention policies.

2. Email Archive Searches

This chapter explains how to search for emails in the EMS Archive and what actions you can take on email messages returned in a search.

2.1. Search Personal Email

Task 2.1. Search your personal mail

- 1) From the Email Management Services landing page, click **Search Personal Mail**.
OR From within EMS Archive, click **Search Personal Mail** link in the navigation bar.
- 2) If desired, to search for emails within a certain Outlook folder, click the **Search Within Folder** button.

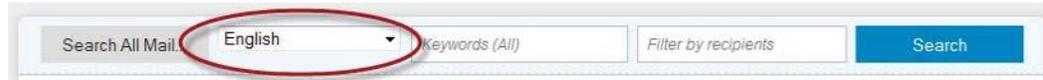


- This brings up the folder selection window.



- Folders are displayed in alphabetical order. Scroll down to display additional folders.
- Click on a folder to add it to the **Search within** path.
- Clicking on a folder name displays its sub-folders.
- This filter searches *only* within the selected folder. Sub-folders of the selected folder are *not* searched.

- Excluded Outlook folders are: Inbox¹, Drafts, Outbox, Sent Items¹, Deleted Items¹, Conflicts, Local Failures, Server Failures, Sync Issues, Contacts, Calendar, Suggested Contacts.
 - Click the **Select** button when the correct folder is displayed in the **Search within** field.
 - The label of the button is the currently selected Outlook folder.
 - To again search all folders, click the **Search Within Folder** button, then click the **Search All Mail** button.
- 3) If desired, select a search language from the **Search Language** drop-down menu. The label of the drop-down is the currently selected language.



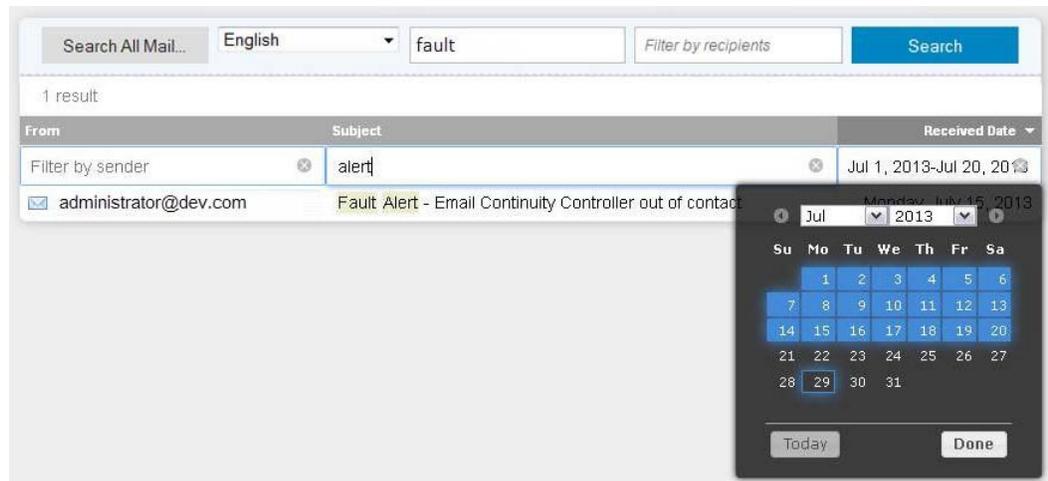
Choosing a search language limits the search to emails identified as belonging to that language, plus all the language-unidentified emails. It also changes the stop word behavior (see ["Stop Words" on page 44](#)). To search *all* emails in the archive, select Any.

Current language choices include: Any, Arabic, Chinese (simplified & traditional), Dutch, English, French, German, Hebrew, Japanese, Portuguese, Russian, Spanish, Swedish.

- 4) Type search term(s) into the **Keywords (All)** field.
- To be considered a match, all the query criteria must be met within the scope of a document (see ["Queries Performed Within Documents" on page 45](#)).
 - See ["Personal Mail Search Tips" on page 15](#) for ideas on building targeted, efficient searches.
- 5) If desired, type search term(s) into the **Filter by recipients** field.
- This searches the **To** and **Cc** fields of all the messages.
 - See ["Personal Mail Search Tips" on page 15](#) for ideas on building targeted, efficient searches.
- 6) Click the **Search** button, or hit the ENTER key.
- 7) EMS Archive displays matching results from your archive in a table below the search box.
- 8) To further filter the search result, click in one or more of the column header filter fields and enter more search terms.
- These terms will be **AND**'d with the **Keywords** field to narrow the search results.

1. For this folder, the top-level folder itself will not contain emails, but its child folders will contain searchable email messages.

- Clicking in the **Received Date** field will bring up a date-picker. To filter messages for only one day, select one date and click **Done**. To filter within a date range, click on the beginning date, then click on the end date, and then click on **Done** to set the range.



- 9) To display the body of the message, click the message's row. The message body expands beneath the message's row. Control-click to expand multiple messages. To collapse the message body, click the message's table row again.
- 10) To change the sort order, click the column header to sort by that column. Click the column header again, to reverse the sort order.
Search results, by default, are sorted in date-descending order.
- 11) To return the default results (all messages), clear all the query fields and click the **Search** button or hit the ENTER key.

2.1.1. Personal Mail Search Tips

Follow these tips to create more targeted, efficient keyword searches:

- Choose specific, descriptive keywords.
- Searches are *not* case sensitive.
- Most special characters are *not* allowed, or are ignored, in personal mail searches.
- The one special character that is used is the dash (-), which excludes from the search results documents that contain the following term or quoted phrase.
 - For example: The search `anyone -anydomain` would return emails and attachments that contained `anyone` that did not also contain `anydomain`.
 - Spaces are not allowed between the "-" character and the following term or phrase.
- The Archive's search index is based on whole words or tokens, not partial words or individual letters/numbers.

- For example: The search term `mail` would *not* return documents containing the term `gmail`.
- The search term `company` would match `person@company.com`, but not `person@newcompany.com`.
- No wildcard characters are needed because search automatically adds an implied wild card (*) at the end of every search term.
 - For example a search term of `gma` would match `gma`, `gmail` and `gmails`.
- Further define your searches using quoted or un-quoted search strings. See ["Quoting Search Strings" on page 42](#).
- Let the search engine help search for words with the same root. For example, if you type `project` the search also matches the words `projected`, `projecting`, and `projects`. See ["Stemming" on page 44](#).
- Let the search engine speed up the search by weeding out unnecessary terms. For example, if you type `the quick brown fox`, it searches on `quick`, `brown` and `fox`, because it knows `the` appears in almost every email. See ["Stop Words" on page 44](#).

2.2. Search Email Archive Using the Query Builder

EMS Archive provides two ways to search company archives: *Query Builder* and *Advanced Query Language*.

- The *Query Builder* allows Reviewers to progressively build very complex queries using easy to understand building blocks.
- *Advanced Query Language* allows Reviewers to directly use the EMS Archive query language to create their search criteria.

Also, a search can be created in *Query Builder* and then edited in the *Advanced Query Language* pane to further define the desired search criteria.

Both *Query Builder* and *Advanced Query Language* searches can be saved and accessed later using the *Saved Searches* feature.

Query Builder is described below. For more information about *Advanced Query Language*, see ["Search Company Archive Using the Advanced Query Language" on page 32](#). For more information about *Saved Searches*, see ["Saved Searches" on page 65](#).

If your organization has Expanded Archives Services, in addition to searching email messages, Archive Reviewers can search archived *instant messages*. See [Chapter 3.. "Instant Message Archive Searches" on page 48](#) for more information.

Task 2.2. Query Builder Email Archive Search

- 1) From the Email Management Services landing page, click **Search Company Archives** to search a company archive for which you have Reviewer privileges. The page defaults to the **Query Builder** tab.

The screenshot shows the Query Builder interface. At the top, there are navigation links: Search Personal Mail, Search Company Archives, Search All Failed Mail, View Recovery Archives, View Retention Holds, and Manage Tags. Below these are several dropdown menus: Email, New reviewer Group, Entire Message, English, and Received Date, Most Recent First. The Query Builder tab is selected, with other tabs being Advanced Query Language and Saved Searches. Below the tabs are input fields for Keywords (All), Sender, Recipients, Subject, and Received Date, along with an Other Fields dropdown. At the bottom, there are Search, Save, and Reset buttons. A note at the bottom reads: "Define your query, then click Search to view your results."

When the archive is first accessed, the system waits for you to execute a search before results are returned. Not executing a default wildcard search greatly increases the system's response time.

- 2) If your organization has Expanded Archives Services, the **Content Type** drop-down appears. If it isn't selected, choose the `Email` content type to search archived email messages.

This screenshot is a close-up of the Content Type dropdown menu. The menu is open, showing options for Email and Instant Messages. The Email option is highlighted in blue. The background shows the same Query Builder interface as the previous screenshot, but the focus is on the dropdown menu.

See [Chapter 3., "Instant Message Archive Searches" on page 48](#) for information on searching Instant Message archives

- 3) If you are part of more than one Reviewer Group, select the Reviewer Group scope from the **Reviewer Scope** drop-down list.

This screenshot shows the Reviewer Scope dropdown menu. The menu is open, and the option "Test Reviewer Group" is selected and circled in red. The background shows the same Query Builder interface as the previous screenshots.

The label of the drop-down is the currently selected Reviewer Group. Only messages that match the search criteria *and* are within the scope of the selected Review Group will be displayed.

- 4) If desired, use the **Search Context** drop-down to select the portion of the message that is to be searched for this query. The selections are: *Entire Message*, *Body Only* or *Attachments Only*

The screenshot shows the top section of the Query Builder interface. It includes four dropdown menus: 'Test Reviewer Group', 'Entire Message', 'English', and 'Received Date, Most Recent First'. The 'Entire Message' dropdown is circled in red. Below the dropdowns are three tabs: 'Query Builder' (active), 'Advanced Query Language', and 'Saved Searches'.

- 5) If desired, select a search language from the **Language** drop-down menu. The label of the drop-down is the currently selected language

The screenshot shows the top section of the Query Builder interface. It includes four dropdown menus: 'Test Reviewer Group', 'Entire Message', 'English', and 'Received Date, Most Recent First'. The 'English' dropdown is circled in red. Below the dropdowns are three tabs: 'Query Builder' (active), 'Advanced Query Language', and 'Saved Searches'.

Choosing a search language limits the search to emails identified as belonging to that language, plus all the language-unidentified emails. It also changes the stop word behavior (see ["Stop Words" on page 44](#)). To search *all* emails in the archive, select *Any*.

Current language choices include: *Any*, *Arabic*, *Chinese (simplified & traditional)*, *Dutch*, *English*, *French*, *German*, *Hebrew*, *Japanese*, *Portuguese*, *Russian*, *Spanish*, and *Swedish*.

The default search language is *English*.

- 6) Create a query by entering values in the search fields:

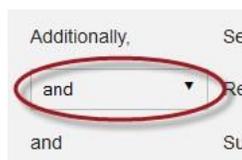
The screenshot shows the search fields section of the Query Builder interface. It includes a row of search fields: 'Keywords (All)', 'Sender', 'Recipients', 'Subject', 'Received Date', and 'Other Fields'. The entire row is circled in red. Below the search fields are three buttons: 'Search' (active), 'Save', and 'Reset'.

- Tab between search fields for easy navigation. Hit the ENTER key to execute the query.
- The **Other Fields** drop-down provides additional search fields: *Keywords (Any)*, *Exact Phrase*, *Involved Users*, *Sender (Envelope)*, *Sender (Header)*, *Recipients (Envelope)*, *Recipients (Header)*, *Recipients (CC)*, *Total Message Size*, *Attachment Name*, *Retention Policy*, *Tagged*, and *Sampling Policy*.

- 7) As search values are entered, they are dynamically placed above the search field boxes.

The screenshot shows the 'Query Builder' interface with three tabs: 'Query Builder' (selected), 'Advanced Query Language', and 'Saved Searches'. Below the tabs, there are several rows of search criteria. The first row is 'Keywords' with the operator 'contains (all words)' and the value 'test'. The second row is 'Received' with the operator 'on' and the value '07/04/2014'. A horizontal line separates the top two rows from the bottom three. Below the line, the first row is 'Sender' with the operator 'contains' and the value 'test'. The second row is 'Recipients' with the operator 'contains' and the value 'test'. The third row is 'Subject' with the operator 'contains' and the value 'test'. At the bottom, there are input fields for 'Sender', 'Recipients', and 'Subject', and a dropdown menu for 'Other Fields'.

- Entered search values are placed in rows either *above* or *below* the line.
Rows that appear *above* the line are all AND'd together.
Rows that appear *below* the line can **all** be AND'd or OR'd together, using the drop-down



The results of the rows *below* the line are then AND'd with the results *above* the line to produce the final query result.

- Default search fields that appear *above* the line: Keywords (All) and Received Date. These values can be entered only once.
 - Default search fields that appear *below* the line: Sender, Recipients, and Subject. Multiple values can be entered for these fields and will appear on multiple rows below the line.
 - **Other Fields** search fields that appear *above* the line: Keywords (Any), Exact Phrase, Involved Users, Tagged, and Sampling Policy. These values can be entered only once.
 - **Other Fields** search fields that appear *below* the line: Sender (Envelope), Sender (Header), Recipients (Envelope), Recipients (Header), Recipients (CC), Total Message Size, Attachment Name, and Retention Policy. Multiple values can be entered for these fields and will appear on multiple rows below the line.
- To clear a row, click the icon, or click the **Reset** button to clear all the rows.

- 8) Execute the search by either clicking the **Search** button or hit the ENTER key.

- 9) See ["Search Features" on page 42](#) for ideas on building targeted, efficient searches.
- 10) To see the query string that is generated by your search, click on the **Advanced Query Language** tab. This will replace the search criteria fields with a box containing the query string.

This field will be blank until a query is executed.

The contents of this query string field can be edited, but once edited you **cannot** return the query to the Query Builder. See ["Search Company Archive Using the Advanced Query Language" on page 32](#) for more information.

- 11) To save the query for future execution, click the **Save** button. See ["Saved Searches" on page 65](#) for more information.
- 12) The results of your search are displayed in the table below the search boxes.
 - To be considered a match, all the query criteria must be met within the scope of a document (see ["Queries Performed Within 'Documents'" on page 45](#)).
- 13) To sort the results list, choose the sort order from the **Sort Order** drop-down.

Sort order options include: Received Date, Oldest First, Received Date, Most Recent First (default search order), Sender, A to Z, Sender, Z to A, Subject, A to Z, Subject, Z to A, Relevance, Most Relevant First, Relevance, Least Relevant First.

- 14) To display the body of the message, click the message. The message body expands beneath the message row.

When your results list contains all the messages you need, refer to the following sections for additional actions you can perform on the messages returned by the search:

- To create a Retention Hold, see ["Retention Holds" on page 78](#).
- To create a Discovery Archive or Recovery Archive, see ["Email and Instant Message Archives" on page 82](#).

2.2.1. Query Builder Further Information

This section describes the detailed functionality of each of the query fields.

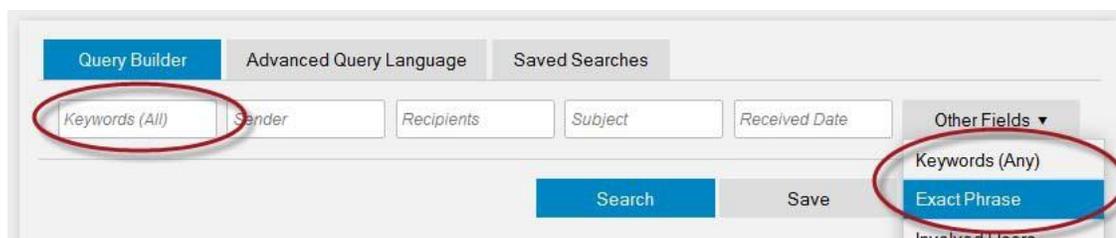
NOTE Special Character Limitations

If you submit a query containing only a single special character (such as a tilde, parenthesis, or exclamation point), the system returns all messages within your reviewer scope. The workaround for this issue is to use at least one alphanumeric character in your query in addition to the special character.

2.2.1.1. Search By Keywords or Phrases

This section covers:

- **Keywords (All)**
- **Keywords (Any)**
- **Exact phrase**



These fields can be used individually or in combination. If data is entered into more than one field, the results are AND'd together to produce the final search result.

- **Keywords (All):** Enter words with a space between words.
 - Stemming does apply (see ["Stemming" on page 44](#)), as does the implied wildcard (*) at the end of each word.
 - Stop words *do* apply. See ["Stop Words" on page 44](#)
 - Double-quotes are ignored.
 - Multiple search terms are AND'd together, then AND'd with the other search fields.
 - See ["Personal Mail Search Tips" on page 15](#) for further tips on using this field.
- **Keywords (Any):** Enter keywords into the field with a space between words.
 - Neither stemming or stop words apply, and this field does *not* add the implied wildcard (*) at the end of words.
 - Double-quotes are ignored.
 - The contents of the field are OR'd together, and the result is then AND'd with the other search fields.

- If any of the keywords contain multiple words, separate each keyword with a comma, instead of a space.
 - Example: The search term: `apple, pumpkin, lemon meringue` searches for three terms: “apple”, “pumpkin” or “lemon meringue”
- **Exact phrase:** Enter **one** phrase.
 - Double-quotes are not needed.
 - Neither stemming or stop words apply, and this field does *not* add the implied wildcard at the end of words.
 - The results of this field are AND'd with the other search terms.

The Archive's search index is based on whole words or tokens, not partial words or individual letters/numbers.

- For example: The search term `mail` would *not* return documents containing the term `gmail`.
- The search term `company` would match `person@company.com`, but not `person@newcompany.com`.

See ["Search Features" on page 42](#) for more information.

2.2.1.2. Search By Sender, Recipients, or Subject

This section covers:

- **Sender**
Filters results based on whether the **From** field in the *message envelope* or *message header* contains or does not contain the value provided.
- **Recipients**
Filters results based on whether the recipient information in the *message envelope* or in the **TO** and **CC** fields in the *message header* contains or does not contain the value you provide. Limitations on envelope searches, as described in the *Recipients (Envelope)* entry in [Table 2-1 on page 31](#), also apply to this filter.
- **Subject**
Filters results based on whether the message **Subject** field contains or does not contain the value provided.

The screenshot shows the Query Builder interface with three tabs: "Query Builder", "Advanced Query Language", and "Saved Searches". Below the tabs is a row of search filters: "Keywords (All)", "Sender", "Recipients", "Subject", "Received Date", and "Other Fields" (with a dropdown arrow). A red oval highlights the "Sender", "Recipients", and "Subject" filters. At the bottom of the interface are three buttons: "Search", "Save", and "Reset".

As entries are made to the **Sender**, **Recipients** or **Subject** fields, a query row is added to the search query *below* the line and the text box remains so more terms can be added.

The screenshot shows the 'Query Builder' interface with three tabs: 'Query Builder' (selected), 'Advanced Query Language', and 'Saved Searches'. The main area contains a search query with the following structure:

- Row 1: Keywords contains (all words) test
- Row 2: and Received on 07/04/2014
- Row 3: Additionally, Sender contains test
- Row 4: and Recipients contains test
- Row 5: and Subject contains test

At the bottom, there are input fields for 'Sender', 'Recipients', 'Subject', and 'Other Fields'.

Each query row contains a drop-down to specify if the query is to be considered a match if the field `contains` or `does not contain` the value entered in the text box.

This close-up shows the 'Subject' field with a dropdown menu open. The dropdown menu has two options: 'contains' (highlighted in blue) and 'does not contain'. The text box next to it contains the word 'test'. Below this, other fields like 'Sender', 'Recip', 'Received Date', and 'Other Fields' are partially visible.

Below is more information on using the **Sender**, **Recipients** and **Subject** fields

- These fields can be used individually or in combination, each of these fields can be used multiple times.
- If data is entered into more than one field, the results can be AND'd or OR'd together with the rest of the query rows below the line to produce the final search result.
- Multiple search terms entered into a single text box with a space between words are AND'd together, then evaluated with the other query rows.
- Stop words *do* apply. See ["Stop Words" on page 44](#)
- Stemming does apply (see ["Stemming" on page 44](#)), as does the implied wildcard (*) at the end of each word.
- Double-quoted values are considered a single string and the string must be matched exactly.
- See ["Personal Mail Search Tips" on page 15](#) and ["Search Features" on page 42](#) for further tips on using these fields.

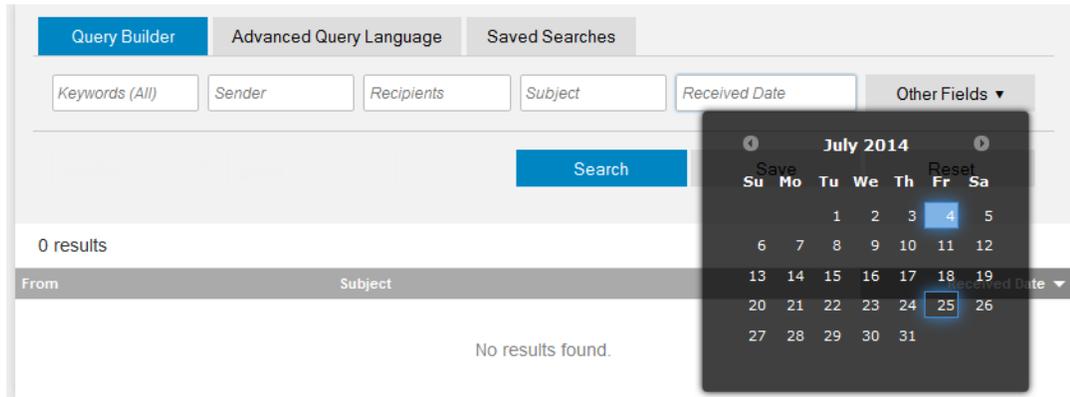
2.2.1.3. Search by Received Date

Use this field to filter the query by dates. The email date used for this query is the date the Exchange Server received the email message.

The query can be created to search *on*, *after*, or *before* a defined date, or between two defined dates. The *after*, *before* and *between* searches can also include time values.

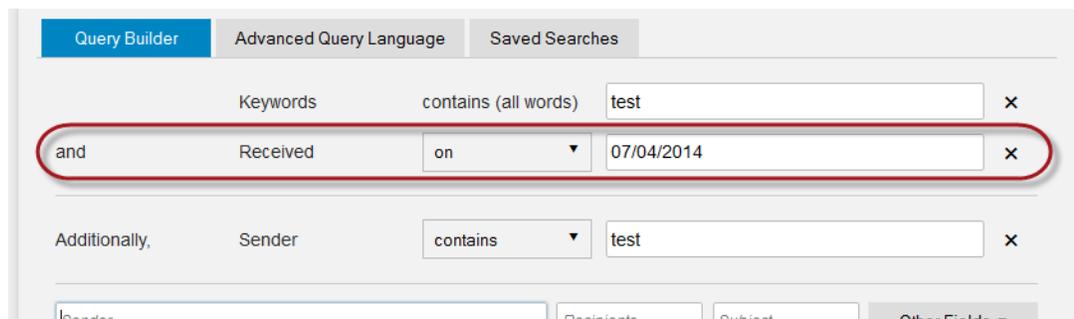
Task 2.3. Search by date or date range

- 1) Click the inside the **Received Date** field to bring up the date selection pop-up.

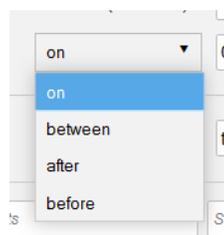


- 2) In the **Calendar** display, click on a day to select that date. Click the  or  buttons to move backward or forward a month. (To close the pop-up, click somewhere outside it)

This inserts a row in the list of query fields. The Received Date row is above the line, meaning only one date row can be entered.



- 3) To search *before* or *after*, a defined date, or *between* two defined dates, select that value from the **on** drop-down menu.



- Selecting *before* or *after* adds the option of adding a time.

Click inside the field to bring up the Calendar pop-up. Either type the time into the text box or use the sliders to set the hours and minutes and click **Done**. A date with 24-hour time is used, in the format: MM/DD/YYYY HH:MM.

- Selecting *between* adds a second date field.

Click inside either date field to bring up the Calendar pop-up. Then either type in the date and time or click the day and use the sliders to set the hours and minutes and click **Done**. A date with 24-hour time is used, in the format: MM/DD/YYYY HH:MM.

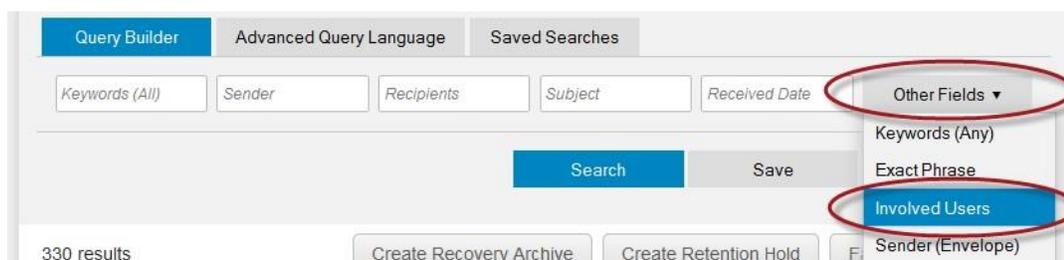
2.2.1.4. Search by Involved Users

The **Involved Users** query field is different than **Sender** or **Recipients** fields. *Sender* and *Recipients* are keyword searches of the character string, and refer to any email address whether they are part of the EMS system or not. *Involved Users* are only EMS system mailboxes.

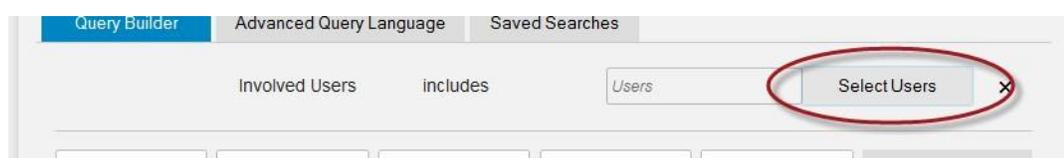
Involved Users are defined by selecting Mailing Lists, User Sets, Email Servers, or individual users from a user selection pane. Involved Users can also be uploaded from a CSV file.

Task 2.4. Search by Involved Users

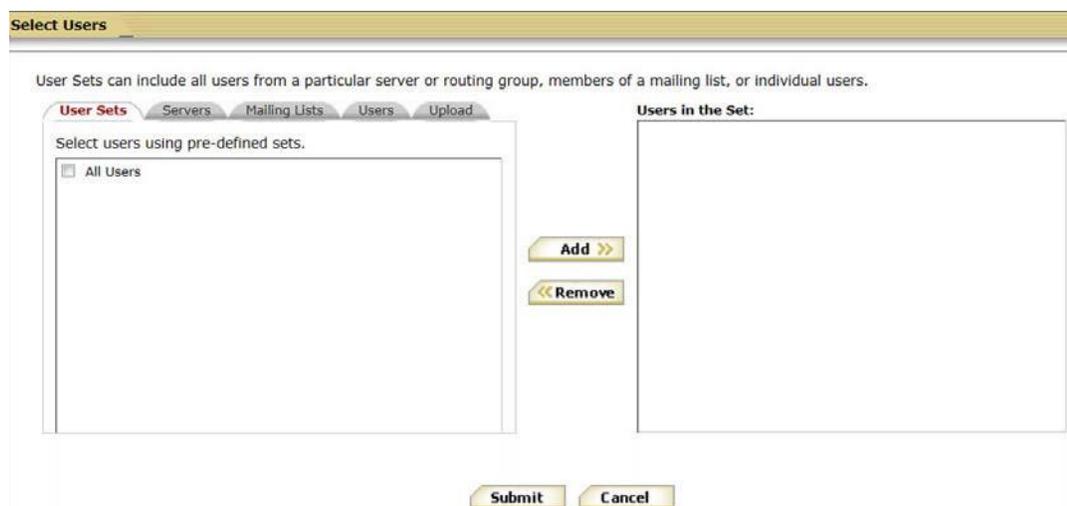
- 1) Click the **Other Fields** drop-down and select **Involved Users**.



- 2) When the **Involved Users** row is added to the list of query fields, click the **Select Users** button.



- 3) The **Select Users** window appears.



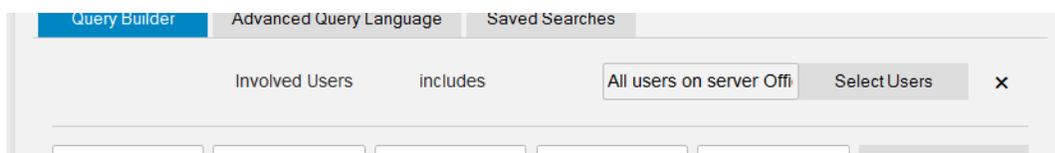
- 4) To upload a CSV file containing email addresses:
 - a. Click the **Upload** tab.
 - b. Click **Browse**, then navigate to and select the CSV file that contains the email addresses to upload.
 - c. Click **Add** to upload the file and add the addresses to the **Users in the Set** pane.

A warning message will be displayed if email addresses in the list cannot be matched to users on the system.

To upload correctly, the CSV file may contain multiple columns, but the column of email addresses *must* have a header row entitled `Email Address`.

- 5) To browse for mailboxes:
 - a. Click one of the user selection tabs (**User Sets**, **Servers**, **Mailing Lists**, or **Users**).
 - b. For **User Sets** and **Servers**, scroll down the list and check the box beside the correct item(s).
 - c. For **Mailing Lists** and **Users**, you can search for specific items by entering part of the user name or mailing list name in the **Search** field and clicking **Search**. Entering % (percent) will display all users or mailing lists. When you locate the correct item(s), check the check box next to the user or mailing list.
 - d. Then click the **Add** button between the two columns. The items you selected are added to the **Users in the Set** pane.
- 6) Repeat until all user sets, servers, mailing lists, and individual users that are to be included in the search are displayed in the **Users in the Set** pane.
- 7) Click **Submit** to add all the users in the list to the query and return to the search window.

The selected items will be listed in the **Involved Users** field beside the **Select Users** button.



If these addresses are not correct, click **Select Users** again and repeat these steps.

2.2.1.5. Search by Tagged Messages

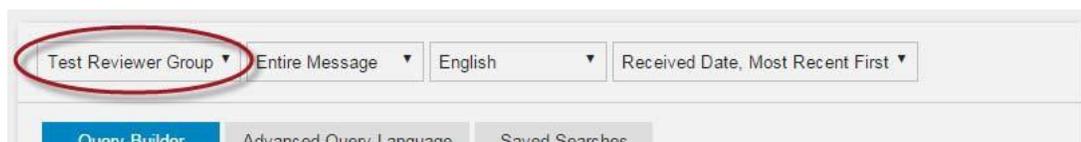
The **Tagged** search filter is located in the **Other Fields** drop-down allows Reviewers to search for messages that have been tagged with a certain value.

See ["Message Tagging" on page 68](#) for more information on how to tag messages and what can be done with them.

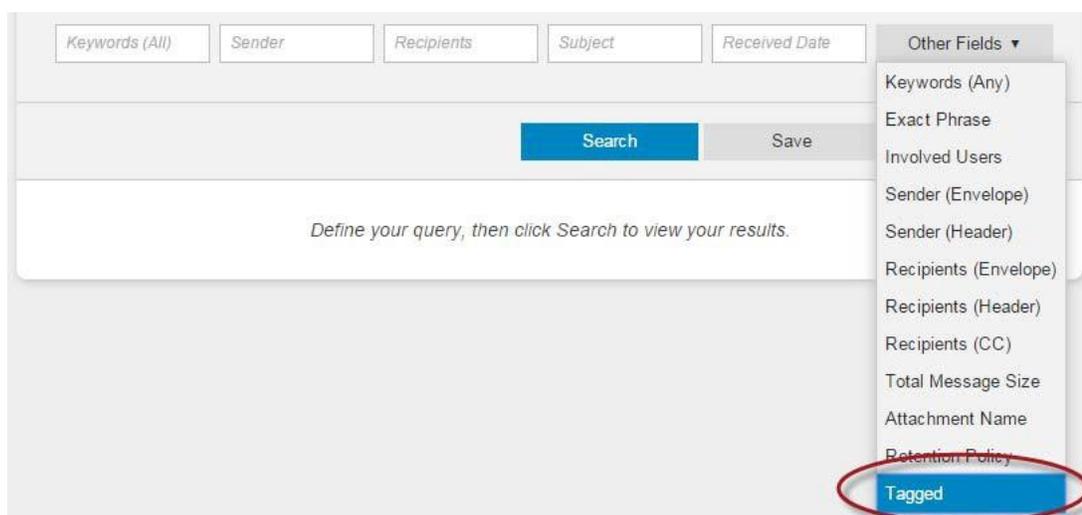
Task 2.5. Search for Tagged Messages

- 1) When Tags are created, they are defined within the context of a specific Reviewer Group. So, when searching for tagged emails, ensure the Reviewer Group scope is properly set by first clicking the **Reset** button to clear all the search fields.

- 2) Click on the **Reviewer Scope** drop-down and select the Reviewer Group that contains the Tag that is being search for.



- 3) Click the **Other Fields** drop-down and select **Tagged**.



- 4) When the **Tagged With** row is added to the list of query fields, click the **Tagged** drop-down to display the list of available tags.



- 5) Select the desired **Tag** from the drop-down list.
Only one **Tagged With** value can be searched for in each search.
- 6) If desired, select other search terms.
- 7) Click the **Search** button to execute the search.

2.2.1.6. Search by Sampling Policy

The *Sampling Policy* filter is located in the **Other Fields** drop-down. When this Sampling Policy filter is included in a Reviewer query, all other terms in the query are executed first, and then a random sample of the resulting emails is returned to the user.

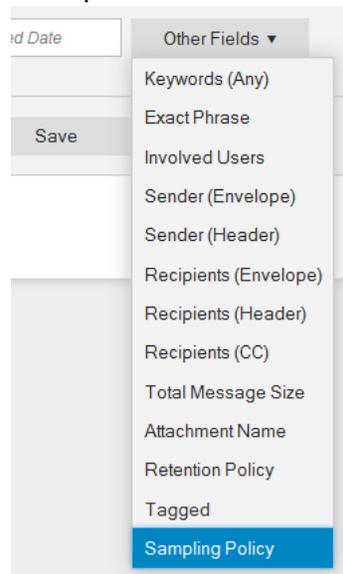
The *Sampling Policy* filter has the options of: 1/100, 1/1,000, 1/10,000, and 1/100,000 of the total number of messages returned by the other terms in the query.

The actual number of messages returned by the *Sampling Policy* filter depends on which individual messages are selected by the sampling algorithm. Generally, the expected number of messages will be returned by the Sampling Filter. But due to the design of the sampling algorithm, it is possible that no messages will be returned if no item was sampled by the algorithm, or more than the expected number of messages will be returned if those items are selected by the algorithm.

Queries using a *Sampling Policy* filter are reproducible. Entering the exact same search query will produce the same sample set.

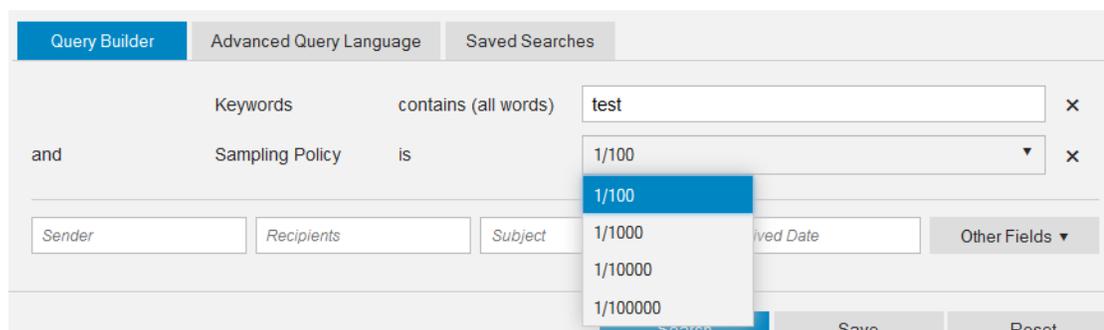
Task 2.6. Use the Sampling Policy filter

- 1) Click the **Other Fields** drop-down and select **Sampling Policy**.



The Sampling Policy filter can be added to the query in any order, and is always evaluated last.

- 2) Select the desired sampling rate from the drop-down.



- 3) Enter other search terms as desired. Then click the **Search** button to execute the search.

The messages selected by the Sampling Policy algorithm will be returned.

The returned messages can be used to create a Retention Hold or Discovery Archive. Recovery Archives do not support the use of the Sampling Policy filter.

2.2.1.7. Search By Other Fields

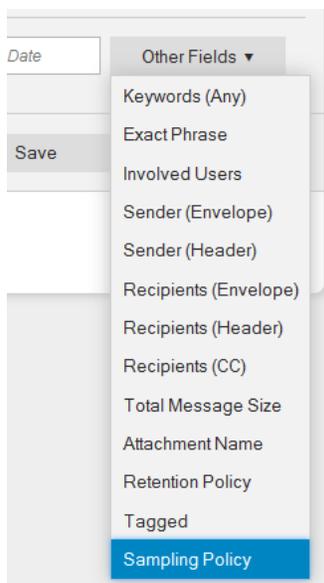
For instructions regarding using:

- **Keywords (Any)** and **Exact Phrase**, see ["Search By Keywords or Phrases" on page 21.](#)
- **Involved Users**, see ["Search by Involved Users" on page 25.](#)
- **Tags**, see ["Search by Tagged Messages" on page 27.](#)
- **Sampling Policy**, see ["Search by Sampling Policy" on page 28.](#)

The following applies to the remaining **Other Fields** filters.

Task 2.7. Apply Other Fields filters to search results

- 1) Click the **Other Fields** drop-down, and then choose a filter from the drop-down list.



2) A row is added to the query area, *below* the line

The screenshot shows the Query Builder interface with three rows of filters. The first row is 'Keywords contains (all words) test'. The second row is 'Additionally, Sender (Envelope) contains Sender (Envelope)'. The third row is 'and Recipients (Envelope) contains Recipients (Envelope)'. Below the rows are tabs for 'Sender', 'Recipients', 'Subject', 'Received Date', and 'Other Fields'.

3) Click inside the row's text box and enter the search term

4) Click the **Operator** drop-down to select the operator for the row.

The field's label and default value is the first value in the list.

5) Refer to [Table 2-1](#) for a list of **Other Fields**, their operators and the values you can use.6) Click the **Other Fields** drop-down to add another filter to the list.

7) Repeat the process until all desired filters have been added to the query.

Table 2-1 Other Fields Options

Filter	Operators	Values/Notes
Sender (Envelope)	<ul style="list-style-type: none"> contains does not contain 	Filters results based on whether the From field in the <i>message envelope</i> contains or does not contain the value provided.
Sender (Header)	<ul style="list-style-type: none"> contains does not contain 	Filters results based on whether the From field in the <i>message header</i> contains or does not contain the value provided.
Recipients (Envelope)	<ul style="list-style-type: none"> contains does not contain 	Filters results based on whether the recipient information in the <i>message envelope</i> contains or does not contain the value provided. <i>For non-journaled messages:</i> This filter can be used to search for Bcc recipients. (NOTE: Only email addresses found in retention policies can be found using this option. It will not find any email addresses that are external to your organization or not subject to a retention policy.)
Recipients (Header)	<ul style="list-style-type: none"> contains does not contain 	Filters results based on whether the To field in the <i>message header</i> contains or does not contain the value provided.
Recipients (CC)	<ul style="list-style-type: none"> contains does not contain 	Filters results based on whether the Cc field in the <i>message header</i> contains or does not contain the value provided.

Table 2-1 Other Fields Options (Continued)

Filter	Operators	Values/Notes
Total Message Size	<ul style="list-style-type: none"> • <code>is</code> (bytes) • <code>is not</code> (bytes) • <code>is greater than</code> (bytes) • <code>is less than</code> (bytes) 	Filters results based on whether the total size of the message and its attachments in bytes <code>is</code> (exactly), <code>is not</code> (exactly), <code>is less than</code> , or <code>is greater than</code> the value provided.
Attachment Name	<ul style="list-style-type: none"> • <code>contains</code> 	Filters results based on whether the name of the attachment <code>contains</code> the value provided. Is not case sensitive. Adds an implied wildcard.
Retention Policy	<ul style="list-style-type: none"> • <code>is</code> 	Filters results based on the retention policy chosen from the drop-down list. Messages must meet all the other filter criteria <i>and</i> be a part of the selected Retention Policy.

2.3. Search Company Archive Using the Advanced Query Language

Reviewers can use the Advanced Query Language search mode to submit complex searches, such as those that:

- Use specific terms, such as all messages that include the phrase `Quarterly Report`.
- Use comparisons, such as all messages sent between December 25 and August 1st, or all messages greater than 4 KB but less than 8 KB.
- Use the Boolean operators `AND`, `OR`, and `NOT` to refine searches, such as messages from `bob@genericorp.com AND` that are smaller than 4 KB.
- Search for terms in proximity to other terms, such as terms that appear within four words of each other in a specified order.
- Edit searches generated in the **Query Builder** tab.

2.3.1. Build an Advanced Query Language Query

NOTE Limitations When Formulating Long Queries

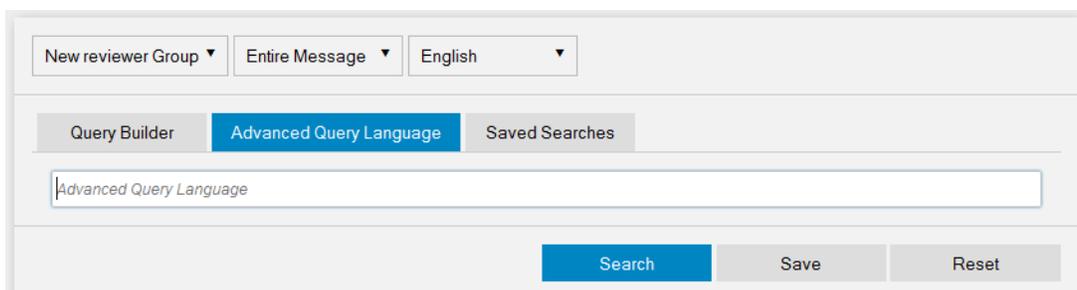
In Internet Explorer, the URL length limit of 2083 characters can cause errors when executing a long discovery query. If a query URL exceeds the character limit, Internet Explorer will display an error message and the query will not execute.

This scenario is most likely when using the Query Builder options to build a complex query containing many search parameters. Simple searches are not likely to trigger this issue.

One workaround is to use a web browser with longer URL character limits, such as Mozilla Firefox. Another workaround is to narrow the search to fewer parameters.

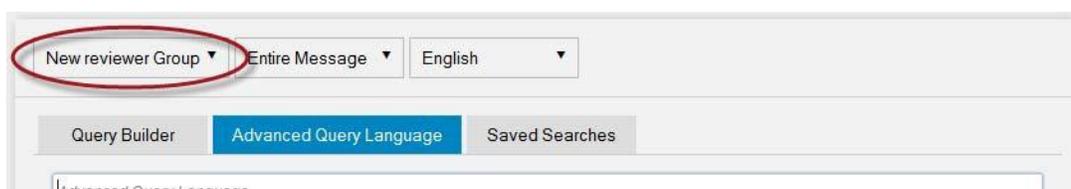
Task 2.8. Build a query using Advanced Query Language

- 1) Click the **Advanced Query Language** tab. The Advanced Query Language search pane appears.



The screenshot shows the search interface with three filter dropdowns at the top: "New reviewer Group", "Entire Message", and "English". Below these are three tabs: "Query Builder", "Advanced Query Language" (which is highlighted in blue), and "Saved Searches". A search input field contains the text "Advanced Query Language". At the bottom right, there are three buttons: "Search" (highlighted in blue), "Save", and "Reset".

- 2) If you are part of more than one Reviewer Group, select the Reviewer Group scope from the **Reviewer Group** drop-down list.



This screenshot is a close-up of the "New reviewer Group" dropdown menu. The menu is open, showing a list of options. The currently selected option, "New reviewer Group", is circled in red. The other two filter dropdowns, "Entire Message" and "English", are visible to the right of the dropdown menu.

The label of the drop-down is the currently selected Reviewer Group. Only messages that match the search criteria *and* are within the scope of the selected Review Group will be displayed.

- 3) If desired, use the **Search Context** drop-down to select the portion of the message that is to be searched for this query. The selections are: *Entire Message*, *Body Only* or *Attachments Only*

The screenshot shows a search interface with three dropdown menus at the top: 'New reviewer Group', 'Entire Message', and 'English'. The 'Entire Message' dropdown is circled in red. Below the dropdowns are three tabs: 'Query Builder', 'Advanced Query Language' (which is active), and 'Saved Searches'. A text input field labeled 'Advanced Query Language' is visible below the tabs.

- 4) If desired, select a search language from the **Search Language** drop-down menu. The label of the drop-down is the currently selected language.

The screenshot shows the same search interface as above. The 'English' dropdown menu is circled in red. The 'Advanced Query Language' tab is still active.

Choosing a search language limits the search to emails identified as belonging to that language, plus all the language-identified emails. It also changes the stop word behavior (see ["Stop Words" on page 44](#)). To search *all* emails in the archive, select *Any*.

Current language choices include: *Any*, *Arabic*, *Chinese (simplified & traditional)*, *Dutch*, *English*, *French*, *German*, *Hebrew*, *Japanese*, *Portuguese*, *Russian*, *Spanish*, and *Swedish*.

The default search language is *English*.

- 5) Type your Query Language search string into the **Advanced Query Language** text field.

The screenshot shows the search interface with the 'Advanced Query Language' tab active. The text input field labeled 'Advanced Query Language' is circled in red. Below the field are buttons for 'Search', 'Save', and 'Reset'.

- Use the syntax, fields, and options described in [Table 2-2. "Query Language Fields" on page 35](#).
- The **Advanced Query Language** field does *not* implement [Stemming](#). You must use the wildcard character (*) to expand Query Language searches beyond the search strings you enter.

For example, to search for all the terms (*project*, *projected*, *projecting*, *projector*, or *projects*) in the message subject, add `subject:"project*"` to your query.

- If an unquoted string is entered into the Advanced Query Language box without other syntax, the search engine implements a “google style” search, instead of giving a syntax error.

This means the result set includes documents which match all terms as well as documents which match some of the terms, ranked by relevance.

Putting double quotes around the query causes it to be a phrase match rather than a “google style” match.

- See the examples listed under [2.3.2.. "Query Language Examples" on page 39](#) for additional guidance.
- 6) Execute the search by either clicking the **Search** button or hit the ENTER key.
 - 7) To save the query for future execution, click the **Save** button. See ["Saved Searches" on page 65](#) for more information.
 - 8) The results of your search are displayed in the table below the search boxes.

When your results list contains all the messages you need, refer to the following sections for additional actions you can perform on the messages returned by the search:

- To create a Retention Hold, see ["Retention Holds" on page 78](#).
- To create a Discovery Archive, see ["Email and Instant Message Archives" on page 82](#).

Table 2-2 Query Language Fields

Field	Description	Type	Example
altrrecipients ¹	Alternative recipients listed in the To field or Cc field of the envelope journal report.	String	altrrecipients: bob_anderson@ genericcorp.com
attachedfiles	<ul style="list-style-type: none"> • A filename (If filename contains spaces, enclose in quotes) • Filenames joined by Boolean expressions (If filename contains spaces, enclose in quotes) • To match an ordered list of attachments use a semicolon separated list of all filenames, enclosed in quotes (No need to add extra quotes to filenames with spaces) 	String	<ul style="list-style-type: none"> • attachedfiles: picture.jpg • attachedfiles: picture.jpg or "second picture.jpg" • attachedfiles: "report.xls; report.doc; Quarterly Report.ppt"
content	The content of the message.	String	content:"Q4 results"
dlists ¹	Distribution lists listed in the To field or Cc field of the envelope journal report.	String	dlists: all_employees@ genericcorp.com

Table 2-2 Query Language Fields

Field	Description	Type	Example
emaildate	<p>The date specified in the Sent Date field of the message header.</p> <p>To search by date only, use the form YYYY-MM-DD.</p> <p>To search by date and time, use the form YYYY-MM-DDThh:mm:ssZ.</p> <ul style="list-style-type: none"> T is a required constant that identifies the following characters as times. Z is an optional UTC (Coordinated Universal Time) time zone identifier. UTC is default. Use 24-hour clock when specifying time. <p>Use <code>min</code> and/or <code>max</code> to specify earliest/latest dates.</p> <p>Use <code><</code> or <code>></code> to specify dates before or after a certain date.</p> <p>Note: By default, <code>emaildate</code> is stored as UTC (GMT) time. To search using your local time zone value, use the <code>TIME</code> value to manually compensate for the number of hours offset from UTC. For example: <code>T05:00:00</code> is midnight in the US-Central time zone.</p>	Date	<p>To find messages sent between January 1, 2008, midnight (local) and January 3, 2009, midnight (local): <code>emaildate:range (2008-01-01T05:00:00, 2009-01-03T05:00:00)</code></p> <p>To find messages received after Aug. 21, 2012 use: <code>emaildate:>2012-08-21</code></p> <p>To find messages received before Aug. 21, 2012, use: <code>emaildate:<2012-08-21</code></p>
envrecipients	<p>The recipient information contained in the message envelope.²</p> <p><i>For non-journaled messages:</i> This field can be used to search for Bcc recipients.</p> <p>NOTE: Only email addresses found in retention policies can be found using this option. It will not find any email addresses that are external to your organization or not included in a retention policy.</p> <p><i>For envelope journaled messages:</i> This field contains all recipient information.</p>	String	<code>envrecipients:bob_anderson@genericcorp.com</code>
envsender	<p>The sender information contained in the message envelope.²</p>	String	<code>envsender:bob_anderson@genericcorp.com</code>

Table 2-2 Query Language Fields

Field	Description	Type	Example
filename	The file name of a document or message. <ul style="list-style-type: none"> When searching for an attachment, also set <code>isattachment:1</code> for the attachment file name. To search for a message, set <code>isattachment:0</code>. 	String	filename:report.xls and isattachment:1
isattachment	An indicator of whether the document is an email attachment or a message. <ul style="list-style-type: none"> To indicate that the document is an attachment, set <code>isattachment:1</code>. To indicate that the document is not an attachment, set <code>isattachment:0</code>. 	Integer	filename:report.xls and isattachment:1
mailbcc ¹	Recipients listed in the Bcc field of the envelope journal report.	String	mailbcc: bob_anderson@ genericcorp.com
mailbccaltrecipient ¹	Alternative recipients listed in the Bcc field of the envelope journal report.	String	mailbccaltrecipient: bob_anderson@ genericcorp.com
mailbccdlist ¹	Distribution lists listed in the Bcc field of the envelope journal report.	String	mailbccdlist: all_employees@ genericcorp.com
mailcc	The recipients listed in the Cc field of the message header.	String	mailcc:bob@ genericcorp.com
mailccaltrecipient ¹	Alternative recipients listed in the Cc field of the envelope journal report.	String	mailccaltrecipient: bob_anderson@ genericcorp.com
mailccdlist ¹	Distribution lists listed in the Cc field of the envelope journal report.	String	mailccdlist: all_employees@ genericcorp.com
mailfrom	The sender listed in the From field of the message header.	String	mailfrom:bob@ genericcorp.com
mailsubject	The subject of the message. <ul style="list-style-type: none"> If value contains spaces, enclose in double-quotes. 	String	mailsubject: "Quarterly Report"
mailto	The recipients listed in the To field of the message header.	String	mailto: bob@genericcorp.com
mailtoaltrecipient ¹	Alternative recipients listed in the To field of the envelope journal report.	String	mailtoaltrecipient: bob_anderson@ genericcorp.com

Table 2-2 Query Language Fields

Field	Description	Type	Example
mailtodlist ¹	Distribution lists recipients listed in the To field of the envelope journal report.	String	mailtodlist: all_employees@ genericcorp.com
receiveddate	<p>The date the message was received by the email server.</p> <p>To search by date only, use the form YYYY-MM-DD.</p> <p>To search by date and time, use the form YYYY-MM-DDThh:mm:ssZ.</p> <ul style="list-style-type: none"> • T is a required constant that identifies the following characters as times. • Z is an optional UTC time zone identifier. UTC is default. • Use 24-hour clock when specifying time. <p>Use min and/or max to specify earliest/latest dates.</p> <p>Note: By default, receiveddate is stored as UTC (GMT) time. To search using your local time zone value, use the TIME value to manually compensate for the number of hours offset from UTC. For example: T05:00:00 is midnight in the US-Central time zone.</p>	Date	<p>To find all messages received on or after February 3, 2008, use receiveddate:range (2008-02-03, max).</p> <p>To find all messages received before February 3, 2008, use receiveddate:range (min, 2008-02-03)</p>
recipients	<p>The recipients listed in one or more of the following:</p> <ul style="list-style-type: none"> • The list of recipient information contained in the message envelope (see envrecipient field for details) • The To field of the message header. • The Cc field of the message header. • Distribution lists listed in the To field or Cc field of envelope journal report.¹ • Alternative recipients listed in the To field or Cc field of envelope journal report.¹ 	String	(recipients:bob@ genericcorp.com OR recipients:sue@ genericcorp.com)

Table 2-2 Query Language Fields

Field	Description	Type	Example
senders	The list of senders in the message envelope ² or the From field of the message header.	String	(senders:bob@genericcorp.com OR senders:sue@genericcorp.com)
size	The size of document (message or attachment) in bytes. Express sizes in bytes. For example, 4 KB as 4096. Use < or > to specify sizes greater or less than a certain size.	Integer	To find all messages (messages only, without attachments) with a total size of at least 4KB but no greater than 8KB, use <code>size:range (4096, 8192)</code>
totalsize	The size of the message, in bytes, including all attachments. Express sizes in bytes. For example, 4 KB as 4096. Or use < or > to specify sizes greater or less than a certain size.	Integer	To find all messages with a total size (messages and attachments) of at least 8KB or greater, use <code>totalsize:range (8192, max)</code>
undisclosedrecipients ¹	Undisclosed recipients listed in one or more of the following: <ul style="list-style-type: none"> The list of recipients in the Bcc field of the envelope journal report. The list of distribution lists in the Bcc field of the envelope journal report. The list of alternative recipients in the Bcc field of the envelope journal report. 	String	undisclosedrecipients : bob_anderson@genericcorp.com

1. This search field is only applicable to envelope journaled messages.

2. The **message envelope** is the wrapper that contains the message's delivery directives.

2.3.2. Query Language Examples

2.3.2.1. Field Search

To search for a term in any field, type:

```
field:term
```

where

- `field` is one of the fields in [Table 2-2](#)
- `term` is the value you want to find. To find a phrase, enclose it in double quotation marks.

For example:

To find all messages that include the phrase `Quarterly Report` in the **Subject** field

```
mailsubject:"Quarterly Report"
```

To find all messages sent from the email address `bob@genericcorp.com`

```
mailfrom:bob@genericcorp.com
```

NOTE Message Envelope Search Limitations For Non-Journaled Messages

Message envelope searches (*Recipients (Envelope)* and *All Recipients* filters, or *envrecipients* and *recipients* query language fields) can only search the envelope information that EMS is able to capture.

For undisclosed recipient information (including Bcc recipients), the only addresses that will be captured are internal addresses included in a retention policy.

When searching for undisclosed recipients, the undisclosed recipient headers will not be visible in the search results but the relevant messages will be included in the result set.

2.3.2.2. Search For Range of Dates or Sizes

To search for mail using a range of dates or a range of sizes, type

```
field:range(start, end)
```

where

- `field` is `emaildate`, `receiveddate`, `totalsize`, or `size`
- `range` defines the beginning and ending points of the search. `min` indicates the minimum size or date, and `max` indicates the maximum size or date.

For example:

To find all messages with a total size that is at least 4 KB but no greater than 8 KB

```
totalsize:range(4096, 8192)
```

To find all messages sent between December 25, 2003 and August 1, 2005 (local time)

```
emaildate:range(2003-12-25T05:00:00, 2005-08-01T05:00:00)
```

To find messages sent before December 25, 200 (local time)

```
emaildate:range(min, 2008-12-25T05:00:00)
```

To find messages received on or after August 2, 2005 (local time)

```
receiveddate:range(2005-08-02T05:00:00, max)
```

2.3.2.3. Proximity Search

NEAR

To search for words in proximity to each other, type:

```
near(arg, arg, n=numericValue)
```

where:

- `arg` is a word you want to find (use as many as are required, following each by a comma)
- `n=numericValue` the *slop* for the search.

Slop is defined as the cumulative number of places that tokens may be moved in order to be considered a match the given phrase.

For example:

```
near(big, red, car, n=0) matches:
```

- the exact phrase "big red car"

```
near(big, red, car, n=1) matches:
```

- the phrase "big red * car" ("car" moved one token)
- and all phrases matched by `n=0`
- but does NOT match "big * red car" (both "red" and "car" moved one token, for a total slop of 2)

```
near(big, red, car, n=2) matches:
```

- the phrase "big red * * car" (car moved two tokens)
- the phrase "big * red car" (both "red" and "car" moved one token)
- the phrase "red big car" (both "big" and "red" moved one token)
- and all phrases matched by `n=1` and `n=0`
- but does NOT match "big * * red car" (both "red" and "car" moved two tokens, for a total slop of 4)

2.3.2.4. Boolean Operators

To combine search expressions using Boolean operators (AND, OR and NOT), use:

- AND *between* terms, to indicate *both* terms must be matched
- OR *between* terms, to indicate *either* term may be matched, but at least one *must* match
- NOT as a prefix to a term, to find terms that do *not* match the specified criteria
- Use matched parenthesis, '()', to group terms

For example:

To find messages that include either the phrase `financial report` or the phrase `balance sheet` and were sent before December 25, 2003 or after August 1, 2005, but not between those dates

```
NOT (emaildate:range (2003-12-25T05:00:00, 2005-08-01T05:00:00))
AND ("financial report" OR "balance sheet")
```

2.3.2.5. Find Partially Indexed Documents

To find only partially indexed documents, such as those that are too large or have damaged metadata, add `AND indexlevel:1` to the query.

To find documents sent before December 31, 2008 that have not been fully indexed

```
emaildate:range(min, 2008-12-31) AND indexlevel:1
```

2.4. Search Features

2.4.1. Quoting Search Strings

Non-Quoted Search Strings

When a non-quoted search string is entered, the search algorithm implements both the stop word and stemming functions.

First, it determines if any of the terms are [Stop Words](#) for the appropriate language. If so, it ignores the term.

Secondly, the search mechanism implements the [Stemming](#) function.

Example:

- Search language: English

- Search string: `by tomorrow night`
- Matches:
 - All English emails containing both (`tomorrow` or `tomorrows` or `tomorrow's`) and (`night` or `nightly` or `nights` or `night's`), ignoring the stop word `by`
 - AND All language-unidentified emails containing the specific words `by`, `tomorrow` and `night`

Quoted Search Strings In *Search Personal Mail*

When a quoted search string is entered, [Stop Words](#) and [Stemming](#) are again invoked, but stop words behave slightly differently.

If the quoted search string includes a stop word, the stop word is replaced with a wildcard that matches *any* stop word.

Example:

- Search language: `English`
- Search string: `"the financial report"`
- Matches:
 - All English emails containing `"(any stop word) financial(stemming applied) report(stemming applied)"`
 - such as `a financially reported` or `the financial reports`
 - AND All language-unidentified emails containing the exact phrase `the financial report`

Quoted Search Strings In *Search Company Archives*

When using quoted search strings, neither [Stop Words](#) nor [Stemming](#) functions are applied to the string.

Example:

- Search string: `"by tomorrow night"`
- Matches:
 - All emails containing the exact phrase `by tomorrow night` in the search language specified plus the language-unidentified emails

2.4.2. Stemming

To make searching more intuitive, the concept of *stemming* has been implemented. Stemming means that the search mechanism matches not only the exact term entered, but also returns matches based on the same 'stem' or root word of the search term(s).

Example:

Search string: **finance mouse**

- **Matches:** `finance mouse`, `finance's moused` and `financing mouser`
- **But not:** `financial mice`

Stemming typically matches the stems to regular verbs, regular plurals and regular possessives.

Irregular formations are implemented... well... irregularly, so some experimentation may be needed to produce the desired search results. For example: `mice` returns `mouse`, but `mouse` does not return `mice`.

Depending on the language being searched, words are stemmed differently. Typically in English, stemming is implemented based on suffixes. In other languages, stemming may be based on prefixes, infixes and/or suffixes, or not performed at all.

NOTE Stemmed search function does not apply to some languages

If **Chinese** or **Japanese** is chosen from the **Search Languages** menu, the Simple Query search performs a literal search on the entered terms.

2.4.3. Stop Words

To make searching more efficient, the concept of *stop words* has been implemented. Stop words are words that are not indexed in the search database (just like all the instances of the word 'the' would not appear in the index of a book) which greatly improves search response times.

Below is the list of currently implemented stop words for English:

a	are	be	for	it	or
an	as	but	in	of	the
and	at	by	is	on	to

Stop words are not implemented for the Chinese, Japanese or Hebrew languages. Stop words for all implemented languages are listed in ["Appendix A: Stop Words" on page 95](#).

The exact function of stop words depends on the **Search Language** selection. If a specific language is selected, then the stop words for that language are used when returning search results. *Plus*, search results are returned for all emails whose language cannot be determined which match all search terms.

Example:

- Search language: English
- Search string: `by tomorrow`
- Matches:
 - All English emails containing `tomorrow`, ignoring the stop word `by`
 - *AND* All language-unidentified emails containing both the words `by` and `tomorrow`

If the search language is set to `Any`, the search algorithm determines if any of the terms are stop words for any language, and if so, it ignores the term for emails tagged with that specific language.

Example:

- Search language: `Any`
- Search string: `by tomorrow`
- Matches:
 - All English emails containing `tomorrow`, ignoring the stop word `by`
 - *AND* All emails in all other language, including language-unidentified emails, containing both the words `by` and `tomorrow`

2.4.4. Queries Performed Within ‘Documents’

All queries are performed within documents

To be considered a match, multi-term searches require that *all* search terms appear in the contents of *one* document,

A document is an:

- Email body and metadata
- Individual attachment (whether email message or file) and its metadata

Metadata includes: Subject, From, To, Date, Attachment name, etc.

For example:

- Two search terms are given, and

- one term appears only in the body of the email
- and the second term appears only in the attachment,
- that message would *not* be returned as a match, because the message body and the attachment are considered to be *separate* documents.

Another example:

- The search term specified is the **To** recipient's user name (user_name@company.com) and one of the matched message has three attachments.
- Because the To recipient's email address appears in the metadata for all attachments, that single message would return four matches, because the message body and the attachment are considered to be *separate* documents.

3. Instant Message Archive Searches

If your organization has EMS Expanded Archive Services, Archive Reviewers can search archived *instant messages* in addition to searching email messages.

This chapter explains how to search the Instant Message archive and what actions you can take on messages returned by a search. See [Chapter 2. "Email Archive Searches" on page 13](#) for information on searching Email messages.

3.1. Search Instant Message Archive Using the Query Builder

The EMS Archive provides two ways to search instant message archives: *Query Builder* and *Advanced Query Language*.

- The *Query Builder* allows Reviewers to progressively build very complex queries using easy to understand building blocks.
- *Advanced Query Language* allows Reviewers to directly use the EMS Archive query language to create their search criteria.

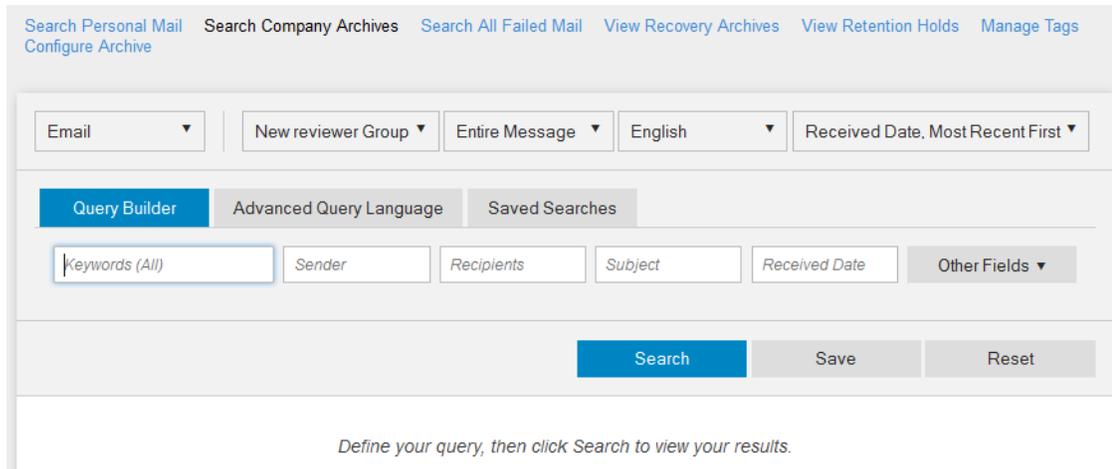
Also, a search can be created in *Query Builder* and then edited in the *Advanced Query Language* pane to further define the desired search criteria.

Both *Query Builder* and *Advanced Query Language* searches can be saved and accessed later using the *Saved Searches* feature.

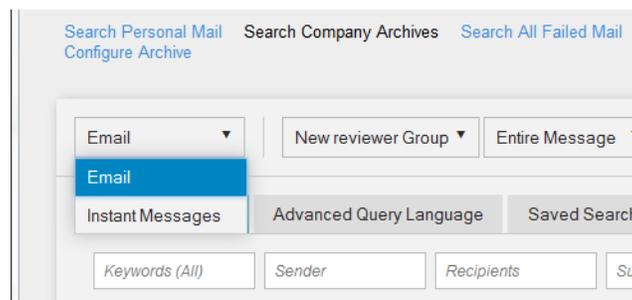
Query Builder is described below. For more information about *Advanced Query Language*, see ["Search Instant Message Archive Using the Advanced Query Language" on page 58](#). For more information about *Saved Searches*, see ["Saved Searches" on page 65](#).

Task 3.1. Query Builder Instant Message Archive Search

- 1) From the Email Management Services landing page, click **Search Company Archives** to search a company archive for which you have Reviewer privileges. The page defaults to the **Query Builder** tab.

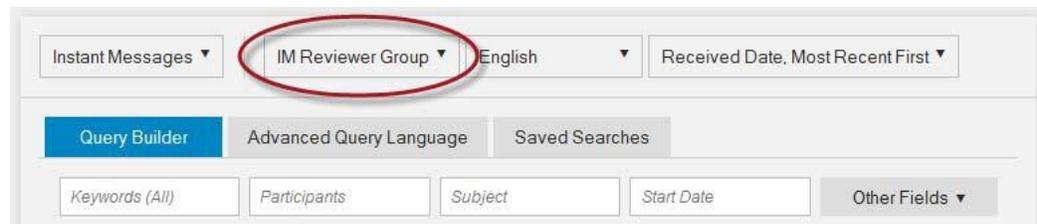


- 2) The **Content Type** drop-down appears. If it isn't selected, choose the **Instant Message** content type to search archived instant messages.



See [Chapter 2. "Email Archive Searches" on page 13](#) for information on searching Instant Message archives

- 3) If you are part of more than one Reviewer Group, select the Reviewer Group scope from the **Reviewer Scope** drop-down list.



The label of the drop-down is the currently selected Reviewer Group. Only messages that match the search criteria *and* are within the scope of the selected Review Group will be displayed.

- 4) If desired, select a search language from the **Search Language** drop-down menu. The label of the drop-down is the currently selected language.

The screenshot shows the top section of the Query Builder interface. It includes four dropdown menus: 'Instant Messages', 'IM Reviewer Group', 'English' (highlighted with a red circle), and 'Received Date, Most Recent First'. Below these are three tabs: 'Query Builder' (active), 'Advanced Query Language', and 'Saved Searches'. At the bottom of this section are five input fields: 'Keywords (All)', 'Participants', 'Subject', 'Start Date', and 'Other Fields' (with a dropdown arrow).

Choosing a search language limits the search to messages identified as belonging to that language, plus all the language-unidentified messages. It also changes the stop word behavior (see ["Stop Words" on page 44](#)). To search *all* messages in the archive, select *Any*.

Current language choices include: Any, Arabic, Chinese (simplified & traditional), Dutch, English, French, German, Hebrew, Japanese, Portuguese, Russian, Spanish, and Swedish.

The default search language is English.

- 5) Create a query by entering values in the search fields:

This screenshot shows the same Query Builder interface as above, but with a red oval highlighting the search fields: 'Keywords (All)', 'Participants', 'Subject', 'Start Date', and 'Other Fields'. Below the search fields are three buttons: 'Search' (blue), 'Save', and 'Reset'.

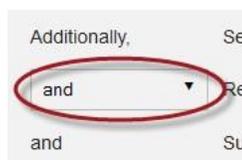
- Tab between search fields for easy navigation. Hit the ENTER key to execute the query.
- The **Other Fields** drop-down provides additional search fields: *Keywords (Any)*, *Exact Phrase*, *Involved Users*, *Total Size*, *Attachment Name*, *Retention Policy*, *Tagged* and *Sampling Policy*.

- 6) As search values are entered, they are dynamically placed above the search field boxes.

The screenshot shows the 'Query Builder' tab with three sub-tabs: 'Query Builder', 'Advanced Query Language', and 'Saved Searches'. The main area contains a search criteria table with a horizontal line separating criteria above and below it.

Operator	Field	Operator	Value	Action
	Keywords	contains (all words)	test	×
and	Started	on	01/01/2015	×
<hr/>				
Additionally,	Participants	contains	test	×
and	Subject	contains	test	×
<hr/>				
	Participants			
	Subject			
	Other Fields			

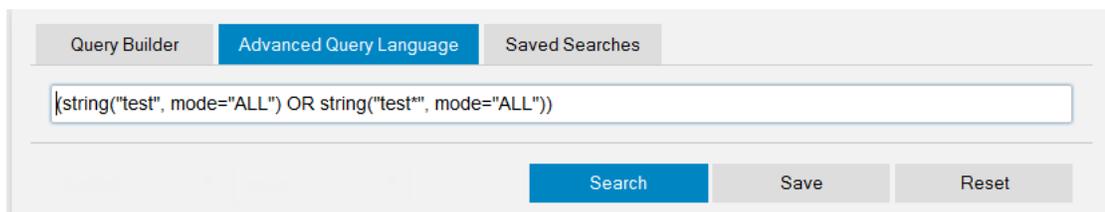
- Entered search values are placed in rows either *above* or *below* the line. Rows that appear *above* the line are all AND'd together. Rows that appear *below* the line can **all** be AND'd or OR'd together, using the drop-down



The results of the rows *below* the line are then AND'd with the results *above* the line to produce the final query result.

- Default search fields that appear *above* the line: **Keywords (All)** and **Start Date**. These values can be entered only once.
 - Default search fields that appear *below* the line: **Participants**, and **Subject**. Multiple values can be entered for these fields and will appear on multiple rows below the line.
 - **Other Fields** search fields that appear *above* the line: **Keywords (Any)**, **Exact Phrase**, **Involved Users**, **Tagged**, and **Sampling Policy**. These values can be entered only once.
 - **Other Fields** search fields that appear *below* the line: **Total Size**, **Attachment Name**, and **Retention Policy**. Multiple values can be entered for these fields and will appear on multiple rows below the line.
- To clear a row, click the **×** icon, or click the **Reset** button to clear all the rows.
- 7) Execute the search by either clicking the **Search** button or hit the ENTER key.
- 8) See ["Search Features" on page 42](#) for ideas on building targeted, efficient searches.

- 9) To see the query string that is generated by your search, click on the **Advanced Query Language** tab. This will replace the search criteria fields with a box containing the query string.



The screenshot shows a web interface with three tabs: "Query Builder", "Advanced Query Language" (which is selected and highlighted in blue), and "Saved Searches". Below the tabs is a text input field containing the query string: `(string("test", mode="ALL") OR string("test*", mode="ALL"))`. Below the input field are three buttons: "Search" (highlighted in blue), "Save", and "Reset".

This field will be blank until a query is executed.

The contents of this query string field can be edited, but once edited, you **cannot** return the query to the Query Builder. See ["Search Instant Message Archive Using the Advanced Query Language" on page 58](#) for more information.

- 10) To save the query for future execution, click the **Save** button. See ["Saved Searches" on page 65](#) for more information.
- 11) The result of your search is displayed in the table below the search boxes.
- To be considered a match, all the query criteria must be met within the scope of a document (see ["Queries Performed Within 'Documents'" on page 45](#)).
- 12) To display the body of the message, click the message. The instant message conversation expands beneath the message row.

When your results list contains all the messages you need, refer to the following sections for additional actions you can perform on the messages returned by the search:

- To create a Retention Hold, see ["Retention Holds" on page 78](#).
- To create a Discovery Archive, see ["Email and Instant Message Archives" on page 82](#).

3.1.1. Query Builder Further Information

This section describes the detailed functionality of each of the query fields.

NOTE Special Character Limitations

If you submit a query containing only a single special character (such as a tilde, parenthesis, or exclamation point), the system returns all messages within your reviewer scope. The workaround for this issue is to use at least one alphanumeric character in your query in addition to the special character.

3.1.1.1. Search By Keywords or Phrases

Keywords (All), Keywords (Any), and Exact phrase function exactly the same for IM searches as they do for email searches. See ["Search By Keywords or Phrases" on page 21](#) for more information.

3.1.1.2. Search By Participants or Subject

This section covers:

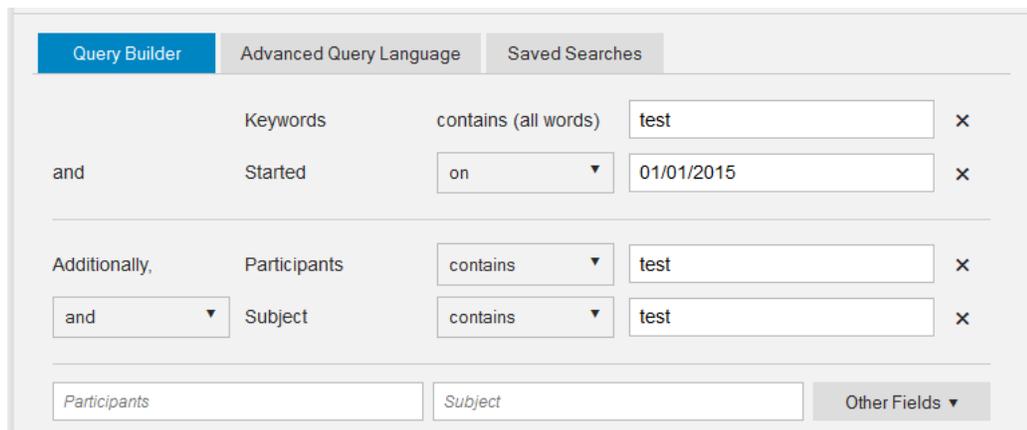
- **Participants**

Filters results based on whether the **Participants** of the Instant Message conversation `contains` or `does not contain` the value provided.

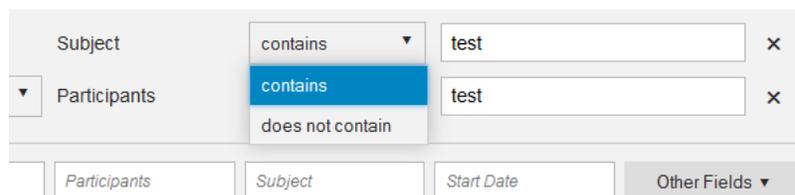
- **Subject**

Filters results based on whether the conversation's **Subject** field `contains` or `does not contain` the value provided.

As entries are made to the **Participants** or **Subject** fields, a query row is added to the search query *below* the line and the text box remains so more terms can be added.



Each query row contains a drop-down to specify if the query is to be considered a match if the field `contains` or `does not contain` the value entered in the text box.



Below is more information on using the **Participants** and **Subject** fields

- These fields can be used individually or in combination, each of these fields can be used multiple times.

- If data is entered into more than one field, the results can be AND'd or OR'd together with the rest of the query rows below the line to produce the final search result.
- Multiple search terms entered into a single text box with a space between words are AND'd together, then evaluated with the other query rows.
- Stop words *do* apply. See ["Stop Words" on page 44](#)
- Stemming does apply (see ["Stemming" on page 44](#)), as does the implied wildcard (*) at the end of each word.
- Double-quoted values are considered a single string and the string must be matched exactly.
- See ["Search Features" on page 42](#) for further tips on using these fields.

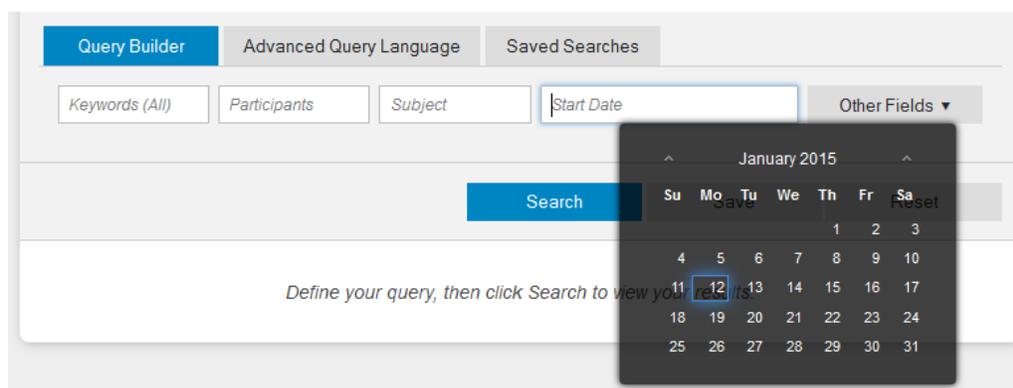
3.1.1.3. Search by Start Date

Use this field to filter the query by dates. The Start Date used for this query is the date the instant message conversation began.

The query can be created to search on, after, or before a defined date, or between two defined dates. The after, before and between searches can also include time values.

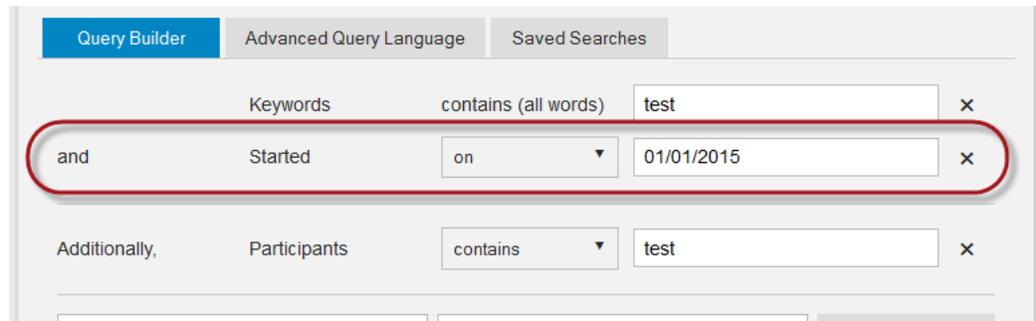
Task 3.2. Search by start date or date range

- 1) Click the inside the **Start Date** field to bring up the date selection pop-up.

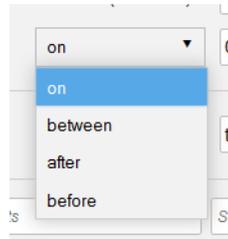


- 2) In the **Calendar** display, click on a day to select that date. Click the  or  buttons to move backward or forward a month. (To close the pop-up, click somewhere outside it.)

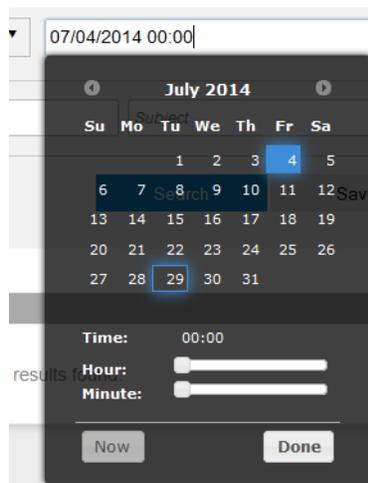
This inserts a row in the list of query fields. The Start Date row is above the line, meaning only one date row can be entered.



- 3) To search *before* or *after*, a defined date, or *between* two defined dates, select that value from the **on** drop-down menu.



- Selecting *before* or *after* adds the option of adding a time.



Click inside the field to bring up the Calendar pop-up. Either type the time into the text box or use the sliders to set the hours and minutes and click **Done**. A date with 24-hour time is used, in the format: MM/DD/YYYY HH:MM.

- Selecting `between` adds a second date field.



The screenshot shows a search filter configuration. On the left, the text "Started" is followed by a dropdown menu set to "between". To the right of the dropdown are two date input fields: "01/01/2015 00:00" and "01/01/2015 23:59", separated by the word "and". A small "x" icon is located to the right of the second date field.

Click inside either date field to bring up the Calendar pop-up. Then either type in the date and time or click the day and use the sliders to set the hours and minutes and click **Done**. A date with 24-hour time is used, in the format: MM/DD/YYYY HH:MM.

3.1.1.4. Search By Other Fields

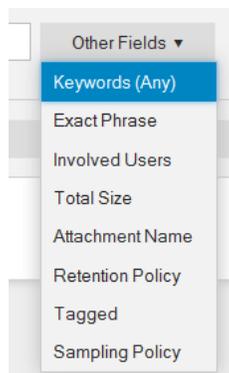
The following query fields function the same for instant message searches as they do for email searches. Refer to the email search instructions for more details:

- **Keywords (Any)** and **Exact Phrase**: ["Search By Keywords or Phrases" on page 21.](#)
- **Involved Users**: ["Search by Involved Users" on page 25.](#)
- **Tagged**: ["Search by Tagged Messages" on page 27.](#)
- **Sampling Policy**: ["Search by Sampling Policy" on page 28.](#)

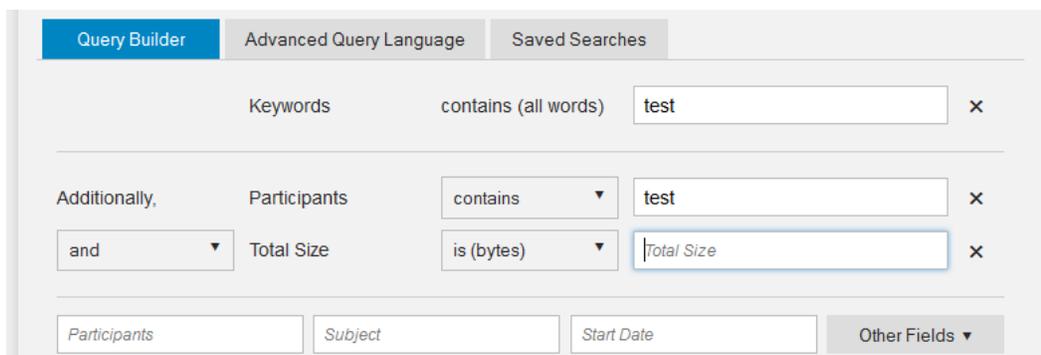
The following task gives instructions for the remaining **Other Fields** filters.

Task 3.3. Apply Other Fields filters to search results

- 1) Click the **Other Fields** drop-down, and then choose a filter from the drop-down list.



2) A row is added to the query area, *below* the line



- 3) Click inside the row's text box and enter the search term
- 4) Click the **Operator** drop-down to select the operator for the row.
The field's label and initial value is the first value in the list.
- 5) Refer to [Table 3-1](#) for a list of **Other Fields**, their operators and the values you can use.
- 6) Click the **Other Fields** drop-down to add another filter to the list.
- 7) Repeat the process until all desired filters are listed.

Table 3-1 Other Fields Options

Filter	Operators	Values/Notes
Total Message Size	<ul style="list-style-type: none"> • is (bytes) • is not (bytes) • is greater than (bytes) • is less than (bytes) 	Filters results based on whether the total size of the message and its attachments in bytes is (exactly), is not (exactly), is less than, or is greater than the value provided.
Attachment Name	<ul style="list-style-type: none"> • contains 	Filters results based on whether the name of the attachment contains the value provided. Is not case sensitive. Adds an implied wildcard.
Retention Policy	<ul style="list-style-type: none"> • is 	Filters results based on the retention policy chosen from the drop-down list. Messages must meet all the other filter criteria <i>and</i> be a part of the selected Retention Policy.

3.2. Search Instant Message Archive Using the Advanced Query Language

Reviewers can use the Advanced Query Language search mode to submit complex instant message searches, such as those that:

- Use specific terms, such as all instant messages that include the phrase `Quarterly Report`.
- Use comparisons, such as all instant messages sent between December 25 and August 1st, or all messages greater than 4 KB but less than 8 KB.
- Use the Boolean operators `AND`, `OR`, and `NOT` to refine searches, such as instant messages originated by `bob@genericorp.com` `AND` that are smaller than 4 KB.
- Search for terms in proximity to other terms, such as terms that appear within four words of each other in a specified order.
- Edit searches generated in the **Query Builder** tab.

3.2.1. Build an Advanced Query Language Query

NOTE Limitations When Formulating Long Queries

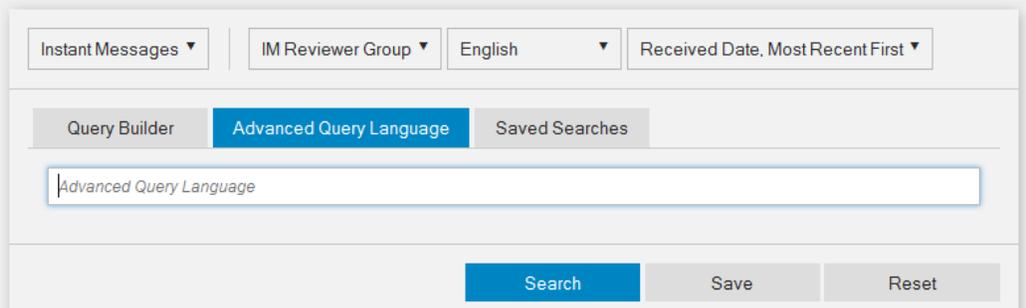
In Internet Explorer, the URL length limit of 2083 characters can cause errors when executing a long discovery query. If a query URL exceeds the character limit, Internet Explorer will display an error message and the query will not execute.

This scenario is most likely when using the Query Builder options to build a complex query containing many search parameters. Simple searches are not likely to trigger this issue.

One workaround is to use a web browser with longer URL character limits, such as Mozilla Firefox. Another workaround is to narrow the search to fewer parameters.

Task 3.4. Build a query using Advanced Query Language

- 1) Click the **Advanced Query Language** tab. The Advanced Query Language search pane appears.



The screenshot shows the search interface with the following elements:

- Four dropdown menus at the top: "Instant Messages", "IM Reviewer Group", "English", and "Received Date, Most Recent First".
- A tabbed interface with three tabs: "Query Builder", "Advanced Query Language" (which is selected and highlighted in blue), and "Saved Searches".
- A large text input field containing the placeholder text "Advanced Query Language".
- Three buttons at the bottom: "Search" (highlighted in blue), "Save", and "Reset".

- 2) If you are part of more than one Reviewer Group, select the Reviewer Group scope from the **Reviewer Group** drop-down list.



The label of the drop-down is the currently selected Reviewer Group. Only messages that match the search criteria *and* are within the scope of the selected Review Group will be displayed.

- 3) If desired, select a search language from the **Search Language** drop-down menu. The label of the drop-down is the currently selected language.

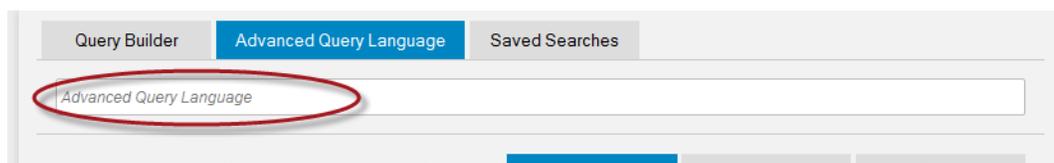


Choosing a search language limits the search to instant messages identified as belonging to that language, plus all the language-unidentified messages. It also changes the stop word behavior (see ["Stop Words" on page 44](#)). To search *all* messages in the archive, select *Any*.

Current language choices include: Any, Arabic, Chinese (simplified & traditional), Dutch, English, French, German, Hebrew, Japanese, Portuguese, Russian, Spanish, and Swedish.

The default search language is *English*.

- 4) Type your Query Language search string into the **Advanced Query Language** text field.



- Use the syntax, fields, and options described in [Table 3-2, "Query Language Fields" on page 60](#).
- The **Advanced Query Language** field does *not* implement [Stemming](#). You must use the wildcard character (*) to expand Query Language searches beyond the search strings you enter.

For example, to search for all the terms (project, projected, projecting, projector, or projects) in the message subject, add `subject:"project*"` to your query.

- If an unquoted string is entered into the Advanced Query Language box without other syntax, the search engine implements a “google style” search, instead of giving a syntax error.

This means the result set includes documents which match all terms as well as documents which match some of the terms, ranked by relevance.

Putting double quotes around the query causes it to be a phrase match rather than a “google style” match.

- See the examples listed under [2.3.2.. "Query Language Examples" on page 39](#) for additional guidance.

- 5) Execute the search by either clicking the **Search** button or hit the ENTER key.
- 6) To save the query for future execution, click the **Save** button. See ["Saved Searches" on page 65](#) for more information.
- 7) The results of your search are displayed in the table below the search boxes.

When your results list contains all the messages you need, refer to the following sections for additional actions you can perform on the messages returned by the search:

- To create a Retention Hold, see ["Retention Holds" on page 78](#).
- To create a Discovery Archive, see ["Email and Instant Message Archives" on page 82](#).

For more information on using query language, see ["Query Language Examples" on page 39](#).

Table 3-2 Query Language Fields

Field	Description	Type	Example
attachedfiles	<ul style="list-style-type: none"> • A filename (If filename contains spaces, enclose in quotes) • Filenames joined by Boolean expressions (If filename contains spaces, enclose in quotes) • To match an ordered list of attachments use a semicolon separated list of all filenames, enclosed in quotes (No need to add extra quotes to filenames with spaces) 	String	<ul style="list-style-type: none"> • attachedfiles: picture.jpg • attachedfiles: picture.jpg or "second picture.jpg" • attachedfiles: "report.xls; report.doc; Quarterly Report.ppt"
content	The content of the IM conversation.	String	content:"Q4 results"

Table 3-2 Query Language Fields

Field	Description	Type	Example
filename	<p>The file name of a document or message.</p> <ul style="list-style-type: none"> When searching for an attachment, also set <code>isattachment:1</code> for the attachment file name. To search for a message, set <code>isattachment:0</code>. 	String	filename:report.xls and isattachment:1
isattachment	<p>An indicator of whether the document is an attachment or a message.</p> <ul style="list-style-type: none"> To indicate that the document is an attachment, set <code>isattachment:1</code>. To indicate that the document is not an attachment, set <code>isattachment:0</code>. 	Integer	filename:report.xls and isattachment:1
mailfrom	The originator of the IM conversation.	String	mailfrom:bob@genericcorp.com
mailsubject	<p>The subject of the IM conversation.</p> <ul style="list-style-type: none"> If value contains spaces, enclose in double-quotes. 	String	mailsubject: "Quarterly Report"
mailto	The participants in the IM conversation.	String	mailto: bob@genericcorp.com
participants	The participants in the IM conversation.	String	participants: bob@genericcorp.com

Table 3-2 Query Language Fields

Field	Description	Type	Example
receiveddate	<p>The date the IM conversation was started.</p> <p>To search by date only, use the form YYYY-MM-DD.</p> <p>To search by date and time, use the form YYYY-MM-DDThh:mm:ssZ.</p> <ul style="list-style-type: none"> T is a required constant that identifies the following characters as times. Z is an optional UTC time zone identifier. UTC is default. Use 24-hour clock when specifying time. <p>Use min and/or max to specify earliest/latest dates.</p> <p>Note: By default, receiveddate is stored as UTC (GMT) time. To search using your local time zone value, use the TIME value to manually compensate for the number of hours offset from UTC. For example: T05:00:00 is midnight in the US-Central time zone.</p>	Date	<p>To find all messages started on or after February 3, 2008, use receiveddate:range (2008-02-03, max).</p> <p>To find all messages started before February 3, 2008, use receiveddate:range (min, 2008-02-03)</p>
recipients	The participants in the IM conversation.	String	(recipients:bob@genericcorp.com OR recipients:sue@genericcorp.com)
senders	The originators of the instant message conversation.	String	(senders:bob@genericcorp.com OR senders:sue@genericcorp.com)

Table 3-2 Query Language Fields

Field	Description	Type	Example
size	<p>The size of document (message or attachment) in bytes.</p> <p>Express sizes in bytes. For example, 4 KB as 4096.</p> <p>Use < or > to specify sizes greater or less than a certain size.</p>	Integer	To find all messages (messages only, without attachments) with a total size of at least 4KB but no greater than 8KB, use <code>size:range (4096, 8192)</code>
totalsize	<p>The size of the message, in bytes, including all attachments.</p> <p>Express sizes in bytes. For example, 4 KB as 4096.</p> <p>Or use < or > to specify sizes greater or less than a certain size.</p>	Integer	To find all messages with a total size (messages and attachments) of at least 8KB or greater, use <code>totalsize:range (8192, max)</code>

3.3. IM Search Features

When searching Instant Messages, quoted strings, stemming and stop words work just as they do when searching emails. See ["Search Features" on page 42](#) for more information.

4. Saved Searches, Message Tags, Holds and Archives

After searching the EMS Archive using the instructions in [Chapter 2, "Email Archive Searches"](#) and [Chapter 3, "Instant Message Archive Searches"](#), the search query can be saved. Additionally, the returned messages can be Tagged for easier retrieval and identification. And the returned messages can be bundled into Retention Holds or Discovery/Recovery Archives.

- **Saved Searches:**
 - Email and Instant Messages search queries can be saved for later use.
 - Both Query Builder and Advanced Query Language searches can be saved.
 - Searches are saved on a per user basis.
- **Tagged Messages:**
 - Tags are created within a Retention Policy scope and can be quickly added and removed from messages.
 - Allows for easy identification and search of tagged messages.
 - Tags can be used to create Retention Holds and Discovery or Recovery Archives.
 -
- **Retention Hold:**
 - Retains messages (prevents messages from being purged) regardless of any other Retention Policies that may apply to the individual messages under the hold, until the hold is released.
 - Optionally, new messages that match a Retention Hold's search criteria can be added to an existing hold.
 - Retention Holds can only be released (deleted) by an EMS Archive administrator.
 - When a Retention Hold is released, messages are then available to be retained or purged based on each individual message's applicable Retention Policies.
- **Discovery Archives:**
 - Collections of email messages or instant messages that are packaged by EMS Archive for later use.
 - Retains messages (prevents messages from being purged) regardless of any other retention policies that may apply to the individual messages contained within the archive, until the archive is deleted.

- Archive contents are static. Unlike Retention Holds, new messages are not added to archives.
- If your organization offers the Export Manager feature, you can export a Discovery Archive to a PST or EML file and deliver it to an authorized user for analysis.
- Discovery Archive contents can be imported into a single designated Exchange mailbox by EMS Administrators where authorized users can analyze them.
- **Recovery Archives:**
 - Recovery Archives can be created by Reviewers who also have EMS Administrator privileges.
 - Recovery archives can be created only for email messages.
 - Retains email messages (prevents messages from being purged) regardless of any other retention policies that may apply to the individual messages contained within the archive, until the archive is deleted.
 - Archive contents are static. Unlike Retention Holds, new email messages are not added to archives.
 - Recovery Archive's email contents can be imported into designated Exchange mailboxes, using RecoveryManager.

4.1. Saved Searches

Reviewers have the option to save search queries for later re-use. Both *Query Builder* and *Advanced Query Language* searches can be saved.

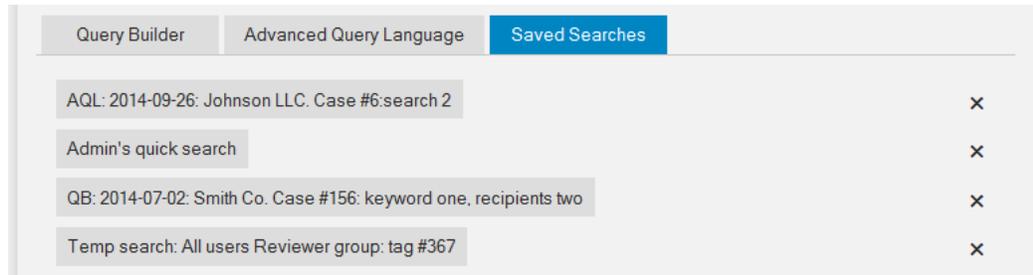
Saving searches saves time in cases where searches need to be performed multiple times. Or a search template could be saved and edited with specific additional fields when it is used at a later date.

Task 4.1. Save a search query

- 1) Ensure the search query is complete and returns the expected. messages.
- 2) Click the **Saved Searches** tab.



3) Review the names of the existing saved searches.

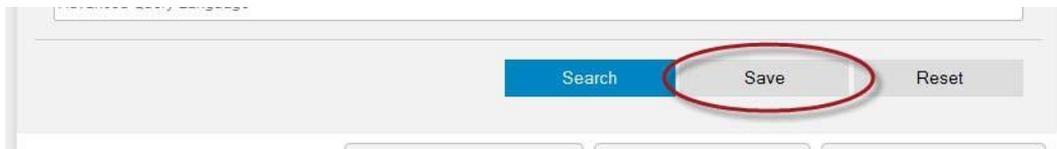


- For each Reviewer, both *Query Builder* and *Advanced Query Language* saved searches appear in one list for email saved searches and a separate list for instant message saved searches.
- If your organization has multiple Reviewers, each Reviewer has their own list of saved searches. One Reviewer can *not* access another Reviewer's Saved Searches.
- Saving a new search using an existing name **over-writes** the existing saved search.
- Saved search names have a maximum of 64 characters.

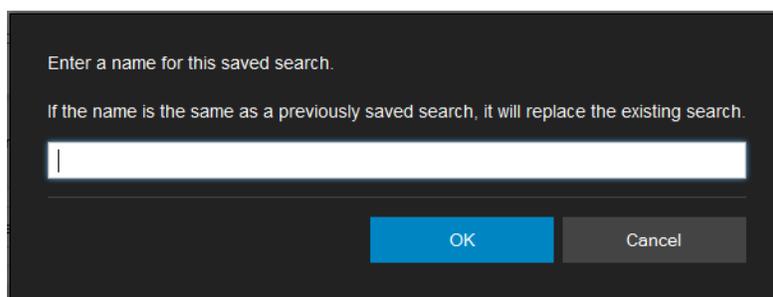
Decide on a name for the saved search.

4) Return to the appropriate *Query Builder* or *Advanced Query Language* tab.

5) Click the **Save** button.



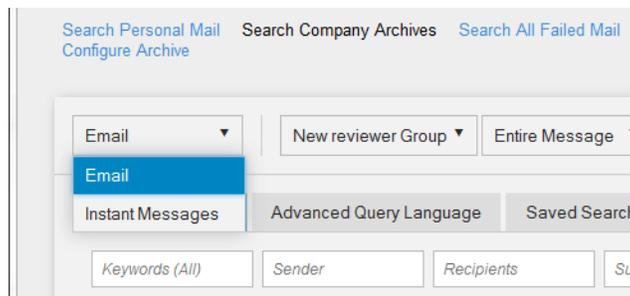
6) In the pop-up, enter the name.



7) Click the **OK** button.

Task 4.2. Execute a saved a search

- 1) If your organization has Expanded Archives Services, the **Content Type** drop-down appears. If the correct content type isn't selected, choose it from the drop-down. This is necessary because email and instant message saved searches are saved in different lists.



- 2) Click the **Saved Searches** tab.



- 3) Click on the name of the saved search to be executed.



The *Query Builder* or *Advanced Query Language* page that was used when saving the search will appear, with all the search fields filled in with saved values.

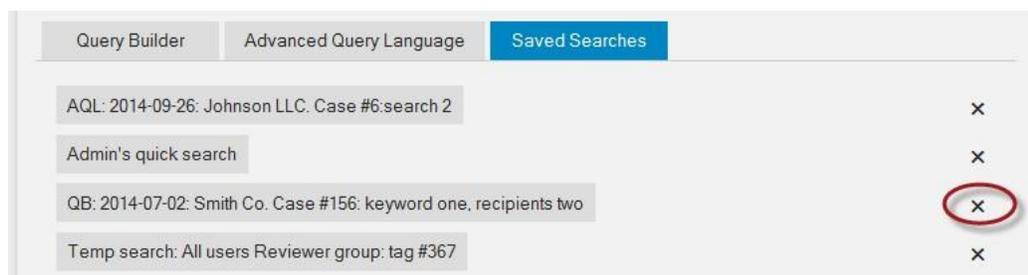
- 4) Optional: Edit the query values.
- 5) Execute the search by either clicking the **Search** button or hit the ENTER key.

Task 4.3. Delete a saved search

- 1) If your organization has Expanded Archives Services, the **Content Type** drop-down appears. If the correct content type isn't selected, choose it from the drop-down.
- 2) Click the **Saved Searches** tab.



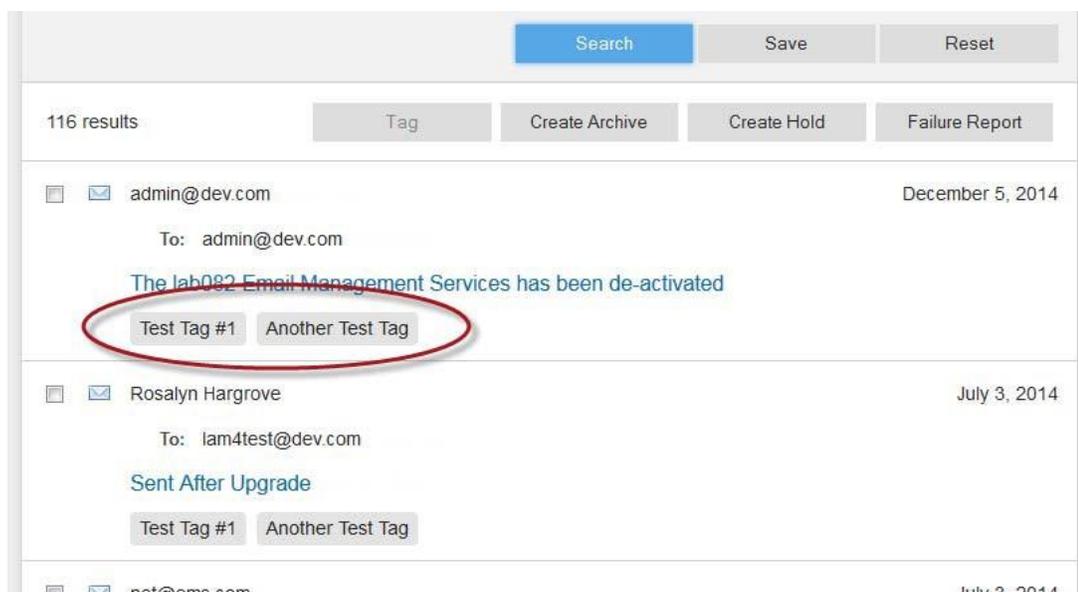
- 3) Find the name in the list of saved searches.



- 4) Click the **X** button in the row of the saved search that is to be deleted.
A confirmation dialog appears, click **OK** to delete the saved search.

4.2. Message Tagging

To assist Archive Reviewers, individual messages can be tagged as an excellent way to mark specific messages for quick retrieval.



Once messages have been tagged, that Tag can be entered as a search term (see ["Search by Tagged Messages" on page 27](#)), and the resulting sub-set of messages can be used to:

- Create a Discovery Archive that can be exported into PST or EML file using Export Manager. See ["Create Recovery or Discovery Archive from Tagged messages" on page 77](#)
- Create a Retention Hold that prevents the sub-set of messages from being deleted during the normal Archive process that purges old messages. See ["Create Retention Hold from Tagged messages" on page 77](#)

- If you have permission, create a Recovery Archive that can be used to restore those tagged messages back to a mailbox(s) on an Exchange server. See ["Create Recovery or Discovery Archive from Tagged messages" on page 77](#)

An individual message can be tagged with multiple Tags, by multiple Reviewers.

Message Tags are retained until they are removed by the Reviewer. See ["Remove Tags from messages" on page 75](#)

Tags are created within a Reviewer Group and affect only messages within the scope of that Reviewer Group. See ["Managing Tags" on page 69](#) for more information.

4.2.1. Managing Tags

Tags can be managed in the Manage Tags window. You can:

- Create Tags. See ["Create a Tag" on page 70](#)
- Edit the name of a Tag. See ["Edit a Tag's Name" on page 71](#)
- Delete tags. See ["Delete a Tag" on page 72](#)

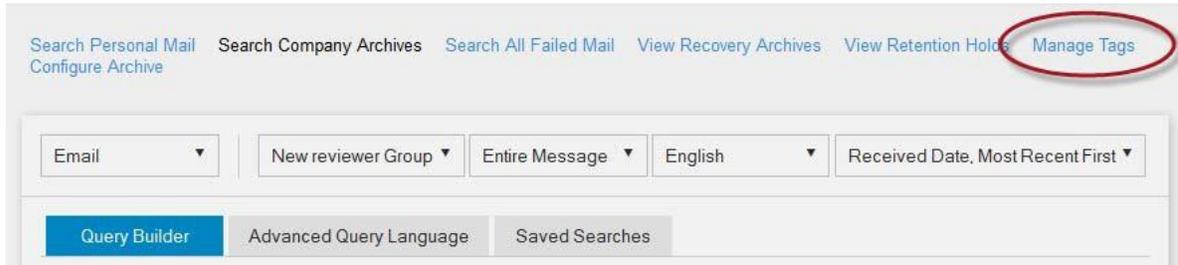
Deleting a Tag will not affect any message associated with that Tag. It only disassociates the deleted Tag from all messages and removes it from the list of available Tags.

Deleting a Tag will also not affect any Retention Holds or Recovery/Discovery Archives based on that Tag. Since Holds and Archives are based on a list of messages created at the time the query is initially run, the Holds and Archives remain unchanged. To delete unneeded Holds or Archives, contact your EMS Archive Administrator.

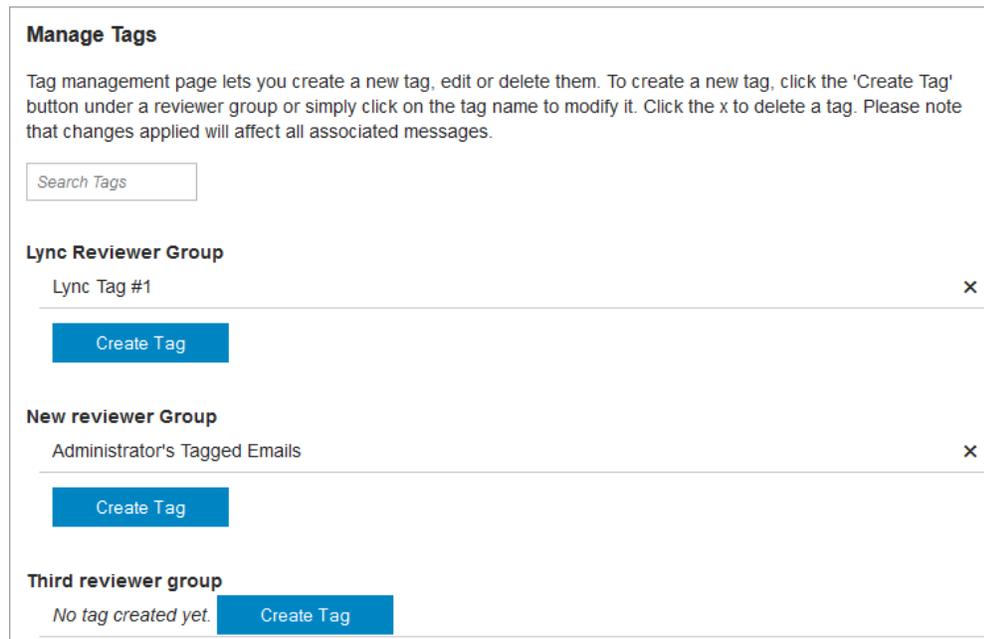
Each Reviewer can manage the Tags associated with the Reviewer Groups the individual Reviewer is a member of. They cannot manage Tags belonging to other Reviewer Groups.

Task 4.4. Create a Tag

- 1) Click the **Manage Tags** link.



The **Manage Tags** window is displayed.



- 2) Scroll down the page to locate the Reviewer Group the Tag is to be created under.
- 3) Click the **Create Tag** button under that Review Group.
- 4) A **Create Tag** filed appears.



- 5) As you begin to type the Tag's name, the **Cancel** button changes to a **Save** button.

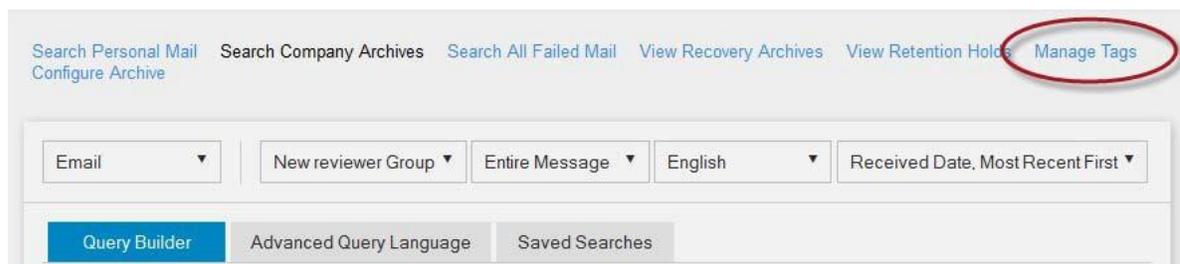


- 6) When you have typed the new Tag's name, click the **Save** button.
To cancel the creation of this Tag, delete the name and click the **Cancel** button.

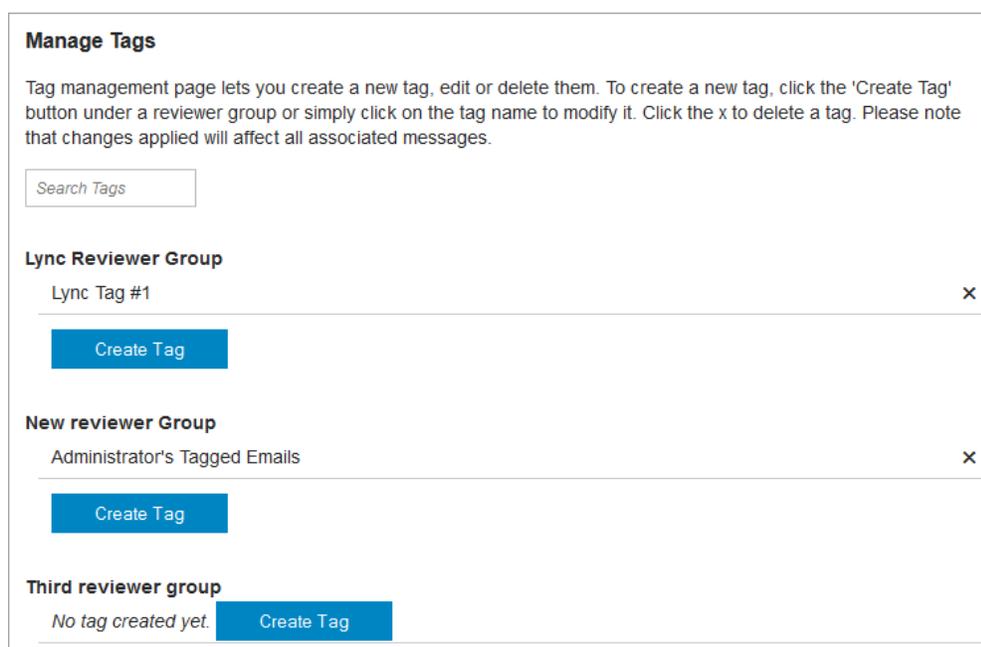
- 7) Tags can also be created when adding Tags to messages. See ["Apply Tags to messages" on page 73](#).

Task 4.5. Edit a Tag's Name

- 1) Click the **Manage Tags** link.



The **Manage Tags** window is displayed.



- 2) Scroll down the page to locate the Reviewer Group the and then within that Reviewer Group, locate the Tag to be edited.

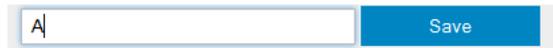
If there are many Tags, use the Search Tags field. Enter the name of the Tag to be edited. As you type, the list of Tags will be refined to contain only Tags that contain the entered value somewhere in the Tag name.

- 3) Click on the name of the Tag that is to be renamed.

The name turns into an editable field.



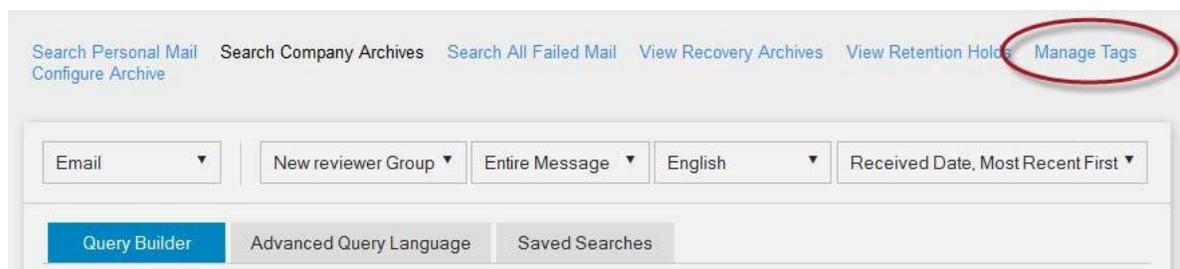
- As you begin to type the Tag's name, the **Cancel** button changes to a **Save** button.



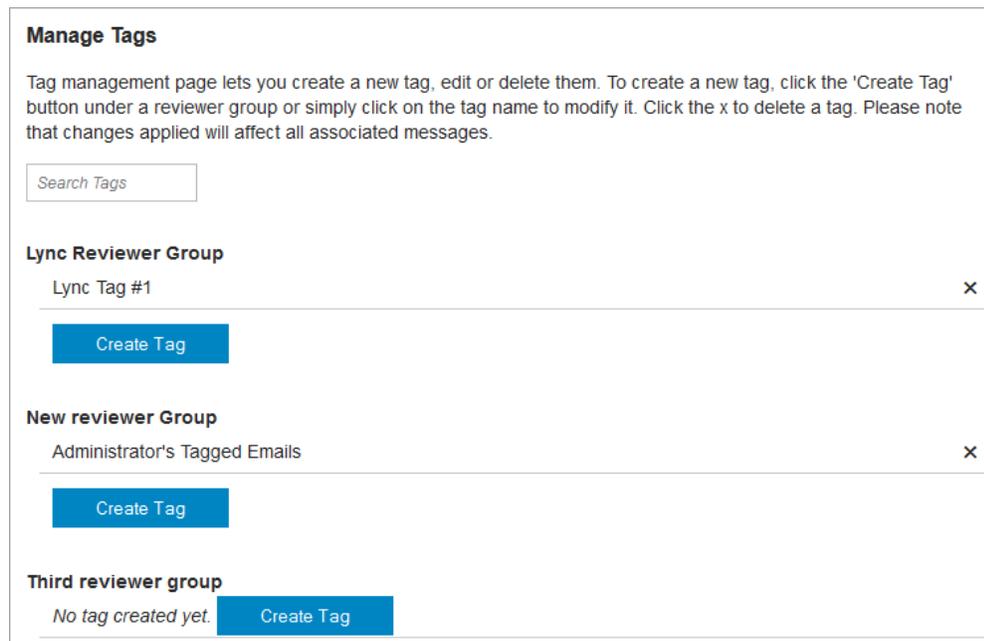
- When you have typed the new Tag's name, click the **Save** button.
To cancel the renaming of this Tag, delete the whole name and click the **Cancel** button.

Task 4.6. Delete a Tag

- Click the **Manage Tags** link.



The **Manage Tags** window is displayed.



- Scroll down the page to locate the Reviewer Group the and then within that Reviewer Group, locate the Tag to be deleted.

If there are many Tags, use the Search Tags field. Enter the name of the Tag to be deleted. As you type, the list of Tags will be refined to contain only Tags that contain the entered value somewhere in the Tag name.

- 3) Click the **X** that is on the line of the Tag that is to be deleted.



- 4) A confirmation dialog will appear. Click the **OK** button to delete this Tag.
If there are Tags in other Reviewer Groups that have the same name, deleting this Tag will not affect those Tags. Each Reviewer Group has Tags independent from the other Reviewer Groups.

4.2.2. Using Tags

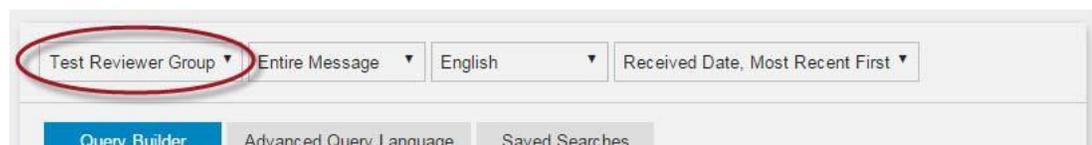
The following actions can be taken when tagging emails:

- ["Apply Tags to messages" on page 73](#)
- ["Search for Tagged Messages" on page 27](#)
- ["Remove Tags from messages" on page 75](#)
- ["Create Recovery or Discovery Archive from Tagged messages" on page 77](#)
- ["Create Retention Hold from Tagged messages" on page 77](#)

Each Reviewer can see, apply, and edit only the Tags associated with the Reviewer Groups the individual Reviewer is a member of. They cannot use Tags belonging to other Reviewer Groups.

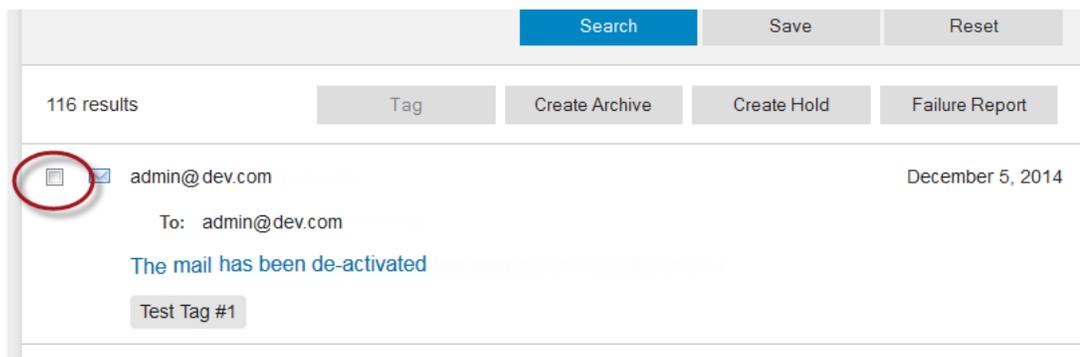
Task 4.7. Apply Tags to messages

- 1) When Tags are created, they are defined within the context of a specific Reviewer Group. So, when searching for message to be tagged, ensure the Reviewer Group scope is properly set by first clicking the **Reset** button to clear all the search fields.
- 2) Click on the **Reviewer Scope** drop-down and select the Reviewer Group that contains the messages that are being search for.



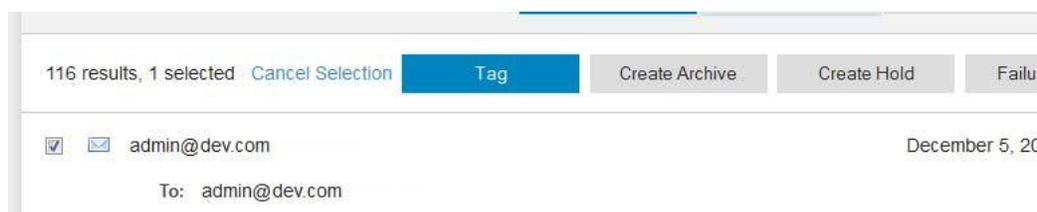
- 3) Execute your search to display the results that contains the message(s) you want to tag.

- 4) Scroll down in the results to find the message(s) you want to tag, and check the check-box for the email. You can check multiple messages at once if you want.



The message's entry displays the Tag(s) that are already associated with it.

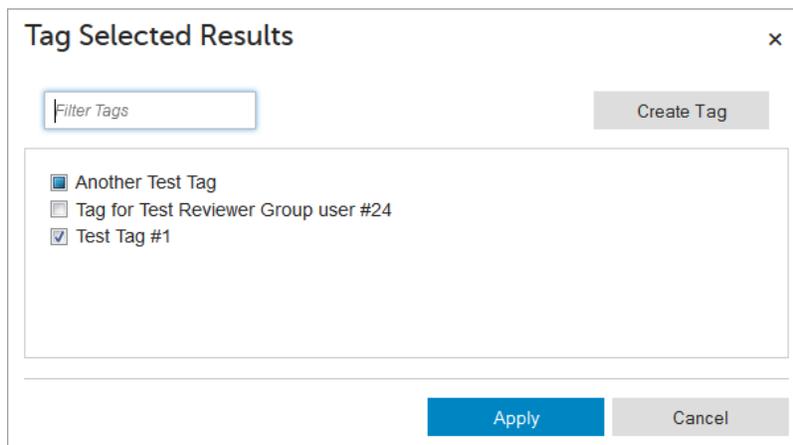
- 5) When an message's tagging box is checked, the number of checked messages is displayed, the **Tag** button is highlighted and a **Cancel Selection** link is displayed.



To un-check all the emails checked, click the **Cancel Selection** button.

- 6) After all messages have been selected, click the **Tag** button.

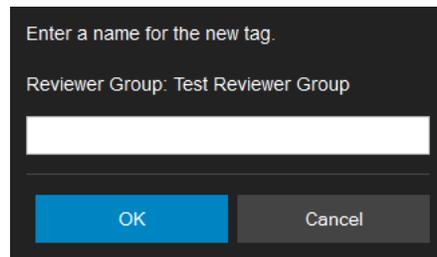
The **Tag Selected Results** window appears.



- 7) If you have defined many tags for this Reviewer Group, you can search for a specific Tag using the **Filter Tags** field. Results are returned as you type the value.

To clear the search, delete the value in the search field.

- 8) To create a new Tag, click the **Create Tag** button.



Enter the name of the Tag, and click **OK**. The new Tag is added to the list of Tags.

- 9) Depending on the messages selected, the Tags listed can have several values.

- Another
- Tag for 1
- Test Tag

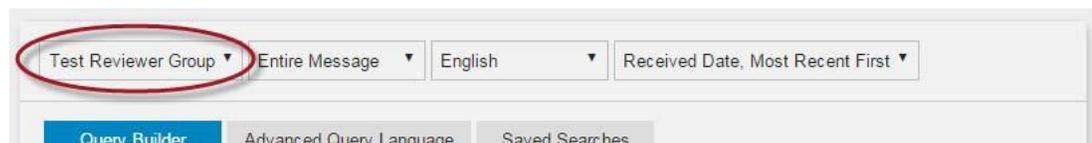
- When a box is checked: , it means *all* of the selected messages have already been assigned to this Tag.
- When a box is filled in, , it means that *some* of the selected messages have already been assigned to this Tag.
- When a box is empty, , it means that *none* of the selected messages have been assigned to this Tag.

- 10) To assign a Tag to the selected message(s), check the box beside the Tag. More than one Tag can be checked and the Tags will be assigned to all selected messages.

- 11) Click the **Apply** button to assign the Tags.

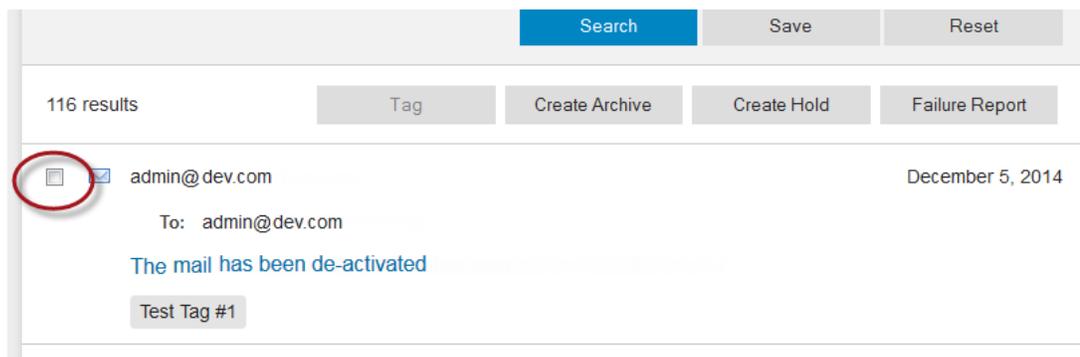
Task 4.8. Remove Tags from messages

- 1) When Tags are created, they are defined within the context of a specific Reviewer Group. So, when searching for messages to remove the Tags from, ensure the Reviewer Group scope is properly set by first clicking the **Reset** button to clear all the search fields.
- 2) Click on the **Reviewer Scope** drop-down and select the Reviewer Group that contains the emails that are being search for.



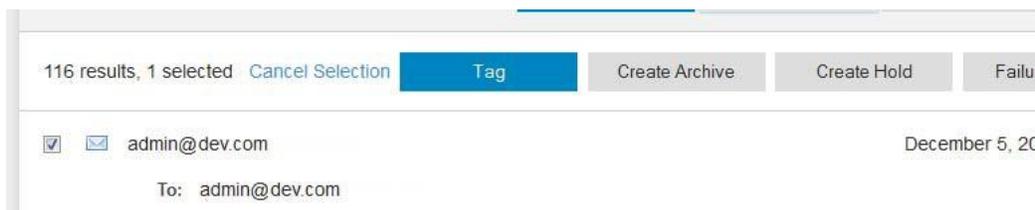
- 3) Execute your search to display the results that contains the message(s) you want to remove the Tag(s) from.

- 4) Scroll down in the results to find the message(s) you want to remove the Tag(s) from, and check the box. You can check multiple messages at once if you want.



The message's entry displays the Tag(s) that are associated with it.

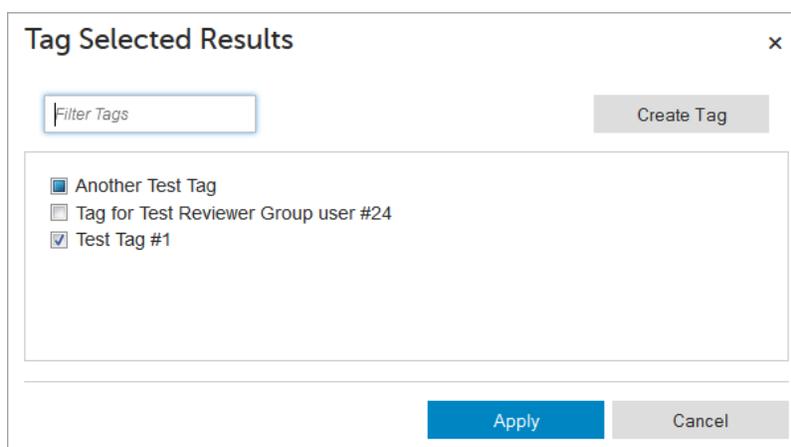
- 5) When an message's Tagging box is checked, the number of checked messages is displayed, the **Tag** button is highlighted and a **Cancel Selection** button is displayed.



To un-check all the messages checked, click the **Cancel Selection** button.

- 6) After all desired messages have been checked, click the **Tag** button.

The **Tag Selected Results** window appears.



- 7) If you have defined many Tags for this Reviewer Group, you can search for a specific Tag using the **Filter Tags** field. Results are returned as you type the value.

To clear the search, delete the value in the search field.

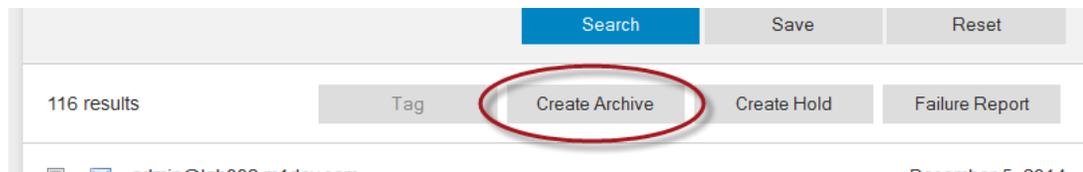
8) Depending on the messages selected, the Tags listed can have several values.

- Another
- Tag for 1
- Test Tag

- When a box is checked, , it means *all* of the selected messages have already been assigned to this Tag.
 - When a box is filled in, , it means that *some* of the selected messages have already been assigned to this Tag.
 - When a box is empty, , it means that *none* of the selected messages have been assigned to this Tag.
- 9) To remove a Tag from the selected email(s), un-check the box beside the Tag so the empty box, , is displayed for that Tag. More than one Tag can be un-checked and the messages will be removed from those Tags.
- 10) Click the **Apply** button to remove the Tag(s) from the message(s).

Task 4.9. Create Recovery or Discovery Archive from Tagged messages

- 1) Using the steps in "[Search by Tagged Messages](#)" on page 27, search for all messages assigned to a specific Tag.
- 2) Click the **Create Archive** button.



The **Create Archive** window will be displayed.

- 3) Enter a name for this new archive.
- 4) By default, a Discovery Archive will be created. This type of archive can be exported to a PST or EML file using Export Manager.

If you have the permission, you will be asked to select the type of archive to create, Discover Archive or Recovery Archive. A Recovery Archive can be recovered back into one or more Exchange mailboxes.

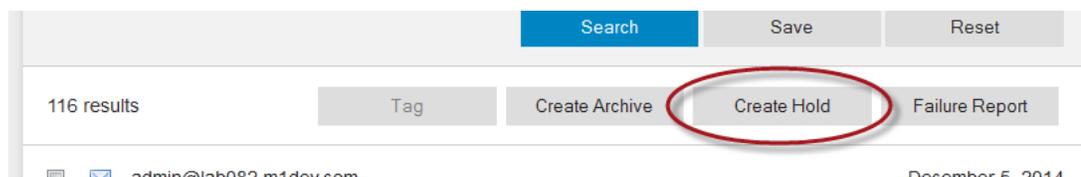
- 5) Click the **Create Archive** button.

This Archive can be used just like any other archive. For more information, see "[Email and Instant Message Archives](#)" on page 82.

Task 4.10. Create Retention Hold from Tagged messages

- 1) Using the steps in "[Search by Tagged Messages](#)" on page 27, search for all messages assigned to a specific Tag.

- 2) Click the **Create Hold** button.



The **Create Retention Hold** window will be displayed.

- 3) Enter a name for this new hold.
- 4) Check the **Update Hold Automatically** box if you want to include future messages that are tagged with this Tag.

If you do not check this box, only the messages tagged at the time the Hold is created will be included in the Retention Hold.

- 5) Click the **Create Retention Hold** button.

This Retention Hold can be used just like any other Hold. For more information, see ["Retention Holds" on page 78](#).

4.3. Retention Holds

A *Retention Hold* generates a set of messages that are to be retained in the Archive (prevents messages from being purged) regardless of any other Retention Policies that may apply to the individual messages under the hold, until the Retention Hold is deleted by an EMS Archive Administrator. When a Retention Hold is released (deleted), messages are then available to be retained or purged based on each individual message's applicable Retention Policies.

A Retention Hold can be set up so new messages matching the hold criteria can be added to the hold. Additionally, the hold can be exported to an archive.

When a Retention Hold is created, the entire message (the body and all attachments) are held, not just the individual portion of the email (body or attachment) that matches the query.

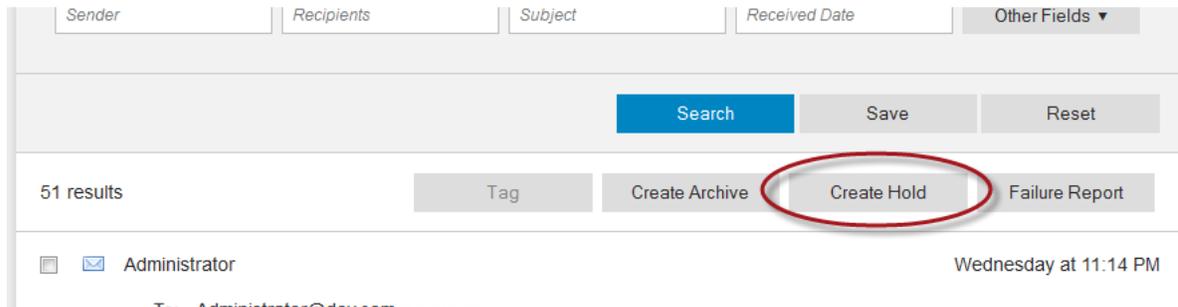
NOTE Maximum Message Limits in Query-Based Retention Holds

EMS Archive limits the maximum number of messages in Retention Holds to prevent improperly configured queries from monopolizing system resources. Requests to produce an over-sized query will fail, and the reason for the failure will appear in the audit log.

To create extremely large holds, create multiple holds.

Task 4.11. Create a Retention Hold

- 1) Use the search instructions under "[Search Email Archive Using the Query Builder](#)" on page 16 or "[Search Instant Message Archive Using the Query Builder](#)" on page 48 to create a query that returns the messages and/or attachments that need to be retained.
- 2) When the search results list displays the collection of messages that need to be retained, click the **Create Retention Hold** button.



- 3) In the **Retention Hold Name** field, type a unique name that identifies the reason to hold these messages.

Create Retention Hold

Prevent these search results from being purged by placing a retention hold on them.

Retention Hold Name:

A retention hold will be created, which will prevent these results from being purged indefinitely.

Update Hold Automatically

Automatically retain new messages that match retention hold query

Estimated Statistics

Messages are composed of one or more *documents* such that each message has one document for the body, and one additional document for each attachment. Search results shown in the result list represent documents rather than messages. The number of messages matching your query, therefore, is likely less than the number of results shown.

- 4) EMS Archive offers the option to evaluate new incoming messages and determine if they match any Retention Hold queries. If you want new matching messages added to the scope of this Retention Hold, check the **Update Hold Automatically** checkbox. If this checkbox is not checked, the scope of this hold is static and applies only to messages that match the query at the time the hold is created.

For example:

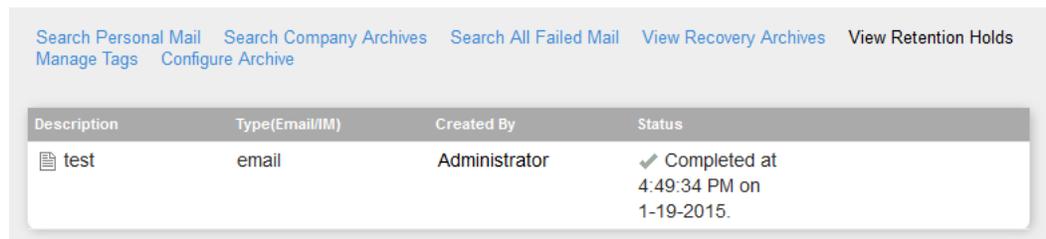
Create a Retention Hold based on a query that matches all messages involving the user `test@sample.com`. If you wish to have all new incoming messages involving this user also included in the hold, then check this field. If you don't need to hold new incoming messages involving this user, un-check this field.

- 5) Click **Create Retention Hold**.
- 6) A pop-up appears to say that the creation of the hold has begun as a background task. Click **OK**.

Depending on the number of messages selected for this hold, it can take up to 24 hours for all messages to be assigned to the new hold.

Task 4.12. View list of recently created Retention Holds

- 1) To view a list of all of your Retention Holds created in the last 24-hours, or in progress, click the **View Retention Holds** navigation link.



The screenshot shows a navigation bar with links: Search Personal Mail, Search Company Archives, Search All Failed Mail, View Recovery Archives, View Retention Holds, Manage Tags, and Configure Archive. Below the navigation bar is a table with the following data:

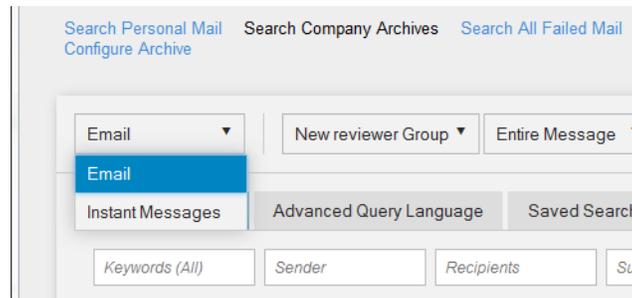
Description	Type(Email/IM)	Created By	Status
 test	email	Administrator	✓ Completed at 4:49:34 PM on 1-19-2015.

If you do *not* have EMS Administrator privileges, your list of recent Retention Holds will contain holds that you created and all holds created by all Reviewers in the Reviewer Groups for which you are a member.

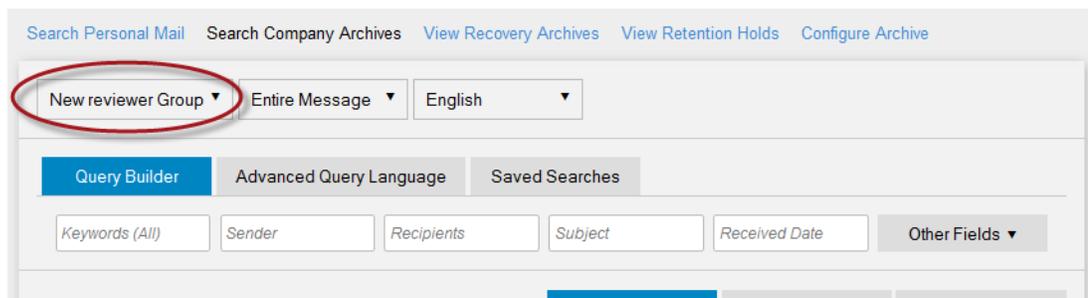
If you *do* have EMS Administrator privileges, your list of recent Retention Holds contains all Retention Holds created by all users.

Task 4.13. Create an Archive from a Retention Hold

- 1) If your organization has Expanded Archives Services, choose the **Content Type** from the drop-down.

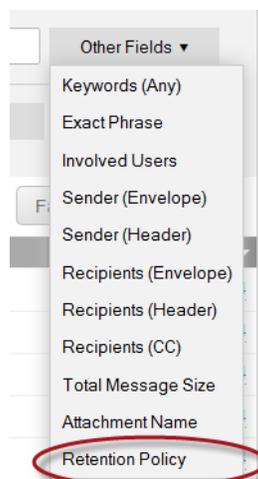


- 2) Click **Query Builder** tab.
- 3) If you are part of more than one Reviewer Group, select the Reviewer Group scope from the **Reviewer Scope** drop-down list.

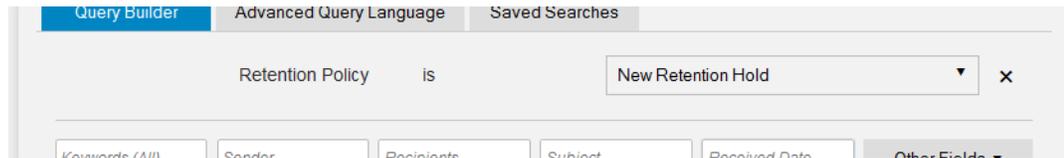


The label of the drop-down is the currently selected Reviewer Group. Only messages that match the Retention Policy *and* are within the scope of the selected Review Group will be displayed.

- 4) Click the **Other Fields** drop-down and select **Retention Policy**.



- 5) Select the desired **Retention Hold** from the drop-down that lists the available holds.



- 6) Click the **Search** button.

This query returns all messages and attachments that are being held within the selected Retention Hold.

If the query doesn't return the expected results:

- If the hold has not completely executed, then this search will return all the messages that are within the scope of the active Reviewer Group, because an incomplete hold doesn't restrict the query. Check the status of the Retention Hold ([Task 4.12. View list of recently created Retention Holds on page 80](#)).
 - If the hold was created with the *Update Hold Automatically* option enabled, the hold's contents may change if it is accessed on different dates, as new archive messages are added to the hold based on the hold's query criteria.
 - If the hold isn't automatically updated, the hold's filter results are from the date the hold was created, not the results of the hold's query being executed now. Your EMS Administrator can tell you when the hold was created.
- 7) Follow the steps in [Task 4.14. Create a Discovery Archive on page 83](#) to create an archive of these results.

4.3.1. Remove Retention Holds

When all tasks related to a Retention Hold are complete and the archived messages are no longer required to be excluded from applicable Retention Policy purging, the Retention Hold can be removed.

At this time, Archive Reviewers (with the authority to do so) should contact their EMS Archive Administrator, with the name of the Retention Hold, and ask the Administrator to delete the Retention Hold. This will return all the hold's messages to the control of their respective Retention Policies.

4.4. Email and Instant Message Archives

Archives are collections of messages (or messages and attachments) that are packaged by EMS Archive for later use.

A Discovery Archive can contain either email messages or instant messages, and its contents can be imported into a single designated mailbox, where an authorized user can analyze them.

A Recovery Archive can be created only by EMS Administrators, it can contain only email messages, and its contents can be imported into multiple designated mailboxes.

If your organization offers the Export Manager feature, you can export a Discovery Archive to a PST file and deliver it over the network to an authorized user for analysis.

NOTE Maximum Message Limits in Discovery and Recovery Archives

EMS Archive now limits the maximum number of messages in Discovery and Recovery Archives to prevent improperly configured queries from monopolizing system resources. Requests to produce an over-sized query will fail, and the reason for the failure will appear in the audit log.

To export extremely large numbers of messages for archival, create multiple archives.

4.4.1. Create Discovery Archives

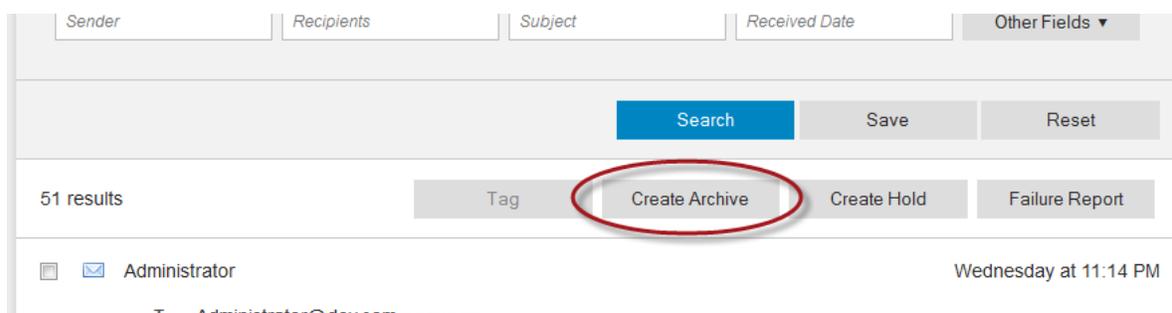
Discovery Archives:

- Can be created by any EMS Archive Reviewer
- Can contain either email messages *or* instant messages.
- Stores the list of message IDs that match the query, so the exact set of matched messages will be returned when the archive is exported or recovered.
- Can be exported into a PST or EML file using the *Export Manager* tool.
- Can be imported into to a *single* mailbox by an EMS Administrator.

Task 4.14. Create a Discovery Archive

- 1) Use the search instructions under "[Search Email Archive Using the Query Builder](#)" on [page 16](#) or "[Search Instant Message Archive Using the Query Builder](#)" on [page 48](#) to create a query that returns the messages and/or attachments that need to be retained. Discovery Archives can also be created using Advanced Query Language queries.

- 2) When you complete the search, click the **Create Archive** button.



- 3) The **Create Discovery Archive** page appears.



- 4) In the **Discovery Archive Name** field, type a unique name for the archive.

TIP Best Practices for Naming Discovery Archives

If you are searching archives for discovery purposes, you may need to create many archives for a given project. To make it easy to find and review archive contents later, use a consistent, descriptive naming convention for the archive, such as Date_ReviewerName_CaseNumber_ArchiveNumber. An example is shown below.

20061027_Smith_345000_1

- 5) Click the **Create Discovery Archive** button. The Archive is created and added to the scheduling list.

- 6) To view archives created in the last 24-hours, or in progress, click the **View Recovery Archives** navigation link at the top of the web page.

Description	Type(Email/IM)	Created By	Status
Disc-- 2015-01-20--for Sarah to look over	email	Administrator	⌚ Not started yet.

- 7) If your organization uses Export Manager, see the *Export Manager Guide* for instructions on exporting a Discovery Archive to a PST or EML file.

4.4.2. Create Recovery Archive

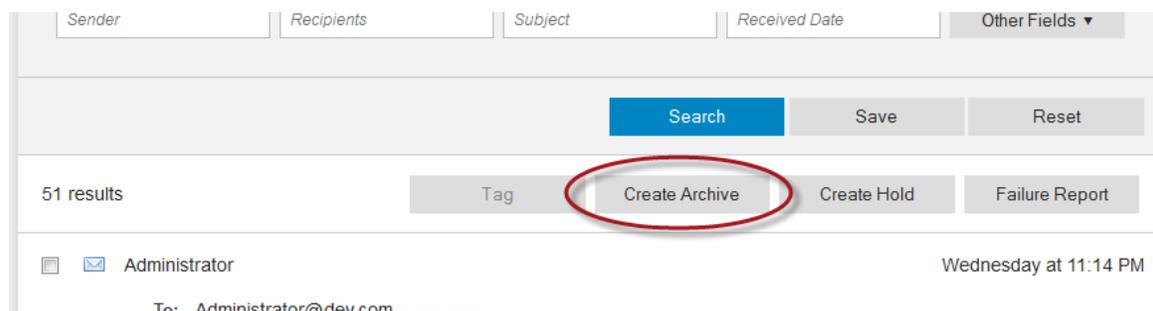
If a Reviewer has EMS Administrator privileges, the Reviewer can also create Recovery Archives for email search results.

Recovery Archives:

- Can contain only email messages. Recovery archives *cannot* be created for instant messages.
- Create an archive that can be recovered into *multiple* mailboxes using the *Recovery Manager* tool.
- *Cannot* be exported by Export Manager.
- Stores the query itself, not message IDs. This means that when the archive is recovered by Recovery Manager, the query is run again and the messages that match the query at that later time will be recovered into the mailboxes.

Task 4.15. Create a Recovery Archive

- 1) Use the search instructions under "[Search Email Archive Using the Query Builder](#)" on page 16 or "[Search Company Archive Using the Advanced Query Language](#)" on page 32 to create a query that returns the messages and/or attachments that need to be retained.
- 2) When you complete the search, click the **Create Archive** button.



- 3) The **Create Archive** page appears.

Create Archive

Export these search results to an archive.

Archive Name:

Archive Type

Discovery Archive

Select this option to create a discovery archive, which can be exported into a single mailbox. Use the *Export Manager* to export the contents of the archive as a PST file for e-discovery purposes.

Recovery Archive

Select this option to create a recovery archive, which can be exported into multiple mailboxes. Use the *Recovery Manager* to restore the contents of the archive into individual users' mailboxes.

Estimated Statistics

Messages are composed of one or more *documents* such that each message has one document for the body, and one additional document for each attachment. Search results shown in the result list represent documents rather than messages. The number of messages matching your query, therefore, is likely less than the number of results shown.

Create Archive Cancel

- 4) In the **Archive Name** field, type a unique name for the archive.

TIP Best Practices for Naming Recovery Archives

If you are searching archives for discovery purposes, you may need to create many archives for a given project. To make it easy to find and review archive contents later, use a consistent, descriptive naming convention for the archive, such as Date_ReviewerName_CaseNumber_ArchiveNumber. An example is shown below.

20061027_Smith_345000_1

- 5) Select the **Recovery Archive** radio button.
- 6) Click **Create Archive**. The Archive is created and added to the scheduling list.
- 7) To view archives created in the last 24-hours, or in progress, click the **View Recovery Archives** navigation link at the top of the web page.

[Search Personal Mail](#)
[Search Company Archives](#)
[Search All Failed Mail](#)
[View Recovery Archives](#)
[View Retention Holds](#)

[Manage Tags](#)
[Configure Archive](#)

Description	Type(Email/IM)	Created By	Status
Rec--2015-01-20--for Sarah's inbox	email	Administrator	✓ Completed at 3:35:11 PM on 1-20-2015.

- 8) After an archive is generated, the RecoveryManager component of Email Management Services can be used to import the email messages into designated Exchange mailboxes.

4.4.3. Delete Recovery and Discovery Archives

When all tasks related to a Discovery or Recovery Archive are complete and the archived messages are no longer required to be excluded from applicable Retention Policy purging, the Recovery or Discovery Archive can be deleted and its messages can be allowed to be purged per their applicable Retention Policies.

At this time, Reviewers (with the authority to do so) should contact their EMS Administrator, with the name of the Archive, and ask the Administrator to delete the Archive. This will return all the archive's messages to the control of their respective Retention Policies.

5. Failed Message Tracking Feature

5.1. Introduction

Failed Message Tracking is an optional feature that displays email messages that have failed to be stored in the archive or fully indexed into the database.

When an email message arrives, EMS normally parses the message for metadata and other information, then stores the message in the archive and sends the metadata to be indexed by the server.

If the message cannot be stored correctly the first time, several more attempts are made to store the message into its archives. If, after repeat attempts, the message cannot be stored into the archives, its metadata is entered into the Failed Message database.

After a message stores correctly, it is sent to be indexed. Again, several attempts are made to index each message. If a message cannot be indexed at all, or can only be partially indexed, its metadata is also placed into the Failed Message database.

Archive Reviewers can access the feature from both the EMS home page, and from the EMS Archive menu.

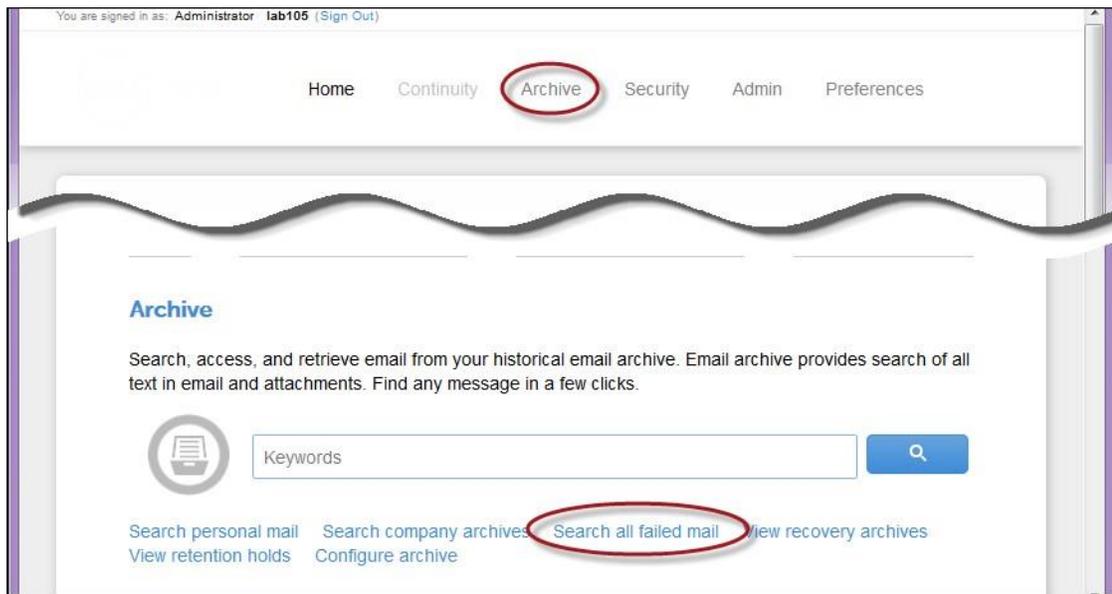
Because failed messages are not contained in normal archive searches, the Failed Message Tracking feature allows Reviewers to provide more accurate search results.

5.2. Access FMT Feature

Archive Reviewers whose company has the Failed Message Tracking feature enabled by Support can access the Failed Message database through the EMS Archive interface.

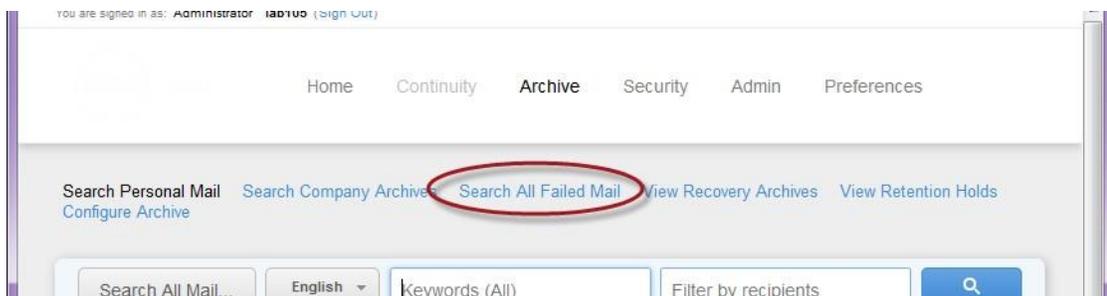
Task 5.1. Access Search Failed Message Tracking

1) From the EMS home page you can access Failed Message tracking in two ways.

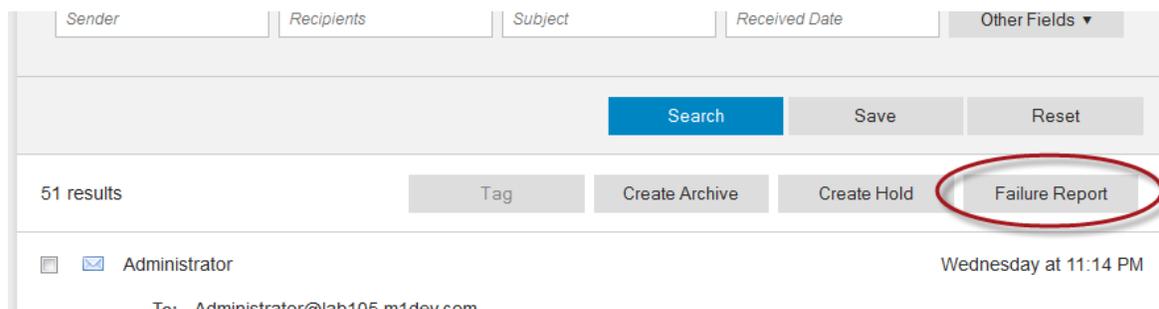


- In the **Archive** section, click the **Search All failed mail** link.
- Click the **Archive** link in the menu at the top of the page.

When then **Archive** page appears, click the **Search All Failed Mail** link.



2) Or the Failed Message Tracking Feature can be accessed from the **Search Company Archives** page. Below the search query area click **Failed Message Report**.



Your current Reviewer Group is forwarded to the Failed Message Tracking page. If you are a member of more than one Reviewer Group, your reviewer group scope can be changed on the Failed Message Tracking page.

If your Search Company Archives page displays the results of a query, the query is forwarded to the Failed Message Tracking feature page, which implements the query before opening the page.

The following Archive query fields are forwarded to the Failed Message Tracking feature (remaining query fields are ignored):

- From (Sender)
- Subject
- Recipients
- Sent date or date range

5.3. Failed Message Tracking Report Page

When the Failed Message Tracking page appears, it lists the first twenty messages in the Failed Message database, with the remaining message listed 20 records per page.

[Return to your EMS Home](#)

Failed Message Filter Criteria

Reviewer Group: Temp Reviewer Group

SMTP ID:

Subject:

Sender:

Recipients:

Users: All Users [Select Users](#)

Received Date Range:

Begin: **End:**

Category	Sender	Recipients	Subject	Sent	Received ▲
Partial Indexing, (Meta) View Documents	ankita2013@dev.com	vaibhav14@dev.com	Accepted: erte	09-02-2013 07:14 AM CDT	09-02-2013 07:14 AM CDT
Partial Indexing, (Meta) View Documents	<>	vaibhav14@dev.com	Delivered: erte	09-02-2013 05:26 AM CDT	09-02-2013 05:26 AM CDT
Partial Indexing, (Meta) View Documents	ankita2013@dev.com	vaibhav2013@dev.com	Mail with attachment	09-20-2013	09-20-2013

5.3.1. Filtering Messages

To filter for specific messages, use the Failed Message Filter Criteria at the top of the page.

The screenshot shows a web form titled "Failed Message Filter Criteria". It contains the following elements:

- Reviewer Group:** A dropdown menu currently showing "Temp Reviewer Group".
- SMTP ID:** A text input field.
- Subject:** A text input field.
- Sender:** A text input field.
- Recipients:** A text input field with a vertical ellipsis icon on the right.
- Users:** A list box showing "All Users" and a "Select Users" link to its right.
- Received Date Range:** Two input fields labeled "Begin" and "End". Each has a date picker icon (calendar with "10") and a red circular clear icon.
- Buttons:** Three buttons at the bottom: "Search", "Clear", and "Generate Archive".

Failed Message Tracking Search provides an Archive Reviewer with searchable fields and query behavior *similar* to Archive Search, but due to the inherent differences, the Failed Message Tracking search fields and rules are:

- **Reviewer Group:** From the drop-down, select the Reviewer Group whose scope contains the message being queried for.
- **SMTP ID:** Enter the SMTP ID of the desired message. The SMTP ID can be gotten from Exchange server that originated the archived message. This field performs a case-insensitive, exact match, string search.
- **Subject:** Performs a case-insensitive, exact wording or phrase search to determine if the entered term(s) is contained in the message's **Subject** field. Double-quotes are not needed. Neither stemming nor wildcards are applied.
- **Sender:** Accepts only a single term, which does not have to be a fully qualified email address, and performs a case-insensitive, keyword search for the entered term in each messages' **From** field.
- **Recipients:** Accepts one or more search terms (which do not have to be a fully qualified email addresses), separated by comma, semicolon, colon or pipe characters, with **no** spaces between entries. This field performs a case-insensitive search to determine if any of the entered terms are contained in the message's **Recipients** list. Neither stemming nor wildcards are applied. The **Recipients** field search results are OR'd with the Users field search results.
- **Users:** Click the **Select Users** link to bring up the **Select Users** dialog, to choose EMS mailboxes. The Users field search results are OR'd with the Recipients field search results.
- **Received Date Range:** Click on the date icon, , beside either or both of the **Begin** or **End** date fields, and select the desired date and time. Click the clear icon, , beside the field to clear the entry. If a field is left empty, it indicates a search from the beginning or to the end of the data.

All filters entered are AND'd together. The one exception is that `Recipients` and `Users` are OR'd together then AND'd with the rest of the search terms.

For example, a filter of `Subject=test` and `Received Date Range Begin=01-01-2011`, would match only messages that were received on or after January 1, 2011, and contained the word "test" part of the message's subject.

5.3.2. Query Results

The results of the query are presented in a table, with twenty items a page.

The results table can be sorted either ascending or descending by **Received Date**. Change the sort order by clicking on the column title.

The possible failure categories are:

- **Size Limit:** The message was too large to be stored.
- **Storage:** The message failed to be stored correctly.
- **Journaling:** A journaled message (either Cloud Services or On-Premises Journaling) failed to be stored correctly.
- **Indexing:** The message was not indexed in any way
- **Partial Indexing (Minimal):** A sub-set of the message's metadata was indexed, but the message body was not indexed.
- **Partial Indexing (Meta):** The message's metadata was indexed, but the message body was not indexed
- **Partial Indexing:** The message's metadata was indexed, and portions of the message body were indexed
- **Internal:** The failure category is not known.

5.3.3. View Documents

Each row in the query results table contains a **View Documents** link. Click this link to view the available information about the message.

Category	Sender	Re
Partial Indexing, (Meta) View Documents	ankita2013@dev.com	vaibhav14@de
Partial Indexing, (Meta) View Documents	<>	vaibhav14@de
Partial Indexing,	ankita2013@dev.com	vaibhav2013@

A pop-up appears, listing the available information regarding the message and its attachments.



The following fields are available:

- **Message ID:** The ID of the email message, including the message's metadata and body.
- **Document ID:** The ID of the individual document—with a document being an individual message body or individual attachment—that failed some aspect of the storage or indexing process. For the email message body, the Message ID matches the Document ID.
- **Category:** This is category of the message storage or indexing failure.
- **Attachment:** This field's value is `true` or `false`. Where `True` means this document is an attachment, and `False` means this document is the body of the email message.
- **Description:** The subject of the email message or the attachment filename.

The pop-up contains information on portions of the message that failed the storage or indexing process. If portions of the message body or attachments succeeded in being stored or indexed, they will not be listed in the pop-up.

To download the message to your computer, in EML format, click the **Download** link, and select the location where to save the message.

5.3.4. Generate Archive

When the filter has produced the desired results, an email message archive can be generated containing the query results.

Once the archive creation process has completed, the archive can be exported, in either PST or EML format, using Export Manager.

Task 5.2. Generate Failed Message Archive

- 1) Finalize the query, to generate the desired list of messages.
- 2) Click the **Generate Archive** button.

The screenshot shows a web interface for generating a failed mail archive. At the top, there is a 'Users' dropdown menu set to 'All Users' with a 'Select Users' link. Below this are 'Begin' and 'End' date range selectors. There are three buttons: 'Search', 'Clear', and 'Generate Archive' (which is circled in red). Below the buttons is a table with the following data:

Category	Sender	Recipients	Subject	Sent	Received
Indexing, (ta)	ankita2013@dev.com	vaibhav14@dev.com	Accepted: erte	09-02-2013 07:14 AM CDT	09-02-2013 07:14 AM CDT
Indexing, (ta)	<>	vaibhav14@dev.com	Delivered: erte	09-02-2013 05:26 AM CDT	09-02-2013 05:26 AM CDT

This brings up the **Generate Failed Mail Archive** page

- 3) Enter a name for the archive. Each archive name must be unique.

The screenshot shows the 'Generate Failed Mail Archive' page. It has a header 'Return to your EMS Home' and a section titled '1 Generate Failed Mail Archive'. Below the title, there is a text box for 'Archive Name:' and a message: 'To create an archive of messages which were not indexed or were only partially indexed, please enter an archive name and click Submit.' Below this, it says 'Estimated Message Count: 12 Messages'. At the bottom, there are 'Back' and 'Submit' buttons.

- 4) Click **Submit** to generate the archive.

Archives may take a while to generate. You can check on the archive's status using the **View Recovery Archives** navigation item in.

Once an archive has completed, if you have access to Export Manager, you may export the archive using that tool. Or contact your EMS Archive Administrator, giving them the name of the archive, and ask for them to export it for you.

Appendix A: Stop Words

NOTE New Search Engine Behavior

Stop Words defines behavior implemented in the new search engine.

To make searching more efficient, the concept of stop words has been implemented. Stop words are words that are not indexed in the search database (just like all the instances of the word 'the' would not appear in the index of a book) which greatly improves search response times.

The exact function of stop words depends on the **Search Language** selection. If a specific language is selected, then the stop words for that language are used when returning search results. *Plus*, search results are returned for all emails whose language cannot be determined which match all search terms.

A.1. English Stop Words

Below is the list of currently implemented stop words for English:

a	are	be	for	it	or
an	as	but	in	of	the
and	at	by	is	on	to

A.2. Arabic Stop Words

من	أي	أنها	إلي	وهو	غير
ومن	أى	إنها	على	فهي	بعض
منها	لا	انه	عليها	فهي	قد
منه	ولا	أنه	عليه	فهو	نحو
في	الا	إنه	اما	انت	بين
وفي	ألا	بان	أما	أنت	بينما
فيها	إلا	بأن	إما	لك	منذ
فيه	لكن	فان	ايضا	لها	ضمن
و	ما	فأن	أيضا	له	حيث
ف	وما	وان	كل	هذه	الان
ثم	كما	وأن	وكل	هذا	الآن
او	فما	وإن	لم	تلك	خلال
أو	عن	التي	ولم	ذلك	بعد
ب	مع	التي	لن	هناك	قبل
بها	إذا	الذي	ولن	كانت	حتى
به	إذا	الذي	هي	كان	عند
ا	ان	الذين	هي	يكون	عندما
أ	أن	الى	هو	تكون	لدى
اى	إن	الي	وهي	وكانت	جميع
اي	انها	إلى	وهي	وكان	

A.3. Dutch Stop Words

Below is the list of currently implemented stop words for Dutch:

aan	dit	hebben	kan	nog	tot	worden
al	doch	heeft	kon	nu	u	wordt
alles	doen	hem	kunnen	of	uit	zal
als	door	het	maar	om	uw	ze
altijd	dus	hier	me	omdat	van	zelf
andere	een	hij	meer	onder	veel	zich
ben	eens	hoe	men	ons	voor	zij
bij	en	hun	met	ook	want	zijn
daar	er	iemand	mij	op	waren	zo
dan	ge	iets	mijn	over	was	zonder
dat	geen	ik	moet	reeds	wat	zou
de	geweest	in	na	te	werd	
der	haar	is	naar	tegen	wezen	
deze	had	ja	niet	toch	wie	
die	heb	je	niets	toen	wil	

A.4. French Stop Words

à	aviez	était	furent	me	sans	t
ai	avons	étant	fus	même	se	ta
aie	avons	été	fusse	mes	sera	te
aient	ayant	étée	fussent	moi	serai	tes
aies	ayez	étées	fusses	mon	seraient	toi
ait	ayons	étés	fussiez	n	serais	ton
as	c	êtes	fussions	ne	serait	tu
au	ce	étiez	fut	nos	seras	un
aura	ceci	étions	fût	notre	serez	une
aurai	celà	eu	fûtes	nous	seriez	vos
auraient	ces	eue	ici	on	serions	votre
aurais	cet	eues	il	ont	serons	vous
aurait	cette	eûmes	ils	ou	seront	y
auras	d	eurent	j	par	ses	
aurez	dans	eus	je	pas	soi	
auriez	de	eusse	l	pour	soient	
aurions	des	eussent	la	qu	sois	
aurons	du	eusses	le	que	soit	
auront	elle	eussiez	les	quel	sommes	
aux	en	eussions	leur	quelle	son	
avaient	es	eut	leurs	quelles	sont	
avais	est	eût	lui	quels	soyez	
avait	et	eûtes	m	qui	soyons	
avec	étaient	eux	ma	s	suis	
avez	étais	fûmes	mais	sa	sur	

A.5. German Stop Words

aber	dem	durch	hatten	keinem	seine	vor
alle	die	ein	hier	keinen	seinem	während
allem	das	eine	hin	keiner	seinen	war
allen	daß	einem	hinter	keines	seiner	waren
aller	derselbe	einen	ich	können	seines	warst
alles	derselben	einer	mich	könnte	selbst	was
als	denselben	eines	mir	machen	sich	weg
also	desselben	einig	ihr	man	sie	weil
am	demselben	einige	ihre	manche	ihnen	weiter
an	dieselbe	einigem	ihrem	manchem	sind	welche
ander	dieselben	einigen	ihren	manchen	so	welchem
andere	dasselbe	einiger	ihrer	mancher	solche	welchen
anderem	dazu	einiges	ihres	manches	solchem	welcher
anderen	dein	einmal	euch	mein	solchen	welches
anderer	deine	er	im	meine	solcher	wenn
anderes	deinem	ihn	in	meinem	solches	werde
anderm	deinen	ihm	indem	meinen	soll	werden
ändern	deiner	es	ins	meiner	sollte	wie
anderr	deines	etwas	ist	meines	sondern	wieder
anders	denn	euer	jede	mit	sonst	will
auch	derer	eure	jedem	muss	über	wir
auf	dessen	eurem	jeden	musste	um	wird
aus	dich	euren	jeder	nach	und	wirst
bei	dir	eurer	jedes	nicht	uns	wo
bin	du	eures	jene	nichts	unse	wollen
bis	dies	für	jenem	noch	unsem	wollte
bist	diese	gegen	jenen	nun	unsen	würde
da	diesem	gewesen	jener	nur	unser	würden
damit	diesen	hab	jenes	ob	unses	zu
dann	dieser	habe	jetzt	oder	unter	zum
der	dieses	haben	kann	ohne	viel	zur
den	doch	hat	kein	sehr	vom	zwar
des	dort	hatte	keine	sein	von	zwischen

A.6. Portuguese Stop Words

a	era	estivesse	houvera	nem	será	teriam
à	era	estivessem	houverá	no	serão	teríamos
ao	eram	estivéssemos	houveram	nos	serei	teu
aos	éramos	estou	houvéramos	nós	seremos	teus
aquela	essa	eu	houverão	nossa	seria	teve
aquelas	essas	foi	houverei	nossas	seriam	tinha
aquele	esse	foi	houverem	nosso	seríamos	tinha
aqueles	esses	fomos	houveremos	nossos	seu	tinham
aquilo	está	for	houveria	num	seus	tínhamos
as	está	fora	houveriam	numa	só	tive
às	esta	foram	houveríamos	o	somos	tivemos
até	estamos	foram	houvermos	os	sou	tiver
com	estão	fôramos	houvesse	ou	sua	tivera
como	estão	forem	houvessem	para	suas	tiveram
da	estas	formos	houvéssemos	pela	também	tivéramos
das	estava	fosse	isso	pelas	te	tiverem
de	estavam	fosse	isto	pelo	tem	tivermos
dela	estávamos	fossem	já	pelos	tem	tivesse
delas	este	fôssemos	lhe	por	tém	tivessem
dele	esteja	fui	lhes	qual	têm	tivéssemos
deles	estejam	há	mais	quando	temos	tu
depois	estejamos	há	mas	que	tenha	tua
do	estes	haja	me	quem	tenham	tuas
dos	esteve	hajam	mesmo	são	tenhamos	um
é	estive	hajamos	meu	se	tenho	uma
e	estivemos	hão	meus	seja	tenho	ocê
ela	estiver	havemos	minha	seja	ter	ocês
elas	estivera	havia	minhas	sejam	terá	vos
ele	estiveram	hei	muito	sejamos	terão	
eles	estivéramos	houve	na	sem	terei	
em	estiverem	houvemos	não	ser	teremos	
entre	estivermos	houver	nas	será	teria	

A.7. Russian Stop Words

а	всех	здесь	можно	о	себя	ты
без	всю	и	мой	об	сегодня	у
более	вы	из	моя	один	сейчас	уж
больше	где	или	мы	он	сказал	уже
будет	говорил	им	на	она	сказала	хорошо
будто	да	иногда	над	они	сказать	хоть
бы	даже	их	надо	опять	со	чего
был	два	к	наконец	от	совсем	человек
была	для	кажется	нас	перед	так	чем
были	до	как	не	по	такой	через
было	другой	какая	него	под	там	что
быть	его	какой	нее	после	тебя	чтоб
в	ее	когда	ней	потом	тем	чтобы
вам	ей	конечно	нельзя	потому	теперь	чуть
вас	ему	кто	нет	почти	то	эти
вдруг	если	куда	ни	при	тогда	этого
ведь	есть	ли	нибудь	про	того	этой
во	еще	лучше	никогда	раз	тоже	этом
вот	ж	между	ним	разве	только	этот
впрочем	же	меня	них	с	том	эту
все	жизнь	мне	ничего	сам	тот	я
всегда	за	много	но	свою	три	
всего	зачем	может	ну	себе	тут	

A.8. Spanish Stop Words

a	esas	estaría	fue	habrán	hubieses	o
al	ese	estaríais	fuera	habrás	hubimos	os
algo	eso	estaríamos	fuerais	habré	hubiste	otra
algunas	esos	estarían	fuéramos	habréis	hubisteis	otras
algunos	esta	estarías	fuera	habremos	hubo	otro
ante	está	estas	fuera	habría	la	otros
antes	está	estás	fueron	habríais	las	para
como	estaba	este	fueron	habríamos	le	pero
con	estaba	esté	fuese	habrían	les	poco
contra	estabais	estéis	fueseis	habrías	lo	por
cual	estábamos	estemos	fuésemos	han	los	porque
cuando	estaban	estén	fuesen	han	más	que
de	estabas	estés	fueses	has	me	qué
del	estad	esto	fui	hasta	mi	quien
desde	estada	estos	fuimos	hay	mí	quienes
donde	estadas	estoy	fuiste	haya	mía	se
durante	estado	estuve	fuisteis	hayáis	mías	sea
e	estado	estuviera	ha	hayamos	mío	sea
el	estados	estuvierais	ha	hayan	míos	seáis
él	estados	estuviéramos	habéis	hayas	mis	seamos
ella	estáis	estuvieran	haber	he	mucho	sean
ellas	estamos	estuvieras	había	hemos	muchos	seas
ellos	estamos	estuvieron	había	hube	muy	ser
en	están	estuviese	habíais	hubiera	nada	será
entre	están	estuvieseis	habíamos	hubierais	ni	serán
era	estando	estuviésemos	habían	hubiéramos	no	serás
erais	estar	estuviesen	habías	hubieran	nos	seré
éramos	estará	estuvieses	habida	hubieras	nosotras	seréis
eran	estarán	estuvimos	habidas	hubieron	nosotros	seremos
eras	estarás	estuviste	habido	hubiese	nuestra	sería
eres	estaré	estuvisteis	habidos	hubieseis	nuestras	seríais
es	estaréis	estuvo	habiendo	hubiésemos	nuestro	seríamos
esa	estaremos	fue	habrá	hubiesen	nuestros	serían

serías	tendría	tendréis	teníamos	todos	tuviesen	vosotras
sí	tendríais	tendremos	tenían	tu	tuvieses	vosotros
sido	tendríamos	tendrías	tenías	tú	tuvimos	vuestra
siendo	tendrían	tened	tenida	tus	tuviste	vuestras
sin	suyas	tenéis	tenidas	tuve	tuvisteis	vuestro
sobre	suyo	tenemos	tenido	tuviera	tuvo	vuestros
sois	suyos	tenga	tenidos	tuvierais	tuya	y
somos	también	tengáis	teniendo	tuviéramos	tuyas	ya
son	tanto	tengamos	ti	tuvieran	tuyo	yo
son	te	tengan	tiene	tuvieras	tuyos	
soy	tendrá	tengas	tiene	tuvieron	un	
su	tendrán	tengo	tienen	tuviese	una	
sus	tendrás	tenía	tienes	tuvieseis	uno	
suya	tendré	teníais	todo	tuviésemos	unos	

A.9. Swedish Stop Words

alla	deras	ett	inom	något	sin	varit
allt	dess	för	inte	några	sina	varje
än	dessa	från	jag	när	sitta	vars
är	det	ha	ju	ni	själv	vart
åt	detta	hade	kan	nu	skulle	vårt
att	dig	han	kunde	och	som	vem
av	din	hans	man	om	till	vi
blev	dina	har	med	oss	under	vid
bli	ditt	här	mellan	över	upp	vilka
blir	du	henne	men	på	ut	vilkas
blivit	efter	hennes	mig	så	utan	vilken
då	ej	hon	min	sådan	vad	vilket
där	eller	honom	mina	sådana	var	
de	en	hur	mitt	sådant	vår	
dem	er	i	mot	samma	vara	
den	era	icke	mycket	sedan	våra	
denna	ert	ingen	någon	sig	varför	