HP Integrated Archive Platform
User Guide
Version 2.0

Includes information about using the Integrated Archive Platform (IAP) Web UI.

For additional user information on Email Archiving software for Microsoft Exchange and IBM Domino, see the *HP Email Archiving software for Microsoft Exchange User Guide* and *HP Email Archiving software for IBM Domino User Guide* contained in those products.

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About this guide

This guide provides information about using the IAP Web Interface.

For additional information on using and configuring Email Archiving software for Microsoft Exchange and IBM Domino, see the *HP Email Archiving software for Microsoft Exchange User Guide* and *HP Email Archiving software for IBM Domino User Guide* contained in those products.

Intended audience

This guide is intended for users of the IAP Web UI.

Prerequisites

Prerequisites for using this product include: Knowledge of using web browsers

Related documentation

In addition to this guide, HP provides the following on the IAP documentation CD:

- *HP Integrated Archive Platform Administrator Guide*
- *HP Integrated Archive Platform System Release Notes*

In addition, online help is available for the IAP Platform Control Center (PCC) and IAP Web Interface. The IAP Web Interface online help is a subset of this guide. The IAP PCC online help is a subset of the *HP Integrated Archive Platform Administrator Guide*.

Document conventions and symbols

Table 1 Document conventions

Convention	Element
Blue text: Table 1	Cross-reference links and email addresses
Blue, underlined text: http://www.hp.com	Web site addresses
Bold text	- Keys that are pressed - Text typed into a GUI element, such as a box - GUI elements that are clicked or selected, such as menu and list items, buttons, tabs, and check boxes
Italic text	Text emphasis
`Monospace` text	- File and directory names - System output - Code - Commands, their arguments, and argument values
`Monospace, italic` text	- Code variables - Command variables
`Monospace, bold` text	Emphasized monospace text

WARNING!
Indicates that failure to follow directions could result in bodily harm or death.

CAUTION:
Indicates that failure to follow directions could result in damage to equipment or data.

IMPORTANT:
Provides clarifying information or specific instructions.

NOTE:
Provides additional information.

TIP:
Provides helpful hints and shortcuts.

HP technical support

Telephone numbers for worldwide technical support are listed on the HP support web site:
http://www.hp.com/support/.

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

For continuous quality improvement, calls may be recorded or monitored.

Subscription service

HP strongly recommends that customers register online using the Subscriber's choice web site:
http://www.hp.com/go/e-updates.

Subscribing to this service provides you with email updates on the latest product enhancements, newest driver versions, and firmware documentation updates as well as instant access to numerous other product resources.

After subscribing, locate your products by selecting **Storage** and then **Storage Archiving** under Product Category.

Other web sites

For other product information, see the following HP web sites:

- http://www.hp.com
- http://www.hp.com/go/storage
- http://www.hp.com/service_locator
- http://www.hp.com/support/manuals

1 IAP overview

This section introduces HP Integrated Archive Platform from a user perspective.

IAP is a fault-tolerant, secure system of hardware and software that archives files and email messages for your organization, and lets you search for archived documents. IAP provides the following main functions:

- Automatic, active data archiving (email and specific types of documents) that helps your organization meet regulatory requirements.
- Interactive data querying to search for and retrieve archived data according to various criteria.

The IAP Web Interface allows you to use your web browser to search for documents archived on the system, and save and reuse your search-query definitions and results. See "IAP Web Interface" on page 17 and "Query expression syntax and matching" on page 39.

To interact with the system, you can use the following EAs applications:

Table 2 EAs applications

Application	What You Can Do
EAs for Microsoft Exchange (customer option)	Search for email messages using Microsoft Outlook with an Exchange mail server. View and work with archived email messages. See the *HP EAs for Microsoft Exchange User Guide* which is included on the HP EAs for Exchange option documentation CD — it is also available on http://www.hp.com.
EAs for Domino (customer option)	Search for email messages using IBM Lotus Notes with a Domino mail server. View and work with archived email messages. See the *HP EAs for IBM Domino User Guide* which is included on the HP EAs for Domino option documentation CD — it is also available on http://www.hp.com.

The IAP Web Interface is available to all users. EAs for Exchange and for Domino are independent customer options. Depending on the configuration of your system, each may or may not be available to you.

Understanding document archiving

IAP archives files and email messages associated with registered users. With EAs, you can find and retrieve archived documents to which you have access.

Archiving involves physically storing copies of a document (file or email message), but also virtually storing it in one or more repositories. A repository is an abstract data store, which is a virtual collection of documents associated with routing rules (for storing) and user access control lists (for retrieving):

- Documents associated with a given user are archived to a given set of repositories. User-repository associations are defined by routing rules.
- A user has query and retrieval access to a given set of repositories. This is controlled by access control lists associated with each repository.

Most users have query and retrieval access to only their own documents, which are archived in their individual repositories. The system automatically archives, in your individual repository, all email messages associated with your email account; that is, all messages you send or receive.

In addition to being automatically routed to your individual repository, your email is probably also routed to one or more other repositories established by your company or organization. For example, a company audit repository may be used to keep track of all company email. Some users have access to other repositories, besides their own. For example, your manager or supervisor may have access to your repository.

Understanding searching and document indexing

You can search for any documents archived in your repository (or any other repositories to which you have access), whether the documents are email messages or files. When you search for a document, your query is checked against an index of words that is updated each time a document is archived.

Indexing the contents of a document involves cataloging the document words to prepare them for later searching. Separators (such as punctuation) between words are ignored during indexing. Note that there is a time delay from when files are archived to when they are indexed. Documents archived less than an hour ago may or may not appear in query or search results depending on the system's configuration.

You can search the contents of a document only if the contents have been indexed. You can search for other kinds of files only by using external identifying information.

Indexed document types

In addition to email messages, the following files are indexed:

- Plain text files
- Rich text files (.rtf)
- HTML (HyperText Markup Language) files
- Files used by the following Microsoft Office programs: Word, Excel, PowerPoint, and Access
- PDF (Portable Document Format) files viewed with Adobe Acrobat Reader
- Zip files
- Embedded messages (RFC 822 messages)

NOTE:

Email message formatting has no bearing on indexing. Only the words you see in your email client are indexing candidates. Invisible source-code words, such as HTML markup tags, are ignored.

NOTE:

For zip files and embedded messages, the content inside the files is expanded and indexed.

We support indexing of MS Office files for MS Office 2007 and prior releases.

Message MIME types (advanced users)

An email message can contain message parts of possibly different MIME (Multipurpose Internet Mail Extensions) Content-Types. The following Content-Types are indexed and each corresponds to one of the indexed document types:

- text/xml
- text/plain
- text/html
- application/rtf
- application/msword
- application/vnd.ms-excel
- application/vnd.ms-powerpoint
- application/msaccess
- application/pdf
- application/zip

An email message that is entirely plain text, not MIME, is indexed. Also, if an email message has been attached to another email message, the attached email message is not indexed.

IAP 2.0 provides document indexing support for Microsoft Office 2007. The supported MIME types and extensions are shown in Table 3. Support for features is shown in Table 4. Support for properties is shown in Table 5.

Office 2007 documents archived prior to installing IAP 1.6.1 or 2.0 will not be indexed or content searchable.

Table 3 Office 2007 supported file extensions and MIME types

File extension	File type	MIME type
.docx	Microsoft Office Word 2007 document	application/vnd.openxmlformats-officedocument.word-processingml.document
.docm	Office Word 2007 macro-enabled document	application/vnd.ms-word.document.macroEnabled.12
.dotx	Office Word 2007 template	application/vnd.openxmlformats-officedocument.word-processingml.template
.dotm	Office Word 2007 macro-enabled document template	application/vnd.ms-word.template.macroEnabled.12
.xlsx	Microsoft Office Excel 2007 workbook	application/vnd.openxmlformats-officedocu-ment.spreadsheetml.sheet
.xlsm	Office Excel 2007 macro-enabled workbook	application/vnd.ms-excel.sheet.macroEnabled.12
.xltx	Office Excel 2007 template	application/vnd.openxmlformats-officedocu-ment.spreadsheetml.template
.xltm	Office Excel 2007 macro-enabled workbook template	application/vnd.ms-excel.template.macroEnabled.12
.xlam	Office Excel 2007 add-in	application/vnd.ms-excel.addin.macroEnabled.12
.pptx	Microsoft Office PowerPoint 2007 presentation	application/vnd.openxmlformats-officedocument.pre-sentationml.presentation
.pptm	Office PowerPoint 2007 macro-enabled presentation	application/vnd.ms-powerpoint.presentation.macroEn-abled.12
.ppsx	Office PowerPoint 2007 slide show	application/vnd.openxmlformats-officedocument.pre-sentationml.slideshow
.ppsm	Office PowerPoint 2007 macro-enabled slide show	application/vnd.ms-powerpoint.slideshow.macroEn-abled.12
.potx	Office PowerPoint 2007 template	application/vnd.openxmlformats-officedocument.pre-sentationml.template
.potm	Office PowerPoint 2007 macro-enabled presentation template	application/vnd.ms-powerpoint.template.macroEn-abled.12

The following items are not yet supported:
- Notes within PowerPoint slides
- Spread sheet names within Excel
- Some embedded OLE objects
- Certain text within Excel charts

Also, some documents converted to Microsoft Office version 2007 by the Office File converter may not be properly indexed.

Table 4 Office 2007 supported features

Feature	Microsoft Word	Microsoft PowerPoint	Microsoft Excel
Contents	Yes	Yes	Yes
Table	Yes	Yes	Yes
Textbox	Yes	Yes	Yes
Header/Footer	Yes	Yes	No
Comment	No	No	No
FootNote/EndNote	No	N/A	N/A
Signature	No	No	No
Chart	Yes	No	No
Object (Microsoft Office, WordPad …)	No	No	No
Embedded Objects	No	No	No
Notes	N/A	No	N/A
WordArt	No	No	No
SmartArt	No	No	No
Sheet's name	N/A	N/A	No

Table 5 Office 2007 supported properties

Type	Property	Microsoft Word, PowerPoint, and Excel
Document Properties	Author	Yes
	Title	Yes
	Subject	Yes
	Keywords	Yes
	Category	Yes
	Status	Yes
	Comments	Yes
	Location	No

Type	Property	Microsoft Word, PowerPoint, and Excel
Advanced Properties: General	Type	No
	Location	No
	Size	No
	MS-DOS name	No
	Created	No
	Modified	No
	Accessed	No
	Attributes	No
Advanced Properties: Summary	Title	Yes
	Subject	Yes
	Author	Yes
	Manager	No
	Company	No
	Category	Yes
	Keywords	Yes
	Comments	Yes
	Hyperlink base	No
	Template	No
Advanced Properties: Statistics	Created	No
	Modified	No
	Accessed	No
	Printed	No
	Last saved by	Yes
	Revision number	Yes
	Statistics	No
Advanced Properties: Contents	Document Contents	No

Type	Property	Microsoft Word, PowerPoint, and Excel
Advanced Properties: Custom	Checked by	Yes
	Client	Yes
	Date completed	Yes
	Department	Yes
	Destination	Yes
	Disposition	Yes
	Division	Yes
	Document number	Yes
	Editor	Yes
	Forward to	Yes
	Group	Yes
	Language	Yes
	Mailstop	Yes
	Office	Yes
	Owner	Yes
	Project	Yes
	Publisher	Yes
	Purpose	Yes
	Received from	Yes
	Recorded by	Yes
	Recorded date	Yes
	Reference	Yes
	Source	Yes
	Status	Yes
	Telephone number	Yes
	Typist	Yes

2 IAP Web Interface

Use this web-based tool to search for documents archived in the system. You can also save and reuse query or search criteria and results.

Major topics include:

- Logging in and out, page 17
- Understanding the user interface, page 17
- Common tasks, page 18
- Troubleshooting, page 36

Logging in and out

Before logging in for the first time, see your system administrator for the URL to use and for the list of supported web browsers. (Microsoft 6.0 and 7.0 are recommended.)

The IAP Web Interface can be accessed from a client desktop using regular http protocol as well as secure http protocol (https), for better protection during the authentication. The IAP Web UI now supports secure http by default. If you use regular http, you will be redirected automatically to secure https protocol. Once logged in, you can used regular http if needed.

To access the IAP Web Interface:

1. In the Address field of your web browser, enter the URL (web address) that was provided to you by your system administrator. The web browser displays a login screen.

2. Enter your user name and password (provided by your system administrator). Both fields are case-sensitive. Click **Login**. The Simple Search page is displayed.

3. To log out, click **LogOut** in the toolbar.

> **NOTE:**
> For access to the audit log repository, submit a request to your administrator.

Understanding the user interface

User interface topics include:

- Using the toolbar, page 17
- Search basics, page 18

Using the toolbar

Each page of the IAP Web Interface has a toolbar at the top.

Figure 1 IAP Web Interface toolbar

The following table describes each button:

Table 6 Toolbar buttons, IAP Web Interface

Button	Description
New Search	Click to display the Simple Search page, where you can submit a query. See "Completing simple searches" on page 19. To display the Advanced Search page, point to this button and click **Advanced search** from the menu. See "Completing advanced searches" on page 20.
Query Manager	Click to display the Query Manager page, where you can display saved queries (see "Accessing saved criteria" on page 31) and results (see "Accessing saved results" on page 32).
Preferences	Click to display the Preferences page, where certain users can change their password for accessing the IAP Web Interface. See "Changing your password" on page 36. You can also use the Preferences menu to change the language of the user interface. See "Changing your language" on page 36. Supported languages include English, French, German, Spanish, Portuguese, Chinese (traditional), Chinese (Taiwanese), Korean, and Japanese.
Help	Click for online help about the IAP Web Interface.
LogOut	Click to log out of the IAP Web Interface.

Search basics

Using the Search For field

The Search for field is available when using the Simple Search and Advanced Search pages. Use this field to search for specific words in a document (email messages or files).

The query syntax allowed is described in "Query expression syntax and matching" on page 39. You can enter simple words, words with wildcards, or a more sophisticated query involving Boolean expressions or word sequences.

> **NOTE:**
> To narrow the search to the documents you want to find, make your search text as specific as possible. In general, the more information provided in the Search for field, the narrower the search. If the field is blank (empty), all documents within the specified date range of the query are returned.

Searching indexed contents

The Search for field is checked for a match against the indexed contents of documents.

- For email messages, the Search for field for words in the message body, but *not* in other message fields such as Subject, From, or To. In addition, the Search for field applies to message attachments that are indexed document files.
- For files, the Search for field applies only to indexed document files. Other types of files do not have indexed contents so their contents cannot be searched.

Common tasks

Use the following table as a quick reference for performing common tasks.

Table 7 IAP Web Interface tasks

Task	Reference
Search for archived documents	"Completing simple searches" on page 19 and "Completing advanced searches" on page 20
Display or print the query or search results	"Displaying query or search results" on page 24
Save query or search criteria	"Saving query or search criteria" on page 27
Save the results of a search	"Saving query or search results" on page 28
Send the results to your email account	"Sending query or search results" on page 31
Export the results	"Exporting query or search results" on page 31
Display or delete saved criteria of a search	"Accessing saved criteria" on page 31
Display the saved results of a search	"Accessing saved results" on page 32
Save archived documents to a quarantine repository	"Copying saved results to a quarantine repository" on page 32
Delete a quarantine repository	"Deleting quarantine repositories" on page 33
Search the audit log repository	"Searching audit log repositories" on page 33
Change your password	"Changing your password" on page 36
Change your language	"Changing your language" on page 36

Completing simple searches

The Simple Search page searches for documents (email messages or files) containing words you enter in the Search for field. In the Search for field, you can enter simple words, words with wildcards (*), or a more sophisticated query involving Boolean expressions or word sequences. The Simple Search page is simpler than the Advanced Search page only because there are fewer fields you can search on.

To complete a simple search:

1. Click **New Search** in the toolbar. The Simple Search page is displayed.

Figure 2 Simple Search page

2. Search using all of the following fields on the Simple Search page:
   - Content Type: Use **email** to search for email message files.
     You would use **document** to search the AuditLog repository as described in Searching audit log repositories, or to search for files in a repository such as those migrated using the HP File Archiving software (formerly known as FMA). To do a search for documents stored via HP File Archiving software, select "document" instead of "email" in the dropdown box, choose the repository to search, and then use an empty search string.

   📝 NOTE:
   Using "document" does not search for email sent by Exchange or Domino.

   - Timeframe: The time period to search. This includes the last-modified date of a file or the date an email message was sent.
   - Where to Search: The repository to search. A repository is a virtual collection of documents (email messages and files). Only the repositories to which you have access are displayed. At a minimum, you have access to your own repository.
   - Search for: Searches for words in the document or message body, but not in message fields such as Subject, From, or To.

3. When you have finished defining your query, click **Find Now** to start the search. The Query Results page is displayed.

Completing advanced searches

For more specific searches, use the Advanced Search page. In addition to the fields of the Simple Search page, the Advanced Search page provides additional query fields to help you refine your search.

To complete an advanced search:

1. Point to **New Search** in the toolbar and click **Advanced search** from the menu. The Advanced Search page is displayed.
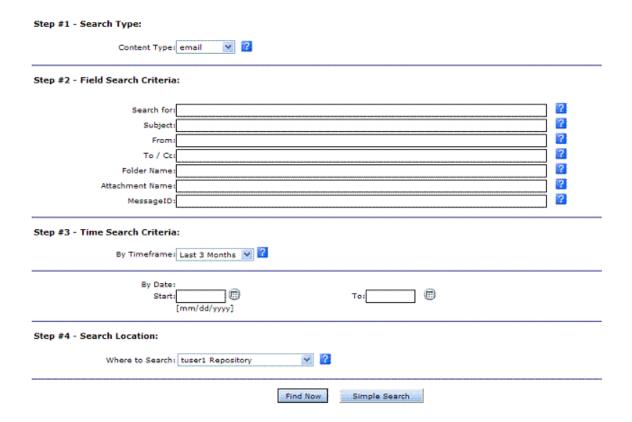

Figure 3 Advanced Search page (email content type)

📝 NOTE:

Figure 3 shows the Advanced Search page for the email content type. The document content type form varies slightly. See Table 8 for an explanation of the differences.

2. Search using the following fields on the Advanced Search page:

- Content Type: Use **email** to search for email message files.
  You would use **document** to search the AuditLog repository as described in Searching audit log repositories, or to search for files in a repository such as those migrated using the HP File Archiving software (formerly known as FMA). To do a search for documents stored via HP File Archiving software, select "document" instead of "email" in the dropdown box, choose the repository to search, and then use an empty search string.

> 📝 **NOTE:**
> Using "document" does not search for email sent by Exchange or Domino.

- Search For: Searches for words in the document or message body, but not in message fields such as Subject, From, or To.
- By TimeFrame: The time period to search. This includes the last-modified date of a file or the date an email message was sent.
  As an alternative to the By TimeFrame field, you can define a time period to search by specifying the Start and end (To) dates. For example, to search for documents dated between March 8, 2003 and March 23, 2003, enter **03/08/2003** in the Start field and **03/23/2003** in the To field.
- Where to Search: The repository to search. A repository is a virtual collection of documents (email messages and files). Only the repositories to which you have access are displayed. At a minimum, you have access to your own repository.

3. To refine the search, use the additional query fields (as shown in Table 8). The available fields depend on the Content Type you select.

Table 8 Additional advanced search query fields

Query Field	Matches (in the Document)
Email Content Type Only	
Subject	The Subject message field.
From	The From message field.
To / Cc	If the email repository belongs to a user with audit privileges (i.e. the user is a compliance user), this value will match message recipients in the Rcpt To, To, Bcc, Cc, and Apparently-To message fields. If the email repository belongs to a user without audit privileges, this value will only match message recipients in the To, Cc, and Apparently-To fields.

Query Field	Matches (in the Document)
Folder Name	The Outlook Exchange folder to which the email belongs. It supports wildcard search like other fields do. (Folder name will appear as a field if it has been enabled by the system administrator in the `domain.jcml` file.) Example queries: **2006** searches all leaf folders with the name "2006," for example, `\Inbox\2006` and `\Inbox\test\2006`, but not `\Inbox`. **\Inbox\2006** searches only folder `2006` in path `\Inbox\2006`. **\Inbox*** searches `Inbox` and all its subfolders and nested folders. **\2006** searches only the root folder `\2006`. **\Inbox\2006\personal** searches only the folder `personal` in the path **\Inbox\2006\personal**. **2006\personal** searches the folder `2006\personal`, anywhere in the path. **2006\personal*** searches the folder `2006\personal` and all its subfolders and nested folders. **sent*** searches all folders that start with "sent," for example, `SentItems` and `SentEmail`. Search is not case sensitive. **bugs\20*** searches all folders in "bugs" that start with "20," for example `\bugs\2006` and `\bugs\20data`. NOTE: Core folders are Outlook hardcoded folders, like `Inbox`, `Outbox`, `Sync Issues\Conflicts`. If the core folder only has one level (like `Inbox`), there is no limitation. If the core folder has more than one level (like `Sync Issues\Conflicts`) and you want to search the emails in the second level (`Conflicts`), type both levels or use wildcards. Searching for **"Sync Issues\Conflicts"** will find email in `Sync Issues\Conflicts`. Searching for **"Sync Issues\Con*"** will find email in `Sync Issues\Conflicts`. But, searching for **Conflicts** will not find email in `Sync Issues\Conflicts`. NOTE: To search any folder which has space inside, use quotes, for example: **"my folder"**.
Attachment Name	The file name of a message attachment. (The contents of indexed document attachments are searched using the Search for field.)
MessageID	The MessageID message field from Outlook, a message identification number (not all messages have MessageIDs). Use this field mainly for audit searches. To display the MessageID field in Outlook: 1. Double-click to open the message in its own window. 2. Select **View > Options**. The Message Options dialog box is displayed. 3. If the message has a MessageID, the field is shown in the Internet headers field of the Message Options dialog box. Example: Message-ID: <LISTMANAGER-115380-9228-2003.03.04-17.34.24--user#hp.com@lists.FrameUsers.com>.
Document (File) Content Type Only	
Document Name	File name, not including the file extension.
Document Path	File path. As for any other text query field, separators such as slash (/), backslash (\ ), and colon (:) are ignored, and the query words are searched in any order. For example, query text `c:\abc\xyz` will match path `abc:\xyz\c`, as well as path `c:\abc\xyz`. To ensure that path components are searched in order, enclose the field text in double-quotes (") to use a word-sequence query. See "Query expression syntax and matching" on page 39 for a complete definition of the Search Engine query syntax.

Query Field	Matches (in the Document)
Extension	File extension. Example: doc for a Microsoft Word file.
Title	Title of the document. Only some files have associated titles. For example, to see the title of a Word document, select **File > Properties** in Word. The Title field is shown on the Summary panel of the displayed Properties dialog box.
Author	Author of the document. Only some files have associated authors. For example, to see the author of a Word document, select **File > Properties** in Word. The Author field is shown on the Summary panel of the displayed Properties dialog box.

4. When you have finished defining your query, click **Find Now** to start the search. The Query Results page is displayed.

Displaying query or search results

When you submit a query, the results are displayed on the Query Results page. From the Query Results page, you can save, send, or export searches and results by clicking **More Options**.

To display the results:

1. Display the Query Results page by completing one of the following tasks:
   - Submit a simple (see "Completing simple searches" on page 19) or advanced search (see "Completing advanced searches" on page 20).
   - Submit a search from previously saved criteria (see "Accessing saved criteria" on page 31).
   - Access previously saved results (see "Accessing saved results" on page 32).
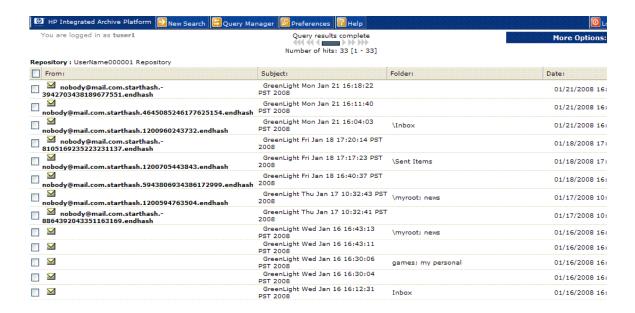
   The Query Results page is displayed.

Figure 4 Query Results page (email content type)

📝 NOTE:

Figure 4 shows the Query Results page for the email content type. The Query Results page for the document content type varies slightly, but has the same functionality.

2. From the Query Results page, complete any of the following tasks:
   - To display the contents of an email or document in the viewing pane, click the item from the list once. Clicking the item twice will instead open the preview pane as a new window.
   - To display a different group of 50 results, click the different symbols in the query results navigation bar. See Query results navigation bar on page 26 for more information.
   - To select all displayed documents or clear all selected documents, click **Check All** or **Uncheck All**, respectively.
   - To print the Query Results page, use the browser print button. (The Print Current Table List printer icon has been removed.)
   - To save the current criteria, see "Saving query or search criteria" on page 27.
   - To save the current results, see "Saving query or search results" on page 28.
   - To mail all or selected results to your mailbox, see "Sending query or search results" on page 31.
   - To export all or selected results, see "Exporting query or search results" on page 31.

NOTE:
Users that have been given "compliance" authorization (generally compliance officers) are able to view all recipients (including Bcc addresses).

Query results navigation bar

When the results are retrieved, the most recent documents are displayed first.

NOTE:
Documents archived less than an hour ago may or may not appear in results depending on the system's configuration.

Fifty results (maximum) are shown on the Query Results page. You can use the query results navigation bar to display different groups of 50 results.
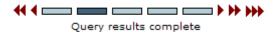

Figure 5 Query results navigation bar

The query results navigation bar shows the following information:

Table 9 Query results navigation bar

Item	Description
bars:	From left to right, the five bars represent subsequent pages of 50 results (maximum). Click a bar to display its page of results. The dark bar represents the currently displayed results. *Note:* To see just which documents a given bar represents, hold the mouse pointer over it momentarily to display a tooltip.
arrows:	Click an arrow to display a different page of results: • Move the results display forward by 50 (▶), 100 (▶▶), or 500 (▶▶▶) documents. • Move the results display back by 50 (◀), 100 (◀◀), or 500 (◀◀◀). For example, if the current page shows results 1-50, clicking the right double-arrow (▶▶) displays results 100-150.
status	Text indicating the current status of results retrieval: • Query Still In Progress: Searching is in progress. Less than 50 results have been found so far. • Click Above: Searching is in progress. At least 50 results have been found and displayed. You can click a navigation bar (▭) to display a set of 50 results while the search is in progress. • Query Results Complete: Searching is complete if the query produces no more than 500 query results. If there are more than 500 results, the search for the first 500 results is complete. To search for additional results with the same query, click the right triple-arrow symbol (▶▶▶) to retrieve all possible results.

Result retrieval batches

When you submit a query or search, the first 500 results are retrieved. To see more results for a query that returns more than 500 results, you must click the right triple-arrow symbol (▶▶▶). When there are

more than 500 results, the Query Results Complete status message means that the first batch of 500 results has been retrieved. It does not mean that all results have been retrieved.

Saving query or search criteria

After you submit a search, you can save the query or search criteria.

To save criteria:

1. Display the Query Results page by completing one of the following tasks:

   - Submit a simple (see "Completing simple searches" on page 19) or advanced search (see "Completing advanced searches" on page 20).
   - Search the audit log repository (see "Searching audit log repositories" on page 33).
   - Access previously saved results (see "Accessing saved results" on page 32).

2. From the Query Results page, click **More Options**, and then click **Save Current Search Criteria**. Or right-click and select **Save criteria**. The Save Criteria page is displayed.

Save Query Criteria as: [   ]

[Save Now!]   [Clear]

Where: UserName000001 Repository
Type: EMAIL
Search For:
Subject:
From:
To:
Folder:
Attachment:
MessageID:
Timeframe: 11/04/2007 to 02/04/2008

Figure 6 Save Criteria page

3. Enter the name of the criteria you are saving in the Save Query Criteria as field. To erase text entered in the Save Query Criteria as field, click **Clear**.

📝 NOTE:
Special characters @ $ % ^ & * # ( ) [ ] / \ { + } ' ~ = | are not allowed.

4. Click **Save Now**.

5. To access the saved criteria, see

Saving query or search results

After you submit a search, you can save the results. The search results are saved for two weeks and then deleted.

📝 NOTE:

Any search results you saved using the IAP Web Interface are deleted after two weeks. The web interface also contains a button for manually deleting saved query results

Deleting search results does not delete the items on the IAP. The actual items remain on the IAP according to the retention period set by your administrator.

If you need to save the results longer than two weeks, consider copying the results to a quarantine repository. A quarantine repository allows you to save search results for an infinite retention period. For more information, see "Copying saved results to a quarantine repository" on page 32.

If the search locates a large number of documents, saving the results is useful. For example, if you are completing a large audit query, you can save the results while the query is still processing and then retrieve all the results at a later time.

When you save query results of a large search, the query is resubmitted as a background process that retrieves all results, no matter how many. Because the query runs in the background, you can continue to use the IAP Web Interface (for example, by submitting other queries).

To save results:

1. Display the Query Results page by completing one of the following tasks:

   - Submit a simple (see "Completing simple searches" on page 19) or advanced search (see "Completing advanced searches" on page 20).
   - Submit a search from previously saved criteria (see "Accessing saved criteria" on page 31).

2. From the Query Results page, click **More Options**, and then click **Save Current Results**. Or right-click and select **Save results**. The Save Results page is displayed.

Save Search Results as: [   ]

[Save Now!]   [Clear]

Where:	UserName000001 Repository
Type:	EMAIL
Search For:	
Subject:	
From:	
To:	
Folder:	
Attachment:	
MessageID:	
Timeframe:	11/04/2007 to 02/04/2008

Figure 7 Save Results page

3. Enter the name of the results you are saving in the Save Search Results as field. To erase text entered in the Save Search Results as field, click **Clear**.

📝 NOTE:
Special characters @ $ % ^ & * # ( ) [ ] / \ { + } ' ~ = | are not allowed.

4. Click **Save Now**.

5. To access the saved results, see "Accessing saved results" on page 32.

NOTE:
The results are not retrieved in chronological order, but are sorted chronologically after they have all been retrieved (query processing is Finished). If you access the saved results before the query is Finished, the results are not sorted.

Sending query or search results

You can send search results to your email account. This includes results that you have placed in a quarantine repository.

To send results:

1. Display the Query Results page by completing one of the following tasks:
   - Submit a simple (see "Completing simple searches" on page 19) or advanced search (see "Completing advanced searches" on page 20).
   - Submit a search from previously saved criteria (see "Accessing saved criteria" on page 31).
   - Access previously saved results (see "Accessing saved results" on page 32).
2. From the Query Results page, select the check box next to each item you want to send. Skip this step if you are sending all items.
3. Click **More Options** to open the menu.
4. To send all results, click **Send All Items**. To send the selected items, click **Send Checked Items**. A confirmation message is displayed when the items are sent.

Exporting query or search results

For information on exporting query or search results, see your *HP EAs for Micosoft Exchange User's Guide* or *HP EAs for IBM Domino User's Guide* as appropriate. Those user guides are included on the documentation CD in those products.

Accessing saved criteria

If you save the criteria of a query or search, you can access it from the Query Manager page. Each item listed shows the name of the saved criteria and date of when you saved the criteria.

To access a saved criteria:

1. Click **Query Manager** in the toolbar. The Query Manager page displays.
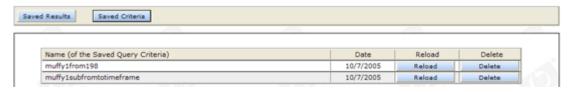2. Click **Saved Criteria** to display all previously saved searches.

Saved Results	Saved Criteria			
Name (of the Saved Query Criteria)		Date	Reload	Delete
muffy1from198		10/7/2005	Reload	Delete
muffy1subfromtotimeframe		10/7/2005	Reload	Delete

Figure 8 Saved Criteria view, Query Manager page

3. Complete any of the following tasks:
   - To resubmit the query, click **Reload**. The Advanced Search page with the saved criteria already entered is displayed. You can then resubmit the query by clicking **Find Now**.
   - To delete the saved criteria, click **Delete**. You are not prompted to confirm the deletion.
   - To switch to the Saved Results view, click **Saved Results**. Or right-click and select **Saved Query Results**.

Accessing saved results

You can access saved results from the Query Manager page. This includes results that you have placed in a quarantine repository. Each item listed shows the name of the results, its status (if unfinished), and start and end dates of the search.

To access saved results:

1. Click **Query Manager** in the toolbar. The default Query Manager page displays all saved results. You can also access this view by clicking **Saved Results** on the Query Manager page.
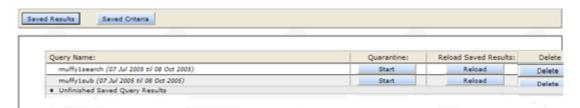

Figure 9 Saved Results view, Query Manager page

2. Complete any of the following tasks:

   • To display the results, click **Reload**. The Query Results page is displayed.
   • To copy the saved results to the quarantine repository, click **Start**. A completed message appears in the row when the contents is in the quarantine repository.
   • To delete the save results, click **Delete**.
   • To switch to the Saved Criteria view, click **Saved Criteria**. Or right-click and select **Saved Query Criteria**.

> **NOTE:**
> Results are automatically deleted after two weeks. If you need to save the results longer than two weeks, consider copying the results to a quarantine repository. See "Copying saved results to a quarantine repository" on page 32.

Copying saved results to a quarantine repository

You can copy items listed in the saved query results to another destination repository called a quarantine repository. If the results are quarantined, the search results are not deleted from the database and have an infinite retention period. This feature is useful for compliance purposes or if you need to save your results for more than two weeks.

> **NOTE:**
> Any search results you saved using the IAP Web Interface are deleted after two weeks. Deleting search results does not delete the items on the IAP. The actual items remain on the IAP according to the retention period set by your administrator.

You have access to your quarantine repositories automatically and work with quarantine repositories as you would any repository, such as search within the repository. For instance, you can select a quarantine repository from the Where to Search list.

To copy the saved results to the quarantine repository:

1. Click **Query Manager** in the toolbar to access the saved results.

2. Click **Start** in the Quarantine column to copy those saved results to the quarantine repository. A completed message appears in the row when the contents is in the quarantine repository. You can not see the quarantine repository until the user logs in again.

Deleting quarantine repositories

If needed, you can delete the contents from a quarantine repository. If a quarantine repository is marked for deletion, the repository contents are removed during the next retention cycle, and either the references to the data are removed or the data itself is removed.

NOTE:
Deleting a quarantine repository does not delete the items on the IAP. The actual items remain on the IAP according to the retention period set by your administrator.

To delete a quarantine repository:

1. Click **Query Manager** in the toolbar to access the saved results.

2. Click **Delete** in the Quarantine column to remove access to that quarantine repository and delete its contents during the next retention cycle.

Searching audit log repositories

Audit log repositories are not available to all users. Users with access to an audit log repository can choose the audit log repository when they select a repository to search. If the audit log repository does not appear in the **Where to Search** list when you specify search criteria, you do not have access. For access to the audit log repository, submit a request to your administrator.

The audit log repository provides a method for creating a surveillance system log. This is useful for demonstrating your company is adhering to surveillance processes. You can complete either a simple or advanced search when searching the repository. If you need to search for multiple criteria, complete an advanced search.

NOTE:
An email search from an audit log repository will produce no results; you need to do a document search.

To search the audit log repository:

1. Select the document content type from the simple or advanced search form:

   - For a simple search, click **New Search** in the toolbar. From the Content Type list, select **document**. The following form is displayed.

Figure 10 Simple Search page (document content type)

   - For an advanced search, point to **New Search** in the toolbar and click **Advanced search** from the menu. From the Content Type list, select **document**. The following form is displayed.

TIP:
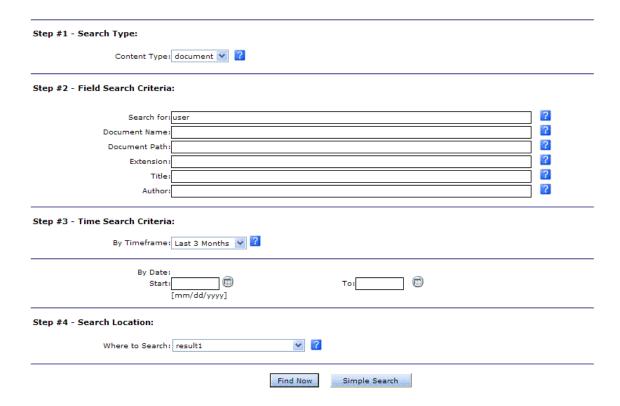To search for multiple items, use the advanced search form.

Figure 11 Advanced Search page (document content type)

2. From the Timeframe list, select the time period to search. This field searches the audit logs stored to the IAP during a specified time period.

Advanced searches only: As an alternative to the By Timeframe field, you can define a time period to search by specifying the Start and end (To) dates. For example, to search for documents dated between March 8, 2003 and March 23, 2003, enter **03/08/2003** in the Start field and **03/23/2003** in the To field.

3. From the Where to Search list, select the audit log repository.

4. In the Search for field, enter one of the following criterion to search for a specific user or action:
   - User ID: Enter the login name of the user, such as **jdoe**.
   - First Name: Enter the first name from the LDAP directory for the user, such as **John**.
   - Last Name: Enter the last name from the LDAP directory for the user, such as **Doe**.
   - Logged actions: Enter one or more of the actions listed in the following table. Or, leave this field blank to search for all logged actions.

Table 10 Logged actions and descriptions

Logged Action	Description
Search	Simple or advanced searches performed by the user.
Query Result	Information about the query results returned or displayed.
Navigation	Navigation through the query results.
View Message	Emails displayed from the query results.
View Document	Documents displayed from the query results.
Download	Email attachments downloaded by the user.
Mail	Emails or documents sent to the user.
Export	Emails or documents exported by the user.
Save Query	Queries saved by the user.
Save Query Result	Query results saved by the user.
Start Quarantine	Saved query results quarantined by the user.
Delete Quarantine	Quarantined query results deleted by the user.

☼ TIP:
You can use boolean expressions AND, OR, and NOT when entering search criteria.

5. *Advanced searches only*: To refine the search, use the additional query fields as shown in the following table.

Table 11 Additional advanced search query fields (for audit log repository searches)

Query Field	Matches
Document Name	Name of the component generating the audit log. For example: **IAP Web Interface**. This is the only option available at this time.
Document Path	Host or IP address of the host where the audit log was generated. For example: **hp-s0-1-93.hp.com**.
Extension	File extension. Not used because the audit log is always an XML file.
Title	Not used because it is not applicable to audit log files.
Author	Used to search for a specific user. Enter one of the following criterion: • User ID: Enter the login name of the user, such as **jdoe**. • First Name: Enter the first name from the LDAP directory for the user, such as **John**. • Last Name: Enter the last name from the LDAP directory for the user, such as **Doe**.

6. Click **Find Now** to start the search. The Query Results page displays the following information:

- User: User for which the audit log was created.
- Session Start: Start time of the user session.
- Session End: End time of the user session.
- Size: Size of the session audit log file.
- Server: Server (HTTP portal) on which the audit log session was captured.
- Date: Date the audit log file was archived.

7. To display the contents of an audit log file in the viewing pane, click the item from the list. If needed, click **New Window** to display the audit log content in a new window.

Figure 12 Audit log details

8. From the Query Results page, you can also save the query or search criteria you entered. See "Saving query or search criteria" on page 27.

Changing your password

Depending on how your system is configured, your password is the same as your Windows or your Lotus Notes password or you have the option to manage your password. The following information applies to users who can change their password through the Web Interface.

For security reasons, change your password periodically. Change your password immediately after you log in for the first time.

To change your password for accessing the IAP Web Interface:

1. Click **Preferences** in the toolbar.

2. Enter your current password (Old Password), enter the New Password twice, and then click **Change**.

Changing your language

To change the language of the user interface:

1. Click **Preferences** in the toolbar.

2. Enter the language you prefer. Supported languages are English, French, German, Spanish, Portuguese, Chinese (traditional), Chinese (Taiwanese), Korean, and Japanese.

Troubleshooting

Troubleshooting topics include:

- Unable to display saved results, page 37
- Problems exporting results, page 37

Unable to display saved results

Search results are saved for two weeks and then deleted. If you save the results of a query, but the retention settings delete the files before the end of the two weeks, the results still appear in the application, but cannot be reloaded from the saved search results. Clicking the saved results displays an error because the application cannot find the saved results on IAP.

Problems exporting results

For information on problems exporting query or search results, see your *HP EAs for Microsoft Exchange User's Guide* or *HP EAs for IBM Domino User's Guide* as appropriate. Those user guides are included on the documentation CD in those products.

3 Query expression syntax and matching

Query expression syntax and matching describes the IAP Web Interface syntax to use to search and retrieve archived documents (files or email messages), and explains how queries are matched against documents.

Major topics include:

Query expressions

Query expressions can be as simple or as complex as needed. The essential idea behind document retrieval is that query words are compared with document words to find a match. You can also:

- Look for document words that are textually similar, but not necessarily identical, to query words. See "Matching similar words" on page 42.
- Look for word sequences in a document: words that are near each other, and in a particular order. See "Matching word sequences" on page 42.
- Combine query words using logical (Boolean) operators (AND, OR, NOT). See "Boolean query expressions" on page 43.

Together, these query constructs provide considerable power to find what you need, provided you learn to use them well.

The way query expressions are interpreted is similar to the way documents are indexed when archived. Text is parsed (broken down) into words. Remaining characters are considered separators and ignored. Query expressions are fundamentally composed of words, no matter how complex the expression.

For indexing and searching, a word need not belong to a natural language, such as English. For example, `wt6_ht3` is a valid document word or query word. Query words can contain wildcards, such as in `f??t`.

Word characters

When the system examines a query expression to determine its words, some characters are not included in query words, but are treated as word separators. When a document is archived, indexing determines which document words are available for searching in the same way.

Learning the rules of creating query words means also learning the rules of document indexing and, therefore, what words you can search for.

Word characters and separators

Word characters include all uppercase and lowercase letters, digits, and the following additional characters:

- _ (underscore)
- # (number/pound/hash sign)
- & (ampersand)

All other characters are separators (except in queries, wildcards `?` and `*`, and special query characters `~`, `"`, `-`, and `!`).

However, `&&` by itself is not a word. It is a Boolean operator. When combined with at least one more word character, `&&` can be part of a word. For example, `a&&b` is a word.

Query analysis and document indexing are not case-sensitive. Uppercase and lowercase letters are treated the same.

Regular expression definition of English word characters

The following regular expression provides, in succinct form, a complete specification of English word characters (except for treatment of `&&` as a non-word):

```
[ A-Za-z0-9_#& ]+
```

Letters and digits in different character sets

Topics include:

- Letters and digits defined, page 40
- Letters and digits in files, page 40

Letters and digits defined

All letters and digits are word characters. What IAP considers a letter or digit depends on the character set encoding used. For US ASCII encoding, letters are uppercase and lowercase English letters (A-Z, a-z). For ISO 8859-1 (Latin-1) encoding, used for Western European languages, accented letters are included. Most ideographic characters, such as those used in Asian languages, are also considered letters.

Whatever the language and encoding used for a particular document (file or email message), IAP maps encoded characters to the Unicode 2.0 standard. The Unicode 2.0 standard is then used to determine if a given character is a letter or a digit (or neither):

- A letter is any Unicode character in one of the following Unicode categories: Ll (lowercase letter), Lu (uppercase letter), Lt (title case letter), Lm (modifier letter), or Lo (other letter).
- A digit is any Unicode character whose Unicode name contains the word DIGIT, provided it is not in the range \u2000 (en quad = en space) through \u2FFF (ideographic description - future).

Letters and digits in files

Although all letters and digits are word characters, their treatment in files (including email message attachments) depends on the character encoding used. You can search for any words in email message bodies and headers, regardless of the encoding.

You can search for words in files (including email body, header, attachments, and indexed documents) provided the character encoding is one the following:

Table 12 Supported character sets

Supported character set	Description
ISO-8859-1	Western European, extended ASCII
WINDOWS-1252	(Code pages supported by Windows) Latin 1
US-ASCII	7-bit American Standard Code for Information Interchange
UTF-8	Universal (all languages)
ISO-8859-2	Eastern European
KOI8-R	Cyrillic (Russian and Bulgarian)
ISO-8859-5	Cyrillic (Bulgarian, Belarusian, Russian)
WINDOWS-1251	Cyrillic
WINDOWS-1254	(Code pages supported by Windows) Turkish
ISO-8859–9	Turkish
GB18030	Chinese (Mainland)
BIG5	Chinese (Taiwan)
GB2312	Chinese (Mainland)
EUC-KR	Korean
KS_C-5601-1987	Korean
ISO-2022-JP	Japanese
EUC-JP	Japanese
SHIFT-JIS	Japanese

Matching words

Matching words is not case-sensitive: *cat*, *Cat*, *cAt*, and *CAT* all match. Corresponding uppercase and lowercase letters, such as *A* and *a*, are treated the same in all respects.

There are two kinds of query words: words that contain occurrences of one or both of the wildcard characters * and ?, and literal words that do not contain wildcards.

- Literal words that do not contain wildcards
- Words containing occurrences of one or both wildcard characters * and ?

A literal word in a query expression matches the same word, character for character (case ignored), in an archived document. A word with wildcard characters (* or ?) matches a document word in the same way, character by character, except for the following:

- A ? matches any single character in a document word. For example, b??t matches *beat*, *beet*, *boat*, *blot*, *best*, *bust*, *bout*, and so on.
- An * matches any sequence of characters in a document word, including a sequence of no characters. For example, f*t matches the document words *foot*, *feet*, *fit*, *fault*, and *ft*; and f* matches any document word beginning with *f*.

You can use any number of wildcard characters (* or ?) in a query word, but you cannot use a wildcard at the beginning of a query word. An error message results. For example, *ion is not a valid query.

Matching similar words

Topics include:

Fuzzy words

You can search for document words that are textually similar to a given literal query word (that is, one containing no wildcards). To do this, append a tilde (~) character to the word, creating a fuzzy word. For example, the fuzzy word `define~` matches the similar words *defined* and *definite*, but does not match *defining*, *definition*, *indefinite*, or *pine*. It also matches *define* itself.

Measuring word similarity

The edit distance (also called Levenshtein distance) between two words is the number of single-character operations (deletion, replacement, or insertion) required to change one word into the other word.

For example, the edit distance between *define* and *pine* is three: two deletions (*d* and *e*) and one replacement (*f* by *p*). The distance between *define* and *definite* is also three (*e* replaced by *i*; *te* inserted).

The search engine considers *define* more similar to *definite* than to *pine*, even though the edit distances are the same (three), because the edit distance (number of character changes) is compared to the word length (of the shorter of the query and document words). Two words are closer, for querying purposes, if it takes less to change one word into the other word relative to their lengths.

The similarity ratio used by the search engine is d/min(query, doc), where *d* is the edit distance, *min* is a function that returns the lesser of its arguments, and *query* and *doc* are the lengths of the query word and document word, respectively. A fuzzy word matches a document word if this ratio is no more than 0.5.

Examples:

Words Compared	Similarity Ratio	Match ?
define, definite	3/min(6, 8) = 3/6 = 0.5	yes
define, pine	3/min(6, 4) = 3/4 = 0.75	no (0.75 > 0.5)

Matching word sequences

You can use word sequences to find documents with words that occur in a specified order and are separated by a specified maximum distance.

Topics include:

Simple word sequences

To search for an ordered sequence of words, use a simple word sequence, which is a list of literal query words (no wildcards) separated by spaces (or other separators) and enclosed in quotes ("). A document matches a simple word sequence if all words occur in the document in the same order, with no intervening words.

For example, the sequence `"like a rolling stone"` does not match a document with the text *like a large rolling stone* because of the intervening word *large*.

Proximity word sequences

You can use simple word sequences to search for words separated by separators but not by other words. To search for document words that are in an ordered sequence, but might be separated by other words, use a proximity word sequence.

To write a proximity word sequence, use the same syntax as a simple word sequence, but append a tilde (~) character to the second quote, and follow that with a numeric proximity value. The proximity value represents the maximum number of other document words that can occur between any two successive words of the sequence. A document matches a proximity word sequence if all words occur in the document in the same order, with at most N intervening words, where N is the proximity value.

For example, the sequence `"bird garden stone"~3` matches any document that has these three words in this order, with *bird* and *garden* separated by no more than three words, and *garden* and *stone* separated by no more than three words. This sequence matches a document with the text *a bird in the rose garden is near a stone* because there are at most three words between successive sequence words. This sequence also matches *a bird garden with a stone* for the same reason.

Simple word sequences are a special case of proximity word sequences: `". . ."` is the same as `". . ."~0`. Any documents found by `". . ."~N` are also found by `". . ."~M`, when M > N.

Boolean query expressions

You can combine words, fuzzy words, and word sequences using Boolean (logical) operators `AND`, `OR`, and `NOT` (these must be uppercase). The following table describes Boolean operators, where `exp`, `exp1`, and `exp2` represents a word, fuzzy word, word sequence, or other Boolean query expression.

Table 13 Boolean query expressions

Syntax	Matches
NOT *exp* alternative syntax: - *exp* alternative syntax: ! *exp*	all documents that do not match *exp*
exp1 OR *exp2*	all documents that match either *exp1* or *exp2*
exp1 AND *exp2* alternative syntax: *exp1* && *exp2* alternative syntax: *exp1exp2*	all documents that match both *exp1* and *exp2*

NOTE:

The second alternative syntax for AND indicates that AND is the default connective in query expressions. You do not need to supply AND explicitly. It is assumed if neither AND nor OR is used explicitly. For example, the query peace quiet is equivalent to the query peace AND quiet.

A `NOT` expression must be combined, using `AND` or `OR`, with another expression other than `NOT`. A query cannot consist solely of negative criteria.

NOT quiet	illegal
(NOT quiet) AND (NOT blue)	illegal
NOT quiet AND blue	legal
NOT quiet OR nois*	legal

You must provide the proper number of arguments for a Boolean operator or an error message results: one argument for `NOT` (- or !), two arguments for `AND` (&&) and `OR`. For example, the following queries result in an error message.

- `alpha NOT`: Missing argument for `NOT`
- `AND alpha`: Missing argument for `AND`

Boolean operators must be surrounded by one or more separators, typically white space. For example, the query `peas&&carrots` is not equivalent to the query `peas && carrots`; `peas&&carrots` is a single word (`&` is a word character).

Negation operators (`-` and `!`) are exceptions to this rule. They must be preceded by a separator, but they need not be followed by a separator. For example, `carrot-a6` is a single query word, but `carrot -a6`, like `carrot (- a6)`, is equivalent to the Boolean expression `carrot AND (NOTa6)`.

Nested Boolean query expressions

You can nest Boolean query expressions using Boolean expressions as arguments of Boolean expressions. For example, the following query searches for documents containing *bird*, but not *garden* or *stone*:

```
bird AND NOT (garden OR stone)
```

Query expression examples

The following are examples of query expressions.

Table 14 Query expression examples

Query expression	Finds documents with ...
`peace OR quiet`	Either *peace* or *quiet*, or both, in either order.

`peace quiet`
`peace AND quiet`
`peace && quiet`
	Both *peace* and *quiet*, in either order.

`peace&&quiet`	The single word *peace&&quiet*.
`peace or quiet`	The three words *peace*, *or*, and *quiet*, in any order. or is a word. The OR operator must be uppercase.
`not quiet`	The words *not* and *quiet*. The NOT operator must be uppercase.
`NOT quiet`	Illegal. A query cannot be purely negative and must have some positive expression.
`peace & quiet`	The three words *peace*, *&*, and *quiet*, in any order. *&* is a word character. The AND operator is implied.
`peace	quiet`	Both *peace* and *quiet*.	is a separator. The AND operator is implied.

`peace AND NOT quiet`
`peace && -quiet`
`-quiet && peace`
	The word *peace* but not *quiet*.

`peace AND quiet OR silence`	Avoid using. Parentheses are needed: `peace AND (quiet OR silence)`.
`quiet OR silence AND peace`	Avoid using. Parentheses are needed: `quiet OR (silence AND peace)`.
`pea*`	Any word starting with *pea* such as: *pea*, *peas*, *peace*, or *peach*.
`pea*c*`	Words such as: *peace*, *peach*, or *peaches*.
`"peace quiet"`	Both *peace* and *quiet*, in that order, with no intervening words. Examples: *peace quiet* or *peace $^%+{} quiet*.
`"peace quiet"~1`	Both *peace* and *quiet*, in that order, separated by at most one word. Examples: *peace and quiet*; *peace, now;%^$ quiet*; *peace quiet*; or *peace george quiet*.
`peace~`	Words similar to *peace* such as: *peaches*, *piece*, *place*, or *plate*.

`(peace quiet)`
`AND`
`NOT "peace quiet"`
	Both *peace* and *quiet*, but not *peace* followed immediately by *quiet*. Examples: *quiet peace*; *quiet blue peace*; or *peace, water, land, quiet*.

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Symbols