

# Searching for Files

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## About queries

You have three tools available to search for information: Quick Search query, Smart Search query, and Advanced Search query. These tools search through the file information stored within the database.

Queries process on the server. Therefore, you can perform other functions or run other queries at the same time. The percent complete appears next to the query in the view tree. This number is based on the percentage of metadata tables searched through.

You can initiate many queries simultaneously. Queries return results as they are found and they appear in the view pane. You can [stop a query](#) from running at any time. If you open a completed search results, the search criteria used to generate the results displays.

Each search results set is saved for the duration of your current session, even if your session is locked then unlocked.

Only the most recent revision of a file is searched through.

Each query returns only those files that you have privileges to view, unless you are assigned the Search All Files privilege at the system level. This privilege allows you to view all results that meet your search criteria, but access to the files is limited to your other system privileges.

To prevent a runaway process, a query automatically stops if it does not return results within a specific time frame.

## Multiple number formats

If your system stores files added from computers with number formats other than your own and you want to search for those files, then you must type the number in the format the file was originally added.

For example, your computer's regional settings are set to English (United Kingdom), but you want to search for files added from a computer with the regional settings set to French (France), then you must type the number in the French format. That is, instead of typing **10,321.91**, you would type **10.321,91** or **10321,91** (you can type values with or without the thousand separator in Advanced Search and Smart Search queries).

## Extraction times

All times are based on the Web server time and stored according to Greenwich mean time (GMT). Times display in local time. That is, the time based on the client computer's regional settings.

However, any time value extracted from a file via an attribute extraction service, PDF template, or user-defined attribute (such as, acquisition time or injection date) will remain as extracted and not converted to Greenwich mean time.

## Searching for file names

When searching for file names that have been added with a file name uniqueness prefix, you must exclude the uniqueness prefix in order to find the file. File uniqueness prefixes generally include computer names, date/time stamps, folder names, or file paths. For example, to search for a file named "| set 2 | poqdleekas.ssizip" you need to type **poqdleekas.ssizip**

## Searching for text

The methods for searching for textual information varies on your database management system (DBMS). Your system may be configured to use Microsoft SQL Server or Oracle. If you are unsure which DBMS you are using, ask your system or database administrator.

### Whole Word vs. Partial Word Searches

In Audit Trail searches, you can type portions of words except when using Oracle databases. In which case, you must type whole words.

In [Advanced Search](#) queries with the Contains or Does Not Contain operators, portions of words are searched, except when using Oracle databases. In which case, you must type whole words. For example, when searching for "alanine", files containing the text "phenylalanine" will not be found.

### Escape Characters

In order to perform text searches for words or phrases containing reserved keywords and characters, the following escape characters may be used.

Escape character	Description
\	Backslash before a reserved character will "escape" the reserved character so that it is considered part of the search text rather than its special meaning. For example, to search for the filename "area%rpt.pdf", you would type <b>area\%rpt.pdf</b>
{ }	Curly braces around search text will cause any reserved characters or words inside the braces to be used as search terms. For example, to search for the text "%impurity", you would type <b>{%impurity}</b>

### Querying escape characters

In order to search for the escape characters, use the backslash to escape the following character. For example, to search for a backslash, enter two backslashes in a row.

### Using Oracle

In addition to the escape characters described above, additional query operators may be used.

For Quick Search queries, type the search expression within quotations. For example, "chromatogram, stability, xy58" will find all files containing any one of the search words using the comma accumulate operator. If the search term is not entered within quotations, the ECM program implies an AND operator at the spaces so that "chromatogram," "stability," and "xy58" must all be found for a result to be returned (commas are part of the words being searched in this case).

For Advanced Search queries, enter the search expression within a Contains or Does Not Contain value. For example, the following query will find files containing the search words within 20 words of each other.

```
[File Information.General Information.File Text Index] contains "NEAR((peptide, digest, pp7324c), 20)"
```

In Audit Trail searches, enter the expression without quotations.

Query operator	Use
ACCUMulate (,)	<p>Use the ACCUM operator to search for files that contain at least one occurrence of any query terms, with the returned files ranked by a cumulative score based on how many query terms are found (and how frequently). For more information on scoring, see the Oracle Text Reference manual from Oracle.</p> <p>For example, typing <b>chromatogram ACCUM stability ACCUM xy58</b> will find files that contain chromatogram, stability, or xy58.</p> <p>You can also type this expression as <b>chromatogram, stability, xy58</b></p>
AND (&)	<p>Use the AND operator to search for files that contain all of the query terms.</p> <p>For example, typing <b>cat AND dog AND mouse</b> will find files that contain cat, dog, and mouse.</p> <p>You can also type this expression as <b>cat &amp; dog &amp; mouse</b></p>
Fuzzy	<p>Use the fuzzy operator to expand queries to include words that are spelled similarly to the specified term. This type of expansion is convenient when there are frequent misspellings in your document set.</p> <p>The fuzzy syntax enables you to rank the result set so that documents that contain words with high similarity to the query word are scored higher than documents with lower similarity. You can also limit the number of expanded terms.</p> <p><b>Syntax</b></p> <p><i>fuzzy(term, score, numresults, weight)</i></p> <p>Where <i>term</i> specifies the word on which to perform the fuzzy expansion. Oracle Text expands term to include words only in the index. The word needs to be at least 3 characters for the fuzzy operator to process it.</p> <p>Where <i>score</i> specifies a similarity score. Terms in the expansion that score below this number are discarded. Use a number between 1 and 80.</p> <p>Where <i>numresults</i> specify the maximum number of terms to use in the expansion of term. Use a number between 1 and 5000.</p> <p>For <i>weight</i>, type <b>WEIGHT</b> or <b>W</b> for the results to be weighted according to their similarity scores. Type <b>NOWEIGHT</b> or <b>N</b> for no weighting of results.</p> <p><b>Backward compatibility</b></p> <p>You can still use the old fuzzy (?) operator. It expands terms to include all terms with similar spellings as the specified term. Term needs to be at least 3 characters for the fuzzy operator to process it.</p> <p>For example, typing <b>?chromatogram</b> will find chromatography and chromatic.</p>

Query operator	Use
NEAR (;)	<p>Use the Near operator to find words that occur within a specified proximity to one another.</p> <p>For example, typing <b>NEAR((monday, tuesday, wednesday), 20)</b> will find files containing the words "monday", "tuesday", and "wednesday" within 20 words of each other.</p> <p>"true" or "false" may be entered after a comma after the number of words value. If "true" is entered, the words must appear in the order specified. If "false" is entered, the words may appear in any order. False is used when no value is specified.</p> <p><b>Note</b> The upper limit for proximity is 100 words. If a larger value is entered, no results will be returned.</p>
NOT (~)	<p>Use the NOT operator to search for files that contain one query term, but not another.</p> <p>For example, typing <b>Benjamin NOT Franklin</b> will find files that contain Benjamin but not Franklin.</p> <p>You can also type this expression as <b>Benjamin ~ Franklin</b></p>
OR ( )	<p>Use the OR operator to search for files that contain at least one occurrence of any of the query terms.</p> <p>For example, typing <b>association OR institute OR forum</b> will find files that contain association, institute, or forum.</p> <p>You can also type this expression as <b>association   institute   forum</b></p>
soundex (!)	<p>Use the soundex (!) operator to expand queries to include words that have similar sounds; that is, words that sound like other words. This function enables comparison of words that are spelled differently, but sound alike in English.</p> <p>For example, typing <b>!smith</b> will find smith and smyth.</p>
stem (\$)	<p>Use the stem (\$) operator to search for terms that have the same linguistic root as the query term.</p> <p>For example, typing <b>\$examine</b> will find examine, examines, and examination.</p> <p>Typing <b>\$sing</b> will find sing, sang, and sung.</p>

For more information on Oracle Text query operators, see the *Oracle Text Reference* manual from Oracle.

## Grouping characters

The grouping characters control operator precedence by grouping query terms and operators in a query expression.

Grouping characters	Use
( )	Use the parentheses characters to group terms and operators found between the characters. For example, typing <b>benzene AND (toluene OR xylene)</b> will first find all files that contain the words toluene or xylene, and then only return the files that also contain the word benzene.
[ ]	Use the bracket characters to group terms and operators found between the characters; however, they prevent penetrations for the expansion operators (fuzzy, soundex, stem).

For more information on Oracle grouping characters, see the Oracle Text Reference manual from Oracle.

When text such as a file name is indexed by Oracle, its string is broken into individual tokens based on the following rules:

- Any non A-Z or 0-9 character is used as a token separator with the following exceptions:
- A hyphen or dash (-) does not separate tokens. For example, Hello-world is recorded as one token, hello-world.
- Commas (,) and periods (.) enclosed by numbers. For example, 1,020 is recorded as one token, 1,020. A,12 is recorded as two tokens, a and 12.
- Periods (.) question marks (?) and exclamation points (!) are dropped from a token if followed by white space. For example, hello world! Will be recorded as two tokens, hello and world without the exclamation point. Test.txt will be recorded as two tokens, test and txt.

## Exclusions

The word "at" is not indexed by Oracle.

For Smart Search queries, the Oracle indexes do not include the Reason and File Description attributes for files. Therefore, do not create a Smart Search query to find files using those attributes.

For Advanced Search queries, the Oracle indexes do not include the Reason, File Description, Location, Cabinet, Drawer, and Folder attributes for files. Therefore, do not create an Advanced Search query to find files using those file information attributes.

## Using wildcard characters

A wildcard character is a keyboard character such as a percent (%) or an underscore (\_) that is used to find text so that the entire word does not have to be entered. The following wildcard characters are available:

Wildcard character	Use
Percent (%)	Use the percent as a substitute for zero or more characters. For example, typing <b>alanine%</b> will find alanine and alanines, but not phenylalanine. Typing <b>%alanine</b> will find alanine and phenylalanine, but not alanines. Typing <b>%alanine%</b> will find alanine, alanines, and phenylalanine.
Underscore (_)	Use the underscore as a substitute for a single character in a name. For example, typing <b>_ing</b> will find king, wing, and sing, but not "nothing".
Brackets [b-e]	Brackets are similar to the underscore except that only characters with the specified range may be found in the position of the brackets where b and e are the beginning and end characters of the range. For example, typing <b>[c-m]arson</b> will find Carson and Larson, but not Parson. Brackets are only available with Microsoft SQL Server.
Brackets with Carat [^b-e]	As with brackets, b and e are the beginning and end characters of a specified range of characters. In this case, only characters that are not in the specified range may be found. For example, typing <b>de[^k-m]%</b> will find debate and depreciation, but not delivery. Brackets with Carat are only available with Microsoft SQL Server.

## Creating Queries

### Create a query by copying another query

Use the following to create a query by copying another query.

#### To create a query by copying another query

1. On the **Content** tab, right-click **Search Results**, and then click **Search**.
2. Click the **Query**, **Smart**, or **Advanced** tab.
3. Click **Open**.
4. In the **Open Search** dialog box, click the query for which you want to copy, and then click **Open**. If necessary, click to select the **Show public queries also** check box.
5. Make the changes you want.
6. Click **Save**.
7. In the **Save search as** box, type the name of the query.
8. If you want to make this query available to everyone, then click to select the **Save as public query** check box.
9. To run the query, click **Quick Search**, **Smart Search**, or **Advanced Search**. Otherwise, click **Cancel**.

## Managing Queries

### Delete a stored query

1. On the **Content** tab, right-click **Search Results**, and then click **Search**.
2. Click the **Quick**, **Smart**, or **Advanced** tab.
3. Click **Save**.
4. In the **Save Search** dialog box, click the query for which you want to delete. If necessary, click to select the **Show public queries also** check box.
5. Click **Remove**.
6. Click **Save**.

### Run a stored query

1. On the **Content** tab, right-click the content, location, cabinet, drawer, or folder you want to search through, and then click **Search**.
2. Click the **Quick**, **Smart**, or **Advanced** tab.
3. Click **Open**.
4. In the **Open Search** dialog box, click the query, and then click **Open**. If necessary, click the **Show public queries also** check box.
5. Click **Quick Search**, **Smart Search**, or **Advanced Search**.

### Save a search query

1. After you enter your query search criteria, click **Save**.
2. In the **Save search as** box, type the query name.
3. If you want to make this query available to everyone, then click to select the **Save as public** query check box.
4. Click **Save**.

### Stop a query from running

- On the **Content** tab, right-click the query you want to stop, and then click **Cancel Search**.

## Using Advanced Search Queries

### About Advanced Search query

Create an Advanced Search query to search through file information and extracted attributes based on attributes and their values.

To search for a numeric value, you can type values with or without the thousand separator. For example, to search for 19,000.89, you can type **19,009.89** or **19000.89**. The actual character used as the thousand separator is determined by the regional settings in the Windows Control Panel.

When searching for a numeric value, you can type up to 14 numeric characters in the search expression.

Only the attributes related to the latest revision are searched.

For some extracted attributes, if the file does not contain an entry for that attributes value, the attributes will not appear in the file's metadata. When an Advanced Search query is performed using that attributes value, any file whose metadata does not contain a value for that attributes will not be considered in the search.

For some numeric-based extracted attributes, if the file does not contain a calculated value for a specific attributes, the attributes will be entered into the file's metadata with a value of zero. When an Advanced Search query is performed using that attributes, files that do not contain a calculated value may still appear in the search results.

If you use the "does not equal" or "does not contain" operator in a query for a user-defined attribute and files with that attribute do not contain a value, then the search will not return those files.

### Using parentheses

You can group query conditions together with the parentheses. The parentheses must always be added in closed pairs. Queries are evaluated from the inside out and from left to right so that, with multiple levels of nested parentheses, the innermost conditions are evaluated first.

### Using AND, OR, and SET

When two or more conditions are added to a query they must be connected with an AND, OR, or SET logical operator.

When AND is used, both conditions must be true for a result to be returned.

When OR is used, at least one condition must be true for a result to be returned. If both conditions are true, a result will be returned.

The SET operator is similar to AND but adds the further requirement that the attributes be linked in the two conditions being evaluated. This is useful when files can have more than one sets of attribute values. In this case, SET requires that the conditions not only be true for the same file but also be true for the same set of attributes.

Do not attempt to find the words "and", "or", or "set" as these are reserved words.

### Example queries

In chromatography results data, a file can have multiple sets of peak attribute values. In the example below, a single sample contains three sets of results. Each row in the table forms a result set for the sample. While each of the results listed in the table is a metadata value for this sample, the peak name, peak area, and peak concentration for peak number 1 are related to one another by a set number.

EZChrom Elite Results for Sample ID: 20031231-001

Peak #	Peak name	Peak height	Peak area	Peak conc.
1	Benzene	2.13	3000	3.5
2	Di nitro Benzene	6.21	10000	7.6
3	Toluene	4.53	9000	6.3

#### Example 1

Query: [EZChrom Elite.Peak.Name] = "Benzene" AND [EZChrom Elite.Peak.Area] > 5000

The search query will find the example file because it contains a peak named Benzene and another peak with an area greater than 5000. This query does not require the peak name and peak area belong to the same peak.

#### Example 2

Query: SET ([EZChrom Elite.Peak.Name] = "Benzene" AND [EZChrom Elite.Peak.Area] > 5000)

The search query will not find the example file because it does not match both criteria: a peak that both is named Benzene and has an area greater than 5000. The SET statement requires the criteria entered between the parentheses to be true for a single peak.

#### Example 3

Query: SET ([EZChrom Elite.Peak.Name] = "Benzene" AND [EZChrom Elite.Peak.Area] < 5000 AND [EZChrom Elite.Peak.Conc] < 4 AND [EZChrom Elite.Peak.Conc] > 3)

The search query will find the example file because it contains a peak named Benzene that has an area less than 5000, and a peak concentration less than 4 but greater than 3.

All of the conditions specified must be true is a specific attribute set for the file to meet this search criteria.

The SET statement can be used only with those attributes that occur in sets. While attributes that occur in categories, such as Header, are assigned set numbers, these attribute values do not occur in sets within the file. Attempting to perform a SET query statement with attributes that do not occur in sets will result in an error.

## Create an Advanced Search query

Use the following procedure to create an Advanced Search query.

### To create an Advanced Search query

1. On the **Content** tab, right-click the location, cabinet, drawer, or folder you want to search through, and then click **Search**.
2. Click the **Advanced** tab.
3. In the **Available keys** box, select the synonym or attribute you want to search through, and then click . The **Value** dialog box displays.
4. In the **Operator** list, click an operator.
5. In the **Value** box, type the value to be used in the search. If the value is a date, click  and select a date. When searching for date and times with "equals" as the operator, the full time must be entered with seconds (for example 7:44:10).
6. Click **OK**.
7. If desired, click **AND** or **OR** and select another attribute or synonym.
8. Click **Advanced Search**.

### Notes

- Click **SET** to group query statements that should be applied not only to a file's metadata, but to specific attribute sets within that metadata.
- Search terms can be grouped with parenthesis. The following query:

```
[EZChrom Elite.Header.Analyst] = Technician1 AND ([EZChrom Elite.Header.Injection Date] = 11/20/2003 OR [EZChrom Elite.Header.Injection Date] = 11/22/2003)
```

Is equivalent to:

```
[EZChrom Elite.Header.Analyst] = Technician1 AND [EZChrom Elite.Header.Injection Date] = 11/20/2003 OR [EZChrom Elite.Header.Analyst] = Technician1 AND [EZChrom Elite.Header.Injection Date] = 11/22/2003
```

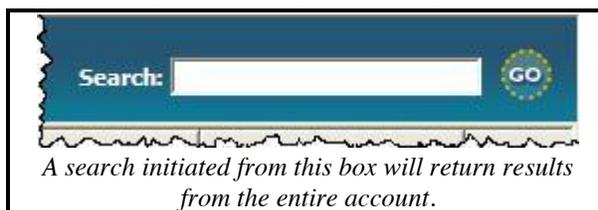
But not equivalent to:

```
[EZChrom Elite.Header.Analyst] = Technician1 AND [EZChrom Elite.Header.Injection Date] = 11/20/2003 OR [EZChrom Elite.Header.Injection Date] = 11/22/2003
```

## Using Quick Search Queries

### About Quick Search queries

Create and run a Quick Search query to search through attribute values to find matching files. You can run a Quick Search query on an account, location, cabinet, drawer, or just a folder. You can also run a Quick Search query by using the **Search** box in the upper right corner of the window.



When you create and run a Quick Search query, it searches through the values of the following attributes:

- File Name
- Uploaded By
- Reason
- File Description
- All other text-based attributes (such as, Source Computer)
- All date-based attributes (such as, File Creation Date)

However, a Quick Search query **does not** search through the values for the following attributes:

- Location
- Cabinet
- Drawer
- Folder
- Check Out User
- All numeric-based attributes (such as, File Size in Bytes)

Instead, it may be convenient to create a [Smart Search](#) or [Advanced Search](#) query.

Only attribute values from current-version files are searched.

### Searching for words in Oracle databases

To search for a single word, your search expression must contain either a whole word or a partial word with a [wildcard character](#).

### Searching for words in Microsoft SQL Server databases

To search for a single word, your search expression can be a whole or partial word. Wildcard characters are not necessary. For example **file** will return all files that contain "file", including "files", "filed", and "profile". The query is equivalent to typing **%file%**

To search for a phrase (group of words in a series), type a double quotation mark (") before and after the phrase. For example, "**vacation request form**"

Without the quotation marks, the query is equivalent to typing **vacation AND request** which will find topics containing both of the individual words, instead of the phrase.

### Searching for multiple words

To search for multiple words, you can use the AND and OR statements. For example, **form OR table** will return all files with either "form" or "table".

You can also use parentheses ().

### Searching through date-based attributes

You can search through date-based attributes only if the search expression is typed in **YYYY/MM/DD** format. This applies to both Oracle and Microsoft SQL Server databases.

### Reserved words

Do not attempt to find the words "and" or "or" as they are reserved words.

### Create a Quick Search query

Use the following procedure to create a Quick Search query.

#### To create a Quick Search query

1. In the **Content** tab, right-click the location, cabinet, drawer, or folder you want to search through, and then click **Search**. To search through the entire account, right-click **Content**, and then click **Search**.
2. Click the **Quick** tab.
3. In the **Search for** box, type the search value.
4. Click **Quick Search**.

#### Tip

To save the query, click **Save**.

## Using Smart Search Queries

### About Smart Search query

Use Smart Search query to search through general file properties and synonyms. You can select an attribute or synonym and operator, then type a value and select a condition. When searching, Smart Search first processes all AND statements, then all OR statements.

To search for a numeric value, you can type values with or without the thousand separator. For example, to search for 19,000.89, you can type **19,009.89** or **19000.89**. The actual character used as the thousand separator is determined by the regional settings in the Windows Control Panel.

### Create a Smart Search query

Use the following procedure to create a Smart Search query.

#### To create a Smart Search query

1. On the **Content** tab, right-click the content, location, cabinet, drawer, or folder you want to search through, and then click **Search**.
2. Click the **Smart** tab.
3. On the first row, click the **Key** column.
4. In the **Key** list, click an attribute or synonym.
5. In the **Operator** list, click an operand.
6. In the **Value** box, type your search term.
7. If you want to further define your results with additional search criteria, then in the **Condition** list, do one of the following:
  - If you want to find files in which all the search criteria are true, click **AND**. Then, on the next row, repeat steps 4 through 7.
  - or -
  - If you want to find files in which at least one of the search criteria are true, click **OR**. Then, on the next row, repeat steps 4 through 7.
8. Click **Smart Search**.

#### Tip

To save the query, click **Save**.

## Changing the Way Queries Work

### Disable the query timeout

Use the following procedure to disable the query timeout.

**Warning!** Disabling the query timeout allows runaway queries on the database.

#### To disable the query timeout

1. On the **Content** tab, right-click **Search Results**, and then click **Search**.
2. Click the **Options** tab.
3. In the **Search In** box, click to select the check box for the account or Web server for which you want to disable queries to timeout.
4. Click to select the **Disable query timeout** check box.

### Enable queries to timeout

Use the following procedure to enable queries to timeout and prevent a runaway process. If a query does not return results within a specific time frame, the query automatically stops.

#### To enable queries to timeout

1. On the **Content** tab, right-click **Search Results**, and then click **Search**.
2. Click the **Options** tab.
3. In the **Search In** box, click to select the check box for the account or Web server for which you want to enable queries to timeout.
4. Click to clear the **Disable query timeout** check box.

### Set up to search through external databases

Use the following procedure to set up to search through external databases. Database connections must be set up in Account Administrator before using this procedure.

#### To set up to search through external databases

1. On the **Content** tab, right-click **Search Results**, and then click **Search**.
2. Click the **Options** tab.
3. Under **External Database Look Up**, click to select the external databases you want to use.

### Set up to search through multiple databases

Use the following procedure to enable queries to search through one or more accounts or Web servers.

#### To set up to search through multiple databases

1. On the **Content** tab, right-click **Search Results**, and then click **Search**.
2. Click the **Options** tab.
3. Click **Add** .
4. In the **Server Name** box, type the name of the Web server.
5. In the **Account** box, type the account name.
6. Fill in the **User Name**, **Password**, and **Domain** fields.
7. Click **OK**.
8. In the **Search In** box, click to select the check box for the account or Web server that you want to enable queries to search through.
9. If you want to disable the query timeout default for this account or Web server, then click to select the **Disable query timeout** check box.