Relativity one

Searching Guide

April 18, 2025

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Table of Contents

1 Searching

Relativity includes flexible search features designed to facilitate the document review process. These features support a range of searching needs from filtering on fields and simple keyword searches to the development of complex queries. The following list summarizes the searching features available in Relativity.

1.1 Filters

You can use filters to limit the documents or items that appear in item lists on Relativity tabs and pop-ups. When you enable the filters for an item list, you can set criteria on single or multiple fields so that only matching documents or items appear in the view.

Filters query across the searchable set of documents in the active view to return your results. Relativity supports multiple filter types so that you can choose the best format for different field types. See the Searching Guide for more information.

1.2 Search panel

The search panel is available for the Document list and for many other tabs in Relativity. It allows you to build complex searches by rearranging and visualizing nested conditions by dragging and dropping them. Conditions can be easily set and organized into logic groups, with the logic display at the top of the panel updating automatically to reflect any changes made. You can access your dtSearch and keyword search indexes and fields within the workspace when creating a search.

With the search panel, the search conditions tool allows you to refine searches by selecting fields, operators, and values to customize queries. This tool can be used independently or in conjunction with keyword searches, dtSearches, Analytics, or Cluster visualization. See the Searching Guide for more information.

1.3 Keyword searches

You can run keyword searches from the Documents tab and from Dynamic Object tabs. With these searches, you can leverage the basic functionality for querying the SQL full-text index populated with data from extracted text fields. The keyword search engine supports the use of Boolean operators and wildcards. See the Searching Guide for more information.

1.4 Saved searches

Saved searches give you the functionality to define and store queries for repeated use. With flexible settings, you can create a saved search based on any Relativity search engine, assign security permissions to it, and define specific columns to display your search results. Saved searches support the development of complex queries that you build using a form with search condition options. These queries run dynamically to ensure that updated results appear when you access a saved search. See the Searching Guide for more information.

1.5 dtSearch

Available on the Documents tab, you can use dtSearch's advanced searching functionality to run queries with proximity, stemming, and fuzziness operators, along with basic features such as Boolean operators and wildcards.

System administrators can create a dtSearch index for a specific subset of documents in a workspace, and then assign security to it. They must manually update indexes when you modify the document search sets used to create them. See the Searching Guide for more information.

1.6 Analytics

Supporting conceptual searching, Analytics includes documents in a result set when they contain similar ideas or conceptual relationships, rather than matching specific search terms or conditions.

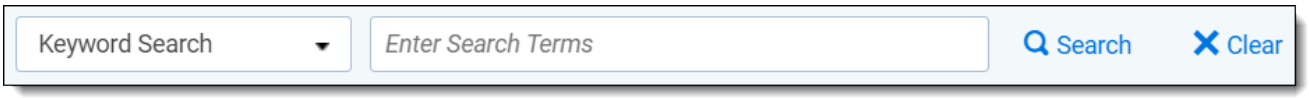
You can create searches with Analytics that categorize your documents based on the concepts contained in a sample document set. Instead of categorizing documents, you can also perform clustering, which uses specific algorithms, system-defined rules, to identify conceptually related documents. See the Searching Guide for more information.

1.7 Regular expressions

Regular Expressions (RegEx) is a form of advanced searching that looks for specific patterns, as opposed to certain terms and phrases. With RegEx you can use pattern matching to search for particular strings of characters rather than constructing multiple, literal search queries. You can use RegEx with a dtSearch index using dtSearch syntax options to construct complex queries. See the Searching Guide for more information.

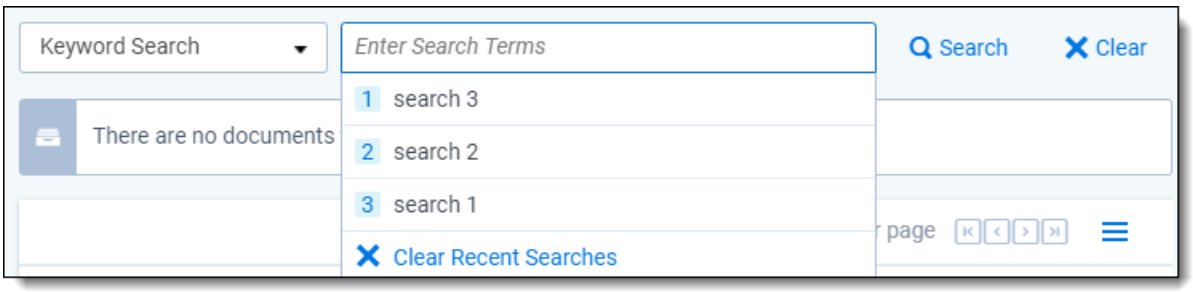
1.8 Additional features

Relativity provides additional features that makes searching easy to use from the Documents tab. Use the **search bar** to run a keyword search query, or click the drop-down list to select another search index you created.



With the *search condition* option, you can build queries using the same condition options available for saved searches. You can click **Save as Search** on the Documents tab to create saved searches based on the criteria defined for keyword searches, dtSearches, Analytics, or the search conditions option. See the Searching Guide for more information.

You can also use the search bar to view recent searches. Click in the search bar to see up to 10 of the most recent searches from any index in descending order, with the most recently run search first.



Select any search from the list to run that search. To clear the list, click **Clear Recent Searches**.

2 Filters

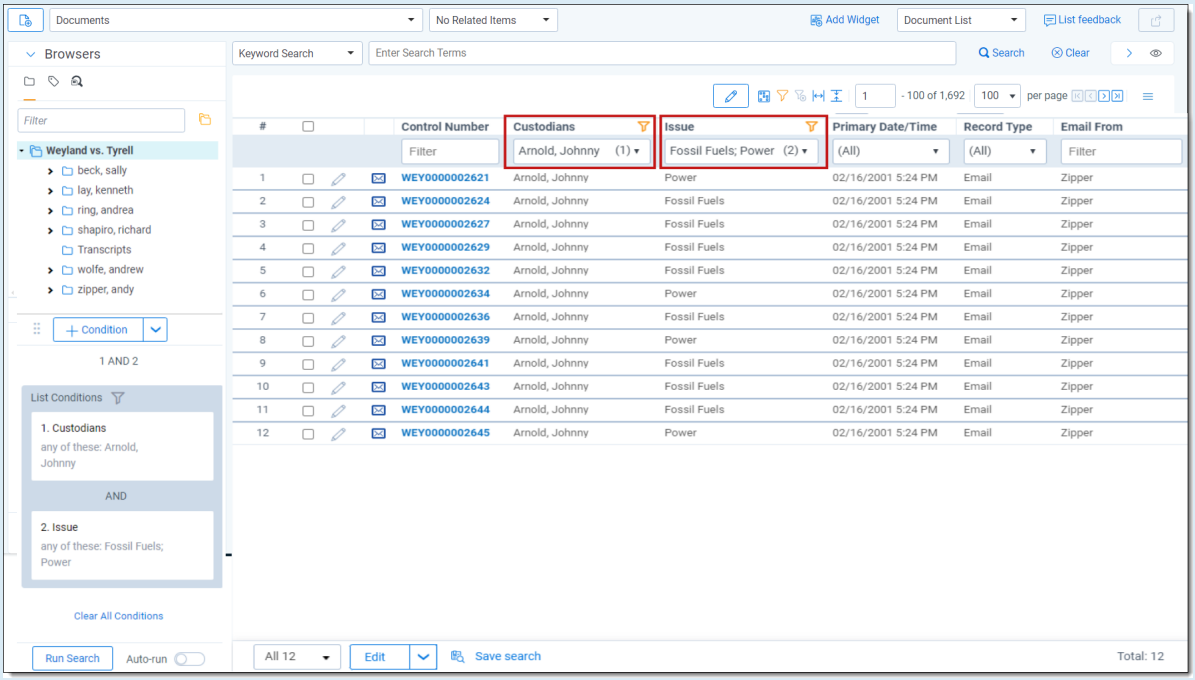
Filtering provides a fast and easy way to search for items in a list in Relativity. You can use filters to search for values in the fields on the active view, and across all records available in the searchable set. Filters are also available for item lists on tabs and pop-up windows.

The field type associated with each column determines the available filter types, such as text boxes, pop-up pickers, and drop-down lists. You do not need any specific security permissions to use filtering.

Using filters

You are a Relativity administrator helping with a review project on a large set of documents. The set includes thousands of emails between traders and investors in your client's products. You need to find all documents owned by trader Johnny Arnold, and relating to gas and power. The evidence might not be admissible in court. To do this, you turn to filters.

You find the view you set up for documents already coded for key issues and you click the filter icon. In the **Custodian** field you enter the last name of the employee in question, **Arnold**. In the **Key Issue** field you select the **Gas** and **Power** choices.



This simple filtering job returns a small set of documents on which you do a quick review and find that they contain references that make them inadmissible.

2.1 Showing and hiding filters in the item list

You enable filters by clicking an icon located at the top of the document list. You can:

- **Show/Hide filters** ( )—to display the field filters at the top of each column. This icon turns orange when you activate a filter. Click the icon again to hide the filters. Your filter settings remain unchanged.
- **Clear all** ( )—to remove the current filter settings. This option is only available after you set a filter.

The filter type determines the steps required to set the filtering criteria that it uses. See Filter types for details on filter types and their use.

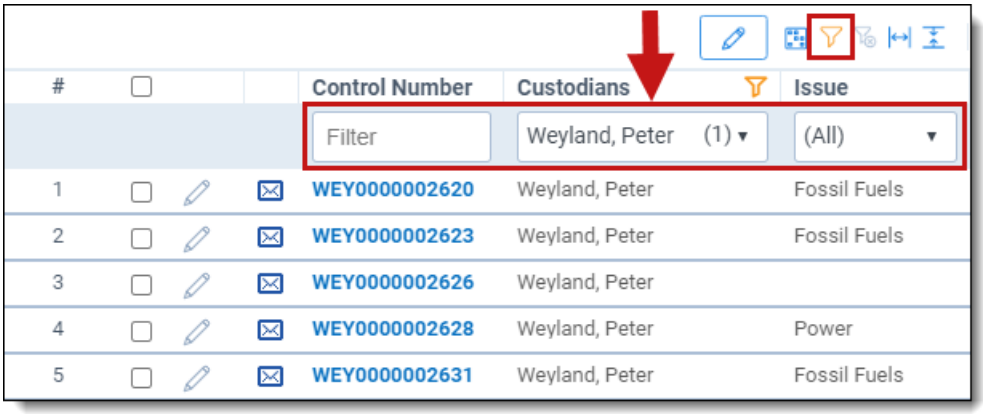
Note: When you create or edit a field, you can select its **Filter Type**. See Fields in the Admin guide.

After enabling filters, you are ready to enter criteria for the fields in your list.

Note: Before defining a new search filter, click the **Clear All** ( ) icon or the **Clear All Conditions** link in the Search Conditions panel to remove any filter settings. For example, say you create a filter on the Privileged field, but now want to search only by the Custodian field. If you do not clear the filter, Relativity filters your documents by both the Privileged and Custodian fields, and your results may include fewer documents than you expect.

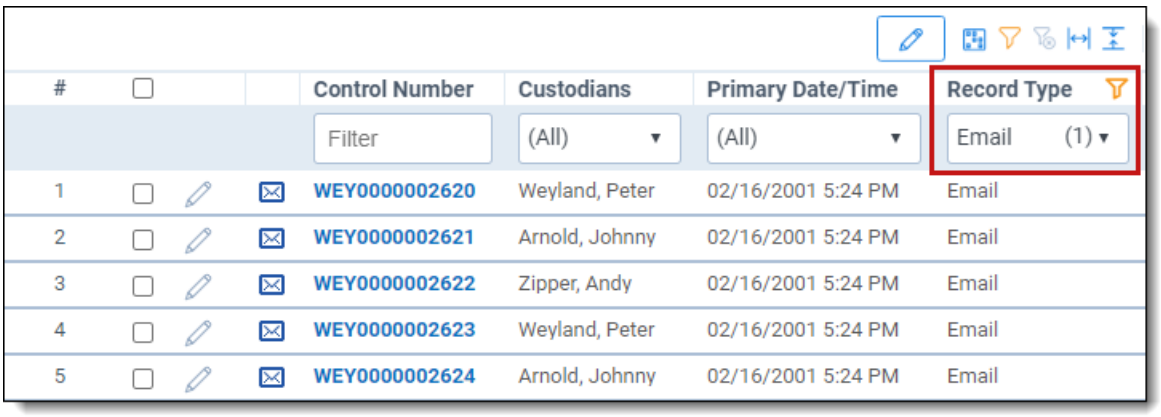
To use a filter:

1. If filtering is not enabled, do so by clicking the filter icon to display the filtering fields below the column headings. The icon will change to orange.
2. Enter your filter criteria. The filter type determines how you enter the criteria and how to use operators to further define the filter. See Filter types for details on filter types and their use.



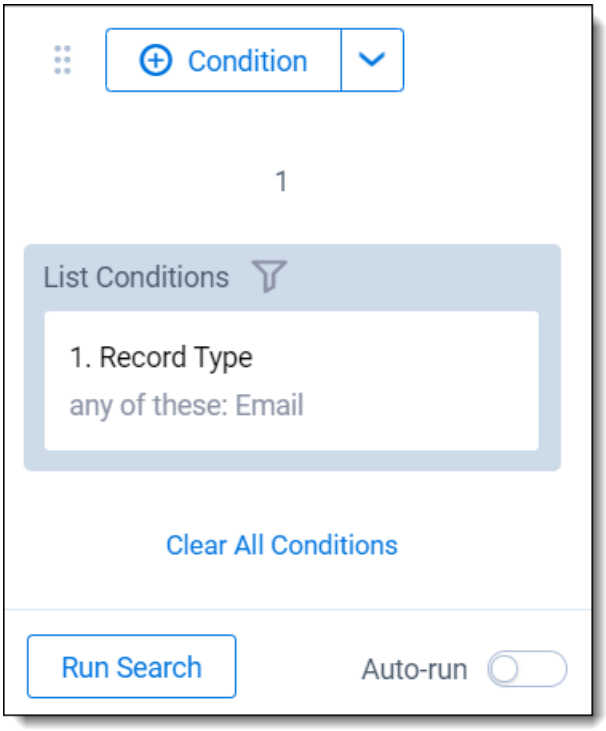
3. Press **Enter** to display the filter results.

The field column header displays the filter icon, letting you know which fields have filters applied. This persists whether you have the filters shown or hidden.



#	Control Number	Custodians	Primary Date/Time	Record Type
	Filter	(All)	(All)	Email (1)
1	WEY0000002620	Weyland, Peter	02/16/2001 5:24 PM	Email
2	WEY0000002621	Arnold, Johnny	02/16/2001 5:24 PM	Email
3	WEY0000002622	Zipper, Andy	02/16/2001 5:24 PM	Email
4	WEY0000002623	Weyland, Peter	02/16/2001 5:24 PM	Email
5	WEY0000002624	Arnold, Johnny	02/16/2001 5:24 PM	Email

The Search Conditions panel also shows the filtering conditions.



You cannot edit the Search Conditions cards by clicking on them. However, you can clear all the conditions by clicking the link at the bottom of the panel.

2.2 Filter types

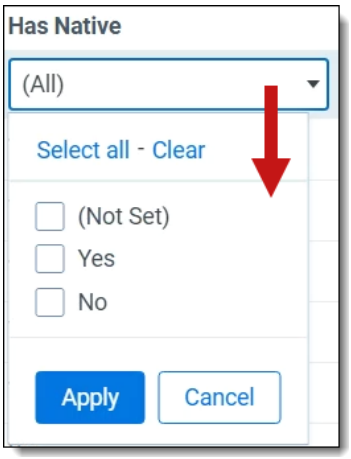
Relativity contains the following filter types:

- Boolean—Yes/No fields.
- Numeric—decimal, whole number, and currency fields.
- List—single choice, single object, user, and fixed-length text fields.
- Date—date fields.

- Multi-list—multiple choice, multiple object, and single choice fields.
- Text box—fixed-length text, long text, date, whole number, decimal, currency, and object fields.

2.2.1 Using Boolean filters

Boolean filters are available for Yes/No field types. To use a Boolean filter, click the drop-down menu and select **Yes**, **No**, or **(Not Set)** from the list. Click **Apply** to set the conditions. Click **Select all** to select all the options. Click **Clear** to remove the filter settings.



2.2.2 Using numeric filters for numbers

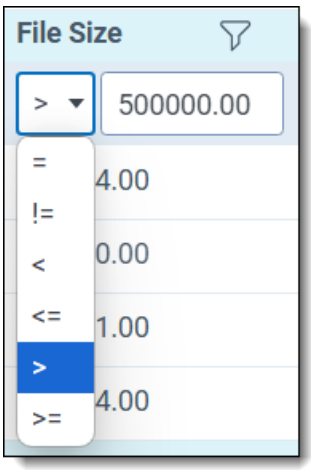
The numeric filter is available for the following field types:

- Decimal
- Whole Number
- Currency

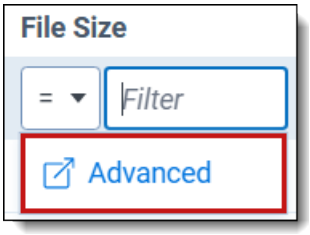
To use a numeric filter, click the drop-down menu and select an operator. Operators include:

- Equal to (=)
- Not equal to (!=)
- Greater than (>)
- Less than (<)
- Less than or equal to (<=)
- Greater than or equal to (>=)

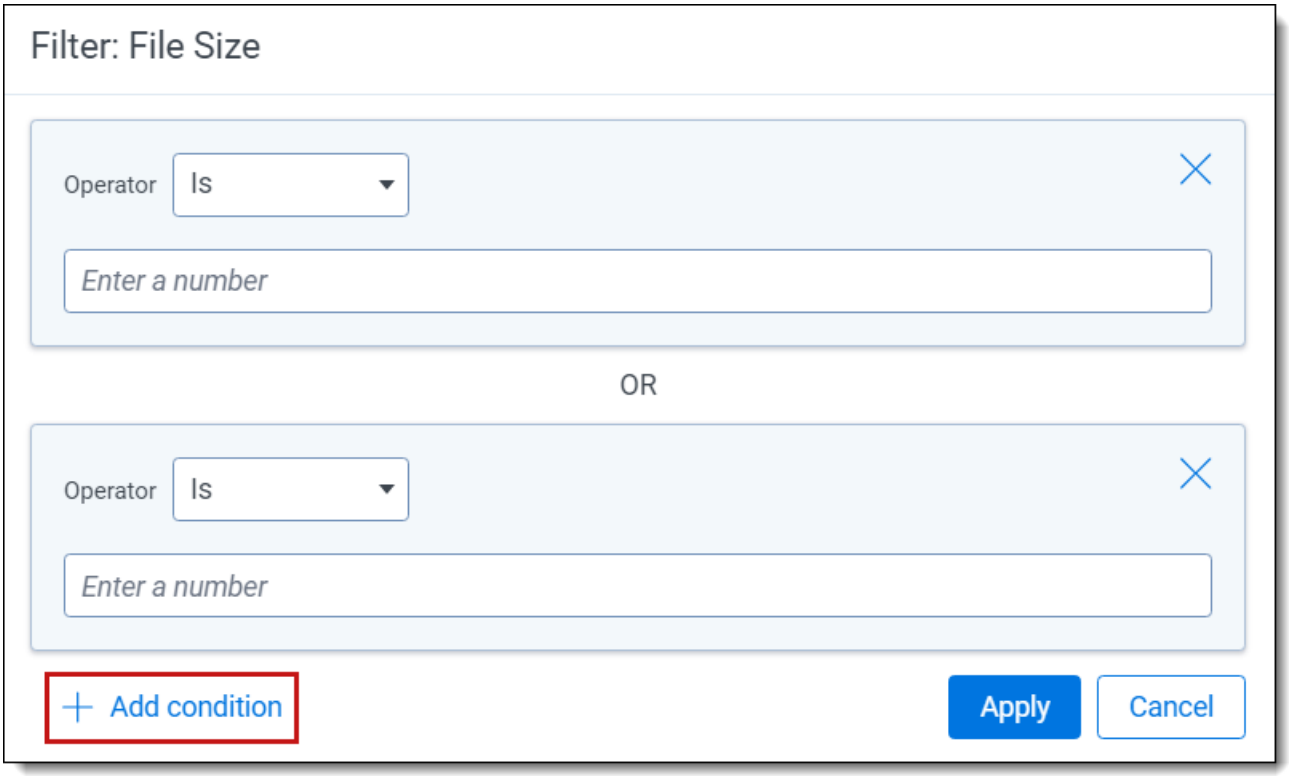
Enter a numerical value in the filter text box. After you enter the value in the text box, press **Enter** to apply the filter. For example, you might search for documents having a file size greater than 500000 bytes.



When you click inside a filter text box, the **Advanced** link appears. Clicking this link opens the advanced filters screen for the filter type.



Here, you can adjust the operator and add conditions to further define the filter. Click **Apply** to set the conditions.

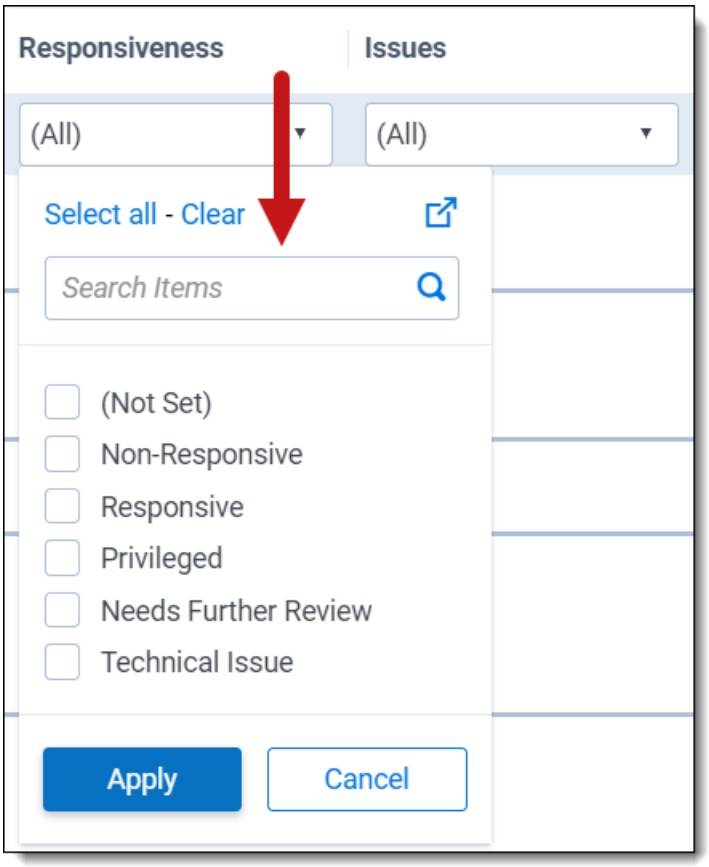


2.2.3 Using List filters

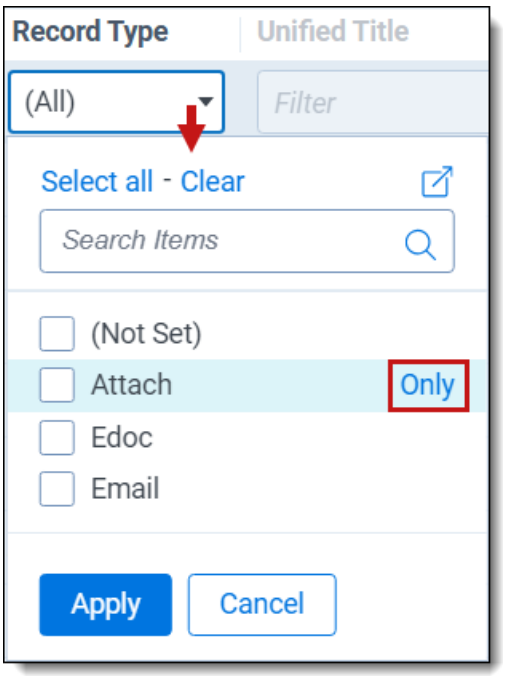
The List filter is available for the following field types:

- Single Choice
- Single Object
- User
- Fixed Length Text

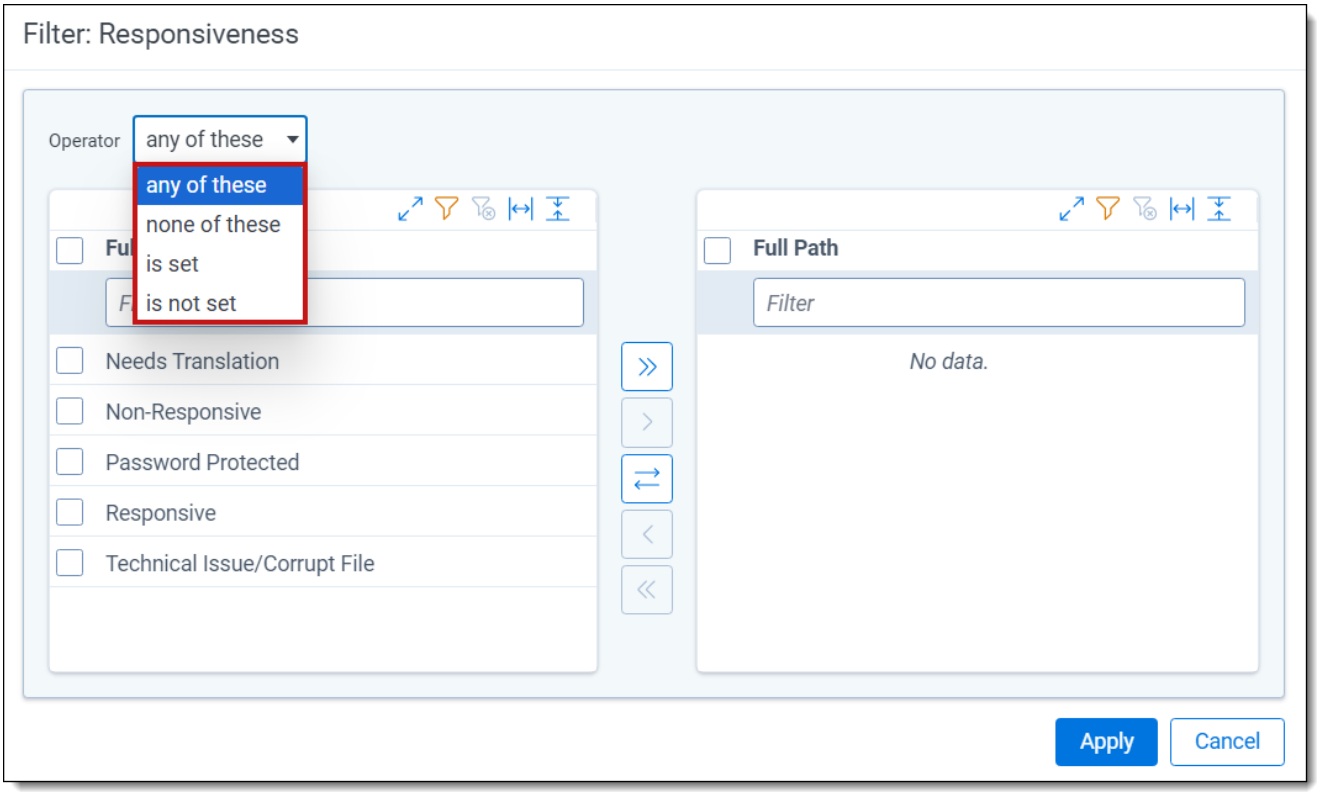
List filters are often associated with fields used for coding documents. The options displayed in the drop-down menu vary by the type and purpose of the associated field. For example, a field called Responsiveness might have the filter conditions of Responsive, Not Responsive, or Needs Further Review. Select the options that you want to filter for, and click **Apply**. Alternatively, you can click **Select all** to select all filters in the list. Click **Clear** to remove all selections. Click **(Not Set)** to show items where the field is empty (null).



If there is a single filter choice you want to apply immediately, hover over the item's row and click **Only** when it appears on the right side.



Click the **Advanced filters** ( ) icon to the right of the **Select all - Clear** options to launch the advanced filters dialog. This dialog has more operators and you can add or remove list items to the field's drop-down menu. Click **Apply** to set the conditions.



2.2.4 Using date filters

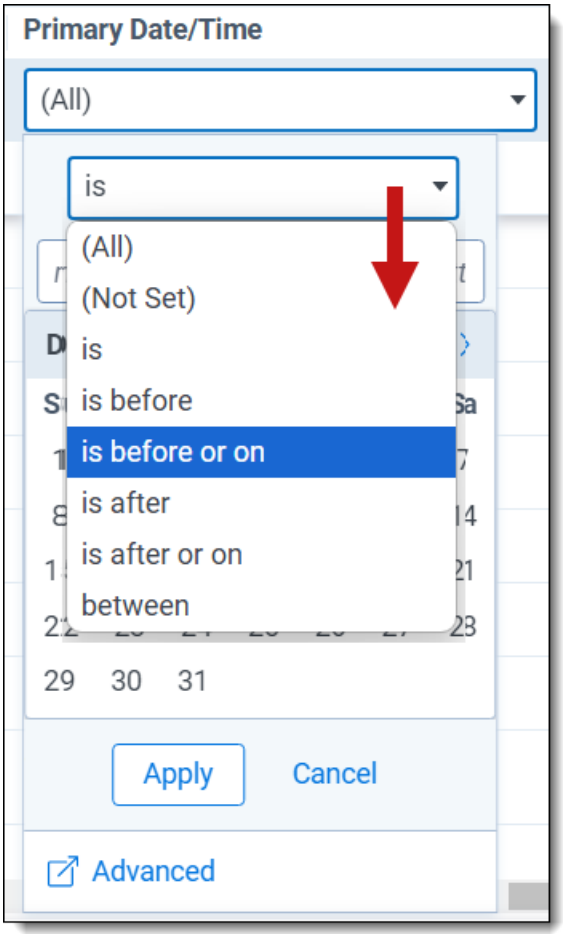
The date filter is available for Date field types to filter on dates and date ranges.

The following operators are available:

- (All)
- (Not Set)
- Is
- Is before
- Is before or on
- Is after
- Is after or on
- Between

For example, if you only want to view items sent before or on January 21, 2024 7 AM, do the following:

1. Select the **is before or on** operator.

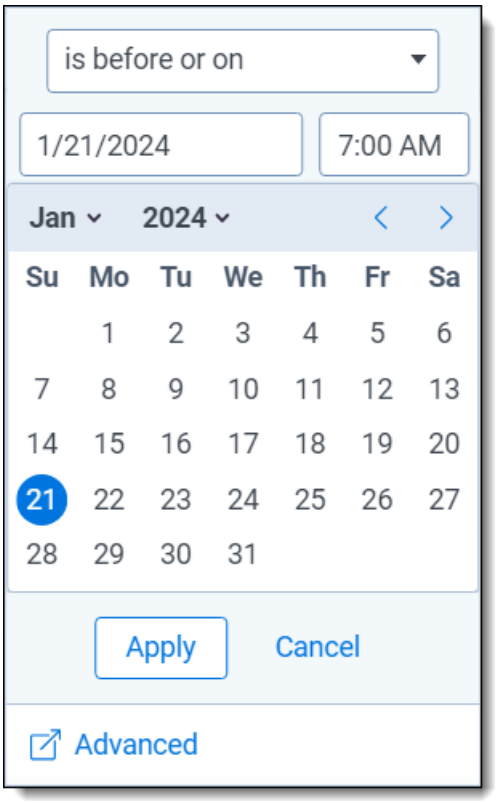


2. Use the calendar interface to select the date, *January 21, 2024*. You can enter the date directly into the text boxes, or use the forward and back arrows to scroll through the calendar months.

   Note: When you select the Between operator, two calendars display in the drop-down date filter, allowing you to pick the starting and ending dates and times.

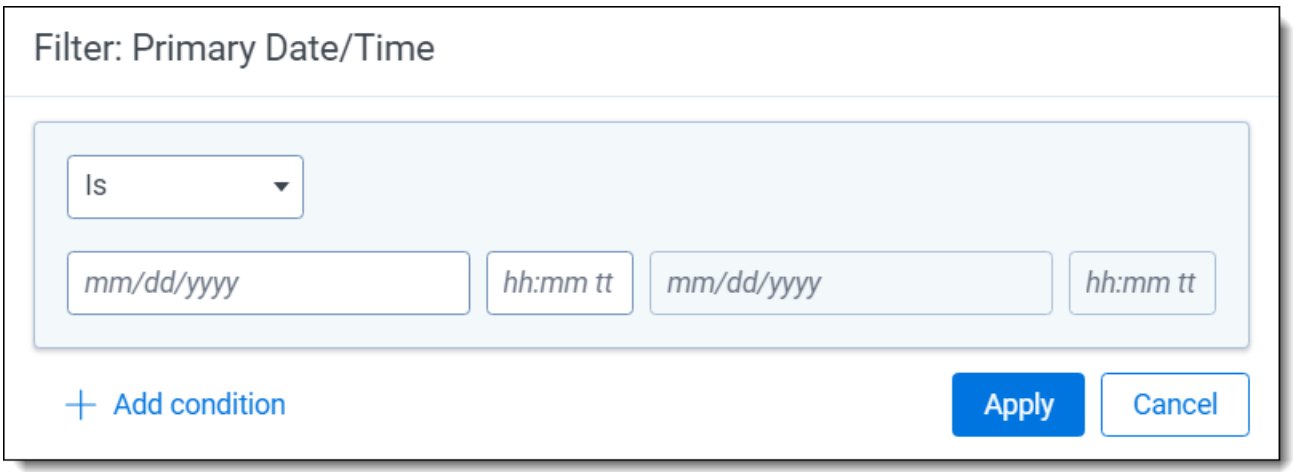
3. Enter the time of *7:00 AM*.

   Note: Filtering on fields using the date and time format does not support using @Today. If you do not enter a specific time, Relativity enters the default time of 12:00 AM.



4. Click **Apply** to set the conditions. Only items sent on or before 7 AM on January 21, 2024 appear in your document list.

Click the **Advanced** ( ) link at the bottom of the calendar interface to launch the advanced filters screen. This screen has more operators where you can add additional date and time conditions. Click **Apply** to set the conditions.



2.2.5 Using multi-list filters

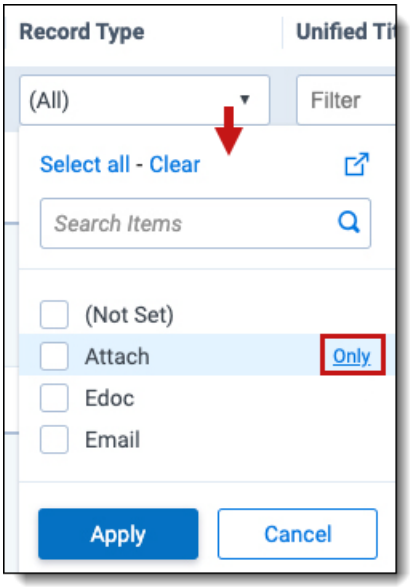
The multi-list filter is available for the following field types:

- Multiple Choice
- Multiple Object
- Single Choice

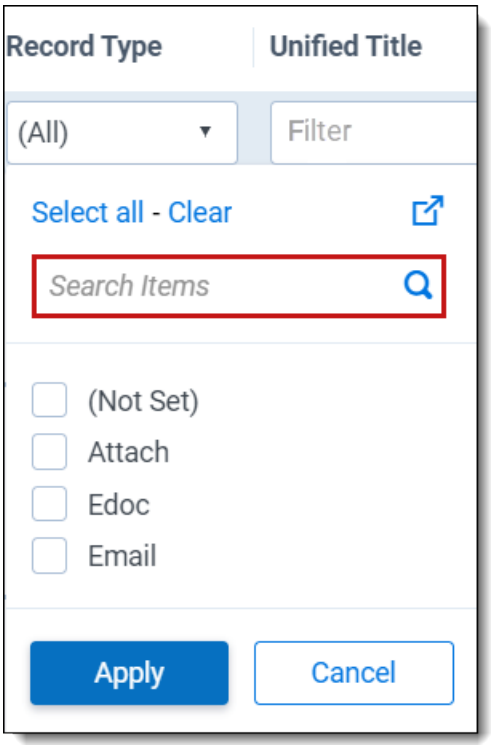
Using multi-list filters, you can select multiple conditions from a drop-down menu. These filters are often associated with fields used for coding documents.

To apply a multi-list filter, click the drop-down menu to display the conditions list. Select the conditions that you want to filter on. Click **Select all** to select all filters in the list. Click **Clear** to remove all selections. Select **(Not Set)** to show items where the field is empty (null). Click **Apply** to set the conditions.

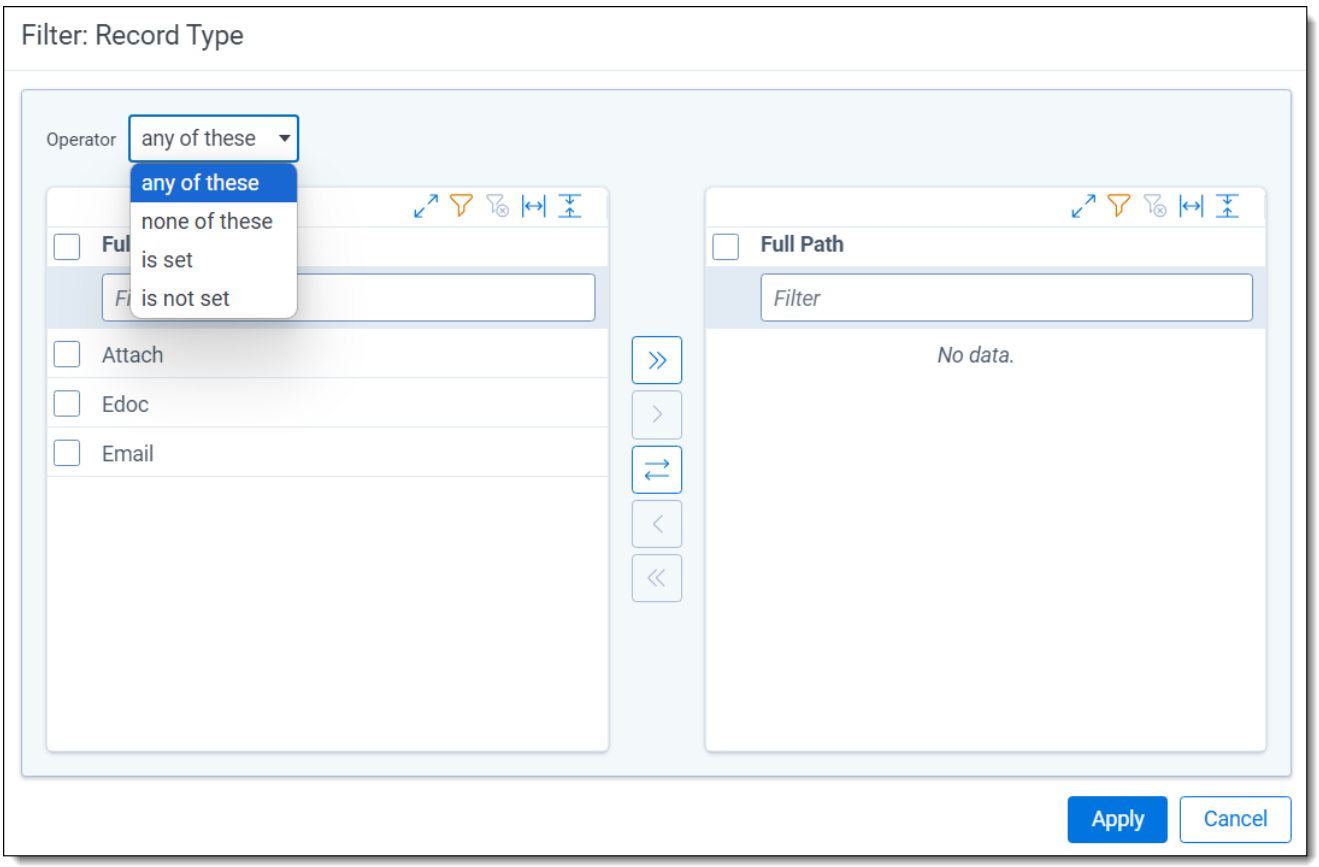
If there is a single filter choice you want to apply immediately, hover over the item's row and click **Only** when it appears on the right side.



To find a specific list item in a large list, use the search box to enter a term. The list filters automatically as you type.



Click the **Advanced filters** ( ) icon to the right of the **Select all - Clear** options to launch the advanced filters screen. This screen has more operators where you can add or remove list items to the field's drop-down menu. Click **Apply** to set the conditions.



2.2.6 Using text box filters

The text box filter is available for the following field types:

- Fixed-length Text
- Long Text
- Date
- Whole Number
- Decimal
- Currency
- Object

You can use text box filters to search on specific terms, numbers, and dates. Enter one or more terms in the filter text box. Connect multiple terms using the following operators:

- AND
- OR
- IS SET
- IS NOT SET
- BETWEEN

- = (equal)
- >= (greater than or equal to)
- <= (less than or equal to)

When entering terms and operators directly into a text box filter, you must use the proper syntax. See Text box filter search examples for more information.

You can also use the advanced text box filter feature to build more advanced filter queries on the selected text field. See Using advanced text box filtering.

2.2.7 Text box filter search examples

Using operators, you can perform text searches by entering search strings directly into the filter text box. Additionally, you can use the advanced filtering feature to build more detailed queries. See Using advanced text box filtering for more information.

2.2.7.1 Search operators

The following table lists examples of valid search strings using search operators.

Valid search strings	Description of search results
cubs OR sox	Matches either *cubs* or *sox* or both.
cubs AND sox	Matches both *cubs* and *sox*. Both terms must appear for a successful match.
cubs OR sox AND kcura	Matches either *cubs* or *sox* or both, and *kcura*.
percent sign (%)	Acts similar to a wildcard, or the *is like* operator in a query. *%chard* matches *Richard*, *Pritchard*.
underscore (_)	Acts as a wildcard for a missing character. Do not use the underscore to check a field's value. It is slower and more resource-intensive than using the percent sign (%).
= with term	Matches an exact phrase.
cubs sox	Matches an exact phrase, *cubs*(space)*sox*.
IS SET	Returns only items where the field has a value.
IS NOT SET	Returns only items where the field does not have a value (null).

The following table shows examples of invalid search strings.

Invalid search strings	Description of search results
cubs AND	The AND operator requires a right search term.
cubs OR	The OR operator requires a right search term.
AND cubs	The AND operator requires a left search term.
OR cubs	The OR operator requires a left search term.

2.2.7.2 Alphabetical filtering

The following table lists examples of valid search strings you can use to filter text alphabetically.

Alphabetical filtering	Description of search results
>= c	Matches any term or phrase where the first letter is *c* or later in the alphabet.
<= c	Matches any term or phrase where the first letter is *c* or earlier in the alphabet.
= cubs sox	Matches the exact phrase *cubs*(space)*sox*.
cubs BETWEEN sox	Matches terms or phrases where the first letter of the phrase falls between *c* and *s* in the alphabet.

2.2.7.3 Dates and numbers

The following table lists examples of valid date and number searches, and the expected result set. When entering dates, do not place a zero (0) in front of single-digit values. For example, use *7/21/2024* and not *07/21/2024*.

Valid search strings	Description of search results
>= 7/24/ 2024	Matches *7/24/ 2024* and later dates.
<= 7/24/ 2024	Matches *7/24/ 2024* and earlier dates.
= 7/24/ 2024	Matches the exact date of *7/24/2024*.
>= 7/27/ 2024 1:23 PM	Matches *7/27/ 2024 1:23 PM* and later dates and times.
<= 7/27/ 2024 1:23 PM	Matches *7/27/ 2024 1:23 PM* and earlier dates and times.
= 7/27/ 2024 1:23 PM	Matches the exact date and time of *7/27/ 2024 1:23 PM*.
7/24/ 2024 BETWEEN 8/24/ 2024	Matches dates that include and fall between *7/24/2024* and *8/24/2024*.
7/24/ 2024 1:23 PM BETWEEN 8/24/ 2024 3:45 PM	Matches dates and times that include and fall between *7/24/ 2024 1:23 PM* and *8/24/ 2024 3:45 PM*.
7/27/ 2024	Matches the exact date of *7/27/ 2024*.
>= 100	Matches numbers that are greater than or equal to *100*.
<= 100	Matches numbers that are less than or equal to *100*.
= 100	Matches *100* exactly.

The following table includes examples of invalid data and number search strings.

Invalid search strings	Description of search results
> 7/24/ 2024	You must use the equal sign with the greater than operator (>=).
< 7/24/ 2024	You must use the equal sign with the less than operator (<=).
>= 0/24/ 2024	The search string starts with 0 for the month. Instead of *01/01/2024*, use *1/1/2024*.
= 0/24/ 2024	The search string starts with 0 for the month. Instead of *01/01/2024*, use *1/1/2024*.
07/24/ 2024 BETWEEN 8/24/ 2024	The search string starts with 0 for the month in the starting date. Instead of *01/01/2024*, use *1/1/2024*.
7/24/ 2024 BETWEEN 08/24/ 2024	The search string starts with 0 for the month in the ending date. Instead of *01/01/2024*, use *1/1/2024*.

2.2.8 Using advanced text box filtering

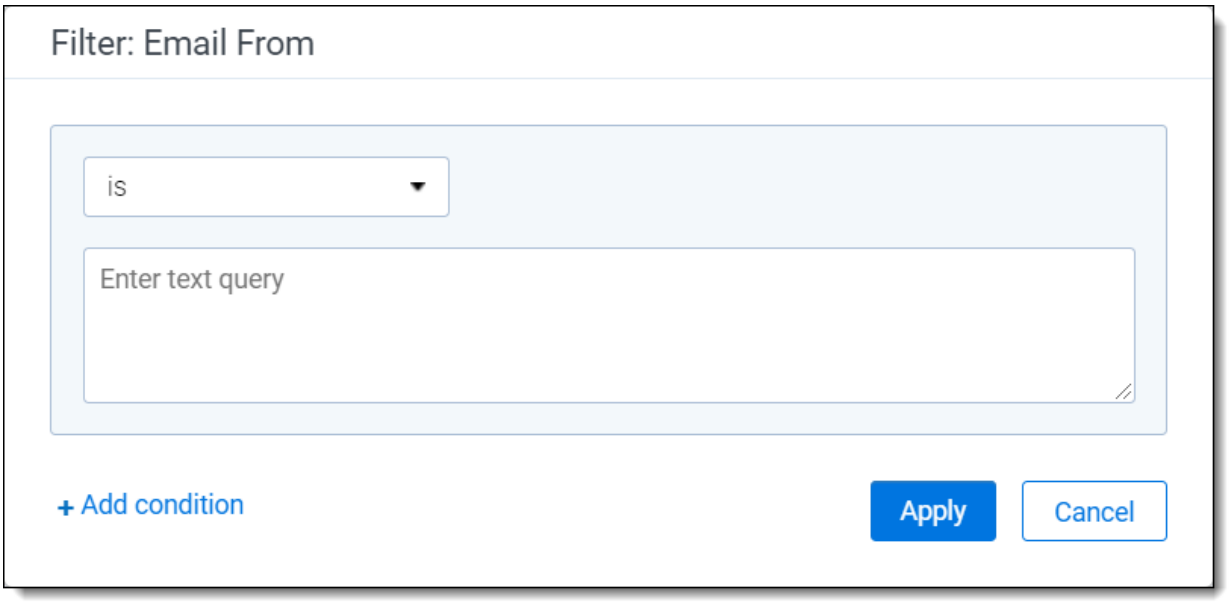
You can use the following operators with advanced filtering:

- Is
- Is not
- Is set
- Is not set
- Is less than
- Is greater than
- Is like
- Is not like
- Contains
- Does not contain

To use advanced text box filtering:

1. Click inside the filter text box for a column. The **Advanced** link appears.
2. Click the **Advanced** link.

3. Choose an operator (such as is greater than.) See Fixed-length, long, or extracted text operators in the Searching guide for a list of definitions of the available operators.



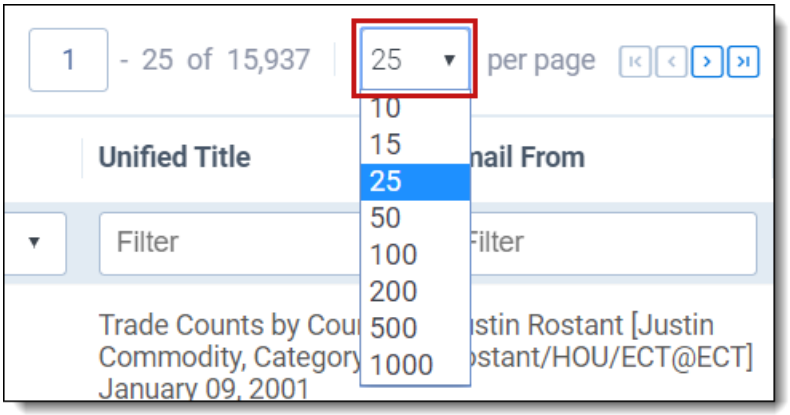
4. Enter a value into the query text box(such as 100.) The filter returns items where the value of the field is greater than 100.
5. (Optional) Click **Add condition** to add a new filter condition. For example, you may want to also return items where the text field contains the word privilege.

   Note: Multiple conditions are automatically connected with an OR operator.

6. Click **Apply** to set the conditions.

2.3 Changing item sets per page

You can use the set selector menu to change the number of items that appear per page. The set selector menu is at the top of the document list. The option you select remains the default setting during your session until you select another option.



2.4 Saving filters as a search

To save your filtered item set as a saved search:

1. Click the **Save Search** button located at the bottom of the screen.
2. Select or enter the following required information:
   - **Name**—enter a title for the search. The title appears in the saved searches browser.
   - **Owner**—select **Public** to make the search available to all users or choose a specific user from the list. Click **Me** to select your name from the list, making the search private. (You must have the appropriate privileges to view searches.) See Controlling the visibility of saved searches in the Searching guide.
   - **Search Folder**—click the **Select** button to launch a pop-up window where you can save the new search to a specific folder on the saved searches browser. Highlight the folder where you want to save the search, and click **OK** to select it.
3. Add to or change the search criteria as needed. See Create and edit a saved search.
4. Click **Save**.

3 Keyword search

You can use a keyword search to query a full text index. The long text and fixed-length text fields included in this index vary by workspace.

Note: New workspaces created in RelativityOne have extracted text automatically stored in Data Grid. Workspaces restored into RelativityOne using the ARM application will automatically have the extracted text migrated to Data Grid. In order to search extracted text in workspaces, you must use dtSearch or Analytics searching; you cannot use keyword search.

You can use the AND, OR, NOT Boolean operators in keyword searches, as well as quotation marks for exact matches, asterisks (*) for wildcards, and other features. However, if you perform a keyword search with multiple terms, documents where those terms exist in separate fields won't return.

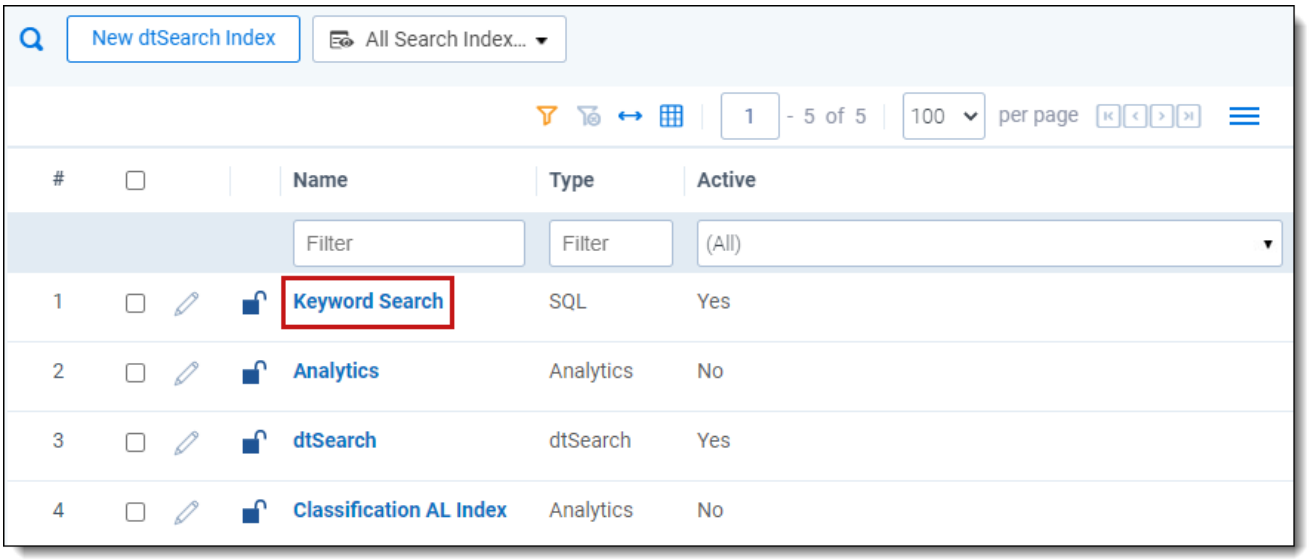
Note: If you want to draft queries outside of Relativity, use a plain text editor such as Microsoft Notepad to prevent adding characters or formatting that might return unexpected search results.

While the keyword search offers fewer options than other Relativity searches, it uses an index that's automatically populated, reducing maintenance and ensuring all required document fields are indexed.

Note: For information on configuring and managing word breakers, see Microsoft's documentation.

3.1 Fields

A keyword search index is available in the Search Indexes tab by default. Click the **Keyword Search** link.



The keyword search index details page contains the following fields:

- **Name**—the name of the keyword search index. The name is the display name for the index.
- **Order**—a number that represents the position of the index in the list. The lowest-numbered index will be at the top. The highest-numbered index is at the bottom. Items that share the same value are sor-

ted in alphanumeric order. Index order can be any integer, positive or negative. No decimals are allowed.

- **Active**—determines whether the index should be activated or deactivated. **Yes** means that the index will be activated; **No** means that the index will be deactivated.

Note: If you apply item-level security to a search index, users cannot run any public saved searches built on that index and will get an error. We recommend leaving the index unsecured and instead applying security to the Search indexes tab or to individual saved searches.

3.2 Example keyword search strings

The following table lists search string examples with their expected results.

Search string	Returns documents with...
wired	the word wired
wired magazine	the words wired and magazine
wired AND magazine	the words wired and magazine
wired OR magazine	the word wired or the word magazine
wired, magazine	the word wired or the word magazine
"wired magazine"	the exact phrase wired magazine
wired NOT magazine	the word wired and not the word magazine **Note:** Do not start key word searches with the NOT operator, or use it with the OR operator. For example, these searches are invalid: ■ not wired ■ wired or not magazine See NOT Operator Evaluation in Keyword searches.
wire*	any words beginning with wire, such as wired, wires, wireless **Note:** Key word searches do not support the use of wildcards at the beginning of a word. Keyword searches are SQL index searches run on the Microsoft SQL Server, which does not support leading wildcards in full text searches.
computer AND (wired OR magazine)	the word computer and the word wired OR the word computer and the word magazine

Search string	Returns documents with...
	Note: When a search string does not include parentheses, the order of precedence for a keyword search evaluates AND then OR expressions. For example, the search string A AND B OR C is evaluated as (A AND B) OR C.

Note: Search terms with accented letters are recognized and return keyword search results.

3.3 Using the NOT operator in keyword searches

When running a keyword search that is an SQL full text search, carefully format queries that use the NOT operator. For example, you may want to query for email messages that have Ryan as the author, but do not have Will as the recipient. The fields in the following record are included in the index used to demonstrate how this query is run:

Document	OCR	Recipient	Author
AS00001	From: Ryan To: Will	Will	Ryan

A keyword search using the string Ryan NOT Will returns the document AS00001 even though you would not expect it in the result set. The following table illustrates the SQL logic used to evaluate the query Ryan NOT Will.

SQL queries this field...	Returns these results...
OCR Field	Finds both Ryan and Will, so no document is returned.
Recipient Field	Does not find Ryan, so no document is returned.
Author Field	Finds Ryan but not Will, so the document AS00001 is returned.

When these fields are searched using the SQL logic, the Author field matches the query Ryan NOT Will, and unexpectedly returns the document.

Note: You can use the AND NOT operator in a dtSearch as an alternative approach to this type of keyword search.

3.4 Understanding noise words

Noise words in a keyword search include punctuation marks, single letters, single digits, and words such as "at", "a", "on" and "the".

3.4.1 Keyword search noise words - without double quotes

Noise words used in keyword searches are ignored if the search string is **not surrounded by double quotes**. In a search for the phrase *sun on my head*, both *on* and *my* are ignored. The result is that the words sun AND head are queried without respect to proximity. Thus, any documents that contain both the words *sun* and *head* will be returned.

The following table illustrates how keyword search queries for phrases that contain noise words that are not surrounded by double quotes.

Searching string without quotes	Queries for this string
sun on my head	sun AND head
sun on head	sun AND head

3.4.2 Keyword search noise words - with double quotes

If a keyword search string containing noise words **is surrounded by double quotes**, then the noise words' positions in the string are taken into account when the query is executed. However, only the *positions* of any *intervening* noise words are taken into account, not the noise words themselves. Noise words at the beginning or tail end of a keyword search string are ignored.

For example, the search strings "*sun on my head*" and "*sun my on head*" (where *on* and *my* are switched) return the same records. This is because keyword search evaluates both search strings as a query for the phrase **sun ABC XYZ head**, where ABC and XYZ represent **any two words**, not just noise words. Similarly, a query for the search string "*sun on head*" returns documents that contain the phrase **sun ABC head**, where ABC represents any word.

The following table illustrates how keyword search queries for phrases that contain noise words, and that are surrounded by double quotes.

Searching string (with quotes)	Queries for this string
"sun on my head"	sun [AnyWord] [AnyWord] head
"sun on head"	sun [AnyWord] head
"sun on my head and"	sun [AnyWord] [AnyWord] head
"and sun on head"	sun [AnyWord] head

3.4.3 Single digits as noise words

Single digits 0-9 are default noise words, so you cannot query on them with a keyword search. Relativity does not return the expected results if you attempt to query on a single digit. Use the dtSearch feature to query on a specific number or letter.

However, you can use a keyword search to query on whole numbers greater than 9. You can search on more than one digit, such as 09. While these digits may be used to represent a specific numeric value, such as 9, they are not considered single digits, and can be used in a keyword search.

3.4.4 Punctuation as noise words

Certain punctuation marks are treated as noise words by default, so you cannot query on them with a keyword search. They include:

- Period (.)
- Colon (:)
- Semicolon (;)
- Slash (\,/)

3.4.5 At sign (@) and dashes

The at sign (@) and dashes (-) are ignored from being indexed in a keyword search, when either is used at the beginning of a query. For example, if you search a domain name, the same number of documents return whether you include or exclude @.

3.4.6 Hyphens and dashes

When a search phrase includes a hyphen or dash, the query returns results that include terms containing other punctuation marks. For example, the following results return for a search on the term Pop-up:

- Pop.up
- Pop--up

3.4.7 Default noise word list

Relativity comes with the following default noise words:

Begins with...	Noise words
A	about, after, all, also, another, any, are, as, at
B	be, because, been, before, being, between, but, both, by
C	came, can, come, could
D	did, do, does
E	each, else
F	for, from
G	get, got
H	has, had, he, have, her, here, him, himself, his, how
I	if, in, into, is, it, its
J	just
L	like
M	make, many, me, might, more, most, much, must, my
N	never, no, now
O	of, on, only, other, our, out
S	said, same, see, should, since, so, some, still, such
T	take, than, that, the, their, them, then, there, these, they, this, those, through, to, too
U	under, up, use
V	very
W	want, was, way, we, well, were, what, when, where, which, while, who, will, with, would
Y	you, your

3.5 Running a keyword search

3.5.1 Running a keyword search in the search panel

Use the following steps to run a keyword search in the search panel.

1. Navigate to the Search panel in the Documents Tab.
2. Click **Add Condition**.
3. Select **(Index Search)** in the Add Condition drop-down menu. The (Index Search) window opens.
4. Select **Keyword Search** from the drop-down Index.
5. Enter terms for the search in the **Search Terms** box.
6. Optionally, select the **Sort By Rank**option to return results in order by relevance. The most relevant documents are listed at the top of the result set.
7. Click **Apply**.
8. (Optional) Add any additional conditions through the Add Condition drop-down menu.
9. Click **Run Search**. To stop a long running search, click **Cancel**.

3.5.2 Running a keyword search in the Search browser

Use the following steps to run a keyword search in the Search browser.

1. Click  to access the search browser from the document list.
2. Click **New Search**.
3. Set required fields.
4. Click **Add Condition**.
5. Select **(Index Search)** in the Add Condition drop-down menu. The (Index Search) window opens.
6. Select **Keyword Search** from the Index drop-down menu.
7. Enter terms for the search in the **Search Terms** box.
8. Optionally, select the **Sort By Rank**option to return results in order by relevance. The most relevant documents are listed at the top of the result set.
9. Click **Apply**.
10. (Optional) Add any additional conditions through the Add Condition drop-down menu.
11. Click **Save** or **Save As**.
12. Click the name of the keyword search in the search browser.
13. Click **Run Search**. To stop a long running search, click **Cancel**.

4 Search panel

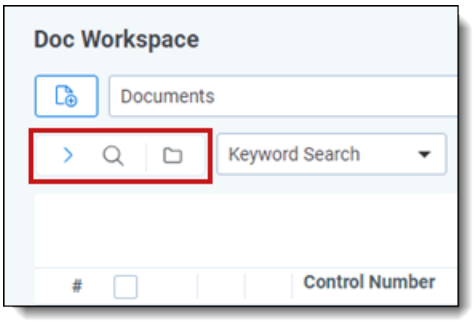
The search panel is available for the Document list and for many other tabs in Relativity.

Using the search panel, you can build complex searches using drag-and-drop to rearrange and visualize nested conditions. You can easily set conditions and drag and drop them into logic groups. The logic display at the top of the panel updates automatically to reflect your drag-and-drop changes. You can access your dtSearch and keyword search indexes and fields in the workspace when creating your search.

Search panel functionality is controlled by security permissions. To access search indexes (Keyword search, dtSearch, Analytics), from the Add Conditions drop-down menu, you must have View Search Index permissions. To view and select fields from the Add Conditions drop-down menu, you must have Edit Search permissions. If neither permission is present, the search panel buttons will not appear. See Workspace security for more information on setting security permissions.

4.1 Showing, hiding, and moving the search panel

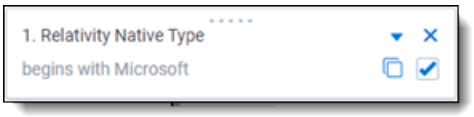
You can show and hide the search panel from the item list by clicking the Search icon (magnifying glass) above the browser panel.



To move the search panel to either side of the document list, click and drag on the top of the panel.

4.2 Condition card icons

The condition card features the following icons and menu options:



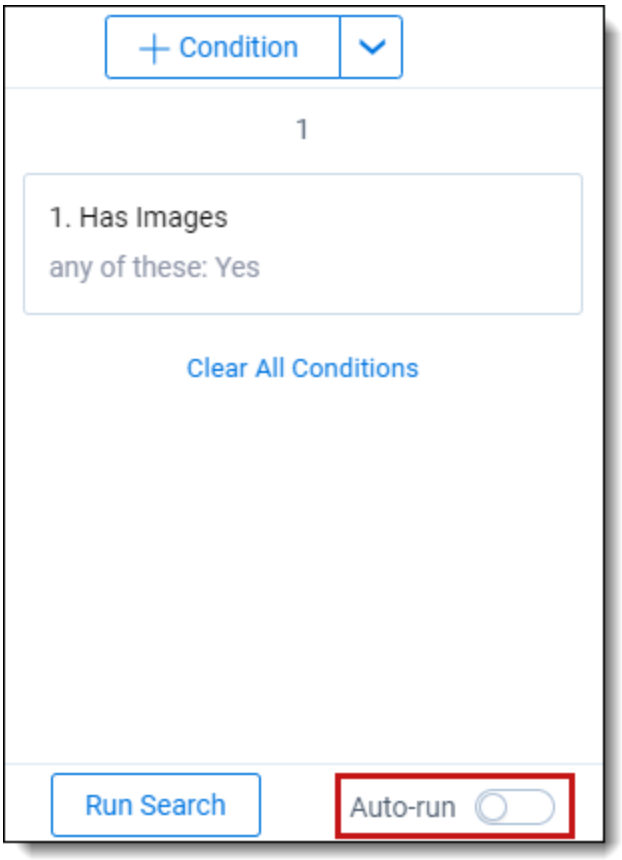
Name	Icon	Description
Grabber	⋯	Click this icon to drag the condition card to a new location.
Expand/Collapse	▾	Click this icon to expose all of the filters and conditions for the card. Collapse the card to return to the summary display.

Name	Icon	Description
Clear	×	Click this icon to clear all of the card's filters and conditions.
Copy		Click this icon to copy the card's filters and conditions. You can paste the card within the pane, then make your adjustments.
Enable/Disable		Click this box to enable the card's filters and conditions. Uncheck this box to disable the card's filters and conditions without actually deleting the card itself.

4.3 Using the auto-run search setting

Enable the auto-run setting at the bottom of the searching panel to automatically update your data when you select new conditions.

With Auto-run search set to **On**, each condition that you select from the searching panel will cause the page to auto-refresh and display updated data based on the new condition. You can leave Auto-run Search set to **Off** if you prefer to manually apply any new conditions as you add them to your search.



4.4 Creating a search in the search panel

To create a search using the search panel:

1. Expand the search panel from the item list by clicking the  icon in the upper left corner of your screen.
2. Click **Add Condition** in the search panel.

   Note: If a related items condition has been set for the saved search, the related items condition also applies to any conditions that are added to the saved search via the search panel.

3. Do one of the following:
   - Enter or select the field to which you want to apply the condition from the drop-down menu.
   - If you have previously linked fields to a field category, you can alternatively select the desired field category from the drop-down menu and then enter or select the field to which you want to apply the condition from the list. To learn more, visit Field Categories.
4. Depending on the field, you will be prompted to specify the conditions to add.

   Note: For single object and multiple object fields, the name of the objects acts as hyperlinks in the filter condition card. You can quickly navigate to the named object instance by clicking on it. For example, if you have a search condition that names the "First pass review" batch set, you can navigate directly to that batch set. from the filter condition card.

5. (Optional) Add additional conditions.
6. (Optional) Apply logic groups to your conditions. See Applying logic groups.
7. Click **Run Search** if auto-run search is toggled off). To cancel a long running search, click **Cancel**.

The search will be automatically saved and you can reference it later as a saved search.

Note: To remove all conditions from the search panel click **Clear All Conditions**.

If you want to edit a condition, click on the search card.

Note: When you search on a user-created date field using a relative date, Last 7 Days for example, you may see different results between a saved search and a search from the search panel if you are not in the same timezone as your Relativity instance.

4.5 Applying logic groups to search conditions

Logic groups act as visual parentheses for your search query. The criteria within logic groups are evaluated first before evaluating against other search conditions or logic groups. When creating logic groups, the logic display at the top of the search panel updates automatically to reflect your drag-and-drop changes.

To apply logic groups to search conditions:

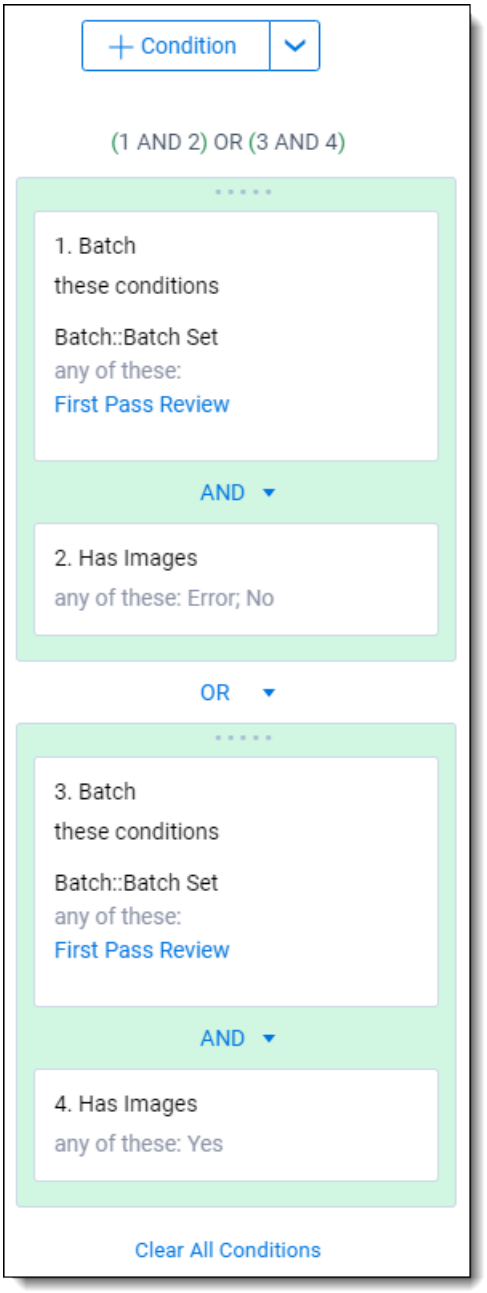
1. Click **Add Logic Group**.
   A green frame appears.

2. Click the handle on the top of the filter condition card you want to add to a logic group.

3. Drag the condition into the logic group frame.
4. Add other conditions to the logic group as needed.

Note: You can also create a logic group automatically by dragging one condition onto another.

5. Click the **AND** or **OR** drop-down menus to set your operators inside your logic group.
6. (Optional) Add additional logic groups and repeat steps 3-5 for the logic groups you add.
7. Click **Run Search** if auto-run search is toggled off. To cancel a long running search, click **Cancel**.



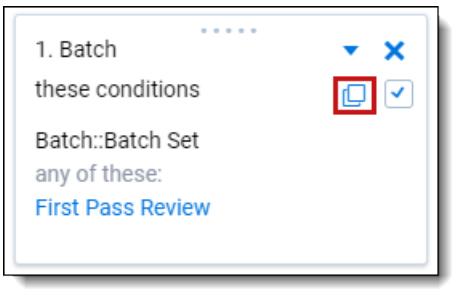
Note: To remove all conditions from the search panel, click **Clear All Conditions**.

4.6 Navigating the search panel

Within the search panel you can expand and collapse your search conditions, in addition to toggling the conditions on and off. By using these options you can better visualize data and make quick changes.

4.6.0.1 Copying conditions

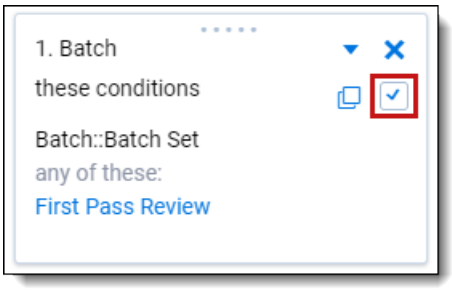
To copy a condition, click the Copy icon in the search panel card.



A pop-up modal opens. In the modal, click **Apply** to copy the same search condition. Edit the operator and the search before clicking Apply for a variation of the original search card. Click **Add Condition** to add another condition to your new search card.

4.6.0.2 Toggling conditions on and off

You can toggle conditions within the search panel to change the documents the search returns. To toggle conditions on and off click the checkbox in the lower-right corner of the condition box. If the box is checked the condition is on; if the box is unchecked the condition is off.

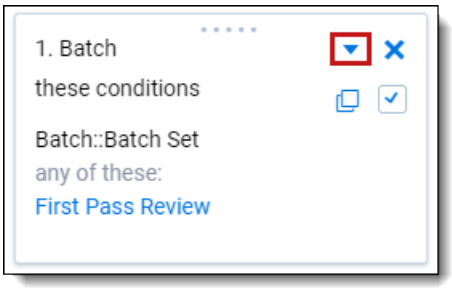


Click **Run Search** to update the toggled conditions (if auto-run search is toggled off).

Note: To collapse and expand filter condition cards in the panel click the arrow next to the name of the field applied in the condition.

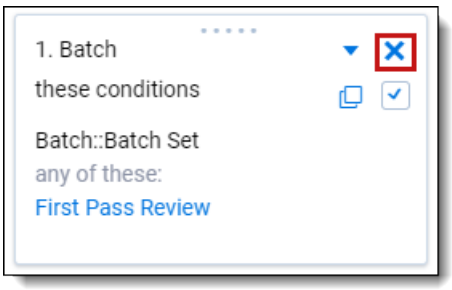
4.6.0.3 Expanding/collapsing cards

If you have a very long search panel card, you can collapse the card. To collapse a card, click ▾ in the top right corner of the search panel card.



4.6.0.4 Removing conditions

To remove a condition, click **X** in the upper right corner of the condition box.



Click **Run Search** to update the toggled conditions (if auto-run search is toggled off).

5 Searching workflows

Relativity provides flexibility to help you identify documents through searches so that you can ready them for further review and analysis.

This topic highlights setting up multiple search indexes, applying various search techniques, and using filters properly when executing searches.

Note: For details on searching for dates within Relativity using a filter, a saved search, or a dtSearch, see the Searching for dates in Relativity knowledge base article on the Relativity Community.

5.1 Workflow details

Relativity offers both Basic Keyword Search and Specialized dtSearch.

The Basic Keyword Search Index populates automatically, is available out of the box, and supports basic Boolean operations. These operations include AND, OR, NOT, and the wildcard (*) operator.

The Specialized dtSearch Index is custom built and must be set up with an index to query against. In addition to basic Boolean operations, it also supports the following functionality:

- Wildcard operator for a single digit (=)
- Stemming operations (~)
- Fuzzy search operation (%)
- Customize data set to be indexed via custom saved search
- Proximity Searching
- Customized Noise Word List
- Auto Recognition of email addresses, credit card numbers, and dates.

5.2 Best practices for advanced operators

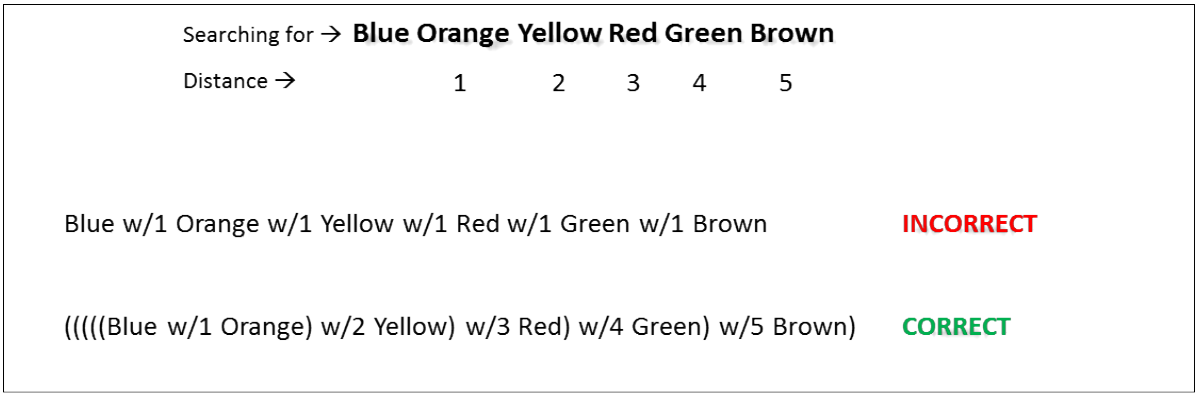
The following includes best practices for the use of advanced operators and workflow options:

5.2.1 Proximity search

Proximity search uses operators to search certain terms in proximity to other terms in a document. Use the following recommendations when employing proximity searching:

- To use directional proximity searching use "pre /x " operators. To use non-directional proximity searching use "w /x" operators.
- To determine the beginning and end of a document, use reserved word with either ("xfirstword") or ("xlastword"). Use these operators to search for metadata like email addresses or footers within a document.
- To determine proximity. The distance between terms is important so you know whether you receive

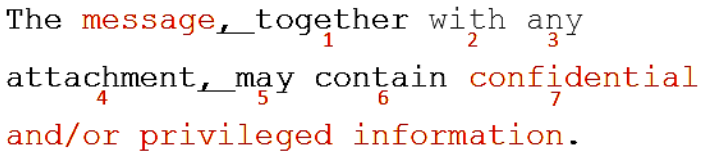
true hits or false positives. The following image illustrates the proper syntax for proximity searches:



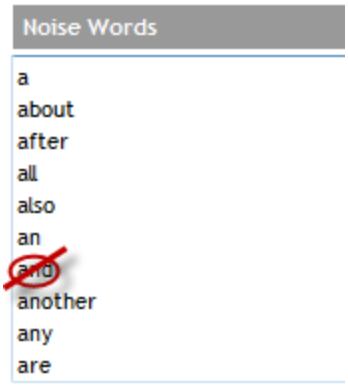
The following image shows all correct and incorrect combinations of proximity searches that result in successful hits when using proximity operators:

Sometimes additional factors affect the distance between terms. The following image demonstrates a search for a string of words in proximity to another word. The search in the following image takes the following into account:

- Noise words count as words when calculating proximity.
- Punctuation counts as whitespace when using default settings.
- Relativity treats line breaks and consecutive space characters as single spaces.
- dtSearch default noise words and connector words like AND, OR, BETWEEN, and NOT count as words when calculating proximity.



In this case, we continue to calculate the distance of the string ("confidential and/or privileged information:) from the word ("message") as shown above. However, when using connector words, system admins should create an index that removes noise words from the noise word list.



Relativity reserves the following noise words and characters, which continue to behave as operators, as well as being noise words: and, or, not, to, contains, xfirstword, xlastword, ", ( ), *, ?, %, @, ~, #, &, :, =.

Once that index is available for query you can either place the search string in quotes or apply stemming to the connector words to override their function as a connector.

(i) message pre/7 "confidential and/or privileged information"

OR

(ii) message pre/7 confidential and~/or~ privileged information

5.2.2 Auto-Recognition

Auto-Recognition identifies email addresses, dates, and credit card numbers in the data set you want to index. You can turn this feature on and off when you build your index. The search returns the results regardless of the data format. Auto-Recognition adds some time to your index build, but, depending on your case, the benefits can be significant.

Type	Syntax	Results	Benefits
Email	mail(*doe@kcura.com)	jdoe@kcura.com john.doe@kcura.com	Treats email addresses as a single term regardless of alphabet settings for "@" and "." characters. Can be used with wildcards.
Credit Card Numbers	Creditcard(1234678 13246578)	1234-5678-1234-5678 1234 5678 1234 5678 1234567812345678	Returns sets of numbers that satisfy the criteria for valid credit card numbers. Can be used with wildcards.
Date	date(1/15/2006)	January 15, 2006; 15 Jan 06; 2006/01/15; 1/15/06; 1-15-06; The fifteenth of January, two thousand six	Returns date regardless of format. Dates mentioned in body of documents and not in metadata.

5.2.3 Searching for times

If you want to search for times in the body of documents, perform a full-text search with your dtSearch index for a specific time. Keep in mind that some characters cause a word break, such as the colon and period. Searching for 12:15 p.m. results in searching for four words: 12, 15, p, and m.

5.2.4 Filters

In addition to the Search Indexes, you can also use filters to search on metadata fields and narrow down the review set of documents.

The following list includes metadata fields, their corresponding field types, and the filter type available in Relativity:

- **File Type** - Single-Choice, List Filter
- **Custodian** - Single-Choice, Pop-Up Filter
- **Date Sent** - Date, Textbox Filter
- **Email To** - Long Text, Textbox Filter
- **Email Subject** - Fixed Length Text, Custom Filter
- **Designation** - Single Choice, Multi-Choice List

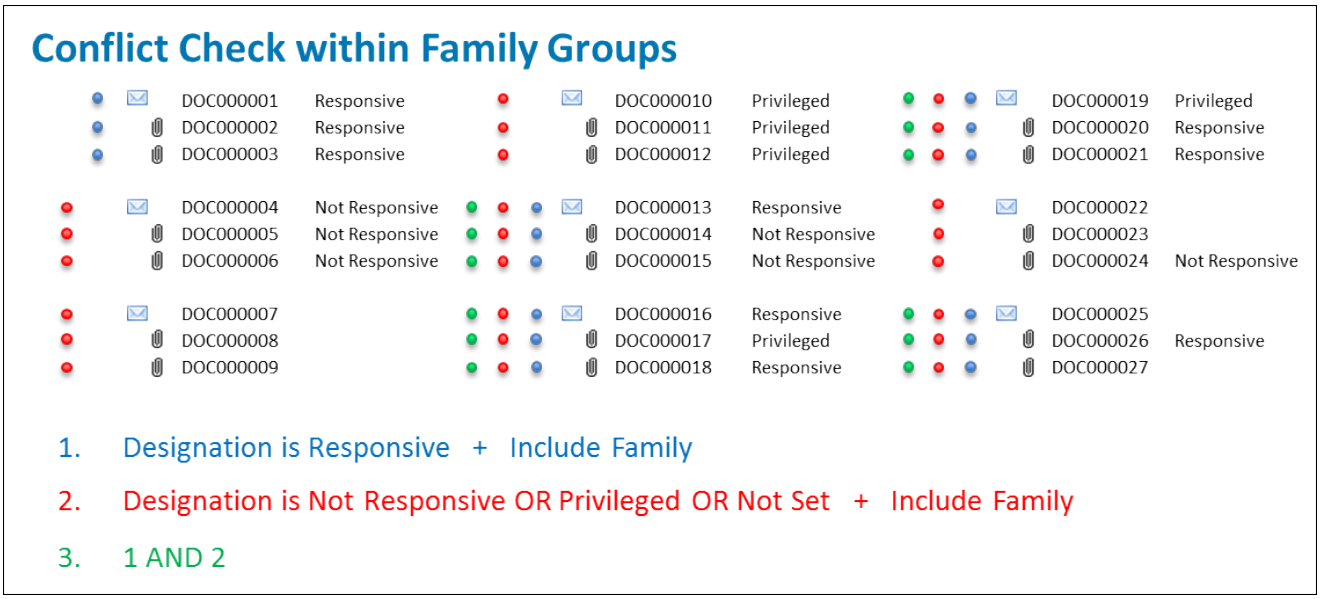
The following table shows different types of filters you can set up with available fields in Relativity.

Type	Text Box	Single Choice List	Multi-Choice List	Pop-Up	Custom
Fixed Length Text	✓	✓			✓
Long Text	✓				
Date	✓				✓
Number (Whole, Decimal, Currency)	✓	✓			✓
Yes/No		✓			
Choice (Single, Multiple)		✓	✓	✓	
Object (Single, Multiple)	✓			✓	

5.2.5 Troubleshooting workflow

To troubleshoot and test searches, use a white board approach to map out searches before you run them. As part of the process, try to take into account all possible variations, so you can see which documents Relativity returns and to gain a better understanding of the search. For instance, if you want to find email family groups with inconsistent coding, numerous possibilities for searches exist. The following illustration shows a mapping of nine email family groups, each with an email and two attachments.

Construct searches (1 and 2) and mark the corresponding documents, and their family members, with hits for each of the searches. At this point, when you look at the board, you can see that the four email family groups have one thing in common. The documents are responsive to both searches. So, to close it out, construct a third search that pulls back documents common to both searches.



6 Search conditions

You can use the search conditions option to build complex queries by selecting fields, operators, and values. While this feature has the same functionality as the search condition section of the saved search form, it's conveniently available from the Documents tab and Relativity Dynamic Object tabs. This option displays up to five rows, with each row representing a separate criterion. Depending on the type of field you select, different operators appear. You can use this option alone or in conjunction with keyword searches, dtSearches, Analytics, or Cluster visualization. When you use search options in conjunction with another search feature, documents must both meet the search criteria and also the conditions specified.

Note: To use the search conditions option, you must have add or edit permissions for **Search** and access to the **Saved Searches Browser** assigned to you through the Security page. See Workspace security in the Admin Guide.

6.1 Setting up search conditions

6.1.1 Setting up search conditions in the Search panel

To set up search conditions in the Search panel follow these steps:

1. Navigate to the Search Builder.
2. Click **Add Condition** and select the fields to which you want to apply conditions.
   A pop-up window opens for each condition field you select.
3. Set the required conditions in the relevant field pop-up window by selecting the desired field or by choosing a field category and then selecting the desired field.
4. Click **Apply**.
5. (Optional) Click **Add Logic Group** to add a logic group. Logic groups are evaluated first, and then connected to other filter conditions or logic groups using AND / OR operators.
6. (Optional) Drag and drop conditions together to create logic groups.
7. (Optional) Add the AND or OR operators to connect the criterion.
8. Click **Apply**.

If you need to edit the condition, click on the condition card. The pop-up reopens so you can make changes.

6.1.2 Setting up search conditions in the Search browser

To set up search conditions in the Search browser, follow these steps:

1. Click the **Saved Search** icon to navigate to the Search Browser.
   
2. Click **New Search**.
3. Click **Add Condition** and select the fields to which you want to apply conditions.
   A pop-up window opens for each condition field you select.

4. Set the required conditions in the relevant field pop-up window.
5. Click **Apply**.
6. (Optional) Click **Add Logic Group** to add a logic group and drag and drop your conditions into the frames. Logic groups are evaluated first and then connected to other filter conditions or logic groups using AND / OR operators.
7. (Optional) Add the **AND** or **OR** operators to connect the criterion.
8. Enter all required fields.
9. Click **Save** or **Save As**.

If you need to edit the condition, click on the condition card. The pop-up reopens so you can make changes.

6.1.3 Using the multiple object condition builder

You can set conditions for **multiple object fields** from a single pop-up window. The following example uses Batch as a multiple object field condition.

To use the multi-object condition builder, follow these steps:

1. Click **Add Condition** from the Search browser or Search panel.
2. Enter or select **Batch**.
   The Condition: Batch window opens.
3. Select the desired operator from the **Operator** drop-down list. For example, **these conditions**.
4. Click **Add Condition**.
5. Select the condition from the **Add Condition** drop-down list. For example, **Batch:: Batch Set**.
6. Click the available fields from the **Available** column and move them to the **Selected** column as desired.
7. Click **Apply**.
8. (Optional) Click **Add Logic Group** to add a logic group. Logic groups are evaluated first and then connected to other filter conditions or logic groups using AND / OR operators.
9. (Optional) Drag and drop conditions into logic groups as desired.
10. Click **Apply** on the Condition: Batch window.
    Relativity applies your search conditions.

For more information about multiple object searching logic, see Multiple object searching.

6.2 Canceling queries

You can cancel a long-running search or view by clicking the **Cancel** button. This link appears when you perform a keyword search, dtSearch, Analytics search, or use Pivot. It also appears when you filter or sort a document or Dynamic Object list. It also appears when you perform other actions on item lists containing documents or Dynamic Objects that initiate a query in the background.

When you click **Cancel Request**, Relativity stops the background query used to populate documents in an item list. If you edit a search and click this link, your changes save, but the item list doesn't load. For

example, your changes save when you perform a mass edit on a list of documents in a search and then click **Cancel Request** when the query is running to redisplay the updated list.

Note: Relativity creates an audit record in the History tab for canceled queries. The query description displays the running time of the query and indicates that it was canceled. You must have the appropriate permissions to view this tab.

The following table explains different scenarios in which you might cancel a running query and whether the query actually cancels.

Scenario	Result
You start a query and click **Cancel Request** or **Cancel**.	The query is canceled.
You start a query and close the browser.	The query is canceled.
You start a query and an system admin resets the IIS on the server.	The query is not canceled.
You start a query and leave your browser idle for longer than the session timeout specified in Relativity web.config, regardless of whether you clicked **OK** or **Cancel** on the message from the webpage pop-up.	The query is not canceled.
You start a query and click **Cancel** on the message from the webpage pop-up within the session timeout specified in Relativity web.config.	The query is canceled.
You start a query and click **OK** on the message from webpage pop-up within the session timeout specified in Relativity web.config.	The query continues to run. Relativity returns you back to the waiting screen (see the first row of this table).
You start a query and paste a different URL into your browser, or you refresh the page.	The query is canceled.

6.3 Frequently asked searching questions

This section includes frequently asked questions from Relativity users.

6.3.1 Multiple terms in dtSearch queries

Why would I receive an error message saying my query is too complex?
Relativity can't return precise results when a query includes search conditions that are too complex due to the use of multiple search terms. To avoid this error message, simplify your search criteria. For example, search for 10 instead of 50 terms in your query. You can save and tag your search results from each simpler query. With this approach you can search on the required terms, while providing better results.

6.3.2 Proximity searches in dtSearch queries

Why are terms in my proximity search highlighted even when they don't match my defined W/N criteria?
Relativity highlights terms that meet the requirements of your proximity search as well as the individual search terms. This behavior doesn't affect the results of your proximity search, which returns the appropriate documents. For example, the results of a proximity search for instances of law within three words of order (that is "law W/3 order") includes highlighted terms of "law" and "order" when they aren't

within three words of each other. To accommodate this behavior, focus only on the results that match the proximity search criteria, and disregard the other highlighted terms.

6.3.3 Using reserved characters in dtSearch queries

Can I use a reserved character such as ampersand (&) in my dtSearch queries?
The following characters have special meaning in dtSearch, and must be treated with care when they appear in your queries: ?, *, %, ~, #, =, :, &, (). Use the dictionary to explore syntax options if necessary.

If you want to make any of these characters searchable, you must add them to the alphabet file and, in some cases, use Regular Expressions in your search. For more information, see the Searching Guide.

6.3.4 Multiple conditions

Why do my searches run slowly when I use multiple conditions?
When you add multiple search conditions to a query, Relativity searches on these conditions relative to each other, which slows down the return of your results. For example, you experience slow performance when running a query on all email messages received "after June 1" and "before June 30" of the same year. You can improve performance by using as few conditions as possible, such as excluding the condition "before June 30". Run the query with only the condition "after June 1", and then sort or filter your results to display messages received between the desired dates.

6.3.5 Nesting searches

Can I nest multiple searches in a saved search?
For performance reasons, we don't recommend nesting multiple searches in a saved search. You can select a search as a condition, but using multiple searches as conditions slows down the return of your results. See the Searching guide for more information.

7 Multiple object searching

This topic describes the logic behind multiple object searching.

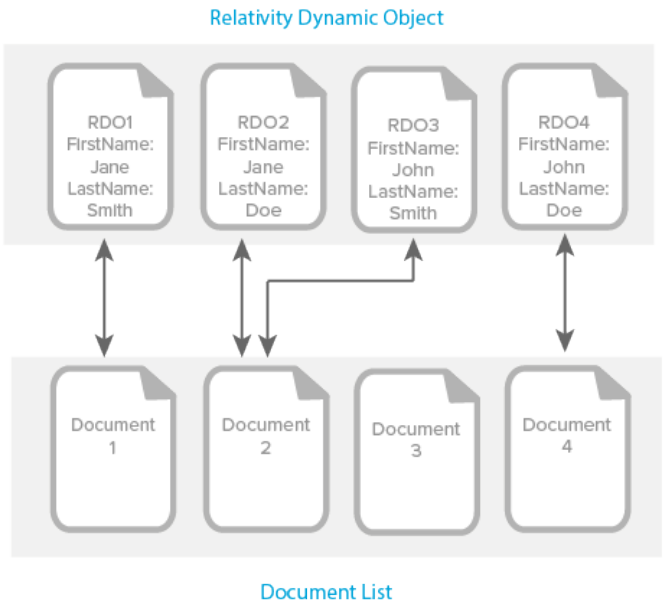
When searching using *These Conditions* or *NOT These Conditions*, keep in mind the following:

- **These Conditions**—returns a document if any of the Relativity Dynamic Objects (RDO) that document is associated with matches the search criteria.
- **NOT These Conditions**—returns all documents that are not associated with at least one RDO that meets the criteria.

If a document is not associated with the object you're searching, it will not be returned in a search for *These Conditions*. For example, Document 3 below will never be returned in a search for *These Conditions* because it is not associated with any objects.

The image below shows documents associated with RDOs.

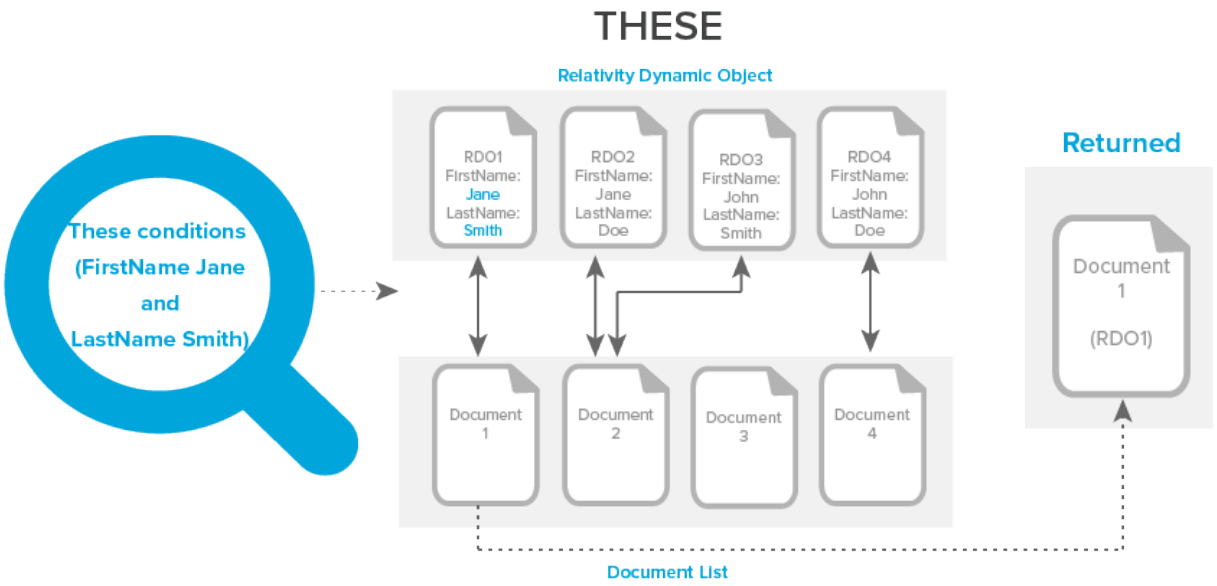
- Document 1 is associated with RDO1.
- Document 2 is associated with RDO2 and RDO3.
- Document 3 is not associated with any RDOs.
- Document 4 is associated with RDO4.



7.1 These Conditions

The following example returns Document 1 because:

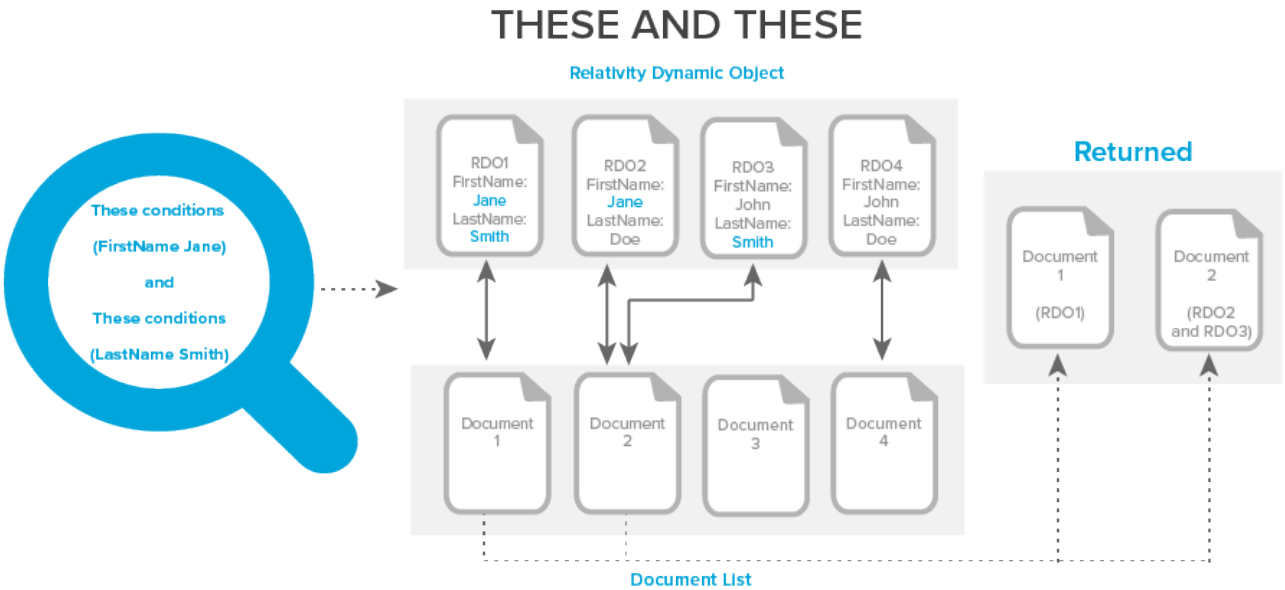
- Document 1 is associated with RDO1.
- RDO1 matches the search criteria (FirstName Jane, LastName Smith).



7.2 These Conditions and These Conditions

The following example returns Document 1 and Document 2 because:

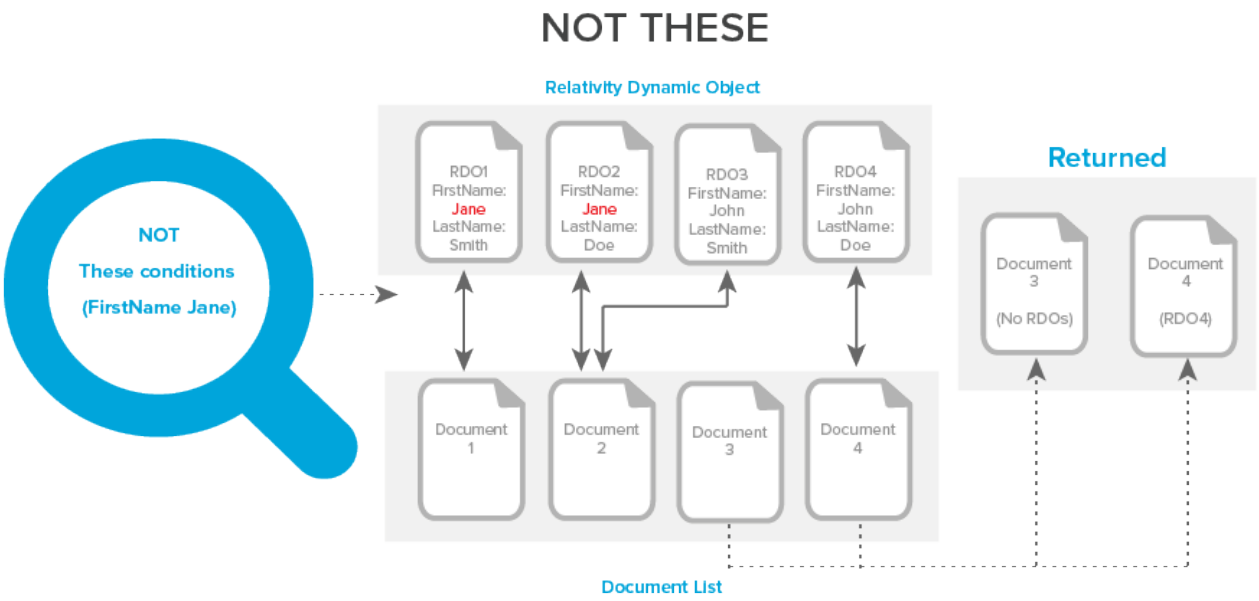
- Document 1 is associated with RDO1.
- RDO1 matches the search criteria (FirstName Jane) and (LastName Smith).
- Document 2 is associated with RDO2 and RDO3.
- RDO2 matches the search criteria (FirstName Jane).
- RDO3 matches the search criteria (LastName Smith).



7.3 NOT These Conditions

The following example returns Document 3 and Document 4 because:

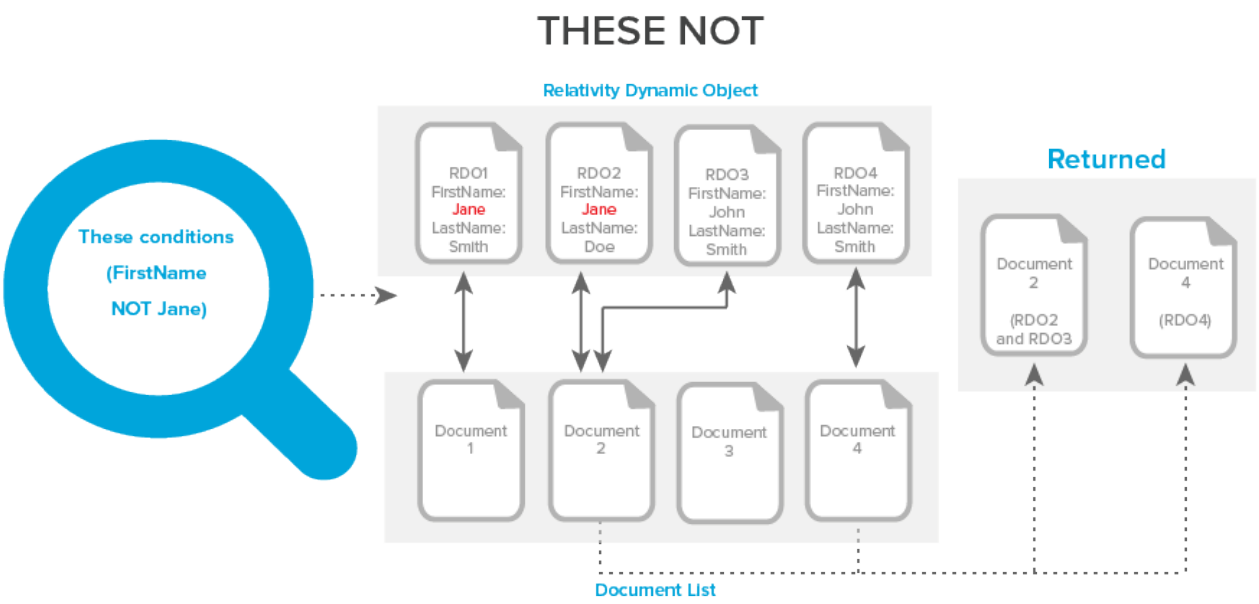
- Document 4 is associated with RDO4. RDO4 doesn't match the search criteria.
- Document 3 is not associated with any RDOs. Therefore, it does not match the search criteria.



7.4 These NOT

The following example returns Document 2 and Document 4 because:

- Document 2 is associated with RDO2 and RDO3.
- Although RDO2 contains (FirstName Jane), RDO3 does not (FirstName John). Remember, if one RDO does not meet the criteria, the document is returned.
- Document 3 is not returned because it isn't associated with any RDOs. Remember, you must associate a document with an object in order for it to return in a *These Conditions* search.



7.5 None of these and Not all of these operators

The difference between *None of these* and *Not all of these* is subtle, but useful:

- **None of these**—will check the field and see if any of the choices on it match any of the conditions. If there are any choices checked on the field and one of them matches one of the conditions, the document will be rejected and not pulled by this search.
- **Not all of these**—will check the field and see if the choices on it match all the conditions. If yes, the document will be rejected. If only some of the choices match the conditions, the document will be pulled by this search.

Comparison of operators table

		Document 1 Coded Choice 1	Document 2 Coded Choice 1 and Choice 2	Document 3 No coding	Document 4 Coded Choice 2
Any of these	**Choice 1**	√	√		
	Choice 2		√		√
	Choice 1 and 2	√	√		√
None of these	**Choice 1**			√	√
	Choice 2	√		√	
	Choice 1 and 2			√	

		Document 1 Coded Choice 1	Document 2 Coded Choice 1 and Choice 2	Document 3 No coding	Document 4 Coded Choice 2
All of these	Choice 1	√	√		
	Choice 2		√		√
	Choice 1 and 2		√		
Not all of these	Choice 1			√	√
	Choice 2	√		√	
	Choice 1 and 2	√		√	√
	Is set	√	√		√
		√	√		√
		√	√		√
	Is not set			√	
				√	
				√	

8 Searching with the Entity object and name normalization

This topic describes the types of searches you can conduct using the Entity object and Name Normalization results.

8.1 Considerations

Note the following special considerations:

- The quality of your searches is affected by the quality of your name normalization results. Please use the Name Normalization Quick Reference Guide to verify your Name Normalization results.
- You can only create the following searches after running the name normalization operation.

8.2 Emails within a specific organization

To find emails between individuals within a specific organization, use the **Alias From** and **Alias Recipient** fields along with the associated **Alias From::Domain** and **Alias Recipient::Domain** fields. You must conduct this search with a double negative in order to find documents that only include your selected organization.

- You can use variations of this search to identify specific cross organization communications. You can also use variations of this search to identify communications with outside counsel if you know the specific domain of outside counsel.
- There are scenarios where an alias doesn't include a domain (ex. Proper names). In these scenarios, the following search will not include documents where those aliases are communication. Reach out to Relativity Support for alternative workflows to circumvent this issue.

Create a search with the following conditions:

Note: Connect the search conditions as follows using Boolean operators: **1 AND 2 AND 3**

Condition 1

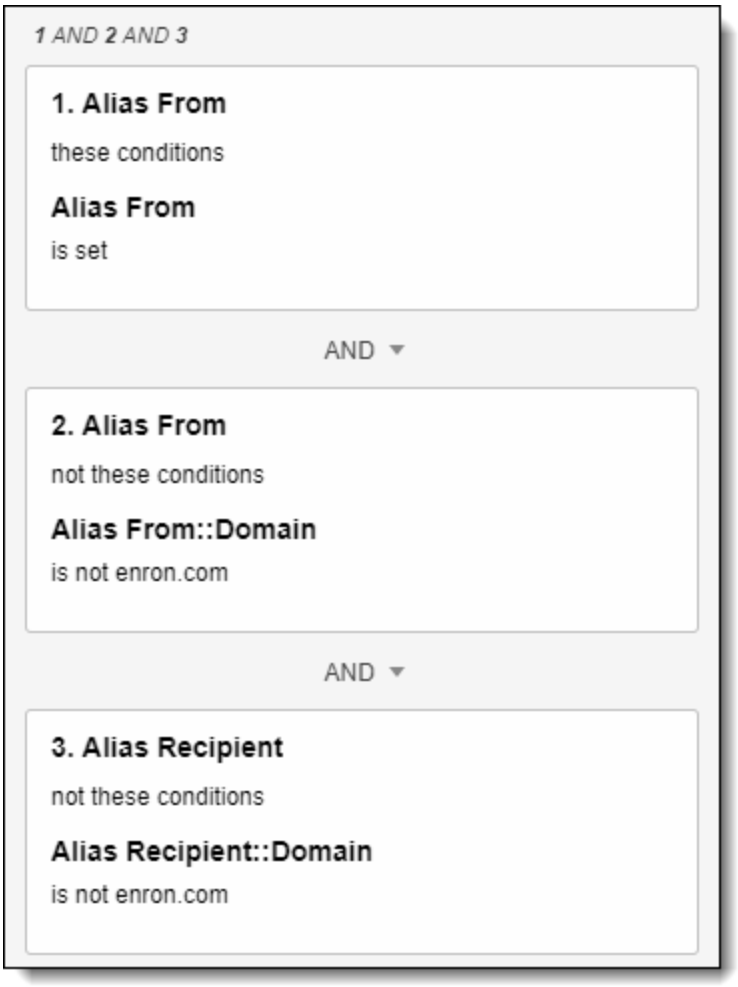
- **Field:** Alias From
- **Operator:** is set

Condition 2

- **Field:** Alias From
- **Operator:**not these conditions
  - **Field:** Alias From::Domain
  - **Operator:** is not
  - **Text:** [Domain 1]

Condition 3

- **Field:** Alias Recipient
- **Operator:**not these conditions
  - **Field:** Alias Recipient::Domain
  - **Operator:** is not
  - **Text:** [Domain 1]



Breaking it down:

- **Alias From::Domain==not this domain** means someone without this domain is the sender
- **Not these conditions [LINE ABOVE]** means no domain other than this domain is the sender

8.3 Communications between two specific individuals and no one else

To find emails between two individuals and no one else, use the **Entity From** and **Entity Recipient** fields. You must conduct this search with a double negative in order to find documents where only your selected entities appear.

- You can use variations of this search to identify communications where a specific entity is the only recipient, but the senders vary.
- You can also use variations of this search to exclude CC or BCC values.
- You can use the Entity Participant field to ensure no one else existed on the email thread.

Create a search with the following conditions:

Note: Connect the search conditions as follows using Boolean operators and Logic Groups: **1 AND ((2 AND 3) OR (4 AND 5))**

Condition 1

- **Field:** Entity From
- **Operator:** is set

Condition 2

- **Field:** Entity From
- **Operator:**not these conditions
  - **Field:** Entity From
  - **Operator:** none of these
  - **Text:** [Entity A]

Note: This is a double-negative condition that will **exclude** everyone but Entity A. In other words, this condition will only allow emails **sent by Entity A**. When conditions 2 and 3 are combined, we have a holistic search condition for emails sent by Entity A and received by Entity B.

Condition 3

- **Field:** Entity Recipient
- **Operator:**not these conditions
  - **Field:** Entity Recipient
  - **Operator:** none of these
  - **Text:** [Entity B]

Note: This is a double-negative condition that will **exclude** everyone but Entity B. In other words, this condition will only allow emails **received by Entity B**. When conditions 2 and 3 are combined, we have a holistic search condition for emails sent by Entity A and received by Entity B.

Condition 4

- **Field:** Entity From
- **Operator:**not these conditions
  - **Field:** Entity From
  - **Operator:** none of these

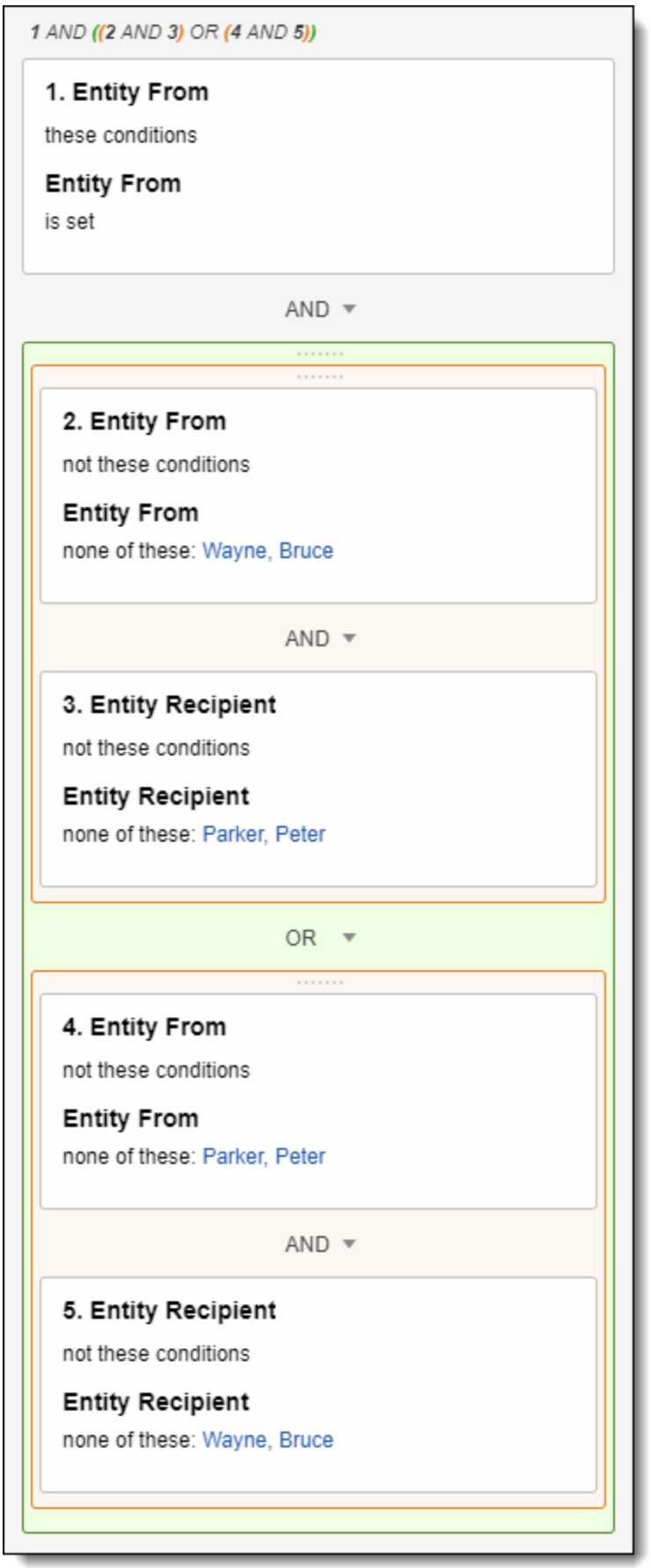
- **Text:** [Entity B]

Note: This is a double-negative condition that will **exclude** everyone but Entity B. In other words, this condition will only allow emails **sent by Entity B**. When conditions 4 and 5 are combined, we have a holistic search condition for emails sent by Entity B and received by Entity A.

Condition 5

- **Field:** Entity Recipient
- **Operator:**not these conditions
  - **Field:** Entity Recipient
  - **Operator:** none of these
  - **Text:** [Entity A]

Note: This is a double-negative condition that will **exclude** everyone but Entity A. In other words, this condition will only allow emails **received by Entity A**. When conditions 4 and 5 are combined, we have a holistic search condition for emails sent by Entity B and received by Entity A.


1 AND ((2 AND 3) OR (4 AND 5))
1. Entity From
these conditions
Entity From
is set
AND
2. Entity From
not these conditions
Entity From
none of these: Wayne, Bruce
AND
3. Entity Recipient
not these conditions
Entity Recipient
none of these: Parker, Peter
OR
4. Entity From
not these conditions
Entity From
none of these: Parker, Peter
AND
5. Entity Recipient
not these conditions
Entity Recipient
none of these: Wayne, Bruce

Note: By combining the two logic groups above, we create a holistic set of search conditions that will return all emails **sent from entity A to entity B** as well as all emails **sent from entity B to entity A**.

Breaking it down:

- **Entity From==not this person** means someone other than this person is the sender
- **Not these conditions [LINE ABOVE]** means nobody other than this person is the sender

8.4 Communications between any two individuals and no one else

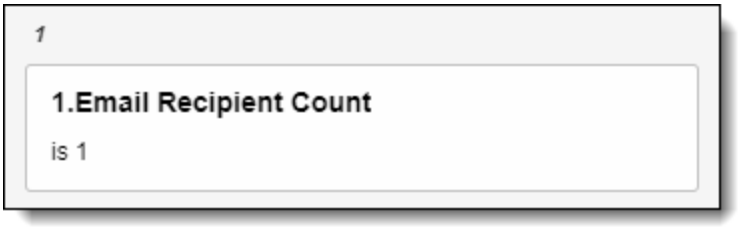
To find emails between any two individuals and no one else, use the **Email Recipient Count** field created by Relativity Processing or the **Delimiter Count by Saved Search** script available on the Relativity Community site to count the number of recipients for each document.

Create the following search:

Field: Email Recipient Count

Operator: is

- **Text:** 1



Because an email always has a single sender, this search focuses on finding emails that have just one recipient.

Note: You can also use this search can to filter out email blasts by looking for documents where **Email Recipient Count** is greater than 20.

8.5 Emails across entity metadata

You can use any entity metadata field for advanced searching on documents. As an example, to find emails sent from the Finance department to the Human Resource department, you can use the **Entity From::Department** and **Entity Recipient::Department** fields.

- You can use variations of this metadata search to identify conversations with attorneys, job title, between your Chicago and Hong Kong offices, location, or between males and females, gender, and more.
- You may need to edit the Entity field to set **Open to Associations** to **Yes** in order to search across it on the document object.

- Importing address book, Active Directory, or CRM information for each entity can give you more metadata to leverage when searching across documents.

Create a search with the following conditions:

Note: Connect the search conditions as follows using a Boolean operator: **1 AND 2**

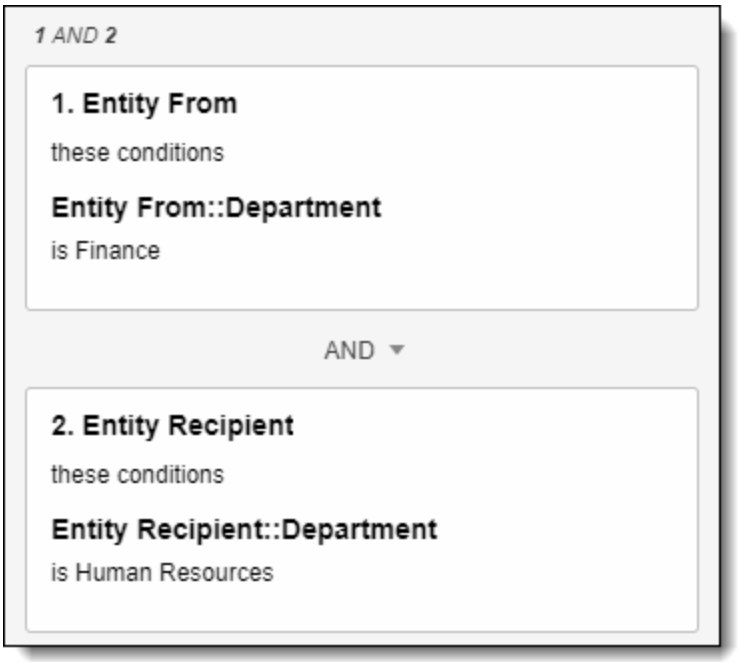
Condition 1

This search indicates that a specific entity value is the sender of the document.

- **Field:** Entity From
- **Operator:** these conditions
  - **Field:** Entity From::Department
  - **Operator:** is
  - **Text:** [Department 1]

Condition 2

- **Field:** Entity Recipient
- **Operator:** these conditions
  - **Field:** Entity Recipient::Department
  - **Operator:** is
  - **Text:** [Department 2]



8.6 Emails sent from two different internal domains

To find emails sent between two different internal domains, use the **Alias From** and **Alias Recipient** fields. Use the **Text** field to define each domain. The logic below pulls emails sent from Domain 1 to Domains 1 or 2 and emails sent from Domain 2 to Domains 1 or 2.

Logic Group 1

- **Condition 1**
  - **Field**: Alias From
  - **Operator**: these conditions
  - **Operator**: is
  - **Text**: [Domain 1]
- **Sub-logic Group 1B**
  - **Condition 2**
    - **Field**: Alias Recipient
    - **Operator**: not these conditions
    - **Field**: Alias From::Domain
    - **Operator**: is not
    - **Text**: [Domain 1], [Domain 2]
  - **Condition 3**
    - **Field**: Alias Recipient
    - **Operator**: these conditions
    - **Operator**: is set

Logic Group 2

- **Condition 4**
  - **Field**: Alias From
  - **Operator**: these conditions
  - **Operator**: is
  - **Text**: [Domain 2]
- **Sub-logic Group 2B**
  - **Condition 5**
    - **Field**: Alias Recipient
    - **Operator**: not these conditions
    - **Field**: Alias From::Domain

        - **Operator**: is not
        - **Text**: [Domain 1], [Domain 2]
    - **Condition 6**
        - **Field**: Alias Recipient
        - **Operator**: these conditions
        - **Operator**: is set

8.7 Emails someone sent to themselves

To find emails someone sent to themselves and nobody else, use the “Entity From” and “Entity Recipient” fields. You must conduct this search with a double negative in order to find documents that only include our selected entity.

Note: This search may be impacted by whether you decided to group professional and personal aliases under a single entity or separate entities.

Create a search with the following conditions:

Note: Connect the search conditions as follows using a Boolean operator: **1 AND 2 AND 3**

Condition 1

- **Field:** Entity From
- **Operator:** these conditions
    - **Field:** Entity From
    - **Operator:** is set

Condition 2

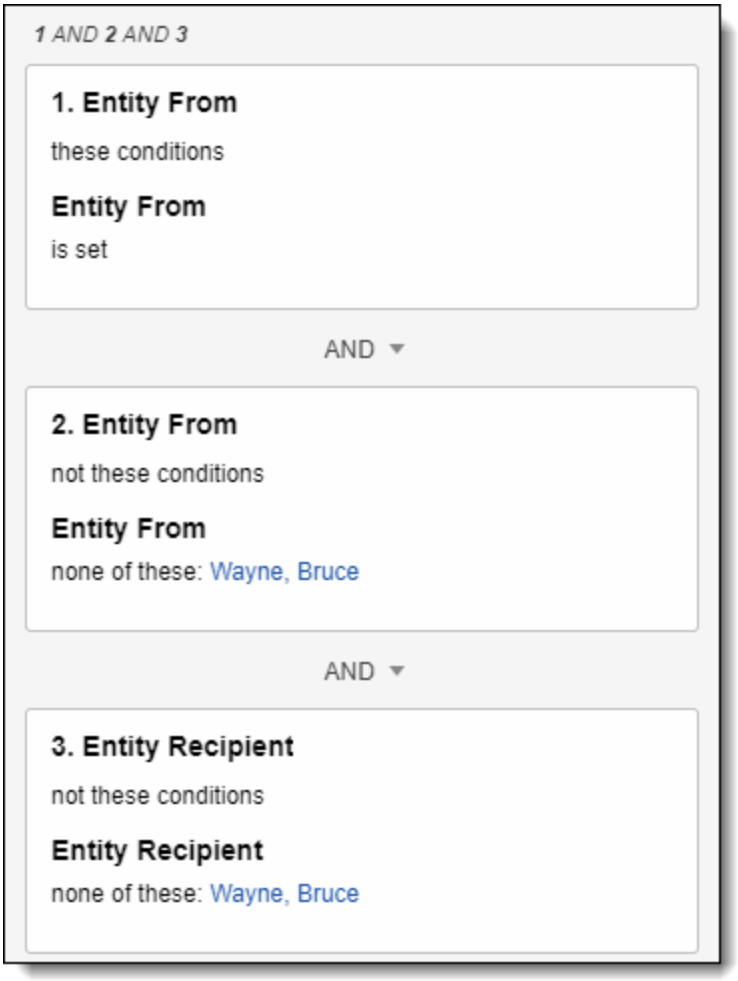
This search indicates that someone other than this person is the sender.

- **Field:** Entity From
- **Operator:** not these conditions
    - **Field:** Entity From
    - **Operator:** none of these
    - **Text:** [Entity 1]

Search 3

- **Field:** Entity Recipient
- **Operator:** not these conditions
    - **Field:** Entity Recipient
    - **Operator:** none of these

- **Text:** [Entity 1]



Breaking it down:

- **Entity From==not this person** means someone other than this person is the sender
- **Not these conditions [LINE ABOVE]** means nobody other than this person is the sender

8.8 Entities that communicated on privileged documents

To find a list of entities that communicated on privileged documents, use the **Entity Participant::Privilege Designation** field on the Entity object (Entities tab).

Note:
You must edit the Privilege Designation field to set **Open to Associations** to **Yes** in order to search across it on the document object.

You can use a variation of this search using the Participant field to return the entities that only sent or received privileged documents rather than participated in any segment of the document .

You can use variations of this search to return the entities that communicated on a document that have any specific attribute. For example, entities that communicated on Hot documents.

Create the following search:

- **Field:** Entity Participant
- **Operator:** these conditions
  - **Field:** Entity Participant::Privilege Designation
  - **Operator:** any of these
  - **Text:** [Designation Type(s)]

This search locates Entities that exist in the **Entity Participant** field of documents that have this specific value in the **Privilege Designation** field.

8.9 Emails where a specific person drops off of a communication

To find emails where a specific person dropped off an email chain, use the **Entity From**, **Entity Recipient**, and **Entity Participant** fields. This search finds all documents where the person appears in a lowers email segment within the document (Entity Participant), but not the top email segment (Entity From and Entity Recipient).

Note: Adding multiple people to the search can cause documents to be missed. If you want to search for multiple people, create separate search cards for each person.

Create a search with the following conditions:

Note: Connect the search conditions as follows using a Boolean operator: **1 AND 2 AND 3**

Condition 1

Entity Participant (these conditions), Entity Participant (any of these [Entity 1])

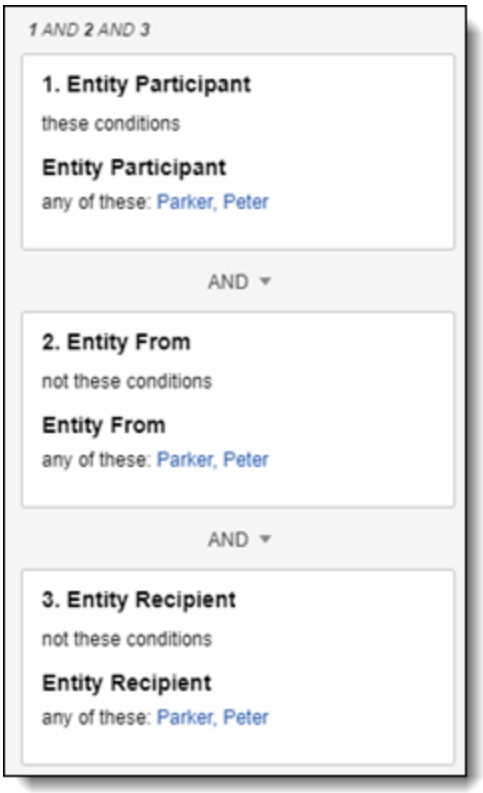
- **Field:** Entity Participant
- **Operator:** these conditions
    - **Field:** Entity Participant
    - **Operator:** any of these
    - **Text:** [Entity]

Condition 2

Entity From (not these conditions), Entity From (any of these [Entity 1])

Condition 3

Entity Recipient (not these conditions), Entity Recipient (any of these [Entity 1])



9 dtSearch

Relativity's dtSearch engine provides advanced search functionality such as proximity, stemming, and fuzzy searches across any field type. It also supports the use of Boolean operators and custom noise word lists and the basic searching features available in keyword searches. After building your dtSearch index, the Dictionary search option becomes available.

Note: Relativity partitions a single index into smaller indexes, called sub-indexes, which multiple workers build simultaneously. This increases performance by spreading out the work over a configurable number of agents. When you perform a search, Relativity runs your query on the smaller indexes in parallel. The application then federates and returns your results. For more details, see the Ask The Expert Training content: Searching: Best Practices for dtSearch Builds.

Using dtSearch indexes

There are roughly three million files relevant to a case you are working on, including emails, email attachments, invoices, and technical manuals related to construction practices and material handling. It is early in the case, and you need to gain an understanding of the data set. You also need to retrieve certain text related to five substances that you know are prevalent in this data, as an employee from the construction company mentioned these specifically in an email to you. To do this, you need to be able to perform proximity, stemming, and fuzzy searches on your data set. So you create a new dtSearch index.

You call the index **Hazardous Materials dtSearch** so that you can identify it in the Search drop-down menu on the Documents list. You might also create an Analytics index for this case with a similar name, so make sure to differentiate them clearly. For the Searchable set field, you select a saved search that you have already created called Hazardous Materials searchable set, which has documents to which you have already applied keywords related to the substances mentioned in your client's email.

Because many of the invoices and emails in your data set contain references to various purchases of building materials made by various departments in the construction company you are helping to represent, you set the Auto-recognize date, email, and credit card numbers field to Yes.

You leave all other fields at their default settings and save the index. You then build and activate the index so that you can select it in the Search drop-down menu.

When you select the index and search your document set on it, you run proximity searches to see how close terms relating to hazardous substances occur to the names of the building materials that may or may not contain them. The searches you run include the following:

- lead W/10 paint
- lead W/10 plumbing pipes
- lead W/10 connectors
- lead W/10 solder
- asbestos W/10 insulation and
- asbestos W/10 pipe coverings

- asphalt W/10 sealant
- asphalt W/10 adhesives
- radioactive W/10 fluorescent lamps
- radioactive W/10 smoke detectors

As you keep running these proximity searches, you get down to a small group of intriguing emails between a prospective buyer, your client, and a prospective seller. This may prove that the seller had knowledge of the fact that those building materials were potentially dangerous when they were negotiating a price with your client. This discovery turns out to be crucial to the case.

9.1 Running a dtSearch

Use dtSearch to complete stemming, fuzzy, and proximity searches on the information included in your dtSearch index.

9.1.1 Considerations

Consider the following before running a dtSearch.

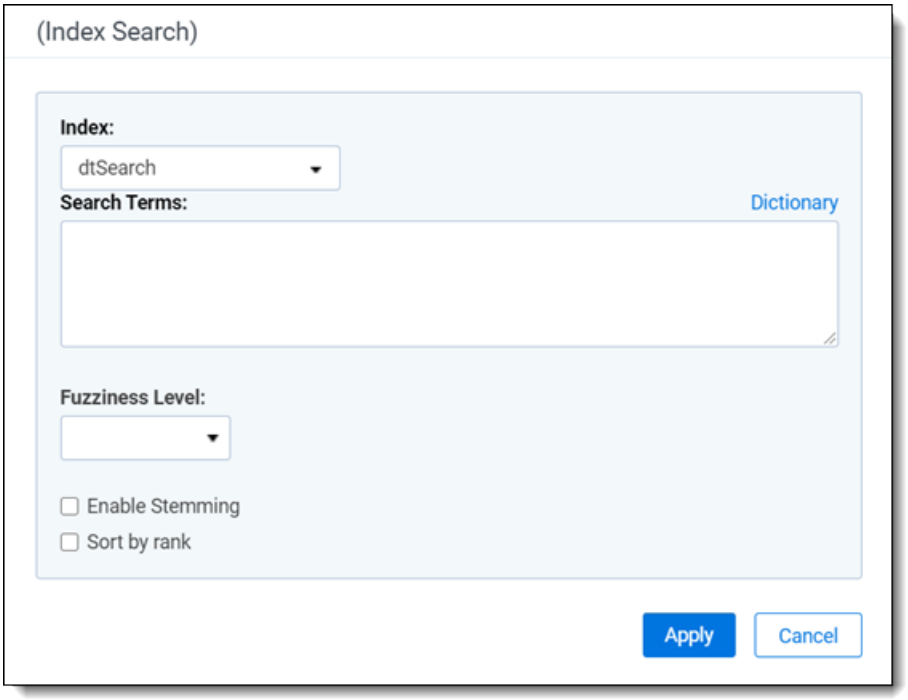
- You can enter search terms on multiple lines.
  - For example, by pressing *Enter*.
  - The hard return will not be treated as an *AND/OR* operator.
- dtSearch indexes are case insensitive by default.
  - All characters in a dtSearch index are normalized to lowercase.
  - For example, if your exact phrase search is an acronym like ACT, you must build a case-sensitive dtSearch index.
- The maximum number of search terms is 65,000 characters.
  - Words longer than 32 characters are truncated during indexing.
  - For more information, see Searching for words longer than 32 characters on page 72.
- We recommend avoiding wildcards in your search terms.
  - Wildcards can slow searches.
  - Wildcards can return more documents than intended.
  - Leading wildcards should not be used. For example **ing*.
- We recommend limiting proximity operators.
  - Large numbers of proximity operators within a single query can cause slower performance. For example, *w/* or *PRE/)*.
  - Nesting proximity operators can also cause performance problems. For example, *dog w/5 (cat w/2 bird)*,
  - Queries can be difficult to read and understand.

- We recommend running multiple queries that return small numbers of documents.
  - We recommend writing specific search terms.
  - Avoid using one broad query.

9.1.2 Running a dtSearch in the search panel

To run a dtSearch in the Search panel from the Documents list in Relativity:

1. Navigate to the search panel.
2. Click **Add Condition**.
3. Select **(Index Search)** from the Add Condition drop-down list.
   The (Index Search) window opens.



4. Select the name of your dtSearch index from the Index drop-down list.
5. Enter terms for the search in the Search Terms box. See examples of search strings and their results in the table below.

   Note: Press Enter to enter search terms on multiple lines. The hard return will not be treated as an AND / OR operator.

   Note: Your total number of search terms cannot exceed 65,000 characters.

6. Optionally, you can:
   - **Fuzziness Level**—access fuzziness for key terms by selecting the desired level from the list.
   - **Enable Stemming**—access stemming for key terms by selecting the box.

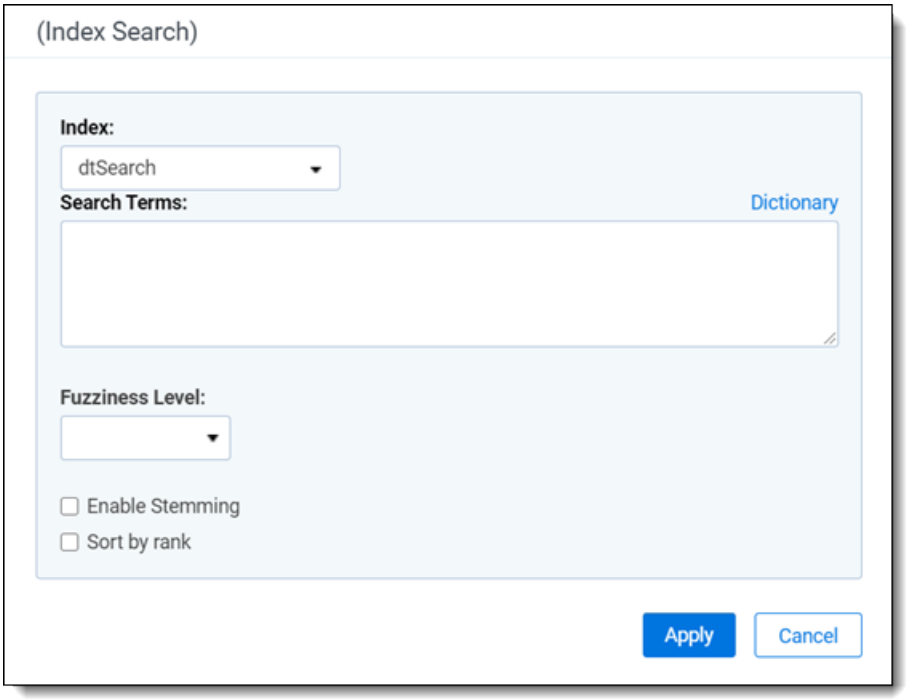
- **Sort by Rank**—click the box to sort the results in order of the most relevance to your search terms. The most relevant documents are listed at the top of the results set, with the least relevant documents, or the documents with the smallest number of keywords, is at the end of the list.

7. If needed, repeat the above steps to add any additional search conditions.
8. Click **Apply**.
   The search terms populate in the Search builder.
9. Click **Run Search**. To stop a long running search, click **Cancel**.

9.1.3 Running a dtSearch in the Search Browser

To run a dtSearch in the Search browser:

1. Click to access the Search browser from the Documents List.
2. Click **New Search**.
3. Enter required fields in the Information card.
4. Click **Add Condition**.
5. Select **(Index Search)** from the Add Condition drop-down list.
   The (Index Search) window opens.



6. Select the name of your dtSearch index from the Index drop-down list.
7. Enter terms for the search in the Search Terms box. See examples of search strings and their results in the table below.

Note: Press Enter to enter search terms on multiple lines. The hard return will not be treated as an AND / OR operator.

Note: Your total number of search terms cannot exceed 65,000 characters.

8. Optionally, you can:
   - **Fuzziness Level**—access fuzziness for key terms by selecting the desired level from the list.
   - **Enable Stemming**—access stemming for key terms by selecting the box.
   - **Sort by Rank**—click the box to sort the results in order of the most relevance to your search terms. The most relevant documents are listed at the top of the results set, with the least relevant documents, or the documents with the smallest number of keywords, is at the end of the list.
9. If needed, repeat the above steps to add any additional search conditions.
10. Click **Apply**.
    The search terms populate in the Search builder.
11. Click **Save** or **Save As**.
12. Select the name of the dtSearch in the Search Browser.
13. Click **Run Search**. To stop a long running search, click **Cancel**.

9.1.4 Search string examples and expected results

The following table shows search string examples and their expected results. For more information, see Using dtSearch syntax options on page 82.

Search String	Returns Documents With...
apple pear	The exact phrase **apple pear**
"apple pear"	The exact phrase **apple pear**
apple AND pear	The word **apple** and the word **pear**
(apple and pear) AndAny (grape or banana)	Any document that contains **apple** and **pear**, with **grape** and **banana** also being counted as hits. **Grape** and **banana** aren't evaluated as conditions. They're simply added to the search results as optional terms to be highlighted if they appear in the document.
apple OR pear	Either **apple** or **pear**
apple W/5 pear	**Apple** appears within 5 words of **pear**
apple PRE/5 pear	**Apple** appears within 5 words before **pear**

Search String	Returns Documents With...
	Note: Relativity does not use the POST operator. However, you can mimic this functionality by reversing the order of the terms, and using the PRE operator.
apple NOT W/5 pear	**Apple** does not appear within 5 words of **pear**
apple AND NOT pear	**Apple** appears but **pear** does not.
apple W/5 xfirstword	**Apple** appears in the first 6 words of the document.
apple w/5 xlastword	**Apple** appears in the last 6 words of the document.

9.1.5 Searching for words longer than 32 characters

When a word has more than 32 characters (none of which are whitespace, characters in the CJKRanges section, or symbols configured as spaces), dtSearch truncates the word and only indexes the first 32 characters. As a result, if you run a search on the first 32 characters, the search returns any words with 33 or more characters that contain the search term as the first 32 characters.

If you attempt to run a search with a string of 33 characters or more, dtSearch does not return any results because it does not truncate the query, and as we've seen, no word is longer than 32 characters. See below examples for reference.

Search	Length (in characters)	Returned results
supercalifragilisticexpialido	29	supercalifragilisticexpialido
supercalifragilisticexpialidoc	30	supercalifragilisticexpialidoc
supercalifragilisticexpialidoci	31	supercalifragilisticexpialidoci
supercalifragilisticexpialidocio	32	supercalifragilisticexpialidocio supercalifragilisticexpialidociou supercalifragilisticexpialidocious
supercalifragilisticexpialidociou	33	NO RESULTS
supercalifragilisticexpialidocious	34	NO RESULTS

- if you include a wildcard (*) after the 32nd character, you will get the exact same results as if you omitted the wildcard.
- You can use the following regular expression to search your dictionary for all 32-character words: ##.{32}

9.2 Running a dictionary search

When you run a dtSearch, you can use **Dictionary Search** to query the index for a term and find the total occurrences and number of documents in which it occurs. The Dictionary Search dialog displays the results, including the following columns:

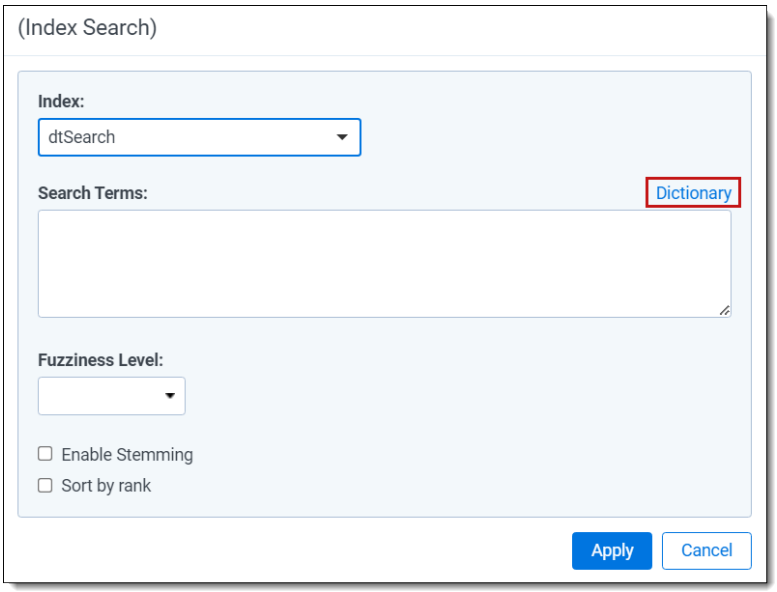
- **Keyword**—the word contained in the index. If you use fuzziness or stemming in your search, this column displays any variations of the term.
- **Total Words**—the number of times the word appears in the dtSearch index.
- **Total Documents**—the number of documents in the index that contain the word.

A dictionary search returns only the first 2,000 items in the result set. If your search returns more than that, a message displays to indicate that only 2,000 items were returned.

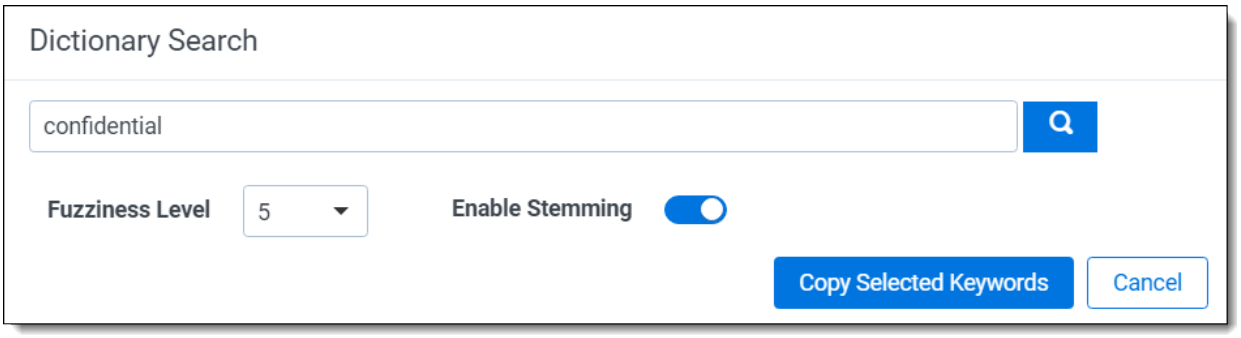
9.2.1 Running a dictionary search in the search panel

To run a dictionary search in the search panel:

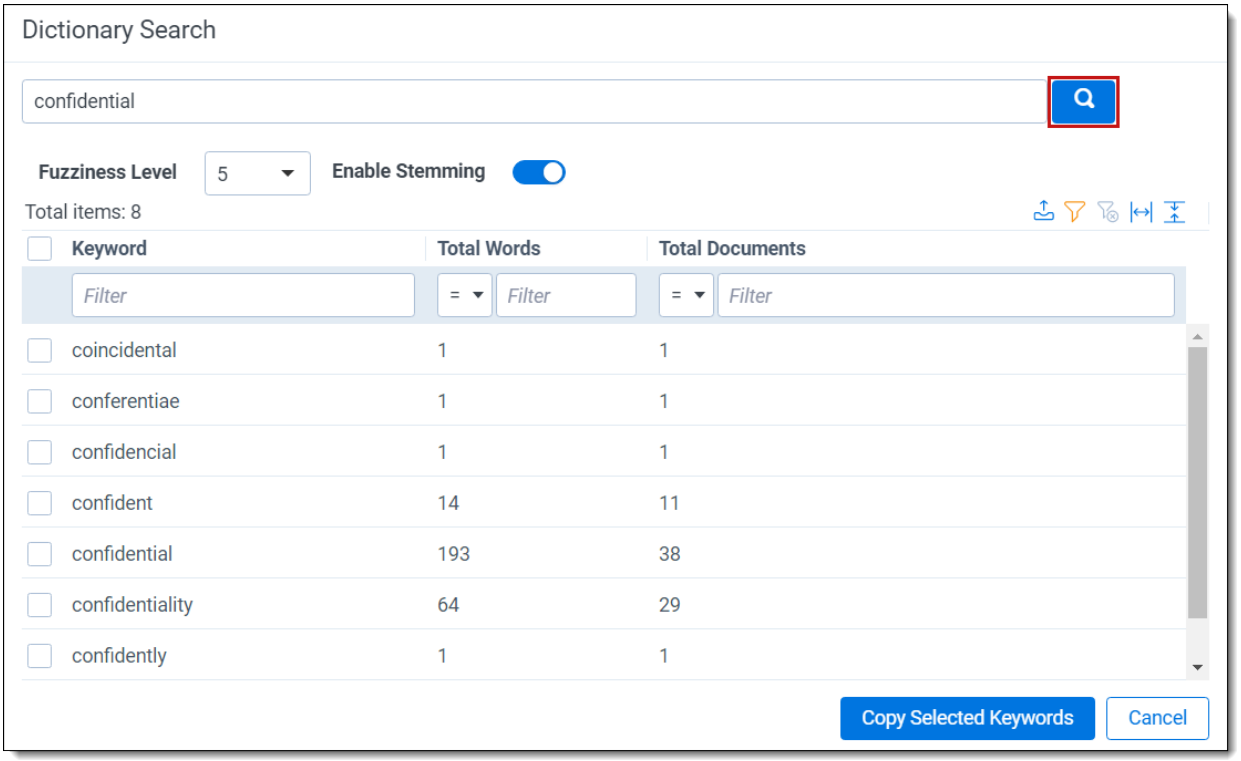
1. Navigate to the search panel.
2. Click the **+ Condition** button.
3. Select **(Index Search)** from the Add Condition field list.
   The (Index Search) modal opens.
4. Select the name of your dtSearch index from the **Index** drop-down menu.
5. Click **Dictionary**.



   The Dictionary Search modal opens.
6. Enter a search term in the text box. You can enter variations of a search term as well as the wildcard (*), stemming (~), or fuzzy searching (%) operators.



7. (Optional) Set one of the following search operators:
   - **Fuzziness Level**—Select a value from one to ten to set the degree of variation in the terms returned. A larger number returns terms with more variation. This option is independent of the fuzziness (%) character that you can enter in the textbox on the Dictionary Search dialog. See Fuzzy searching on page 93.
   - **Enable Stemming**—Select to return grammatical variations of a word. For example, a search on "apply" returns "applying", "applies" and "applied." This option is independent of the stemming (~) character that you can enter in the textbox on the Dictionary Search dialog. See Stemming on page 97.
8. Click the **Search icon** to display a list of keywords and the associated totals.

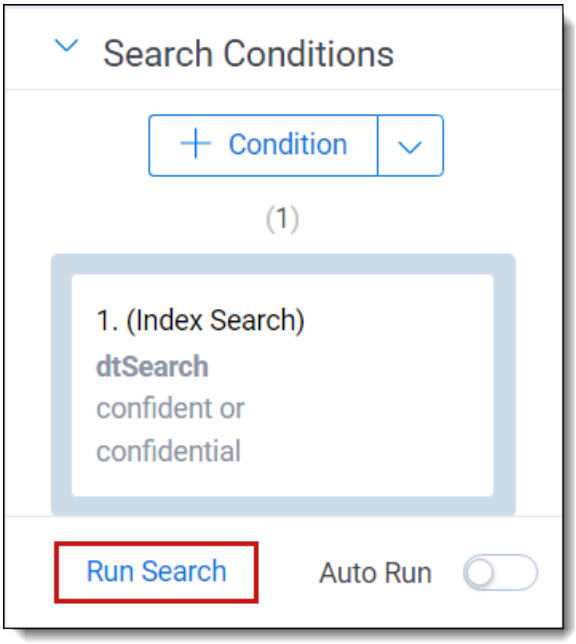


9. Perform any of the following tasks with your search results:
   - **Copy Selected Keywords**—Select the checkboxes for the terms that you want to copy, and click **Copy Selected Keywords**.
     The copy text modal opens.

- Use Ctrl+C to copy the terms, then close the modal.
- Click **Cancel** to close the Dictionary Search modal.
- On the (Index Search) modal, click inside the **Search Terms** box and use Ctrl+V to paste your terms.
  The terms are added to the text box separated by the OR operator.

- **Sort**—Click a column header to sort in descending or ascending order.
- **Reset Columns Sizes**—Displays columns with their default widths.
- **Export**—Click to download an Excel spreadsheet containing the keywords and totals from the dictionary search.
- **Show Filters/Clear All**—See Filters on page 11.

10. Click **Apply** to save your search settings.
11. Click **Run Search** to run the search against your document list.

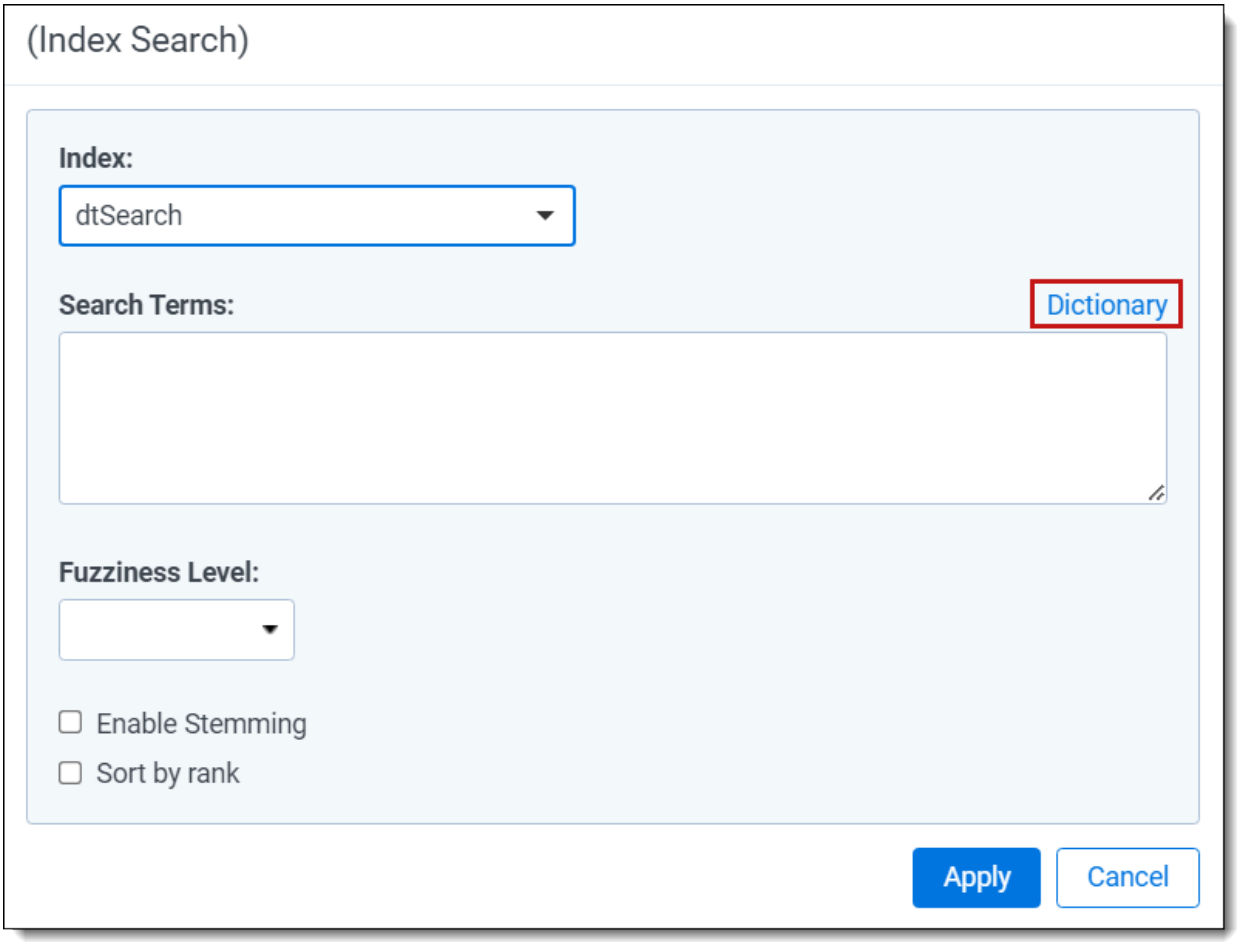


9.2.2 Running a dictionary search in the search browser

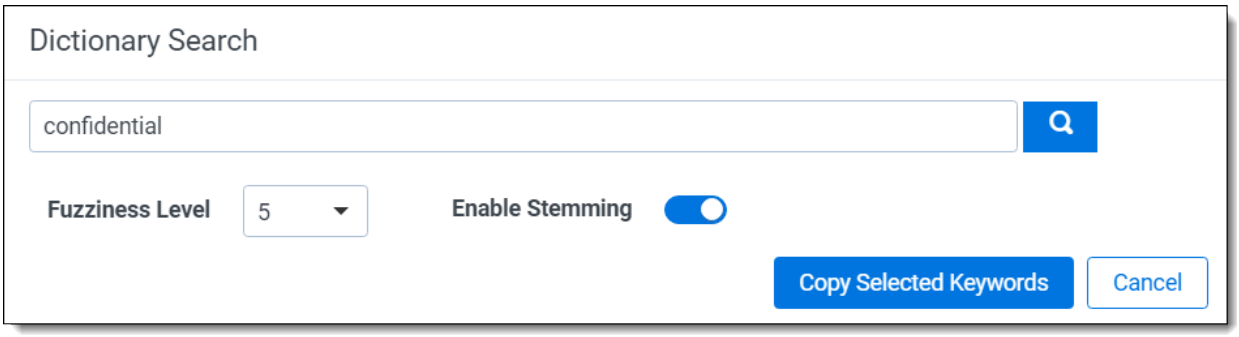
To run a dictionary search in the Search browser:

1. Click the **Saved Searches** icon ( ) to access the Search browser from the Document list.
2. Click **Create New Search**.
3. From the **Information** tab, enter a **Name** and **Owner**.
4. Click the **+ Condition** button on the Conditions tab.

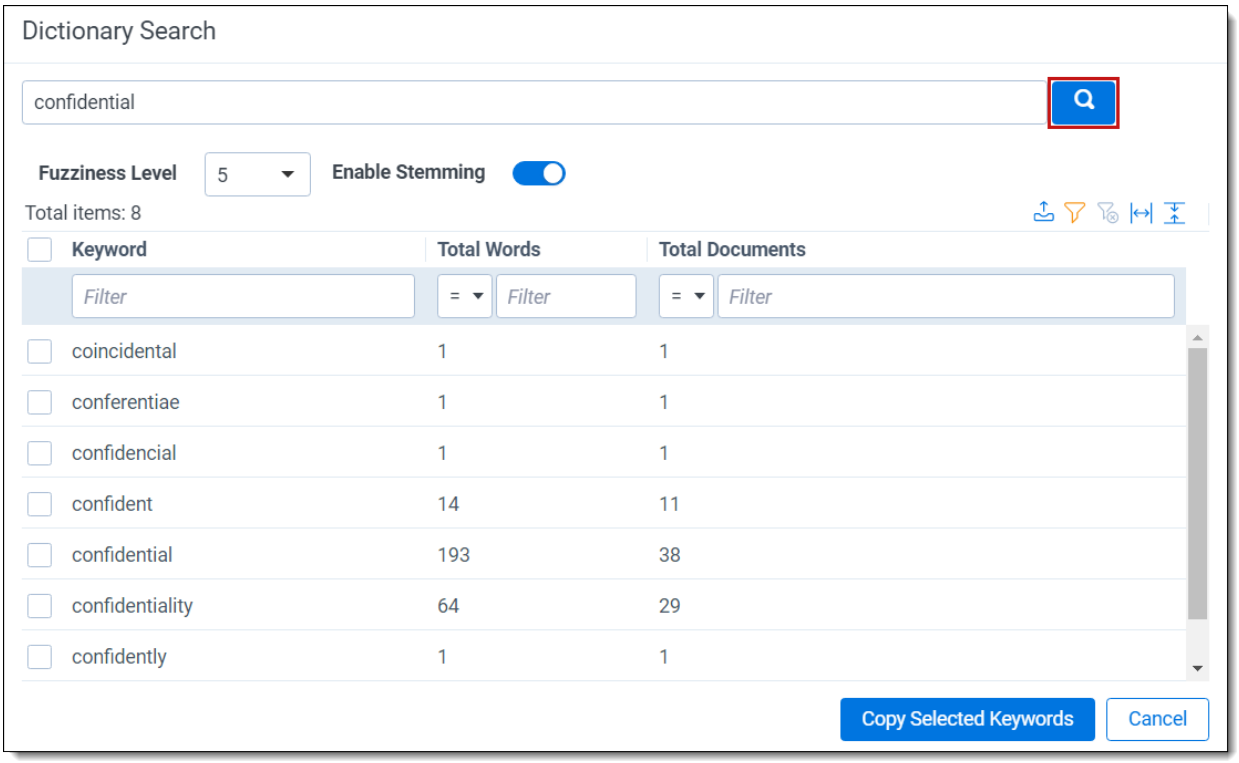
5. Select **(Index Search)** from the Add Condition field list.
   The (Index Search) modal opens.
6. Select the name of your dtSearch index from the **Index** drop-down menu.
7. Click **Dictionary**.



   The Dictionary Search modal opens.
8. Enter a search term in the text box. You can enter variations of a search term as well as the wildcard (*), stemming (~), or fuzzy searching (%) operators.



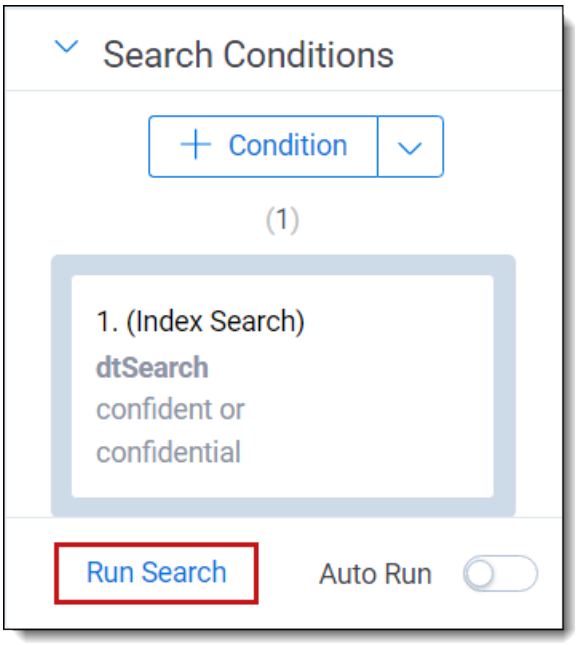
9. (Optional) Set one of the following search operators:
    - **Fuzziness Level**—Select a value from one to ten to set the degree of variation in the terms returned. A larger number returns terms with more variation. This option is independent of the fuzziness (%) character that you can enter in the textbox on the Dictionary Search dialog. See Fuzzy searching on page 93.
    - **Enable Stemming**—Select to return grammatical variations of a word. For example, a search on "apply" returns "applying", "applies" and "applied." This option is independent of the stemming (~) character that you can enter in the textbox on the Dictionary Search dialog. See Stemming on page 97.
10. Click the **Search icon** to display a list of keywords and the associated totals.



11. Perform any of the following tasks with your search results:
    - **Copy Selected Keywords**—Select the checkboxes for the terms that you want to copy, and click **Copy Selected Keywords**.
      The copy text modal opens.
        - Use Ctrl+C to copy the terms, then close the modal.
        - Click **Cancel** to close the Dictionary Search modal.
        - On the (Index Search) modal, click inside the **Search Terms** box and use Ctrl+V to paste your terms.
          The terms are added to the text box separated by the OR operator.
    - **Sort**—Click a column header to sort in descending or ascending order.
    - **Reset Columns Sizes**—Displays columns with their default widths.

- **Export**—Click to download an Excel spreadsheet containing the keywords and totals from the dictionary search.
- **Show Filters/Clear All**—See Filters on page 11.

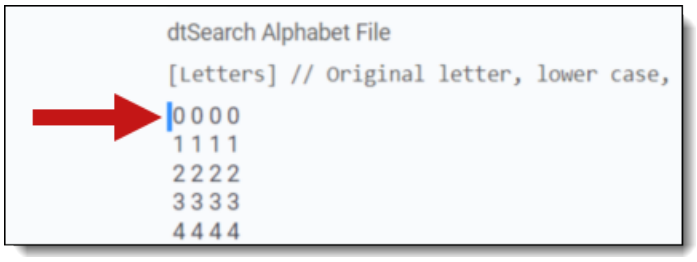
12. Click **Apply** to save your search settings.
13. Click **Run Search** to run the search against your document list.



9.3 dtSearch default alphabet file text

Note: Some of the characters in the alphabet file are not printable; screenshots were used instead of the actual text. You cannot copy or paste the **Spaces** or **Ignore** characters since they are not printable. Instead, use the dtSearchDefaultAlphabetFile instance setting in the Instance Setting system guide to update the dtSearch default alphabet file.

Note: Each sequence must start with a leading, or empty, space. Not having the leading space may produce errors.



Alphabet file validation
When you save a dtSearch index, Relativity runs a validation check on the alphabet list. You will see a warning message if Relativity detects invalid spacing or syntax. You cannot save the index if there are

errors with the alphabet list. The validation check includes:

- Header sections:
  - Header section appears first in Alphabet
  - Exact header section without any added whitespace
  - Required newline before section
- Letters:
  - Exact title, allowing any whitespace and comments preceding double slash //
  - Each letter on own line with preceding space
  - Each letter variant separate by single space
  - Allow any extra whitespace after letter
- Hyphens, Spaces, and Ignore
  - Exact title, allowing any whitespace
  - Single line of characters with preceding space
  - Optional newlines before next section
- Footer sections:
  - Exact title
  - Skip validating any text following title
- General:
  - Purple, Pink, Red, Green sections are each optional and can be in any order

9.3.1 dtSearch Alphabet File

[Letters] // Original letter, lower case, upper case, unaccented
0 0 0 0
1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4
5 5 5 5
6 6 6 6
7 7 7 7
8 8 8 8
9 9 9 9
A a A A
B b B B
C c C C
D d D D
E e E E
F f F F
G g G G
H h H H
I i I I

J j J J
K k K K
L l L L
M m M M
N n N N
O o O O
P p P P
Q q Q Q
R r R R
S s S S
T t T T
U u U U
V v V V
W w W W
X x X X
Y y Y Y
Z z Z Z

_ _ _ _
a a A a
b b B b
c c C c
d d D d
e e E e
f f F f
g g G g
h h H h
i i I i
j j J j
k k K k
l l L l
m m M m
n n N n
o o O o
p p P p
q q Q q
r r R r
s s S s
t t T t
u u U u
v v V v
w w W w
x x X x
y y Y y
z z Z z

[Hyphens]
-

[Spaces]
\09\0a\0c\0d !@"#$&'()*+,./:;<=>?[\5c]^`{|}~

[Ignore]
[illegible]\08[illegible]%[illegible]

[End]
CJKRanges = 0e00-0e4e 3040-30ff 4e00-9fff

Note: Previous guidance hid some characters that should not have been hidden. Those non-printable characters are critical to index function and should never be removed. The "\08" text represents the "backspace" text, and should also never be removed or split up (IE trying to index the backslash).

Note: This section only accepts ASCII characters (code points between 33 and 127) as input, we currently do not support ignoring extended Unicode values.

9.4 Making the dtSearch noise word list searchable

Relativity ignores words that do not act as meaningful criteria when you create dtSearch and keyword queries. Ignored words are known as noise or noise words. Search indexes automatically include the default list of noise words. However, you can edit this list in the dtSearch list to suit your needs. This article includes an overview of noise words and steps to create custom lists.

9.4.1 Default noise word list

Relativity references the default list of noise words each time you create a new index. System admins cannot edit noise words in keyword searches. The default noise word list consists of punctuation marks, single letters and numbers, and the following words:

Begins with	Noise words
A	a, about, after, all, also, an, and, another, any, are, as, at
B	be, because, been, before, being, between, both, but, by
C	came, can, come, could
D	did, do
E	each, even
F	for, from, further, furthermore
G	get, got
H	had, has, have, he, her, here, hi, him, himself, his, how, however
I	i, if, in, indeed, into, is, it, its
J	just
L	like
M	made, many, me, might, more, moreover, most, much, must, my

Begins with	Noise words
N	never, not, now
O	of, on, only, or, other, our, out, over
S	said, same, see, she, should, since, some, still, such
T	take, than, that, the, their, them, then, there, therefore, these, they, this, those, through, thus, to, too
U	under, up
V	very
W	was, way, we, well, were, what, when, where, which, while, who, will, with, would
Y	you, your

Note: Relativity ignores noise words. However, Relativity does not ignore their position in the search phrase set. So, if you execute the query apple w/6 pear, the search returns the phrase apple tree is far from the pear even though it contains the noise words is, from and the.

9.4.2 dtSearches and noise words

The default list of noise words is the same in a dtSearch as in a keyword search. The primary difference is that you can customize the dtSearch index list. For example, if the word never is important to your litigation, remove it from the noise words list, so that your search results always return that word.

To create a custom noise word list, perform the following:

1. Create a new dtSearch index, and then name it *dtSearch - updated noise words*.
2. Select your extracted text search for the Searchable set.
3. Delete the word *never* from the Noise Words list.
4. Save the list, and then perform a full build on your new index.

9.4.3 Noise words in languages other than English

You can set up noise words to search documents in other languages. If the workspace primarily contains of documents in a different language, see for an overview of suggested noise words for use in nineteen additional languages.

9.5 Using dtSearch syntax options

dtSearch includes special characters and other operators used to define search criteria. The following table lists the syntax options available for queries that run against a dtSearch index. Click the search functionality name for more details on the syntax use.

Search functionality	Special characters or operators
Auto-recognition of dates, emails, credit cards	date(), mail(), creditcard()

Search functionality	Special characters or operators
Boolean operators	AND, OR, NOT
Built-in search words	xfirstword, xlastword
Connector words	and, or, not, to, contains
Exact phrase - double quotes	" "
Operator precedence	()
Exact phrase - no double quotes	
Fuzzy searching	%
Noise words and the alphabet file	Noise Words, Alphabet
Numerical patterns	=
Phonic searching	#
Regular expressions (Redirects to another topic.)	"##"
Stemming	~
Wildcards	?, *
W/N operator	W/N
Proximity with terms order	PRE
Words and phrases	

For the list of the special characters recognized as spaces that cause word breaks, see Alphabet file.

9.5.1 Auto-recognition

Auto-recognition provides you with the ability to search for various date formats, email addresses, and credit card numbers. However, it can dramatically affect indexing and searching performance. You must activate auto-recognition before you can use it in your workspace. Contact your system administrator for more information.

9.5.1.1 Date recognition

Date recognition searches for strings that appear to be dates. It uses English-language months, including common abbreviations, and numerical formats. For example, dtSearch recognized the following date formats:

- January 15, 2006
- 2006/01/15
- 1/15/06
- 1-15-06
- The fifteenth of January, two thousand six

Note: The short month format, *Jan*, *Feb*, and so forth, can be problematic, and is occasionally rejected by Relativity. The recommendation is to stick with the full name of the month to avoid any errors. For example *January*, *February*, and so forth.

Note the following date and date range search strings:

- To search for a date, enter a date expression between the parentheses in the string date(); for example, date(january 10 2006).
- To search for range of dates, enter a date range between the parentheses in the string date(); for example, date(january 10 2006 to january 20 2006).
- To search for a range of dates near the word apple, enter date(january 10 2006 to january 20 2006) w/10 apple.
- dtSearch does not support unterminated date ranges. To search for any date after or before a particular date, enter a bounded range with a maximal or minimal value for the bounds. The maximum value for a year is 2900, and the minimum value is 1000. For example, date(january 10 2006 to january 1 2900).

dtSearch recognizes numeric strings as dates, as long as it interpretes as a valid date. This includes formats common in the US and UK, including:

- MM/DD/YY or MM-DD-YY
- MM/DD/YYYY or MM-DD-YYYY
- DD/MM/YY or DD-MM-YY
- DD/MM/YYYY or DD-MM-YYYY

In the case of ambiguous dates, such as 01/05/10, dtSearch defaults to MM/DD/YY. If the date contains words dtSearch converts the words to a numeric value to help interpret the date. For example, 30 must be a day and not a month, and 2015 must be a year, not a day or month.

9.5.1.2 Email address recognition

Email address recognition searches for text with the syntax of a valid email address, such as sales@example.com. With this feature, you can search for a specific email address regardless of the alphabet settings for "@", ".", or other punctuation in the email address.

You can also use the word listing functions in dtSearch to enumerate all email addresses in a document collection. You must include either the * or ? wildcard expression to enumerate all email addresses in a document collection.

- *mail(sales@example.com)* returns the exact email address: *sales@example.com*.
- *mail(sa*@example.com)* returns variations of the email address: *sal@example.com*; *sales.sa@example.com*.

9.5.1.3 Credit card number recognition

Credit card number recognition searches for any sequence of numbers that matches the syntax for a valid credit card number issued by a major company, such as Visa and MasterCard. dtSearch recognizes a credit card number regardless of the pattern of spaces or punctuation embedded in the number:

- 1234-5678-1234-5678
- 1234567812345678
- 1234 5678 1234 5678

Credit card issuers use numerical tests to exclude sequences of numbers that are not valid credit card numbers. Since these tests do not detect all invalid numbers, the feature for credit card number recognition may find additional invalid numbers.

To search for a credit card number, enter a credit card number between the parentheses in creditcard() as exemplified in creditcard(1234*).

9.5.2 Boolean operators

The dtSearch engine supports Boolean operators, including AND, OR, and NOT. You can use these operators to connect multiple phrases or terms in a single search expression.

Note: When using Boolean operators in a proximity search, dtSearch includes noise words. Although not searchable, a proximity searches still counts noise words.

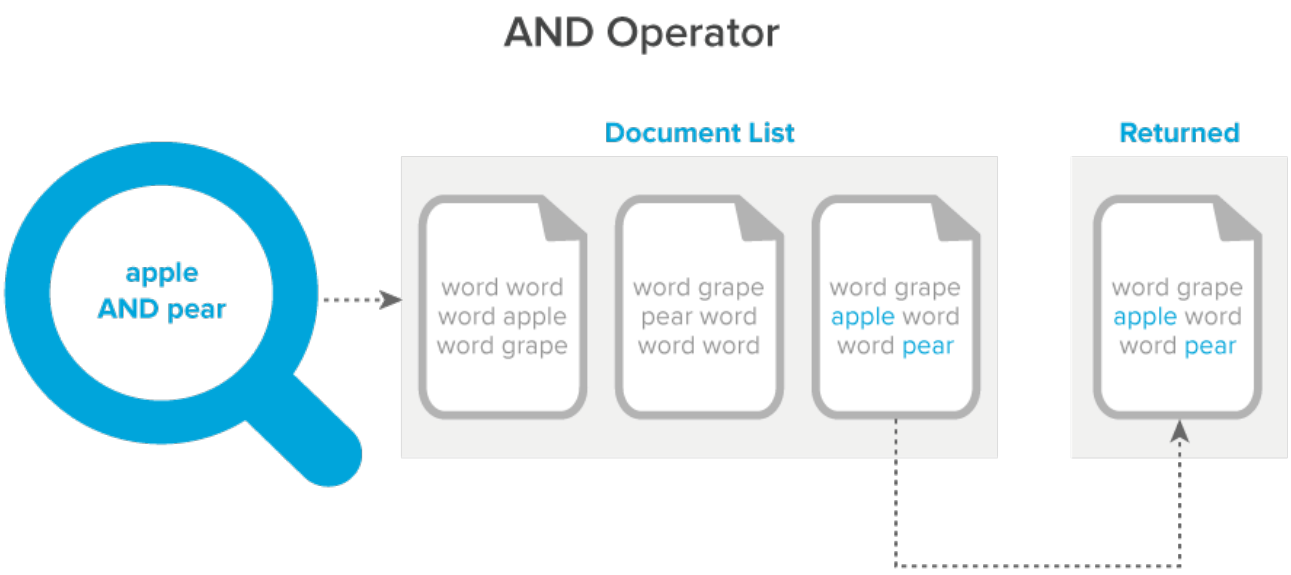
9.5.2.1 AND operator

Note: For details on parsing proximity and Boolean strings in search conditions, see dtSearch - How are Proximity and Boolean (AND/OR) parsed in search conditions? knowledge base article on the Relativity Community site.

When you use the AND operator to connect expressions, only documents that contain all the expressions in the search string return in the result set. The following search strings illustrate how to use this operator:

- apple pie AND poached pear retrieves any documents that contain both phrases.
- (apple or banana) AND (pear w/5 grape) retrieves any documents that contain apple or banana AND contain pear within five words of grape.

The following graphic depicts what documents return when you use the AND operator in a dtSearch string:



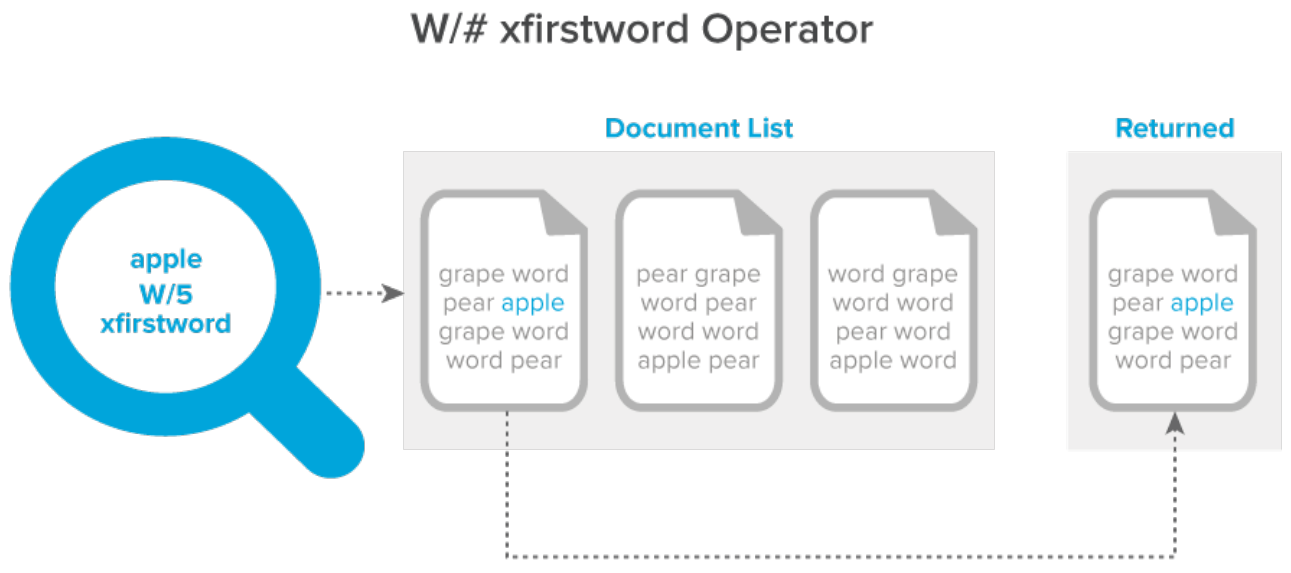
9.5.3 Built-in search words

dtSearch includes the following built-in search words:

You can use these terms to limit a search to the beginning or end of a file. For example, apple W/10 xlastword searches for apple within 11 words of the end of a document.

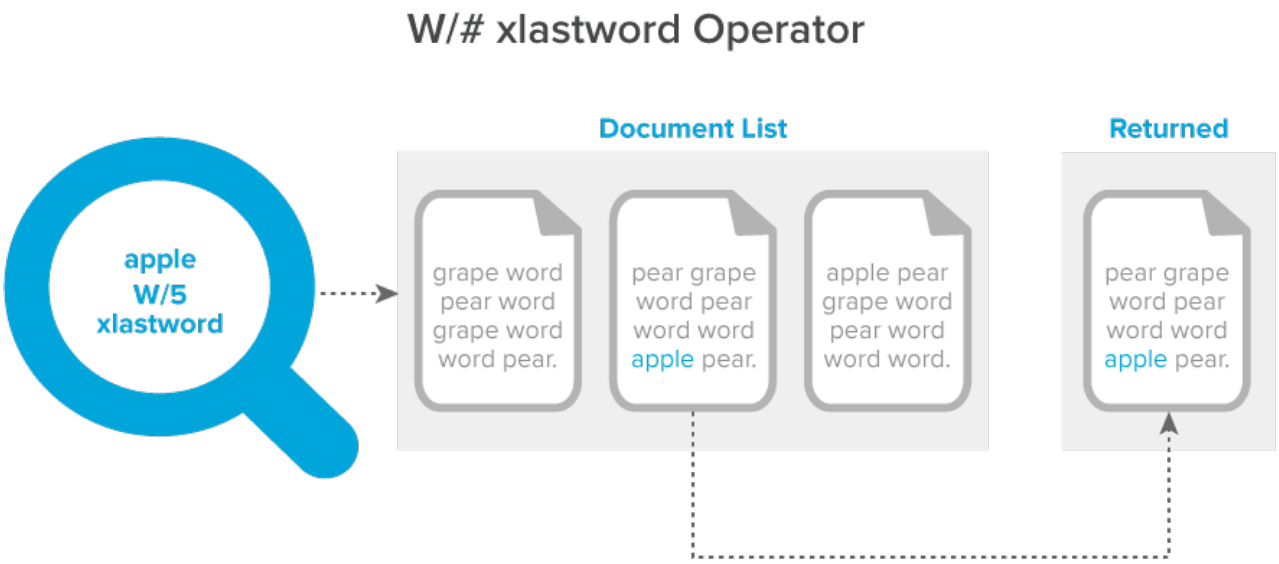
- **xfirstword**—marks the beginning of a file.

The following graphic depicts what documents return when you use the W/# xfirstword operator in a dtSearch string:



- **xlastword**—marks the end of a file.

The following graphic depicts what documents return when you use the W/# xlastword operator in a dtSearch string:



9.5.4 Connector words

The dtSearch connector words include:

- and
- or
- not
- to
- contains

To search for a phrase that contains one of the dtSearch connector words, quote a connector word or the phrase it is in, or put a tilde after the connector. The following search strings work in returning phrases that contain connector words:

- "clear and convincing evidence"
- not~ relevant
- "whether or not John wants to"

Note the following:

- Adding a ~ after a connector word prevents dtSearch from recognizing the word as a connector but does not otherwise affect the search. The ~ character after a word tells dtSearch to apply the stemming rules to it. Because the stemming rules included with dtSearch do not modify short words, the ~ does not change the outcome of a search for and, or, not, or to.

- The noise word list includes connector words such as *and* and *not* by default. All these words are noise words and you must remove these words from the list to make dtSearch index these files. See Creating a dtSearch index for details.
- Relativity does not support the dtSearch contains connector functionality. The word *contains* must also be treated separately to be searched.

9.5.5 Exact phrase - double quotes

You must use double quotes when searching for exact phrases that contain dtSearch operator reserved words, such as the Boolean connectors AND, OR. For example:

Note: Connector words such as and and not are in the noise word list by default. All these words are noise words and you must remove these words from the list to make dtSearch index these files

Search string: *clear and present danger*

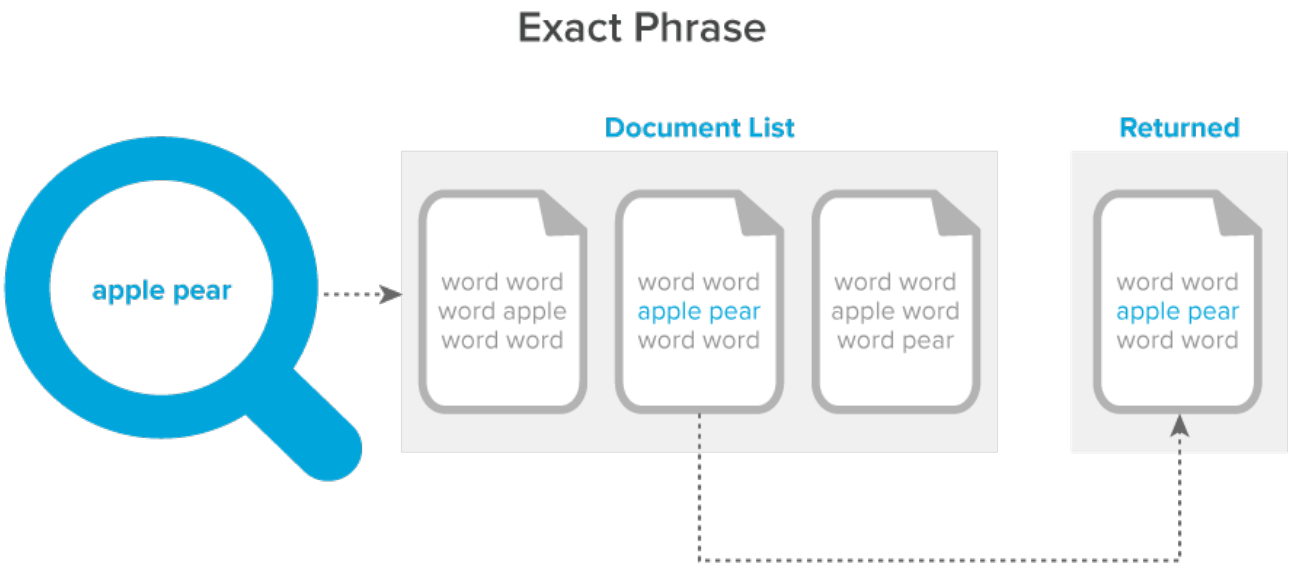
- Returns documents that contain both the word clear and the phrase present danger.
- If you need to return documents that contain the exact phrase clear and present danger, you must:
  - Remove the word and from the dtSearch noise words list.
  - Surround the search string with "double quotes" so that the word AND is not treated as a Boolean connector.

Search string: *"clear and present danger"*

- Returns the exact phrase clear and present danger.

Note: Do not confuse the parentheses function for order of preference with the double quotes function.

The following graphic depicts what documents return when you execute an exact phrase search:



9.5.5.1 AndAny operator

You can combine a search for required search terms with other optional terms. The words before the AndAny connector constitute required search terms, and the words after the AndAny connector are optional. A document only returns if it contains at least the required search terms. For example, (apple and pear) AndAny (grape or banana) would find any document that contains apple and pear, with grape and banana also counts as hits only if apple and pear are also present in the document.

The following example further explains the AndAny operator:

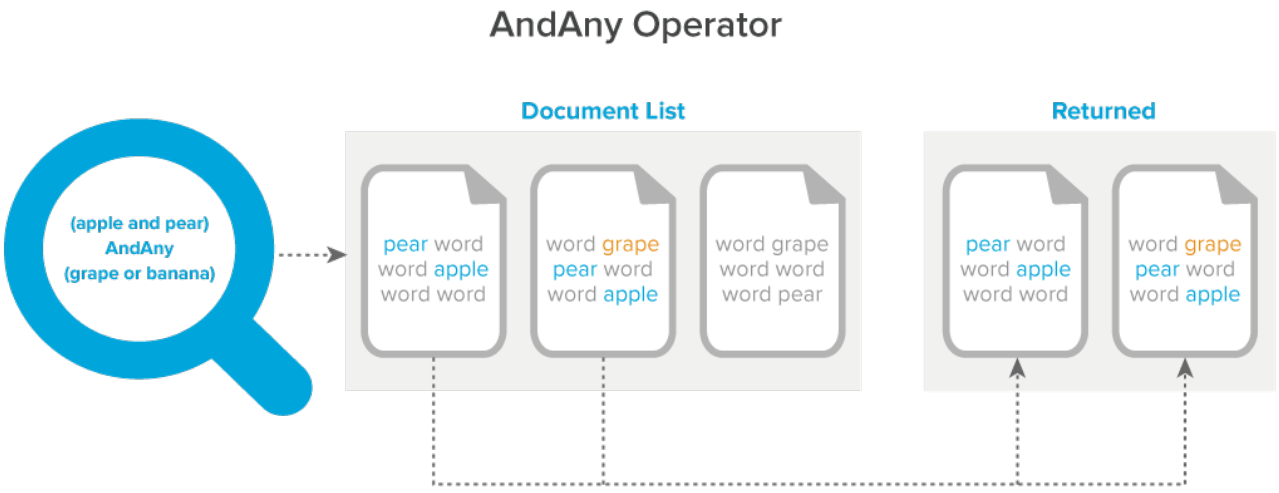
You have three documents, each containing the terms specified below:

- Document 1: Apple
- Document 2: Apple, Grape, Pear
- Document 3: Grape, Pear

Note the following behavior:

- When you search for the term *apple*, documents 1 and 2 return.
- When you search for the string *apple* AND *pear*, only document 2 returns.
- When you search for the string *apple* AndAny *pear*, documents 1 and 2 return.

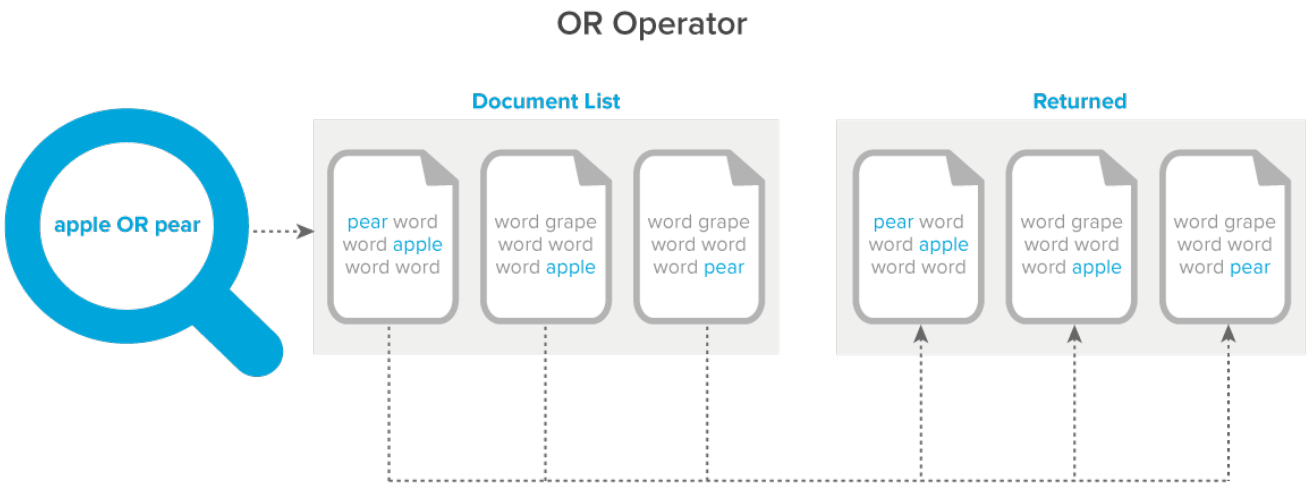
The following graphic depicts what documents return when you use the AndAny operator in a dtSearch string:



9.5.5.2 OR operator

When you use the OR operator to connect expressions in a search string, documents that contain one or more of these expressions return in the result set. For example, the search string apple pie or poached pear returns documents that contain apple pie, poached pear, or both phrases.

The following graphic depicts what documents return when you use the OR operator in a dtSearch string:



9.5.5.3 NOT operator

In a dtSearch, you can use the NOT operator at the beginning of a search expression to negate its meaning and exclude documents from a result set. For example, the search expression applesauce and NOT pear returns documents that contain the word applesauce, but not those documents that contain both the words applesauce and pear.

- **NOT operator as a standalone**—you can use the NOT operator by itself at the beginning of a search expression. For example, the search expression NOT pear returns all the documents that do not contain the word pear. The search expression NOT (apple w/5 pear) returns all the documents that do not contain the word apple within five words of pear. Other examples:
  - NOT (apple or pear) returns every document that does not have apple or pear in it.
  - NOT (apple and pear) returns documents where apple and pear do not appear together in the same document. It returns all other documents including documents with the word apple and documents with the word pear. It does not return documents that include both terms.
- **NOT operator as a connector**—when the NOT operator appears in the middle of a search expression, you must also use either AND or OR. For example, the search expression apple OR NOT pear returns all the documents that contain the word apple and those that do not contain the word pear.

  Note: You can also use NOT in a proximity search as illustrated by the NOT W/N, NOT Within N words, operator.

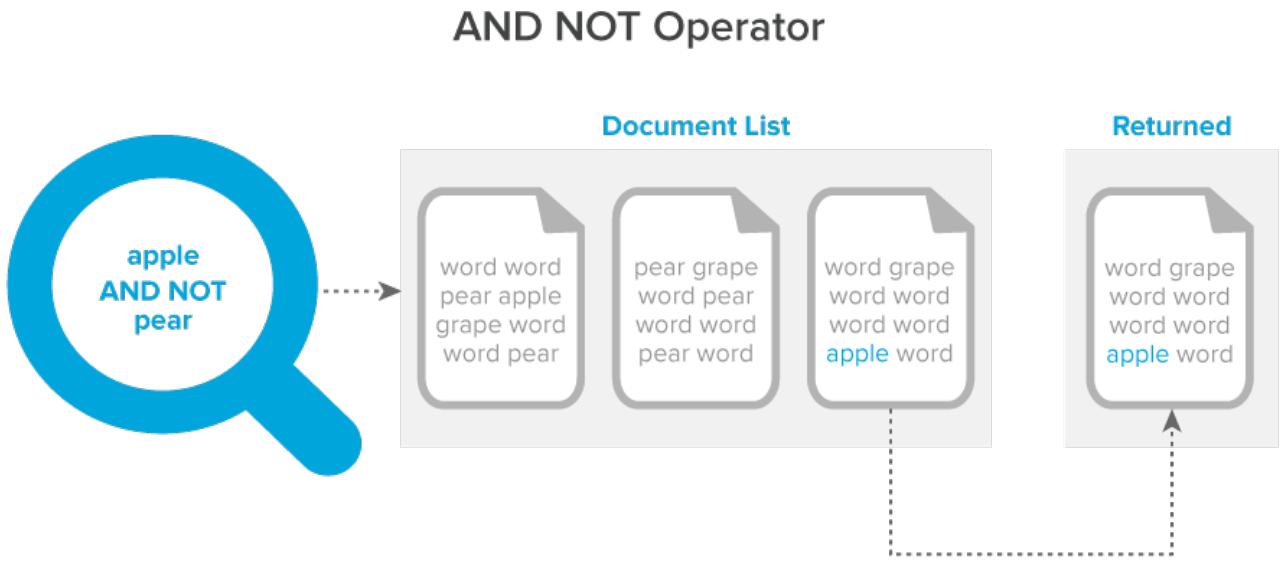
- **AND NOT operator**—you can use the AND NOT operator to develop queries for documents that include the first expression but not the second expression. For example, you may want to query for email messages that have Ryan as the author, but do not have Will as the recipient. The following record illustrates these conditions:

Document	OCR	Recipient	Author
AS00001	From: Ryan To: Will	Will	Ryan

- You can perform a dtSearch using the search string Ryan AND NOT Will and return results that do not include document AS00001.
- The dtSearch engine combines into a single pool the text for all fields identified for inclusion in an index. A search string using the AND NOT operator queries the index that includes the combine text from all indexed fields, rather than querying the content of individual fields. This behavior ensures consistent result sets when querying with the AND NOT operator.

Note: A keyword search is an SQL full text search, which queries individual fields. Keyword searches do not return the same results as dtSearch when using the NOT operator to query across multiple fields. See NOT operator.

The following graphic depicts what documents return when you use the AND NOT operator in a dtSearch string:



9.5.5.4 Operator precedence - no parentheses

The precedence, or order of evaluation, determines how a group of expressions evaluates in a query.

Note: By default, dtSearch evaluates OR expressions before AND expressions: A AND (B OR C). Unlike dtSearch, the order of precedence for a keyword search evaluates AND expressions before OR expressions: (A AND B) OR C. See Keyword search.

Evaluation order for the search string: *apple AND pear OR grape*

- pear OR grape evaluates first
- AND apple evaluates second

Documents containing the following terms return:

- pear, grape, apple
- pear, apple

- grape, apple

9.5.5.5 Operator precedence - with parentheses

Parentheses allow you to group expressions and control the order of query string execution where the query string contains both AND and OR operators. dtSearch requires both AND and OR operators for the parentheses to affect query results and ignores parentheses when the query string does not contain both operators.

For query strings containing both AND and OR operators, dtSearch evaluates OR first before AND. However, expressions contained within parentheses take precedence. If you want AND evaluated before OR, place the AND expression within parentheses.

Evaluation order for the search string: *grape OR (apple AND pear)*

- *apple AND pear* evaluated first as they reside within the parentheses
- *OR grape* evaluated second

dtSearch returns documents containing the following terms:

- apple, pear, grape
- apple, pear
- grape

9.5.5.6 Workaround for expressions containing only AND or OR operators

Use a proximity operator to separate query expressions. For example, insert a PRE proximity operator between each expression of the search string.

Evaluation of the search phrase: *(grape OR apple) PRE/1 (banana OR pear)*

dtSearch returns documents containing the following terms:

- grape banana
- grape pear
- apple banana
- apple pear

Evaluation of the search phrase: *(grape OR apple) (banana OR pear)*

dtSearch ignores the parentheses and analyzes the query as *grape OR apple banana OR pear* and returns documents with the following terms:

- grape
- apple banana
- pear
- grape, apple banana, pear

9.5.6 Exact phrase - no double quotes

Searching for words next to each other with no operator between them constitutes an exact phrase in dtSearch. For example, if you search for apple pear, dtSearch returns documents that contain the exact

phrase apple pear. There is no rule that requires double quotes around a phrase of any number of words. You only need to use double quotes when searching for a word that is a dtSearch operator. For more details, see Exact phrase - double quotes.

Search string: *pear orange*

- Returns the exact phrase: *pear orange*
- Does not return standalone word: *pear*
- Does not return standalone word: *orange*

Search string: *apple grape banana*

- Returns the exact phrase: *apple grape banana*
- Does not return partial phrase: *apple grape*
- Does not return standalone word: *grape banana*

9.5.7 Fuzzy searching

Using the dtSearch engine, you can perform fuzzy searches, which return documents containing spelling variations of a specified term. You may want to use fuzzy searching when querying documents that contain misspelled terms, typographical errors, or you have scanned with Optical Character Recognition (OCR).

Note: Fuzzy searching is not supported in Search Terms Reports (STR). You must use the Dictionary function to perform fuzzy searching. You would then add the desired terms to the STR. For information on how to use the Dictionary, see Running a Dictionary search.

The percent sign (%) is the character used for fuzzy searches. The number of % used indicates how many characters in the search term dtSearch engine ignores when it runs the query. The position of the % indicates the number of characters from the beginning of the term that must match exactly with words in the result set. The following search strings illustrate how to use this character:

- app%ly indicates that a matching word must begin with app and differ from apply by only one character.
- a%%pply indicates that a matching word must begin with a and differ from apply by only two characters.

9.5.7.1 Using the fuzziness operator and fuzziness level option

In Relativity, you can use the fuzziness character (%) or the **Fuzziness Level** menu to perform fuzzy searches. The availability of these search options depends on the location where you are running a dtSearch:

- **Documents tab**—when you select a dtSearch in the **Search With** option, you can use the fuzziness character (%). See Running a dtSearch.
- **Dictionary Search**—when you click the **Dictionary** link, you can use the fuzziness character (%) and the **Fuzziness Level** menu on the Dictionary Search dialog. See Running a Dictionary search. In the **Fuzziness Level** menu, you can select a value from 1 to 10, which applies to all terms in the text box. Larger numbers return terms with more variation. We recommend using values between 1-3 for moderate error tolerance. The following table describes the expected results for sample settings.

Fuzziness level	Description of search results
Blank	Only returns the entered term.
1	Returns slight variations of the entered term.
4	Returns multiple variations of the entered term.

- **Saved Search**—when you create a saved search, you can use the fuzziness operator (%) and the **Fuzziness Level** menu when you add a dtSearch index condition or by clicking the **Dictionary** link. The **Fuzziness Level** menu in a saved search uses the same settings as described above. See Saved search.

  Note: The **Fuzziness Level** menu is independent of the fuzziness (%) character that you can enter in the text box. A search for appl% without a *Fuzziness Level* setting may return documents containing apple or apply, since these terms have the stem appl and differ by one character.

Fuzzy searching uses term length and fuzziness level to decide how many % characters to add. This is not a straight level to character match. This means a level seven fuzziness search does not necessarily mean up to seven additional characters return.

9.5.8 Noise words and the alphabet file

The dtSearch engine references a default list of noise words and an alphabet file when it creates a new index. The dtSearch index excludes the noise words to improve query performance and prevent unnecessary index growth. When you run a query, dtSearch ignores words such as AND, THE, and WILL. The alphabet file determines how queries handle characters and spaces.

Note: If your dtSearches do not return expected results, you may want to contact your system administrator to adjust the noise word list or alphabet file.

9.5.8.1 Alphabet file

The dtSearch engine uses an alphabet file to define which characters to treat as text, cause word breaks, and ignore. System administrators can modify the default alphabet file when they create or edit a dtSearch index. See Making a special character searchable.

The alphabet file determines which characters to treat as text, which cause spaces, which cause word breaks, and which to ignore. The categories of items in the alphabet file include:

- **Letters**—all searchable characters, which should include all alphabet characters, a-z and A-Z, and all digits, 0-9.
- **Hyphens**—characters removed during index creation. For example *First-Level* becomes two separate words in a dtSearch index.
- **Spaces**—characters that cause a word break. For example, the period indexes as a space character by default. Thus, dtSearch processes U.S.A. as three separate words: U, S, and A. Values listed as \## are Unicode characters. Their definitions are:
  - \09—horizontal tab
  - \0a—line feed
  - \0c—form feed

- \0d—carriage return
- \5c—backslash (\)

Note: Do not remove these Unicode characters from your alphabet file.

- **Ignore**—characters that dtSearch should disregard in processing text. For example, if you classify the period as ignore instead of space, then dtSearch would process U.S.A. as one word, USA.

Note: dtSearch does not recognize the underscore (_) as a space by default. Check the [Spaces] section to ensure that any character you want to treat as a word separator is properly defined in dtSearch.

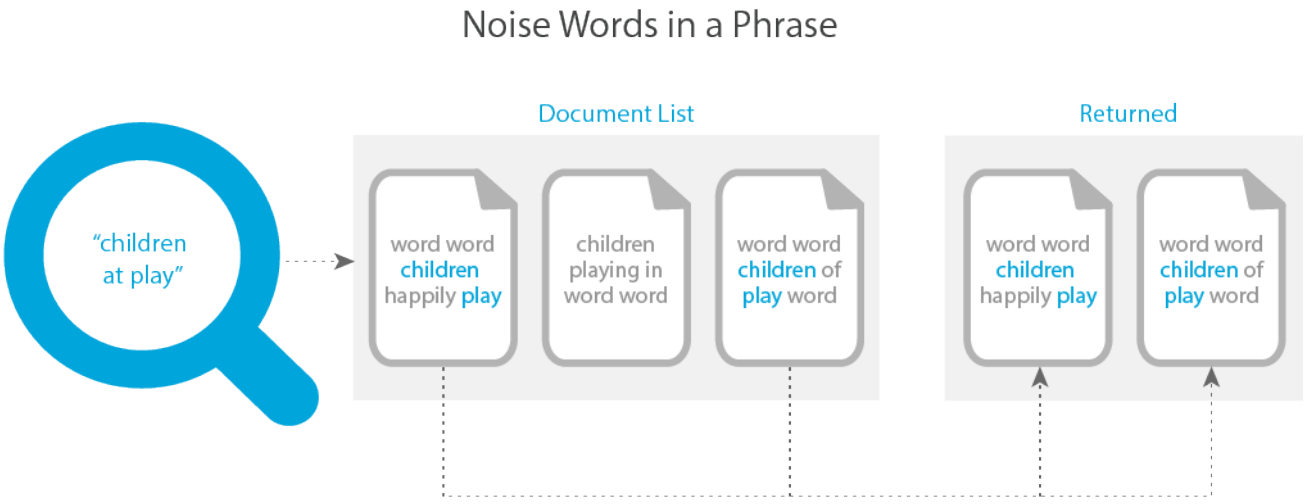
9.5.8.2 Default noise word list

The following table shows the default noise words list. System administrators can modify this list when they create or edit a dtSearch index. Thus, if you search for a phrase that contains a term in the noise words list, you need to remove the term from the list and rebuild your index.

Begins with...	Noise words
A	a, about, after, all, also, an, and, another, any, are, as, at
B	be, because, been, before, being, between, both, but, by
C	came, can, come, could
D	did, do
E	each, even
F	for, from, further, furthermore
G	get, got
H	had, has, have, he, her, here, hi, him, himself, his, how, however
I	i, if, in, indeed, into, is, it, its
J	just
L	like
M	made, many, me, might, more, moreover, most, much, must, my
N	never, not, now
O	of, on, only, or, other, our, out, over
S	said, same, see, she, should, since, some, still, such
T	take, than, that, the, their, them, then, there, therefore, these, they, this, those, through, thus, to, too
U	under, up
V	very
W	was, way, we, well, were, what, when, where, which, while, who, will, with, would

Begins with...	Noise words
Y	you, your

The following graphic depicts what documents return when you include noise words in a dtSearch string:

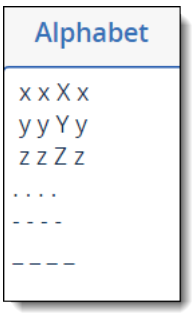


9.5.8.3 Making a special character searchable

Note: You can make special characters searchable in a dtSearch index. However, you must escape some characters when using regular expressions. For more information, see the Searching for symbols recipe on the Relativity documentation site.

1. Navigate to the **dtSearch index**.
2. Click **Edit**, and then scroll down to the Alphabet section.
3. Delete the character from the current category, such as *hyphen* or *spaces*. Do not delete the category heading.
4. Enter the character you want to make searchable four times, separated by spaces under the section **[Letters] // Original letter, lower case, upper case, unaccented**.

   Note: You must also begin with a space.



5. Perform a full build on the dtSearch index. The search now adds the characters you included.

Note: If you make any symbol a searchable character in your dtSearch index and then build an index on a long, uninterrupted search string, such as a file path, dtSearch truncates the string after the 32nd character. For more information, see Searching for words longer than 32 characters.

9.5.9 Numerical patterns

To search for other numerical patterns, such as social security numbers, you can use the = wildcard, which matches any single digit. For example, if you include hyphens as spaces, then the following search request would find United States social security numbers:

=== == ====

This searching pattern can return false hits. For example, no valid social security number begins with nine. However, this is the only way to get social security numbers with spaces instead of dashes.

Note: dtSearch support notes that the === == ==== notation is higher performing than a regular expression for the same pattern, assuming you are comfortable with getting some false hits.

9.5.10 Phonic searching

Using the dtSearch engine, you can perform phonic searching, which returns documents containing words that sound like the word you are searching for and begins with the same letter. The pound sign (#) is the character used for phonic searches when added to the front of a word. For example, a phonic search for pear also finds pair and pare.

You can also use phonic searching in Dictionary searches.

9.5.11 Stemming

Using the dtSearch engine, you can perform stemming searches, which return documents containing grammatical variations of a root word. Stemming limits to English only. The tilde (~) is the character used for stemming searches when added at the end of the root word. For example, a search on apply~ returns documents containing the words apply, applying, applies, and applied. After you perform a stemming search, you can enter applied in the **Find Next** box, and then click the **Find Next** icon to locate hits or grammatical variations.

Because stemming only works with the root word, it generally does not return irregular variations of a verb. For example, a search on run~ would not return ran. The dtSearch engine only supports stemming for the English language.

9.5.11.1 Using the stemming operator and enable stemming checkbox

In Relativity, you can use the stemming character (~) or the **Enable Stemming** checkbox to perform stemming searches. The availability of these search options depends where you are running a dtSearch:

- **Documents tab**—when you select a dtSearch in the **Search With** option, you can use the stemming character (~). See Running a dtSearch.
- **Dictionary Search**—when you click the **Dictionary** link, you can use the stemming character (~) and the **Enable Stemming** checkbox on the Dictionary Search dialog. See Running a Dictionary search.
- **Saved Search**—when you create a saved search, you can use the stemming character (~) and the **Enable Stemming** checkbox in the Search Conditions section of the form. See Saved search.

The **Enable Stemming** checkbox is independent of the stemming (~) character that you can enter in the **Search Terms** box or **Dictionary Search** text box. A search for apply~ with **Enable Stemming** checkbox unselected returns apply, applied, applies, or applying. A search for apply with **Enable Stemming** checkbox selected returns the same results.

9.5.11.2 Using fuzzy searching and stemming together

With fuzzy searching *and* stemming enabled, it checks for a fuzzy match twice, once on the original term, and once comparing the stemmed word with the stemmed word in the index. A match on either counts as a hit.

9.5.12 Wildcards

The dtSearch engine supports special characters that you can use as wildcards. It also supports the use of leading wildcards, or those added to the beginning of a word. The following characters represent wildcards in dtSearches:

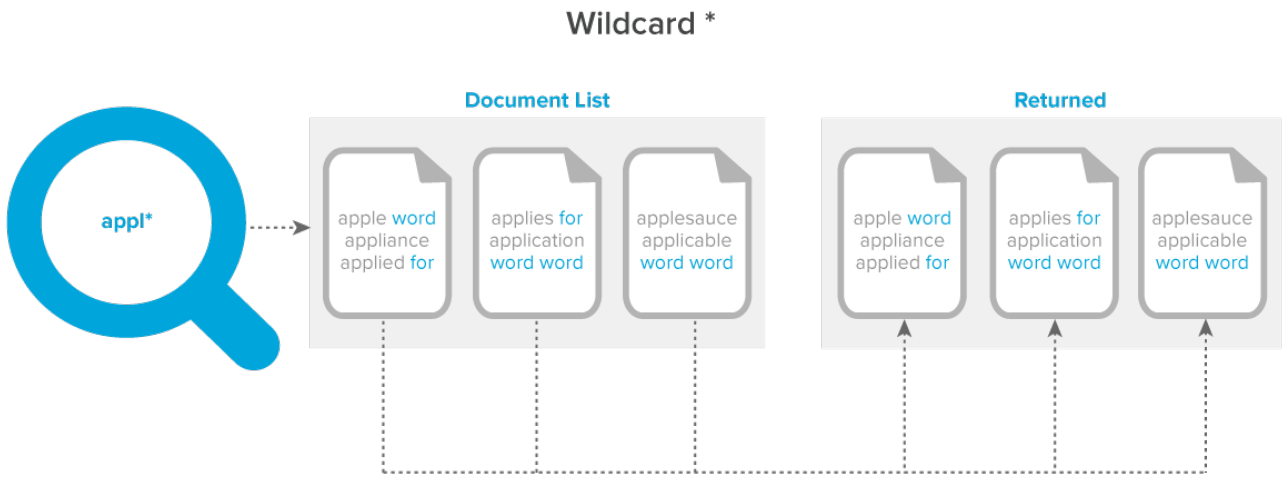
Special character	Function
?	Matches any single unknown character in the specified position in a word. Must be a character and not a blank or empty space.
*	Matches any number of unknown characters in a word, including a blank or empty space. **Note:** This character slows searches when used near the beginning or middle of a word.
~	Matches words containing grammatical variations of a root word. The tilde (~) is the stemming character available in dtSearches. See Stemming.
=	Matches any single numerical digit. Use multiple equal (=) signs to match a particular numerical pattern. See Numerical Patterns.

As illustrated in the following table, you can add wildcards to the root of any word to return matching terms from a dtSearch.

Sample search string	Description of search results
appl?	Matches apply and apple, but not apples.
folder?	Matches folders, but not folder.
pe?r	Matches pear, peer
?ear	Matches pear, dear, hear
appl*	Matches appl, apple, apples, application.
cipl	Matches principle, participle, disciplined.
ap*ed	Matches applied, approved, appeased
apply~	Matches apply, applied, applies.
=th	Matches 4th, 5th, 6th.
=== == ====	Matches United Stages Social Security Numbers (hyphens represented as

Sample search string	Description of search results
	spaces)

The following graphic depicts what documents return when you use the * wildcard in a dtSearch string:



The following graphic depicts what documents return when you use the ? wildcard in a dtSearch string:

9.5.13 W/N operator

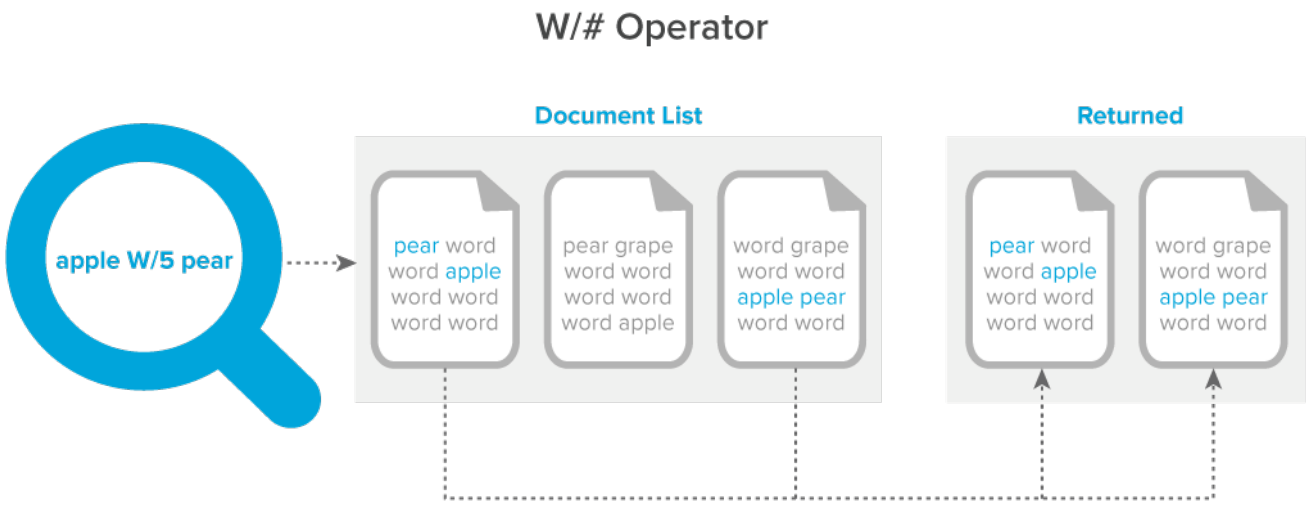
You can use the W/N, within N words, operator to return documents with two words or phrases occur within a certain proximity of each other. When using Boolean operators in a proximity search with the W/N operator, dtSearch includes noise words. The N value represents the number of intervening words. For example, the search expression apple W/5 pear returns documents that contain apple only when it occurs within five words of pear. The documents returned by the search must contain the terms within the required proximity, such as five words.

The W/N operator is symmetrical. The search expression apple W/5 pear returns the exact same document as pear W/5 apple.

Note: dtSearch treats Single characters as full words when using this operator. For instance, if you search for Harry W/2 Truman, your search retrieves documents that include Harry S Truman or Harry S. Truman.

Note: Relativity does not support the WI operator. Use the W/N syntax to search for documents having words or phrases within a certain proximity of each other.

The following graphic depicts what documents return when you use the W/# operator in a dtSearch string:



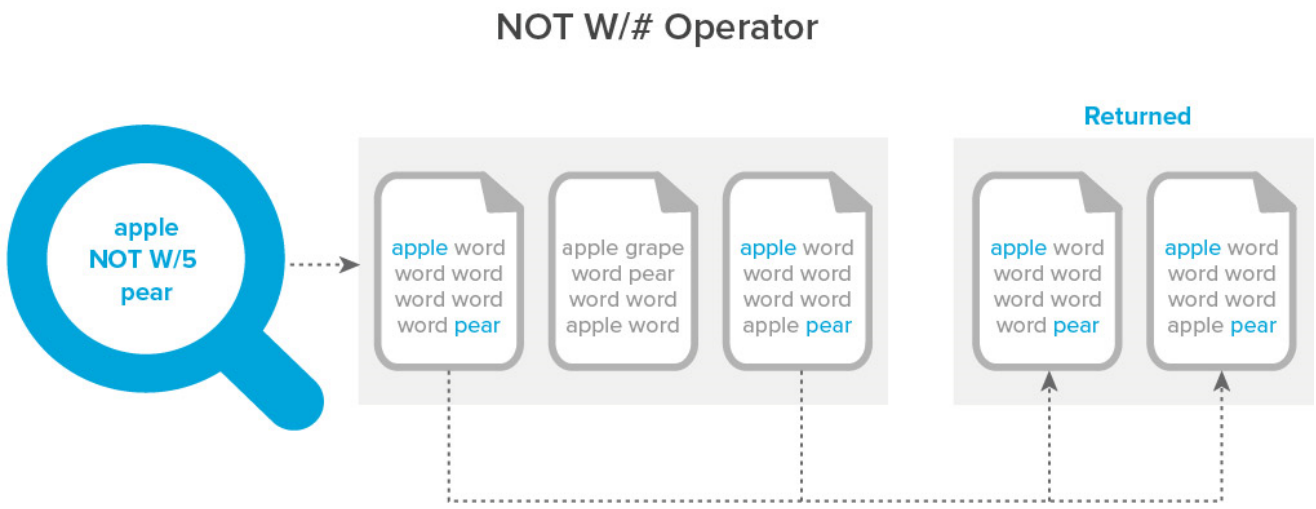
9.5.13.1 NOT W/N

You can use the NOT W/N, not within N words, operator to exclude documents from a result set when two words or phrases are within a certain proximity of each other.

For example, the search expression apple NOT W/20 pear returns documents that contain apple when separated from pear by at least 20 words. It also returns documents that do not contain pear. Documents that contain *apple* separated from pear multiple times with varying proximity return as long as there is at least one concurrence where apple separates from pear by at least 20 words.

The NOT W/N is not symmetrical. The search expression apple NOT W/20 pear does not return the same documents as pear NOT W/20 apple.

The following graphic depicts what documents return when you use the NOT W/# operator in a dtSearch string:



9.5.13.2 Complex expressions

You can create complex expressions with the W/N operator by connecting words or phrases. At least one of these expressions must be a single word, phrase, or group of words and phrases connected by an OR operator as illustrated by the following:

- (apple AND banana) W/10 (pear OR grape)
- (apple AND banana) W/10 (orange tree)

Note: You can break up complex expressions with OR connectors into separate searches. Search apple w/10 "orange tree" OR banana w/10 "orange tree" to return the same results as (apple OR banana) W/10 "orange tree".

Avoid creating complex expressions that produce ambiguous results as illustrated in the following examples:

- (apple AND banana) W/10 (pear AND grape)
- (apple w/10 banana) w/10 (pear and grape)

Note: dtSearch displays a warning message when you enter an ambiguous search request.

You can also use the Boolean operators AND and OR to connect proximity expressions as illustrated in the following examples:

- (apple w/10 banana) AND (pear w/5 grape)
- (apple or banana) OR (pear w/5 grape)

Note: When connecting proximity expressions using Boolean operators, you must use parentheses.

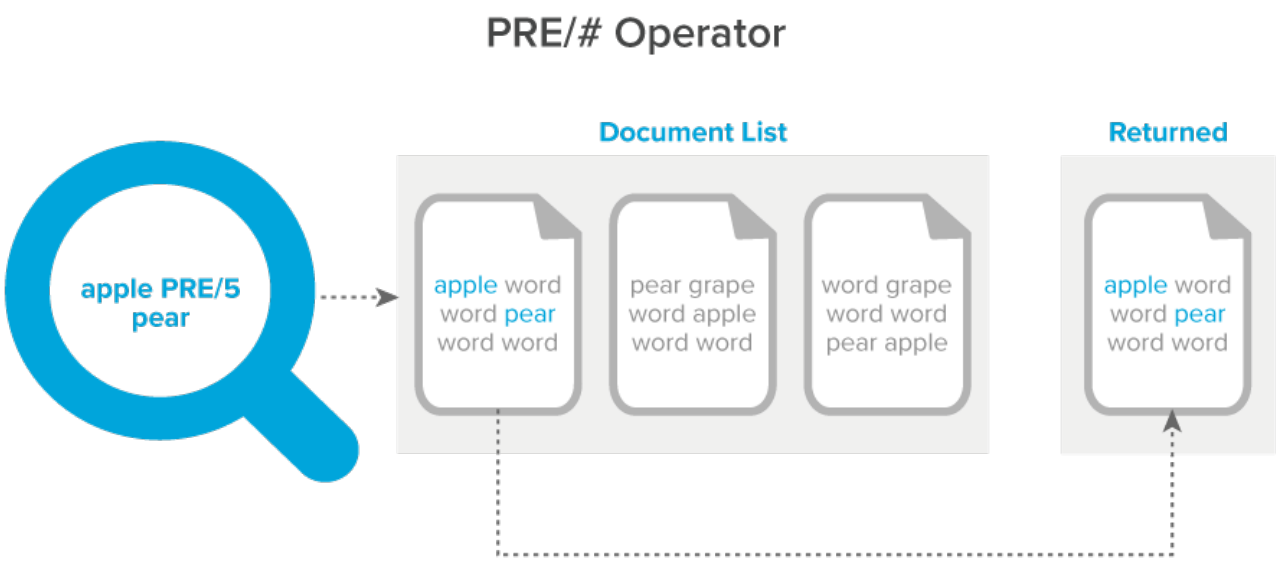
9.5.13.3 Proximity with terms order

You can use the PRE operator to search for a word that appears within a certain number of words before another word.

For example, the search string apple PRE/5 pear returns documents where apple appears within five words before pear.

Note: Relativity does not use the POST operator. However, you can mimic this functionality by reversing the order of the terms, and using the PRE operator.

The following graphic depicts what documents return when you use the PRE/# operator in a dtSearch string:



9.5.14 Words and phrases

With a dtSearch, you can use double quotes to search for a phrase. For example, the phrase *fruit salad* in the search string apple w/5 "fruit salad". The following list outlines how dtSearch queries on words or phrases with noise words or punctuation:

- **Phrases with Noise Words**—dtSearch skips any noise words in a phrase. For example, it skips of in the search string Statue of Liberty and retrieves any documents that contains statue an intervening word, and liberty.
- **Words with Punctuation**—punctuation treated as a space when inside a word. For example, dtSearch treats the search term can't as two words, can and t.
- **Numbers and Characters in Parenthesis**—you may see unexpected results when you use numbers or characters in parenthesis in a dtSearch. For example, the search term 1843 (c)(8)(ii) returns as four words.

9.5.15 Other considerations

- dtSearch does not recognize an underscore (_) by default. You must add the underscore to the Spaces section if you want it to be considered a space in dtSearch. For more information, see Alphabet file on page 94.
- Relativity does not use the colon (:) or ampersand (&), even though considered a syntax term by the dtSearch index. If you want to use these symbols, the following applies:

- To include either symbol in the dtSearch index, you must add it to the alphabet file.
- To search for either symbol within file content, you must use a regular expression to define the character. Searching for special characters on their own produces incorrect results.

- dtSearch indexes are case insensitive by default. All characters in a dtSearch index normalize to lowercase. For example, if your exact phrase search is an acronym like ACT, you must build a case-sensitive dtSearch index.
- For more information on making noise words and alphabet lists searchable, see Making the dtSearch noise word and alphabet list searchable.

9.6 dtSearch queue admin

With the dtSearch queue admin page, you can monitor all dtSearch indexing jobs across an instance of Relativity that are not yet complete. This page only shows dtSearch jobs that you can access.

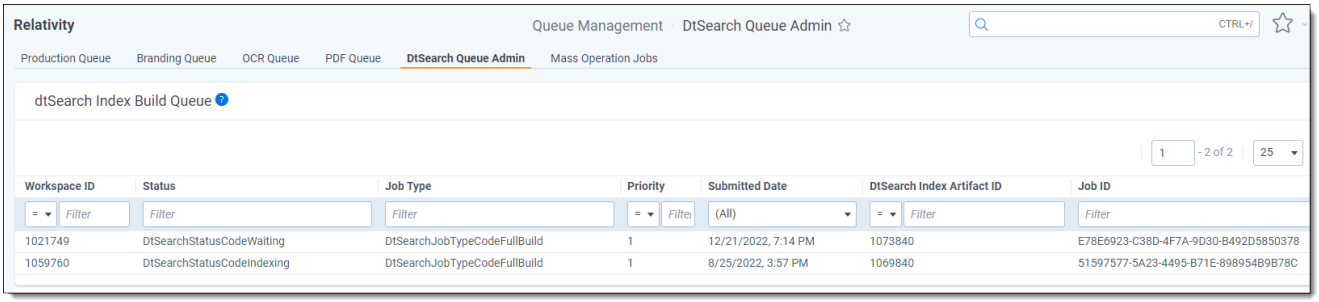
9.6.1 Permissions

You must have the *DtSearch Queue Admin* Tab Visibility permission to view.

Note: As of February 2025, the new Feature Permissions redefines Relativity's security management by shifting the focus from Object Types and Tab Visibility to feature-based permissions. This new method is simply another option; any feature-specific permissions information already in this topic is still applicable. This new interface enables administrators to manage permissions at the feature level, offering a more intuitive experience. By viewing granular permissions associated with each feature, administrators can ensure comprehensive control, ultimately reducing complexity and minimizing errors. For details see Instance-level permissions and Workspace-level permissions.

9.6.2 Monitoring dtSearch indexing jobs

The dtSearch Queue Admin is an instance-level page. This page is a sub-tab of Queue Management.



The following list contains the information you can find in the dtSearch Index Build Queue list:

- **Workspace ID**—the ID of the workspace that contains the products set used for the job.
- **Status**—the current stage of the production job.
- **Job Type**—the type of job submitted. For example, Single, Mass, or Delete.
- **Priority**—the priority setting for the indexing job.

- **Submitted Date**—the date and time the search index was run.
- **DtSearch Index Artifact ID**—the unique ID assigned to the index.
- **Job ID**—the unique ID assigned the job.

10 Searching with regular expressions (regex)

A regular expression is a form of advanced searching that looks for specific patterns, as opposed to certain terms and phrases. With regular expressions, you can use pattern matching to search for particular strings of characters rather than constructing multiple, literal search queries.

Regular expressions uses metacharacters in conjunction with a search engine to retrieve specific patterns. Metacharacters are the building blocks of regular expressions. For example, “\d” in a regular expression is a metacharacter that represents a digit character. “d” stands for the literal character, “d.” You can use regular expressions to search for social security numbers, patent numbers, URLs, email addresses, Bates numbers, and other strings that follow a specific pattern.

There are several implementations of regular expressions. The differences in implementations usually include the way special characters are handled and how character classes are treated.

10.1 Use cases for regular expressions

Regular expressions can help you in cases where you need to find different numbers that contain the same pattern.

Take, for example, the serial numbers in the first cell below. Instead of writing three literal search strings to match each serial number, you can construct one regular expression to match the serial numbers’ pattern. This single regular expression returns any document that contains any of the three serial numbers. In the second cell, there is another serial number with a slightly different pattern. By making a few adjustments to your regular expression string, your search results return documents with the new pattern.

Text	Pattern/Regular Expression
■ XFRD-8324-ERWH-3231 ■ GHSR-3413-KBKV-8173	■ Pattern: 4 letters-4 digits-4 letters-4 digits ■ Regular expression: [a-zA-Z]{4}-[0-9]{4}-[a-z]{4}-[0-9]{4}
■ ABC.001.001.0001_0001 ■ xyz.123.123.1234_1234	■ Pattern: 3 letters.3 digits.3 digits.4 digits_4 digits ■ Regular expression: [a-zA-Z]{3}\.[0-9]{3}\.[0-9]{3}\.[0-9]{4}_[0-9]{4}

Note: Think of each regular expression as a phrase when you construct your search string. If you switch the order of the string you will not receive the same results.

Unless you modify your dtSearch index to be case-sensitive, you cannot use capital letters when constructing a regular expression in dtSearch.

For example, if you search for strings that begin with NLRT:

- NLRT-0381
- NLRT-6334
- NLRT-9167

Use the following regular expression in Relativity: "##nlrt-\d{4}"

10.2 Regular expression metacharacters

Metacharacters are the building blocks of regular expressions. Characters in regular expressions are understood to be either a metacharacter with a special meaning or a regular character with a literal meaning.

The following are some common regular expression metacharacters and examples of what they would match or not match in regular expression.

Metacharacter	Description	Examples
\d	Whole Number 0 - 9	\d\d\d = 327 \d\d = 81 \d = 4 --- \d\d\d ≠ 24631 \d\d\d does not return 24631 because 24631 contains 5 digits. \d\d\d only matches for a 3-digit string.
\w	Alphanumeric Character	\w\w\w = dog \w\w\w\w = mule \w\w = to --- \w\w\w = 467 \w\w\w\w = 4673 --- \w\w\w ≠ boat \w\w\w does not return boat because boat contains 4 characters. --- \w ≠ ! \w does not return the exclamation point ! because it is a non-alphanumeric character.
\W	Symbols	\W = % \W = # \W\W\W = @#%

Metacharacter	Description	Examples
		---------- \W\W\W\W ≠ dog8 \W\W\W\W does not return dog8 because d, o, g, and 8 are alphanumeric characters.
[a-z] [0-9]	Character set, at least one of which must be a match, but no more than one unless otherwise specified. The order of the characters does not matter.	pand[ora] = panda pand[ora] = pando ---------- pand[ora] ≠ pandora pand[ora] does not bring back pandora because it is implied in pand[ora] that only 1 character in [ora] can return. Quantifiers that allow pand[ora] to match for pandora is discussed below.
(abc) (123)	Character group, matches the characters abc or 123 in that exact order.	pand(ora)= pandora pand(123)= pand123 ---------- pand(oar) ≠ pandora pand(oar)does not match for pandora because it's looking for the exact phrase pandora.
|	Alternation—allows for alternate matches. | operates like the Boolean OR.	pand(abc|123) = pandabc OR pand123
?	Question mark matches when the character preceding ? occurs 0 or 1 time only, making the character match optional.	colou?r = colour (u is found 1 time) colou?r = color (u is found 0 times)
*	Asterisk matches when the character preceding * matches 0 or more times. **Note:** The asterisk (*) in regular expression is different from * in dtSearch. Regular expression * is asking to find where the character, or grouping, preceding * is found ZERO or more times. dtSearch * is asking to find where the string of characters preceding * or following * is found 1 or more times.	tre*= tree (e is found 2 times) tre* = tre (e is found 1 time) tre* = tr (e is found 0 times) ---------- tre* ≠ trees tre* does not match the term trees because although "e" is found 2 times, it is followed by "s" , which is

Metacharacter	Description	Examples
		not accounted for in the regular expression.
+	Plus sign matches when the character preceding + matches 1 or more times. The + sign makes the character match mandatory.	tre+ = tree (e is found 2 times) tre+ = tre (e is found 1 time) --- tre+ ≠ tr (e is found 0 times) tre+ does not match for tr because e is found zero times in tr.
. (period)	The period matches any alphanumeric character or symbol.	ton. = tone ton. = ton# ton. = ton4 --- ton. ≠ tones ton. does not match for the term tones because . by itself will only match for a single character, here, in the 4th position of the term.Â In tones, s is the 5th character and is not accounted for in the regular expression.
.*	Combine the metacharacters . and *, in that order .* to match for any character 0 or more times. **Note:** .* in regular expression is equivalent to dtSearch wildcard * operator.	tr.* = tr tr.* = tre tr.* = tree tr.* = trees tr.* = trough tr.* = treadmill

10.2.1 Regular expression quantifiers

Regular expressions uses quantifiers to indicate the scope of a search string. You can use multiple quantifiers in your search string. The following table gives examples of the quantifiers you can use in your regular expression:

Quantifier	Description	Examples
{n}	Matches when the preceding character, or character group, occurs n times exactly.	\d{3} = 836 \d{3} = 139 \d{3} = 532 --- pand[ora]{2} = pandar

Quantifier	Description	Examples
		pand[ora]{2} = pandoo pand(ora){2} = pandoraora --- pand[ora]{2} ≠ pandora pand[ora]{2} does not match for pandora because the quantifier {2} only permits for 2 letters from the character set [ora].
{n,m}	Matches when the preceding character, or character group, occurs at least n times, and at most m times.	\d{2,5} = 97430 \d{2,5} = 9743 \d{2,5} = 97 --- \d{2,5} ≠ 9 9 does not match because it is 1 digit, thus outside of the character range.

10.2.2 Escaping regular expression metacharacters

When using regular expressions to search for a character that is a reserved metacharacter, use the backslash \ to escape the character so it can be recognized. The following table gives an example on how to escape a reserved metacharacter when searching.

Search For	Regular Expression	Match Results
UK phone number	\+[0-9]{11}	>+14528280001 +38119930978 ---If the + sign is not escaped with a backslash, regular expressions treat + as a quantifier instead of the literal plus sign character.

10.3 Using regular expressions with dtSearch

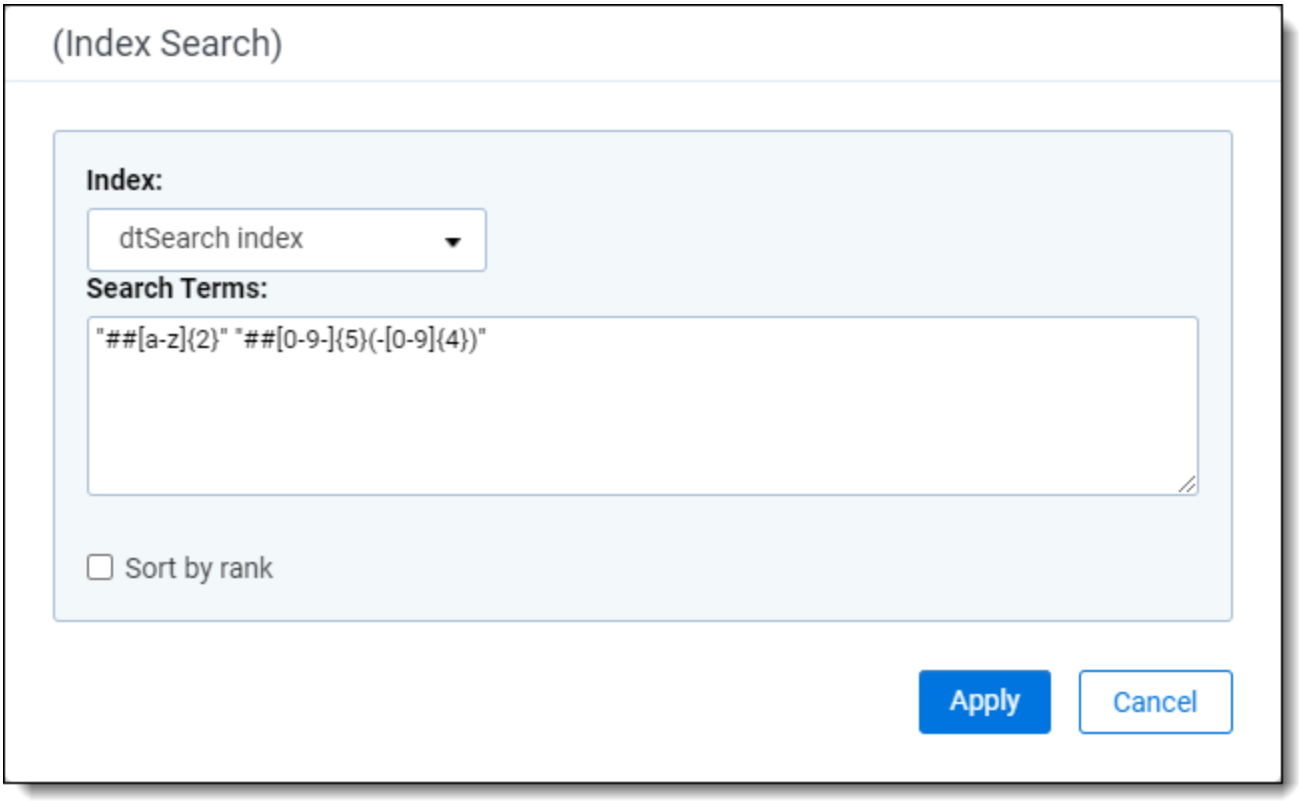
You can use regular expressions with your dtSearch index to search for more complex items such as Bates numbers, zip codes, and phone numbers. You can also use regular expressions in conjunction with proximity, stemming, and fuzzy searching in dtSearch.

Using Regular Expressions

Your case team needs to find documents containing a variety of serial numbers that all match the same pattern. The pattern consists of five letters, a hyphen, then four numbers: ABCDE-1234. Instead of searching for every possible serial number, you decide to use a regular expression to find all instances of the serial number in your document set. Using regular expressions will save your case team a lot of time. You use the following regular expression search string: "##[a-z]{5}-[0-9]{4}"

10.3.1 Regular expression search strings

To activate regular expressions in dtSearch, use double pounds signs (##) at the beginning of your search string. You can start your search from the search bar on the List page, or by adding a condition from the search panel. For details on how to run a dtSearch, see Running a dtSearch.



Relativity breaks down the regular expression syntax as follows:

"##ExampleRegularExpressionText": The double pound signs (##) signals to Relativity that the string following ##, and enclosed by double quotes, should be interpreted as regular expression. Be sure to use straight double quotes (**""**) and not curly quotes (“”). Curly quotes may cause the regular expression to fail. You also want to avoid using capital letters in your regular expression because all characters in a dtSearch index are normalized to lowercase. You can use the Dictionary to help troubleshoot an individual regular expression. If your expression does not match in the Dictionary, it will not match in the index.

Note: Starting in Relativity 10.0.119.1, regular expression searches run from the Document List will highlight search hits in the Native Viewer for any returned documents. This does not apply to the Extracted Text mode of the Viewer.

Note: All regular expressions with dtSearch must begin with the ## call sign. If any table entries below do not include the call sign, be sure to add them to your search string before executing.

10.3.2 Regular expression metacharacters

Metacharacters are the building blocks of regular expressions. Characters in regular expression are understood to be either:

- a metacharacter with a special meaning, or
- a regular character with its literal meaning

10.3.2.1 View regular expression metacharacters examples

Note: dtSearch **does not** accept white space characters, even with regular expressions.

Metacharacter	Description	Example
\d	Whole number 0 - 9	\d\d\d = 327 \d\d = 81 \d = 4 \d\d\d ≠ 24631 \d\d\d does not return 24631 because 24631 contains 5 digits. \d\d\d only matches for a 3-digit string.
\w	Alphanumeric character	\w\w\w = dog \w\w\w\w = mule \w\w = to \w\w\w = 467 \w\w\w\w = 4673 \w\w\w ≠ boat \w\w\w does not return boat because boat contains 4 characters. \w ≠ ! \w does not return the exclamation point ! because it is a non-alphanumeric character.
\W	Symbols	\W = % \W = # \W\W\W = @#% \W\W\W\W ≠ dog8 \W\W\W\W does not return dog8 because d, o, g, and 8 are alphanumeric characters.

Metacharacter	Description	Example
[a-z] [0-9]	Character set, at least one of which must be a match, but no more than one unless otherwise specified. The order of the characters does not matter.	pand[ora] = panda pand[ora] = pando pand[ora] ≠ pandora pand[ora] does not bring back pandora because it is implied in pand[ora] that only 1 character in [ora] can return.

10.3.3 Regular expression groups

With regular expression groups you can match for groups of characters within a string. The following table provides examples of how to use groups in your regular expression. Groups are most useful when you use them in conjunction with alternation and quantifiers.

Metacharacter	Description	Example
(abc) (123)	Character group, matches the characters abc or 123 in that exact order.	pand(ora) = pandora pand(123) = pand123 pand(oar) ≠ pandora pand(oar) does not match for pandora because it is looking for the exact phrase pandoar.

10.3.4 Escaping regular expression metacharacters

When using regular expression to search for a character that is a reserved metacharacter, use the backslash \ to escape the character so it can be recognized in its literal sense. The following table gives an example on how to escape a reserved metacharacter when searching.

Search for	Regular expression	Match results
International phone number (UK)	\+[0-9]{12}	+447700900954 +447700900312 If the + sign is not escaped with a backslash, regular expression treats + as a quantifier instead of the literal plus sign character.

10.3.4.1 Regular expression caveats in dtSearch

There are a few caveats to consider when using regular expressions in dtSearch. Consider the following caveats before constructing your regular expression.

- The metacharacter \s never matches a whitespace character in Relativity, because whitespace characters do not exist in a dtSearch index. Instead, spaces are word breaks in dtSearch.
  Unless you modify your dtSearch index to be case-sensitive, you cannot use capital letters when constructing a regular expression in dtSearch.

For example, if you search for strings that begin with NLRT:

- NLRT-0381
- NLRT-6334
- NLRT-9167

Use the following regular expression in Relativity: "##nlrt-\d{4}"

- You cannot search characters which are ignored during indexing, such as punctuation. To index a punctuation character, confirm that it is listed as a letter in your dtSearch alphabet file, and that it is not listed as an ignored, hyphen, or space character.

10.3.5 Common dtSearch regular expression examples

The following table includes examples of dtSearch regular expressions you can use to search for patterns in dtSearch.

Type	Regular Expression	Match Results
Bates numbers	"##rel[0-9]{7}" "##rel\d{7}"	REL0000331 REL3728948
Zip codes	"##[a-z]{2}" "##[0-9]{5}" "##[a-z]{2}" "##\d{5}"	IL 60606 MD 21218 ca 94115
United States Phone numbers	"##[0-9]{3}-[0-9]{4}" "##\d{3}-\d{4}" **Note:** You must make the hyphen (-) searchable in your index.	373-8837 463-9391 819-3814
United States Phone numbers with or without area codes	"##([0-9]{3}-)?[0-9]{3}-[0-9]{4}" **Note:** You must make the hyphen (-) searchable in your index.	312-483-8372 463-9391
Serial numbers	"##[a-z]{4}-[0-9]{4}-[a-z]{4}-[0-9]{4}" "##[a-z]{4}-\d{4}-[a-z]{4}-\d{4}" **Note:** You must make the hyphen (-) searchable in your index.	XRFD-8324-ERWF-3231 GHSR-3413-KWEJ-8173 MPFS-1357-QEGT-9376
Dates	"##[0-9]{1,2}/[0-9]{1,2}/[0-9]{2,4}"	10/17/2015 3/6/98 4/25/2006 12/04/87 95/94/93
Email addresses	"##([\w_\.]+)@([\w_\.]+)\.([\w_\.]{2,6})"	Joe.Smith426@example.com

Type	Regular Expression	Match Results
	Note: You must make the at symbol (@) and period (.) searchable in your index.	743.MaryJane@example.com Brian.23.Voltaire@example.net.uk

11 Saved search

A saved search is a saved set of criteria that returns the latest documents that meet that criteria. For example, if you want to reference documents that contain the terms "confidential" and "property" and are also marked as Relevant, you can create a saved search with that criteria. However, saved searches can be much more complex.

In Relativity, you can create saved searches by defining custom queries and unique views, as well as by selecting public or private security settings, specific folders to query, and nested sort orders. You can also execute a search on the fly, save it for later use, or perform a combination of these tasks.

Since saved searches are executed in real-time, you save the search definition but not the results. Relativity executes the search each time you click on it in the Saved Searches browser and when you return to it after performing other tasks in the workspace. This functionality ensures that only data meeting the search criteria is returned in the result set. You can set the **Requires Manual Rerun** option to control this functionality.

Note: When you execute a saved search, Relativity first applies the conditions then related items, from the search criteria, then the filters from the item list. The only exception is when you have nested relational searches. For example, Search A which relies on the results of Search B. In this scenario, Relativity applies the innermost search conditions, in this case, Search B, then the family Search B relies on. It then applies the outer search conditions, Search A, then the family Search A relies on. Finally, Relativity applies the filters from the item list.

You can also use saved searches as the building blocks in other Relativity features. For example, you are required to select a saved search when you set up a Review Center queue, build a dtSearch or Analytics index, define an imaging set, and perform other tasks in Relativity.

Using saved searches

You need access to all the emails in your workspace that were sent between Jan 1, 2013 and Oct 8, 2014 because they contain many references that are vital to your client's case. You're going to reference these documents multiple times throughout review, so it would be nice to have a way to save them and not have to search for them each time. Relativity's saved search feature permits you to do just that.

You go to the saved search browser and create a new saved search. You set the Includes field to Include Family because you need to return files with the same group identifier as the files that meet the field conditions you are about to enter. For the Conditions field, you select the Sent Date field with an Operator of between. For the two Value choices you select 1/1/2013 and 10/8/2014.

When you click Save & Search, Relativity returns only email that fall in the date range you specified, and any reviewer with permissions to this saved search can easily bring up these documents in the saved search browser at any time.

11.1 Required security permissions

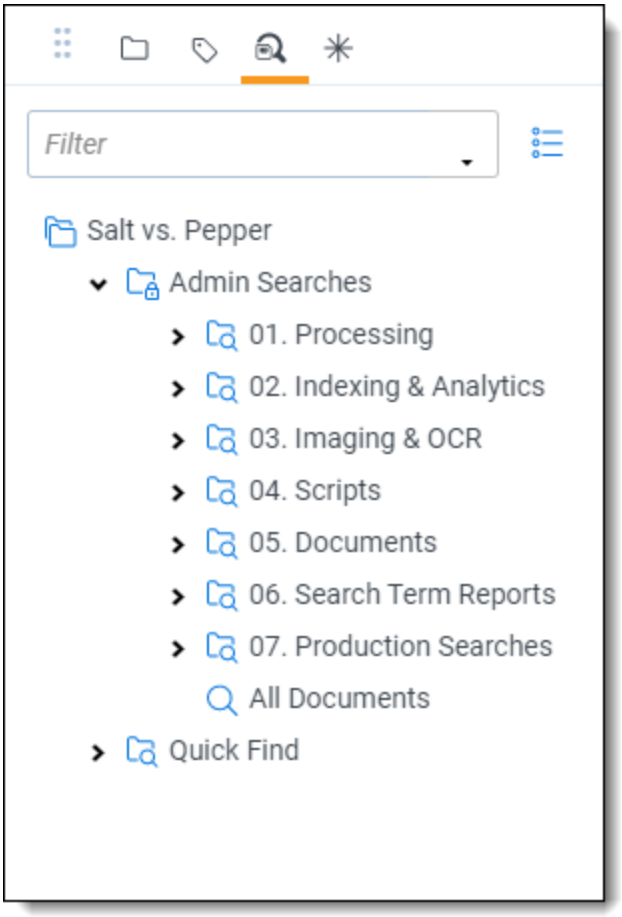
A user must have the following security permissions to view, edit, and add saved searches and saved search folders:

Tab/Permission	Permission	Description
Object Security/Search	View, Edit, Add	Users can view saved searches, edit existing saved searches, and add new saved searches.
Object Security/Search Container	Edit, Add	Users can edit existing saved search folders and add new saved search folders.
Other Settings/Browsers	Advanced & Saved Searches	Users can see and interact with the Saved Searches browser.

For more information, see the guide on Setting workspace permissions.

11.2 Navigating the saved searches browser

On the Documents tab, you can click to view the Saved Searches browser. This browser provides you with features used to create, organize, edit, and perform other tasks with saved searches.



The Search Folder Tree displays the following options:

- **Create New Search** button—click this to display the Saved Search form. To display this form, you can also click any folder, including the root folder.
- **Public**  **or Private**—the icons display next to the name of a saved search to indicate its visibility.
- **Search text box**—enter the name of a search in this field to automatically filter the list as you type to the saved searches that you are looking for. See Filtering the list of saved searches.
- **Display check boxes button**  —click this button to display check boxes in the list to the left of folders and searches. You can then perform mass operations for items that you check. Click the icon again to toggle them off. See Performing mass operations on saved searches.
- **Search Right-click Menu**—highlight a search in the folder tree to display a right-click menu with the following options:
  - **Edit**—displays the Saved Search form, where you can modify the current settings for the search.
  - **Copy**—adds a duplicate of the search to the tree.
  - **Secure**—available on public searches, this option displays a security page so that you can override the security inherited from the workspace, or parent folder. See the Admin guide for more information on Setting permissions on Relativity objects.
  - **Delete**—permanently removes the search from the database.
  - **Email Link**—opens an email message containing a link to the saved search. The Subject line is pre-populated with the following text: "Review - <Workspace Name> - <Search Name>." When the recipient clicks on the link, the saved search is displayed with the current result set.

    Note: Relativity displays a permissions denied message if the recipient clicks the link to display the search but does not have access rights to it.
  - **Copy Link to Clipboard**—copies a URL path to the search to your clipboard.

    Note: Relativity displays a permissions denied message if the recipient clicks the link to display the search but does not have access rights to it.
- **Folder Right-click Menu**—Highlight a folder to display a right-click menu for managing folders. See Organizing saved searches in folders.

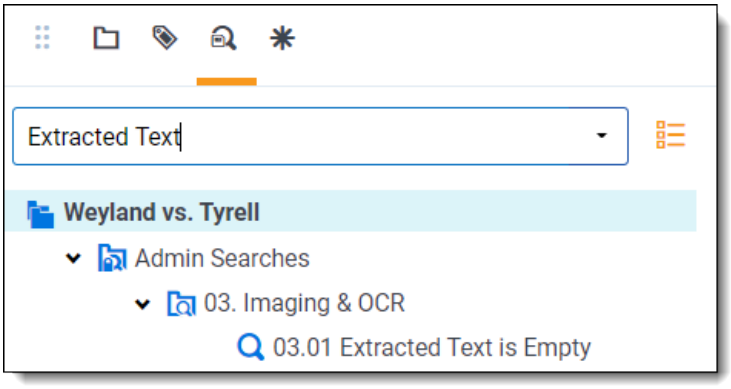
The action bar displays the following when a search is selected in the browser:

- **Show current path icon**  —view the current search browser folder location for the displayed search.
- **Edit Search**  —when you click this icon on the action bar, the Search Builder dialog appears where you can update search criteria.
- **Save Search**  —when you click this icon on the action bar, a pop-up appears where you can select a new owner and modify the search name. See Creating or editing a saved search.

11.2.1 Filtering the list of saved searches

To filter the list in the saved search browser:

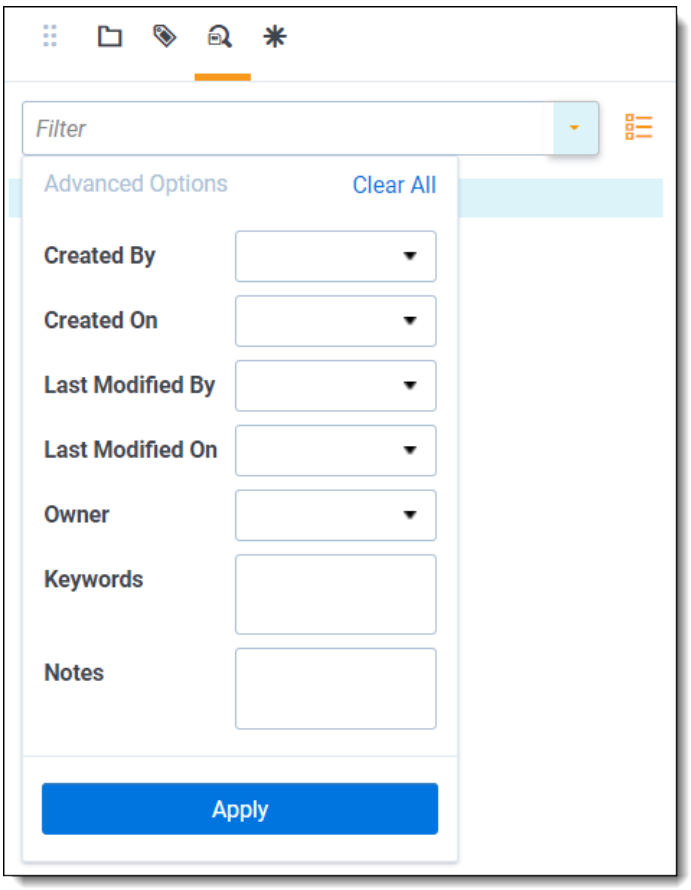
1. Enter text matching the search or search folder you want to see in the Filter text box at the top of the browser.
   Matching searches and search folders display as you type in their respective folders.



2. Select the search you want to view.

You can also expand the Filter text box and filter on advanced searching fields, including:

- **Created By**—choose which user created the saved search.
- **Created On**—select from four different date ranges, including: Past Hour, Today, Past 7 days, and Past 30 days.
- **Last Modified By**—choose which user last modified the saved search.
- **Last Modified On**—select from four different date ranges, including: Past Hour, Today, Past 7 days, and Past 30 days.
- **Owner**—select a specific user or public.
- **Keywords**—enter keywords.
- **Notes**—enter notes.



Note: To remove your filtering from the list, delete the text that is there or click the X to the right. The list of searches will automatically update.

To access Advanced Search Filtering:

1. Navigate to the **Views** tab.
2. Locate the Advanced Search Browser View.
3. Make sure at least one of the following fields is added to the view: Created By, Created On, Last Modified By, Last Modified On, Owner, Keywords, or Notes. We recommend you add them all at once.
4. Click **Save**.

11.2.2 Performing mass operations on saved searches

Note: Add or delete permissions must be selected on the Search object for check boxes to display for the user.

The following mass operations are currently available:

- Copy
- Delete

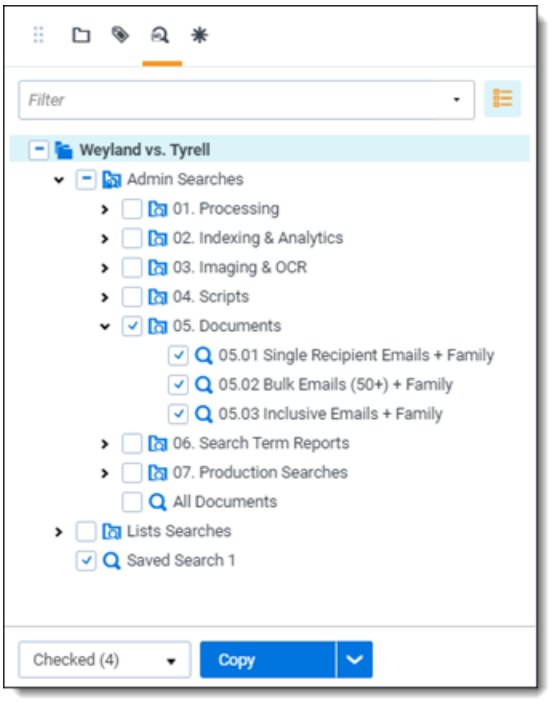
- Move
- Export to file

To perform mass operations on saved searches in the saved search browser:

1. Click the check boxes button to the right of the Filter text box to turn check boxes in the list of searches on.
2. Select the checkbox for an individual search or select the checkbox for a search folder to select searches inside that folder.

   Note: You must expand the search folders before you can check the checkbox for the folder to allow you to examine the searches you will perform a mass operation for.

   The number of selected searches appears in the drop-down list to the left of the mass operations multi-select button below. Alternatively, you can select All from the drop-down list to select all searches.



3. Once you have selected the desired searches, choose the desired mass operation, copy, delete, move, or export to file, from the mass operations multi-select button.

   Note: When selecting the **move** option, sub-folders are not recreated in the destination folder.

4. A pop-up modal window appears, where you edit and confirm the details of the mass operation you are performing.
5. Click **Ok** to complete the operation.

11.3 Controlling the visibility of saved searches

On the saved search form, you can control the visibility of a search by setting the **Owner** option. New searches are private by default, making them visible only to you and Relativity administrators. In addition to owner access, users must have permissions to the **Saved Searches Browser** and at least view permissions for **Search** on the security page. For more information on workspace permissions, see the Admin Guide.

You can change the visibility of a search by selecting one of these options in the **Owner** drop-down menu:

- **Public**—makes the search available to all users with the appropriate permissions.

  Note: You can configure Relativity to make your saved searches public by default. When you create a search, the **Owner** box will display Public. In **My Settings**, select **Public** in the option **Default Saved Search Owner**.

- **User Name**—select a specific user from the drop-down menu. The search will be visible only to that user and Relativity administrators.
- **Me**—click this button to reset the visibility on the search to private. Your name appears in the **Owner** box.

You define the criteria used for saved searches in the Conditions section of the Saved Search form. You can build complex queries using a combination of fields and operators that are set to required values. For information about the operators available for building these queries, as well as specific options for searching batches and developing combined searches, see Defining criteria for saved searches.

11.4 Organizing saved searches in folders

You can organize saved searches by adding them to securable folders that you create and manage in the Saved Searches browser. To work with search folders, you must have the appropriate permissions for **Search Folder**, **Search**, and the **Saved Searches Browser** on the security page. For more information on workspace permissions, see the Admin Guide.

11.4.1 Adding sub-folders to the root

In the Search Folder Tree, right-click on the root folder to add sub-folders to the browser. Click **Create** to add a new folder, and name it something descriptive of its contents. To update the folder name, right-click on the folder, and click **Rename**.

11.4.2 Managing subfolders

Right-click on a folder under the root to display the following menu options:

- **Create**—adds a subfolder to the highlighted folder.
- **Rename**—makes the folder name editable. Enter new text for the name.
- **Secure**—displays a security page so that you can override the security inherited from the workspace, or parent folder. For more information on setting permissions on objects, see the Admin Guide.

- **Delete**—permanently removes all the searches and subfolders that folder contains from the database.
- **New Search**—displays the Saved Search form. See Creating or editing a saved search.

11.4.3 Adding existing searches to folders

To add existing searches to a folder, left click the search and then drag and drop it into the folder. Click **OK** on the confirmation message.

Note: When you move a search, it inherits the security from the parent folder. You may want to check the security on a folder before moving a search into it.

11.5 Creating or editing a saved search

You can create and edit saved searches in the Documents tab.

11.5.1 Considerations

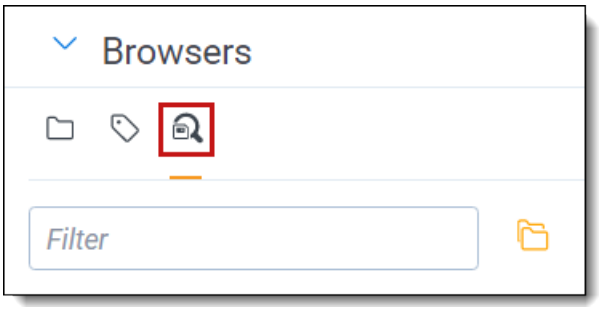
Before creating or editing a saved search, consider the following:

- We recommend avoiding nesting complex saved searches.
  - Nesting the saved search condition, can cause a timeout.
  - For example, when the saved searches used as conditions themselves contain saved search conditions.
  - If relational fields are needed, try to limit the number of nested searches or consider using a field tag.
  - Limit the use of relational fields in searches that will be used as nested saved searches later in your workflows.
- We recommend limiting the usage of the *is like* operator in search conditions.
  - It's likely to match a large number of documents.
  - Other operators return results quicker than the *Is like* operator.
- If a search's execution time exceeds one minute, RelativityOne will slow it down in order to avoid impacting other users. As such, this may be a sign that your search is overly complex and would benefit from optimization.

11.5.2 Create a saved search

To create or edit a saved search from the Search browser, follow these steps:

1. From the Documents tab, click the **Saved Search** icon in the Browsers pane.



2. From the central pane, click **Create New Search**. To edit a search, right-click the search name, and click **Edit**.

   Note: If you do not see the *Create New Search* button, you may have another saved search selected. Click the top-level folder in the browser to deselect another search.

3. Complete the fields in the **Information** section. For more details, see Information.
4. From the Conditions tab, select **Condition** to add a new condition, or **Logic Group** to create a logic group. Use logic groups to group conditions. For more details, see Conditions.
5. From the Fields tab, you can choose which fields you want displayed in your search results. You can also select an existing view, then add all the fields from the view in a single click. For more details, see Search fields.

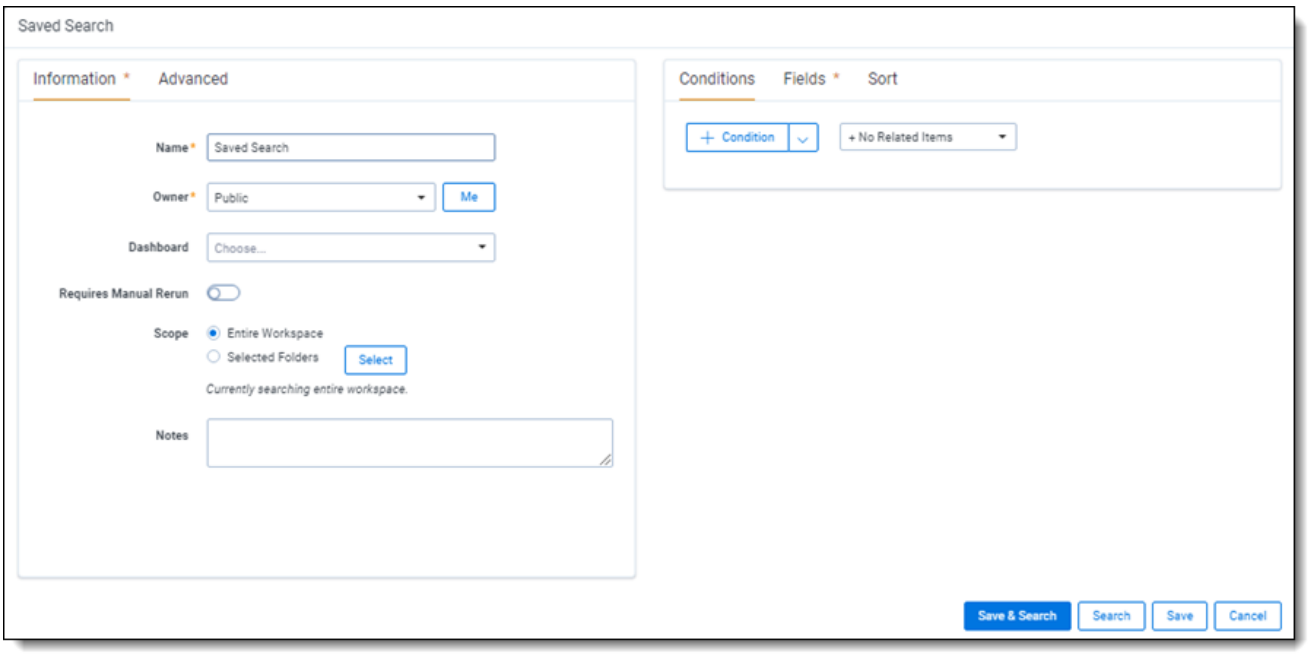
   Note: The Default Search View controls what fields are returned, by default, on an advanced or saved search. You can always include additional fields from the advanced or saved search field selector. This view also controls the field sort order. The Default Search View is only meant to control the default fields returned when running a saved search in Relativity. Since that is its purpose in Relativity there is no way to make any changes or additions to the Conditions portion of this view.

6. Click the **Sort** tab, and then specify any sorting for the search results. For more details, see Sort.
7. Click the **Other** tab to add additional information. See Other.
8. Click **Save & Search**, **Search**, **Save**, or **Save As**.

Note: Selecting Save As opens a pop-up modal to update the name of the saved search.

11.5.3 Search fields

In the Saved Search window, you will want to add the following in each section.



11.5.3.1 Information

The Information fields are:

- **Name**—enter a title for the search.
- **Owner**—select an owner from the drop-down list or click **Me** to make yourself the owner.
- **Dashboard**—select an existing dashboard to link the saved search. For more information, see Linking a dashboard to a saved search.
- **Requires Manual Rerun**—select this option if you want to require users to rerun a saved search when they return to it after navigating to other features in Relativity.
  Selecting this option only affects the search that the current user is running. It does not affect any parent or nested searches tied to the current search. If you have a search that has **Requires Manual Rerun** checked and you include it as the criteria for another search, it will rerun.

  Note: The Requires Manual Rerun option is for searches that might take a long time to run, and you do not need them to run automatically when you navigate back to the saved searches. This keeps you from having to manually cancel queries before you can navigate away from that search.

- **Scope**—select one of these options to designate the document set for the search:
  - **Entire Workspace**—searches all documents within a workspace.
  - **Selected Folders**—select this option, and then click **Select Folders**. On the Select Folders pop-up, select the checkboxes for the folders that you want to search. Clear the **Include Subfolders** checkbox on the pop-up if you do not want to include subfolders. Click **Clear All** to remove all selections.
- **Notes**—any notes you want to add to give more information about the search.

11.5.3.2 Advanced

The Advanced fields are:

- **Relativity Applications**—add Relativity applications you want to associate with a saved search.
- **Keywords**—any keywords you want to give additional information about the search.
- **Query Hint**—used to optimize views. Only use the query hint if instructed by the Relativity Customer Support team. Currently, you can use Hashjoin: (*true/false*) or Maxdop: (*x*) to populate the field. You must remove query hints before using a saved search in a Relativity script.

11.5.3.3 Conditions

The Conditions fields define the criteria of the search. Click on a filter card to edit the condition or click the **x** in the top right corner to remove the condition. The equation box along the top gives you a high-level view of the conditional statement you are creating. This tab has the following controls:

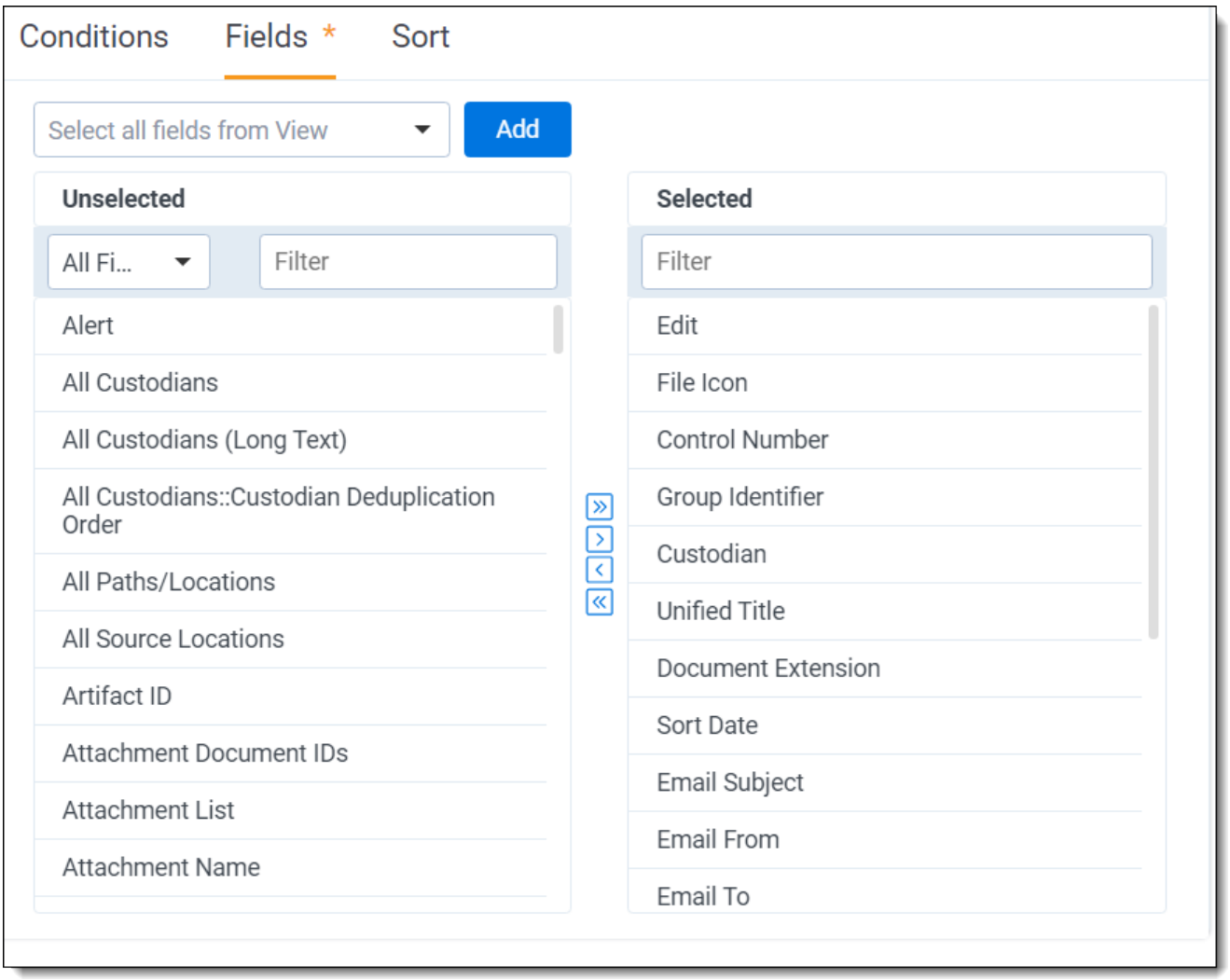
- **Add Condition**—enter a field name into the Search fields text box, or select a field by scrolling through the list.

  Note: If there are previously created field categories, you can select a field category from the drop-down list to conveniently filter the fields list. To learn more, visit Field Categories.

- **Index Search**—select this to select a Keyword, dtSearch, or Analytics index, and then enter search terms to apply as a search condition.
- **Saved Search**—select this to select an existing Keyword, dtSearch, or Analytics saved search to apply as a search condition.
- **<field name>**—select an object field name to create a conditional expression for that field to apply to the overall search criteria.
- **Add Logic Group**—adds logic groups you can add conditions to by dragging and dropping the conditions into the logic group frames. Use the AND or OR operator to join logic groups.
- **Includes drop-down**—select an option for returning documents related to hit documents. Hit documents match the search criteria. The result set includes the related documents, but they do not need to match the search criteria. Select **No Related Items** if you do not wish to include any of these documents.
  - **Duplicates**—use this setting if you want the result set to include documents with the same MD5 Hash values as the hit documents. Relativity uses the MD5 Hash value as a unique file identifier.
  - **Family**—use this setting if you want the result set to include documents with the same group identifiers as the hit documents.
  - **<Custom Field>**—your organization may use custom related fields. Contact your system admin for additional information.

11.5.3.4 Fields

The Fields tab displays the field columns you can add or remove from your search results.



There are two fields panes:

- **Unselected**—fields you add to your search results.
  To add a field, click the name, then click the **Move selected left to right** arrow in the center column. You can also click the **Move all left to the right** arrow to display all available fields.

  Note: If there are previously created field categories, you can select a field category from the drop-down list to conveniently filter the fields list. To learn more, visit Field Categories.

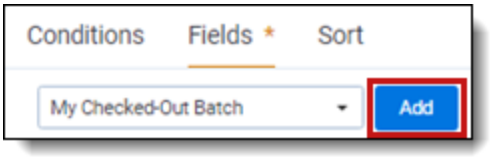
- **Selected**—fields selected that appear on the search results.
  To remove a field, click the name, then click the **Move selected right to left** arrow in the center column. You can also click the **Move all right to left** to remove all fields from the search results. The position of the fields in the box is how they are ordered. You can drag and drop them to change their order.

You can also add all fields from an existing view using the **Select all fields from View** drop-down menu.

1. Click the **Select all fields from View** drop-down menu.
2. Select a view. For example, *My Checked-Out Batch*.

3. Click the **Add** button.

The fields append below any fields already displayed in the *Selected* pane. Use the move arrows to add additional fields or remove fields.



11.5.3.5 Sort

The Sort options define the default sort order used for the search results. Each row in a sort criterion has the following options:

- **Sort Field**—select a field from the left drop-down box. The search sorts on the field you select.
- **Order**—select ascending or descending from the right drop-down box.

11.5.4 Pop-up pickers

You may have the option to select values from a pop-up picker when you choose certain fields or operators in the Conditions section. For example, pop-ups are available when you select the following operators:

- Any of these
- None of these
- All of these, only for multiple object fields
- Not all of these, only for multiple object fields

See Creating or editing a saved search. For information about setting batch conditions, see Batch fields as search conditions.

11.5.4.1 Select items pop-up picker

Use the following general steps to select items in the picker:

1. Navigate to the Saved Search form or use the Search Conditions feature.
2. Select a **Field** option for a condition.
3. Select one or more items in the Available Items list.
   A check mark indicates that you selected the item.
4. Click **Apply**.

11.5.4.2 System user fields

System user fields include the System Created By and System Last Modified By fields, which you can use in search conditions.

1. Navigate to the Save Search form or use the Search Conditions feature.
2. Select a system user field in the **Field** option for a condition.

3. Select an operator, and perform one of the following tasks:
    - If you selected **any of these** or **none of these**, select from the **Available** fields and move to the **Selected** fields column, then click **Apply**.
    - Enter the username in the text box.
4. Define any extra search criteria as needed.

11.5.4.3 Folder name field

You can select Folder Name as a field in a search condition to create more flexible queries than using the Scope section of the Saved Search form. You can combine conditions containing the Folder Name and other fields with AND or OR operators refining your search criteria.

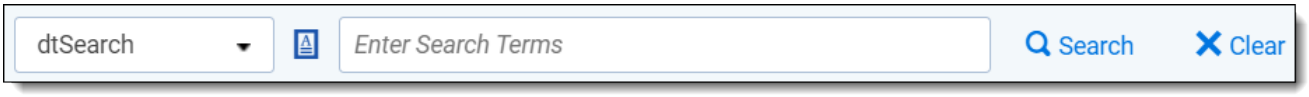
1. Navigate to the Save Search form or use the Search Conditions feature.
2. Select **Folder Name** in the **Field** option for a condition.
3. Select an operator, and perform one of the following tasks:
    - If you selected **any of these** or **none of these**, select the checkbox next to one or more item, then **Apply**.
    - If you selected another operation, enter the folder name in the text box.
4. Define any additional search criteria as needed.

11.5.5 Search bar

The Search Bar, a UI controlled feature, exists along the top of item lists that support index search. This replicates the functionality of the Index Search condition in the Search Panel, including keyword search and dtSearch.

To run the index search,

1. Enter your search terms in the search bar.
2. Click **Search**, or hit **Enter** on your keyboard.
3. Click **Enter + Shift** to add more than one search term on separate lines.



The Search Bar reflects the condition panel state after toggling index search conditions.

11.5.5.1 Recent Searches

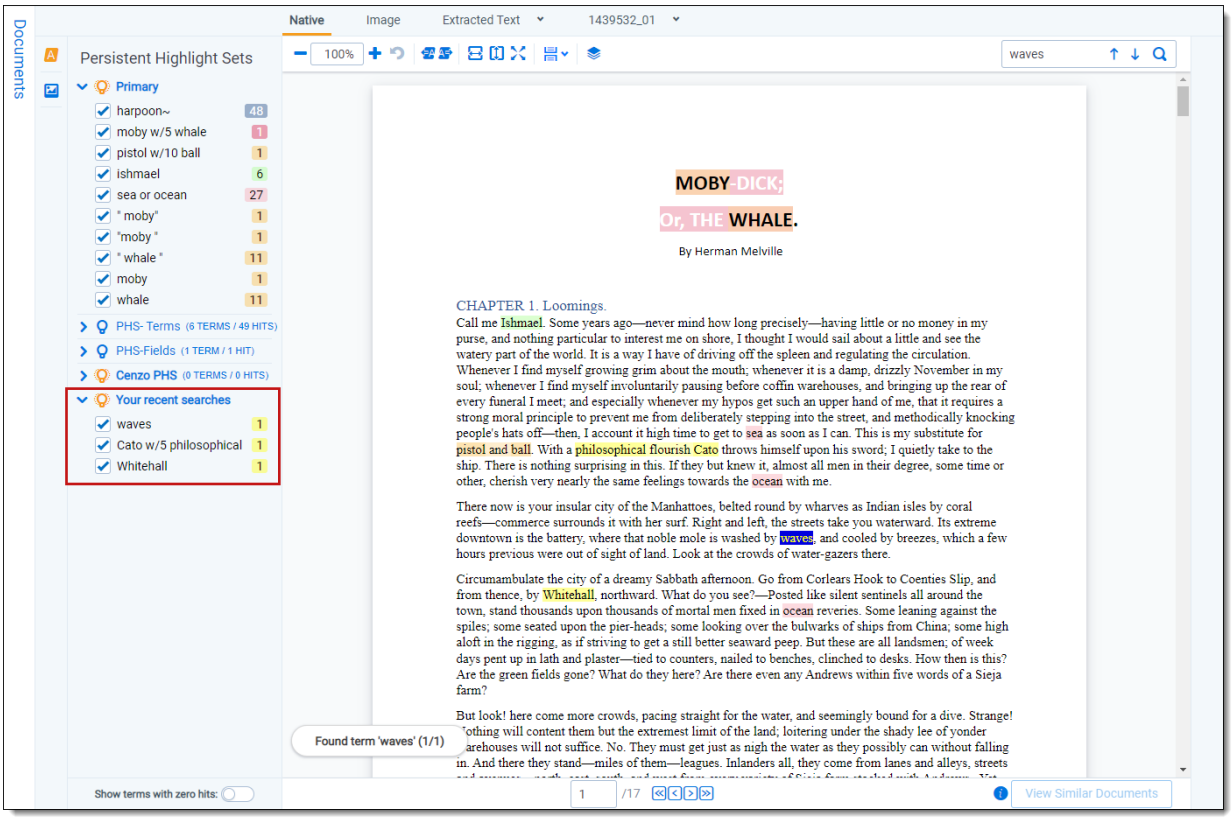
You can use the Search Bar to generate highlights within a document in the Viewer.

To view Recent Searches within a document:

1. Navigate to **Documents**.
2. Select the desired index from the Keyword Search drop-down list.
3. Enter the desired search terms in the field to the right of the drop-list and click **Enter** on your keyboard.
   Keyword, proximity, fuzzy, and stemming searches can work depending on which type of search

index you chose.
The list displays documents that match your search criteria.

4. Click the desired document to open it in the Viewer.
Highlighted terms match the entered criteria, along with any enabled Persistent Highlight Sets.



5. Optionally, click the**Show/Hide Persistent Highlight** pane to display the Recent Searches and Persistent Highlight Sets. Click the show/hide icon, light bulb icon, to toggle the Recent Searches or Persistent Highlight Sets.

Note: Recent Searches only apply when using the Search Bar or when running a saved search against a keyword index. Recent Searches do not apply when running a saved search against a dtSearch index.

11.5.6 Link a Relativity application to a saved search

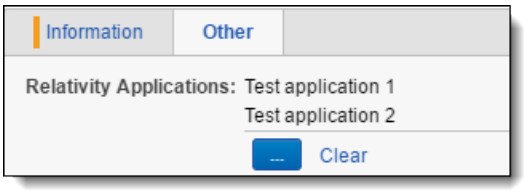
To link a Relativity application to a saved search:

1. Navigate to the Search Browser.
2. Create a new search or edit an existing search.
3. Click **Add** in the **Advanced** tab to display the Select Items - Relativity Applications modal. Available applications are in the left box and Selected applications are in the right box.
4. Choose one or more applications. Use the arrows to move the applications from the available to selec-

ted boxes.

5. Click **Set**.

You can clear your options by clicking the clear button.



To unlink a Relativity Application from a saved search, click **Add** and use the arrows to remove the application(s). Please note that you cannot leave the selected applications box empty. A warning in red appears along the bottom that reads: Selection cannot be empty. Either leave at least one application linked or clear all using the clear button.

11.5.7 Link a dashboard to a saved search

To link a dashboard to a saved search:

1. Navigate to the Search Browser.
2. Create a new search or edit an existing search.
3. Choose a dashboard from the drop-down list.
4. Click **Save & Search**, **Search**, **Save**, or **Save As**.

If you switch to a different dashboard while viewing the saved search, the link breaks. There are two ways to restore this link:

- Log out of your environment, then log back in.
- Edit the search and hit **Save and Search** again.

If you delete a dashboard, Relativity removes the link in the saved search.

If you delete a dashboard with dependencies, a message appears with a list of dependencies.

11.5.8 Rerun out-of-date saved searches

You may need to rerun a saved search when you return to it after navigating to other features in Relativity. Instead of seeing your search results, you see a message indicating that your search is out of date.

Note: To enable the **Run saved search** feature, select the **Requires Manual Rerun** option in the Information section of the Saved Search form.

Perform one of these tasks:

- Click **Run saved search** to reload your search results. You can also click on the saved search in the browser to rerun the search.
- Click **Edit Search** to display the Saved Search form where you modify the search settings.

If you edit an item returned in your saved search, you need to rerun it. You must rerun the search even when the edited item still meets the search criteria, and the number of documents returned does not change.

11.5.9 Required security permissions

A user must have the following security permissions to view, edit, and add saved searches and saved search folders:

Tab/Permission	Permission	Description
Object Security/Search	View, Edit, Add	Users can view saved searches, edit existing saved searches, and add new saved searches.
Object Security/Search Container	Edit, Add	Users can edit existing saved search folders and add new saved search folders.
Other Settings/Browsers	Advanced & Saved Searches	Users can see and interact with the Saved Searches browser.

For more information, see the guide on Setting workspace permissions.

11.6 Defining criteria for saved searches

You define the criteria used for saved searches in the Conditions section of the saved search form. You can build complex queries using a combination of fields and operators that are set to required values. This section provides information about the operators available for building these queries, as well as specific options for searching batches and developing combined searches. For information about building queries, see Creating or editing a saved search on page 122.

11.6.1 Operators

When defining search criteria in the Conditions section of a saved search form, you use operators to determine how a field is queried for the value that you selected or entered. The operators available for a search criterion depend upon the field type:

11.6.1.1 Fixed-length, long, or extracted text operators

The following operators are available for fixed-length, long, and extracted text field types.

Operator	Returns Documents Where...
Begins with	The field begins with the entered term.

Operator	Returns Documents Where...
Does not begin with	The field does not begin with the entered term.
Ends with	The field ends with the entered term.
Does not end with	The field does not end with the entered term.
Is like	The field contains the entered term. Blank values are filtered out, and search values can be enclosed in double quotation marks. A partial match does not require a wildcard (*). Relativity returns an OR operator between terms when a condition uses the "Is like" operator, and the terms are separated by a carriage return into multiple lines, or they are separated by a comma within a single line. For example, Relativity interprets a query as "Field is like Term 1 or Field is like Term 2 or Field is like Term 3". **Note:** For performance reasons, Relativity recommends using the "Contains" operator rather than building queries with single or multiple uses of the "Is like" operator. See FAQs for Contains and Is Like operators on the next page.
Is not like	The field does not contain the entered term. Wildcards (*) are already applied at the beginning and end of a term with this operator. The comments about the "Is like" operator also apply to "Is not like". Relativity returns an OR operator between terms when a condition uses the "Is not like" operator, and the terms are separated by a carriage return into multiple lines, or they are separated by a comma within a single line. For example, Relativity interprets a query as "Field is not like Term 1 or Field is not like Term 2 or Field is not like Term 3".
Is	The field value equals any of the entered items. Multiple values can be separated by a comma or carriage return. Blank values are filtered out, and search values can be enclosed in double quotation marks. Relativity returns an OR operator between terms when a condition uses the "Is" operator, and the terms are separated by a carriage return into multiple lines, or they are separated by a comma within a single line. For example, Relativity interprets a query as "Field is Term 1 or Field is Term 2 or Field is Term 3".
Is not	The field value does not equal the entered term. Relativity returns an OR operator between terms when a condition uses the "Is not" operator, and the terms are separated by a carriage return into multiple lines, or they are separated by a comma within a single line. For example, Relativity interprets a query as "Field is not Term 1 or Field is not Term 2 or Field is not Term 3".
Is set	The field is not empty.
Is not set	The field is empty.
Is less than	The field value is less than the entered term.
Is less than or equal to	The field value is less than or equal to the entered term. Relativity returns an OR operator between terms when a condition uses the "Is less than or equal to" operator, and the terms are separated by a carriage return into multiple lines, or they are separated by a comma within a single line. For example, Relativity interprets a query as "Field is less than or equal to Term 1 or Field is less than or equal to Term 2 or Field is less than or equal to Term 3".

Operator	Returns Documents Where...
Is greater than	The field value is greater than the entered term.
Is greater than or equal to	The field value is greater than or equal to the entered term. Relativity returns an OR operator between terms when a condition uses the "Is greater than or equal to" operator, and the terms are separated by a carriage return into multiple lines, or they are separated by a comma within a single line. For example, Relativity interprets a query as "Field is greater than or equal to Term 1 or Field is greater than or equal to Term 2 or Field is greater than or equal to Term 3".
Contains	The field includes the entered term. This operator is available for long text and fixed length text fields included in the full text index. Blank values are filtered out, and search values can be enclosed in double quotation marks. You can also use the AND/OR operators, and add wildcards (*) to the end of the search.Relativity returns an OR operator between terms when a condition uses the "Contains" operator, and the terms are separated by a comma. (You can also use the OR operator to separate search terms.) For example, Relativity interprets these queries as "Field contains Term 1 or Field contains Term 2 or Field contains Term 3", and "Field contains Term 1 or Term 2 or Term 3" respectively. Relativity returns an AND operator between terms when a condition uses the "Contains" operator, and the terms are separated by a carriage return into multiple lines, or if terms are separated by a space on a single line so "Field contains Term 1 Term 2 Term 3" is interpreted as "Field contains Term 1 AND Term 2 AND Term 3". **Note:** The “Contains” operator works identically to keyword search, except that it searches that specific field.
Does not contain	The field does not contain the entered term. This operator is available for long text and fixed length text fields included in the full text index. Blank values are filtered out, and search values can be enclosed in double quotation marks.

FAQs for Contains and Is Like operators

You can improve your searches by understanding the differences between the "Contains" and "Is like" operators.

Why do searches using the "Is like" operator tend to run slowly?
The "Is like" operator can slow the performance of your system because it queries every document for the field specified in the condition. For performance reasons, we don't recommend building queries with single or multiple uses of the "Is like" operator. Instead, you can use the "Contains" operator, which improves performance by querying only the fields in the full-text index.

Are there any special requirements for using the "Contains" operator?
Yes, the full text-index must include the field that you want to search with the "Contains" operator.

How does query execution differ for searches with the "Contains" and "Is like" operators?
The "Contains" operator queries the SQL full text catalog, while the "Is like" operator queries the database table inside the catalog. The "Is like" operator prevents other queries from editing the table until it completes, which can negatively affect performance.

Why are different search results returned by queries using the "Contains" versus "Is like" operators?
The difference in result sets is caused by the way SQL interprets queries using these operators. An "Is like" statement appends a wildcard to the front of each query, which sometimes causes it to return more items

than a query with the "Contains" operator. You must evaluate these additional items to determine if they're actually part of your expected result set or if they represent false hits for the items that you want to return.

Is there any way to enhance the performance of queries using the "Is like" operator?
Yes, you can make queries that use the "Is like" operator more efficient by creating a SQL index on the table column referenced by the query. The query can point to this index, and avoid accessing the table. For more information, contact your system admin.

How can I use the "Contains" operator to facilitate document reviews?
You can use the "Contains" operator to search fields in email headers for email addresses and other pertinent header information. To perform these searches, the Author, TO, CC, and BCC fields in email headers must be added to the full text index.

Special considerations for Data Grid-enabled fields

You can use only these operators to search Data Grid-enabled text fields:

- is set
- is not set

Note: IS SET condition operator excludes the Data Grid records where the field is null or has an empty string value.

11.6.1.2 Whole number, decimal, and currency operators

The following operators are available for whole number, decimal, and currency field types.

Operator	Returns Documents Where...
Is	The entered number is equal to the field value.
Is not	The entered number is not equal to the field value.
Is set	The field is not empty.
Is not set	The field is empty.
Is less than	The field value is less than the entered number.
Is greater than	The field value is greater than the entered number.

11.6.1.3 User operators

The following operators are available for user field types.

Operator	Returns Documents Where...
Is logged in user	The logged in user is equal to the field value.
Any of these	Any of the selected users match the field value.
None of these	The selected users do not match the field value.
Is set	The field is not empty.
Is not set	The field is empty.

11.6.1.4 Date operators

The following operators are available for date field types.

You can search on date and time but time is not displayed by default when you select a date on the calendar pop-up. For example, you can search on 10/16/2001 3:57 PM by typing in the time after your selected the date. You can also search for 2/3/10 between 4/3/10 and both 2/3/10 and 4/3/10 return in the results.

Note: When you search on a user-created date field using a relative date, Last 7 Days for example, you may see different results between a saved search and a search from the search panel if you are not in the same timezone as your Relativity instance.

Operator	Returns Documents Where...
Is	The entered date is equal to the field value.
Is not	The entered date is not equal to the field value.
Is set	The field is not empty.
Is not set	The field is empty.
Is before	The field value is before the entered date.
Is before or on	The field value is before or on the entered date.
Is after	The field value is after the entered date.
Is after or on	The field value is on or after the entered date.
Between	The field value is between the two entered dates.
Is in	The field value is within the selected range.

11.6.1.5 Yes or no operators

The following operators are available for Yes/No field types.

Operator	Returns Documents Where...
Is	The selected value (Yes or No) is equal to the field value.
Is not	The selected value (Yes or No) is not equal to the field value.
Is set	The field is not empty.
Is not set	The field is empty.

11.6.1.6 Single and multiple choice field operators

The following operators are available for single and multiple choice field types.

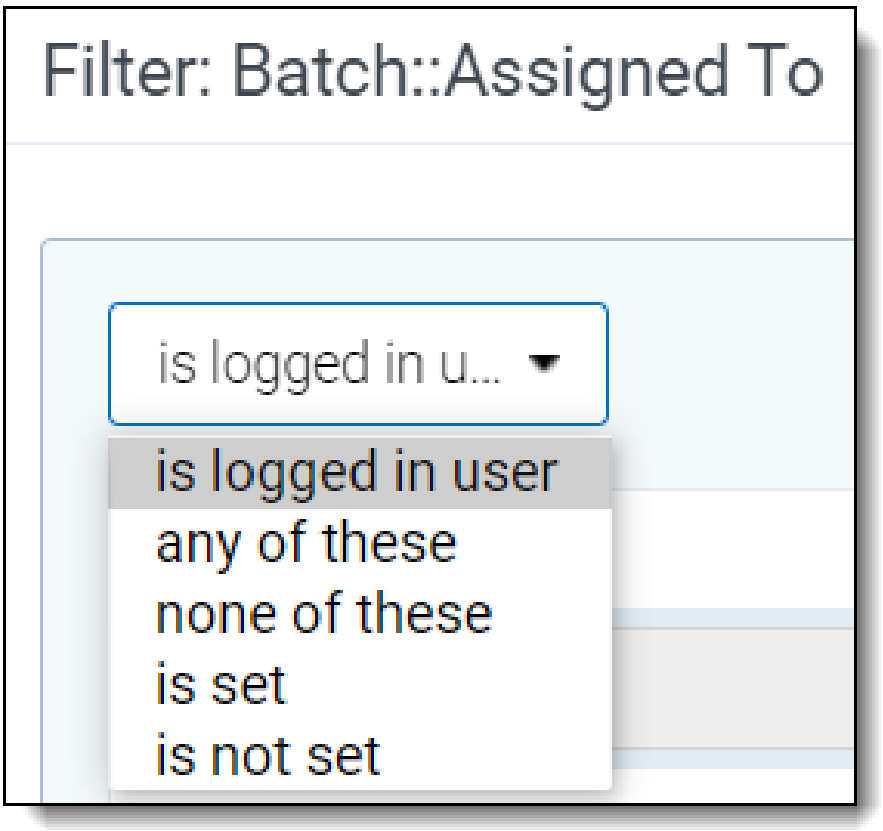
Operator	Returns Documents Where...
Any of these	Any of the selected choices are present in the field.
None of these	None of the selected choices is present in the field.
All of these	All of the selected choices are present in the field.
Not all of these	The selected choices are not present in the field.
Is set	The field is not empty.
Is not set	The field is empty.

11.6.2 Batch fields as search conditions

Relativity includes several fields related to batching that you can use as conditions for searching across batch sets. To use batch fields as search conditions, follow these steps:

1. Create a new saved search. See Creating or editing a saved search on page 122.
2. Select **Batch** in the Fields drop-down menu in the Conditions section of the saved search form.
3. Choose the operator you want to use.
4. Click **Add Condition** to display a modal.
5. Select one of the following batch related fields:
   - Batch
   - Batch::Batch Set
   - Batch::Assigned To

     Note: You can use the *Assigned To* field to search for batches set to a specific user.
   - Batch::Status



See Operators on page 131 for more information.

11.6.3 Using saved searches as conditions (combined searches)

You can combine searches by selecting previously created saved searches as Field conditions. To use a saved search as a search condition, follow these steps:

1. Create a new saved search. See Creating or editing a saved search on page 122.
2. Select **(Saved Search)** from the top of this list in the **Field** drop-down menu in the Conditions section of the saved search form.
3. Select an option in the **Operator** drop-down menu.
4. Click **Add Condition** to display a modal.
5. Select a saved search and click **OK**.

11.6.3.1 Preventing circular references

Relativity prevents you from creating recursive searches when you combine multiple searches as conditions in a query. For example, you might create a combined search using Saved Searches 1, 2, and 3 as follows:

- Saved Search 2 uses Saved Search 1 as a Field condition.
- Saved Search 3 uses Saved Search 2 as a Field condition.

When you edit Saved Search 1, you can't select Saved Search 2 or Saved Search 3 as Field conditions. Relativity prevents you from creating a circular reference by not listing these searches in the **Value** pop-up window.

11.6.3.2 Including related items in combined searches

You can combine saved searches to check for conflicts within related item groups. For example, a review manager may use a combined search for quality control when preparing to produce responsive documents for a case.

Use the following steps to confirm that a search for responsive documents does not include any privileged documents.

1. Create a saved search called **Responsive Check** that uses the *Includes Family* option and sets a condition on a field, such as Designation to **Responsive**.
   This search specifies production criteria that return only responsive documents.
2. Create a second saved search called **Privilege Check** that uses the *Includes Family* option and sets a condition on a field, such as Privilege Description to **Privileged**, **Attorney Client**, and so on.
   This search is used for evaluation purposes.
3. Create a combined search called **Conflict Check** that uses the *Includes Family* option and sets conditions for the **Responsive Check** and **Privilege Check** searches.
   This quality control search determines if any privileged documents are included in the production-eligible saved search.

11.6.4 Lists as search conditions

If you've created saved lists using the Lists feature, you can add lists as criteria in a saved search.

Follow these steps to create a new saved search using a saved list of documents as the search criteria:

1. On the **Documents** tab, click the **Saved Searches browser** icon.
2. Click **Create New Search**.
3. Type a name for the saved search in the **Name** field.
4. Add a condition with the following column settings:
    - **Field**—select **Lists**.
    - **Operator**—select **these conditions**.
    - **Value**—select the following value criteria:
        - **Field**—select **Lists**.
        - **Operator**—select **any of these**.
        - **Value**—select one or more saved lists to include in the search criteria.
5. In the **Fields** category, select the fields you want to include when viewing your saved search results. Select the **Lists** field to show the list(s) with which an object is associated.
6. Click **Save** to save the search. Or, click **Save & Search** to save and execute the search.

11.7 Saving searches on the Documents tab

On the Documents tab, you can click **Save Search** at the bottom of the screen near the mass operations. This creates a new search using the criteria that you've already set on the search panel. You can save conditional searches, keyword searches, dtSearches, or Analytics searches. Relativity also retrieves any settings that you selected for a view, sort order, or other features that control how your results appear.

Note: To use **Save Search**, you must have add permissions for **Search**, and access to the **Saved Searches Browser**. For more information on workspace conditions, see the Admin guide.

To create a saved search on the Documents tab:

1. Navigate to the Documents tab.
2. (Optional) In the **Browser** menu, select the **Folders**, **Field Tree**, or **Clusters** option.
   The item list for the selected browser displays.
3. Filter on the documents in the list or select a keyword or other search option. To set search criteria, see the specific instructions for running keyword searches, dtSearches, Analytics, or filters. Your search results appear in the item list on the Documents tab.

   Note: Any folder, tag, or cluster selected in the browser is included as a condition when the search is saved. The current columns, column filters, and sort order save along with any conditions set for your view (including your selection in the Related Documents drop-down menu).
4. Click .
   The search builder window appears.

5. Select or enter the following required information:
    - **Name**—enter a title for the search. The title appears in the saved searches browser.
    - **Owner**—select **Public** to make the search available to all users or choose a specific user from the list. Click **Me** to select your name from the list, making the search private. (Users must have the appropriate privileges to view searches.) See Controlling the visibility of saved searches on page 121.
    - **Search Folder** —click the **Ellipsis**  button to launch a pop-up window where you can save the new search to a specific folder on the saved searches browser. Highlight the folder where you want to save the search, and then click **OK** to select it.
6. Add to or modify the search criteria as needed. See Creating or editing a saved search in the new UI framework.
7. Click **Save**.

After you save your search, it appears in the saved searches browser. You can modify the search using the same options available for saved searches. See Creating or editing a saved search in the new UI framework. Click  to display the saved search browser. To update the search, follow the same steps as those used to edit a saved search. Right-click on the search in the saved searches browser, and then click **Edit**. The saved search form pre-populates with information used in your search.

11.8 Common Saved Searches application

This topic describes how to install and use the Common Saved Searches application, which contains a group of searches that can assist you in your basic usage of Relativity.

11.8.1 Installing the application

The installation process follows the same steps used to install other Relativity applications. For more information, see Installing applications.

You must have system admin permissions to install an application. See Workspace security.

To install the application:

1. Log into the Relativity Community and search in Files for the Common Saved Searches Solutions application rap file.

Note: You must have valid Relativity Community credentials in order to download any Community file linked to the documentation site. You'll need to enter those credentials on the Community login screen if you're not already logged in. If you're already logged in to the Community at the time you click a link, the file is automatically downloaded in the bottom left corner of your screen. If you get an error message stating "URL No Longer Exists" after clicking a Community link, it may be due to a single sign-on error related to the SAML Assertion Validator, and you should contact your IT department.

2. Click **Download**.
3. Add the application to the Application Library:
    1. On the **Applications & Scripts** tab, click the **Application Library** tab.
    2. Click **Upload Application**.
    3. Click **Choose File**, navigate to and select the Common Saved Searches Application rap file, and then click **Open**.
    4. Click **Save**.
    5. Click **Install** in the Workspaces Installed section to install the application on workspaces.
    6. Click  in the Workspaces field to display the Select Workspaces dialog.
    7. Select a workspaces to install the application, and then click **Ok**.
    8. (Optional) Click **Clear** to remove a workspace from the list.
    9. Click **Save** to install the application to the selected workspaces.

Note: There may be a need to map fields if you have a template already created with the same common fields. For more information, See Mapping fields section in the Installing applications documentation.

11.8.2 Using the application

The table below lists the search name and the description of why this search is used and/or what it returns.

Search Name	Description
All Documents	A quick, easy way to return all documents in the workspace. This is useful for many reasons, including building Search Term Reports and is a method to quickly grab everything.
01.01 Processing Errors	Returns all documents in document table that have an error from processing. Use this to find items that might provide reviewers issues.
02.01 dtSearch	Returns all documents, but more importantly, returns only the extracted text field. Use to build a dtSearch index.
02.02 Structured Analytics Set	Used to check for documents with text and is used for any of the structured analytics sets.
02.03 Email Threading - Parent Emails	Search for emails, but only parent level items, not attachment emails. Previously used for email threading. Items used for threading.
02.04 Near Duplicate Analysis (No Parent Emails)	Returns all files that are identified for near duplication analysis, but are not parent emails.
02.05 Language ID or Repeated Content	Records with text to be used for Language ID or Repeated content similar to Structured set.
02.06 Analytics Not Included	Returns items not included in Analytics because of text size.

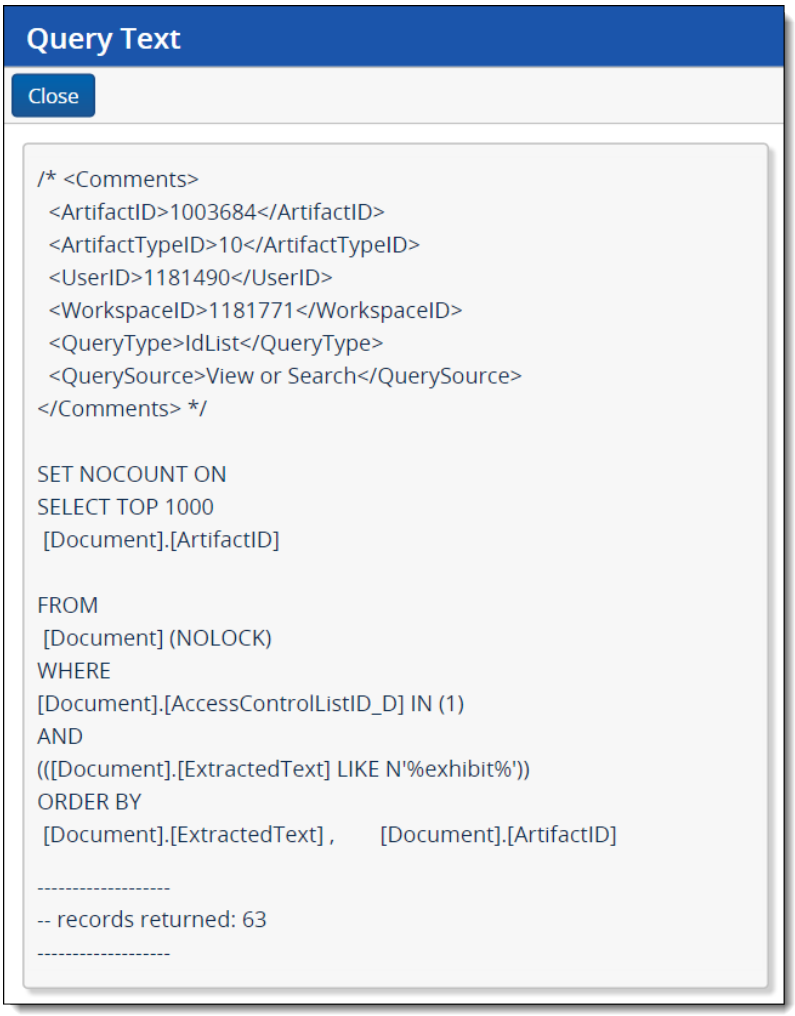
Search Name	Description
02.07 Analytics Index	Returns documents containing text and returns only extracted text for Analytics Indexes.
02.08 All docs Email Metadata fields	Returns all emails with all metadata fields returned.
03.01 Extracted Text is Empty	Includes documents not returned for use in Analytics Index for lack of text.
04.01 Parent Level Documents	Returns top-level documents that are not attachments, but can be emails or other.
04.02 Document Level Documents	Returns child-level documents.
04.03 Parent Level Dupes + Family	Returns parent duplicates with family added. Duplicate not determined on family.
05.01 Single Recipient Emails + Family	Returns emails with one recipient and their attachments.
05.02 Bulk Emails (50+) + Family	Returns emails with 50 or more recipients and attachments.
06.01 Search Term Report	Search across all emails with text for STR.
06.01 Responsive and Family	Returns documents with Designation set to Responsive and family included.
06.02 Conflicts with Family	Returns items not coded the same as parent items.
06.03 Produce with Images Placeholders	Returns items marked with choice in Productions field, Nothing in Bates field, and Check on type of production as Images with Placeholders.
06.04 Produce Natives Only	Returns items marked with choice in Productions field, Nothing in Bates field, and Check on type of production as Native only.
06.05 Produce Natives with Placeholders	Returns items marked with choice in Productions field, Nothing in Bates field, and Check on type of production as Native with Placeholders.
By Filetype	Returns all documents with a filetype sorted by filetype.
By Folder	Returns all documents with a folder path and sorted by folder path.

11.9 Saved search history

On the History tab, you can view the audit records for saved searches, unsaved searches, and queries performed on views. For example, when a user filters a column.

Use the following guidelines to view search history records:

- **Saved Searches**—the Name column displays the name of the search. The Object Type column displays *Search*. Click the Query link to display a pop-up window with the SQL statement for the query.



- **Unsaved Searches or Views**—the Name column displays the name of the view in which the search was performed. The Object Type column displays View. Click the name link to display the details page for the view. You can also click the Query link to display a pop-up window with the SQL statement for the query.

12 Field categories

Field categories allow you to quickly and accurately apply field conditions to the document list, a saved search, or a view. Once a field category has been created, it can be linked to as many fields as desired. The field category can then be selected when adding fields or conditions in the search panel, a view, or a saved search to conveniently access and apply the linked fields.

All Fields is a system default field category that displays every non-secured field in your workspace. It cannot be edited or secured from other users and it will always display at the bottom of the Field Categories drop-list. All Fields allows you to conveniently switch between viewing all of the fields and the fields included in a particular field category.

Field categories have object permissions so that they can be created and limited to a specific group or workflow within in Relativity. Securing a field category only determines whether it is visible in the drop-list of field categories that can be selected when adding conditions in the search panel.

Note: Field categories that you create are carried over during workspace upgrades and when those cases are used as templates. The All Fields field category will also carry over after an upgrade, though it is currently a system default that cannot be configured by users.

12.1 Creating a field category

To create a new field category, do the following:

1. Navigate to the **Field Categories** tab.

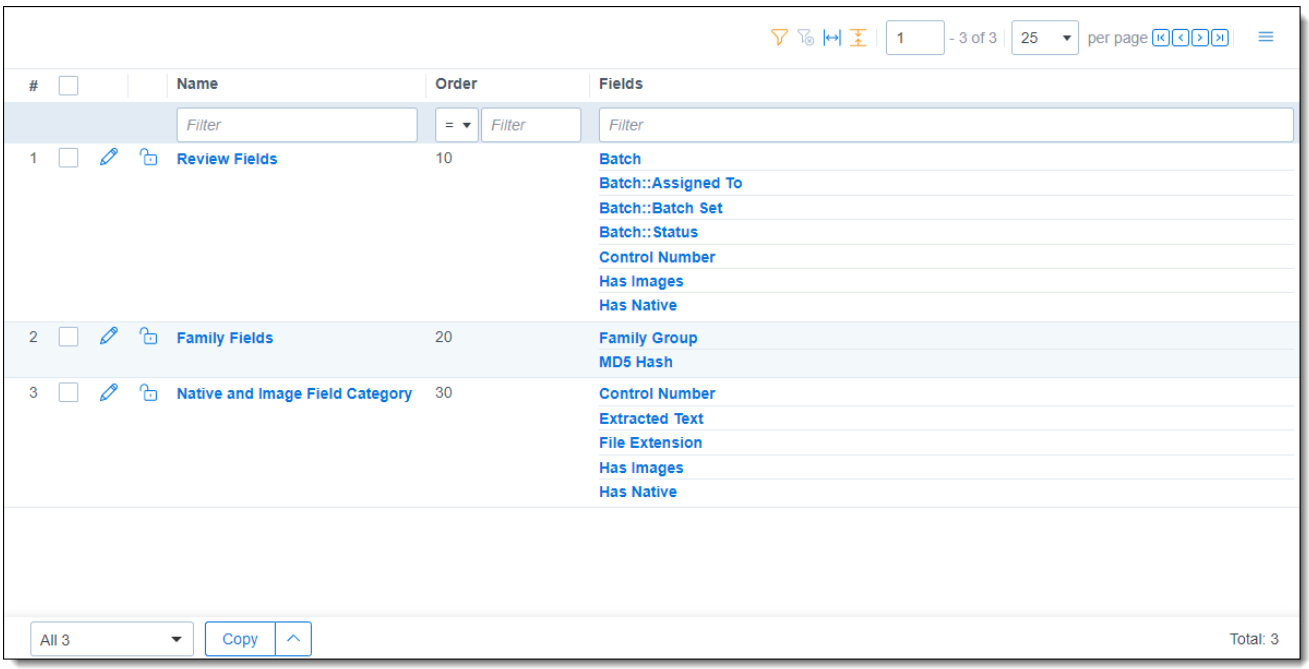
   Note: All Fields is a field category that is always present in Relativity but it does not display on the Field Categories tab since it cannot be edited.

2. Click **New Field Category**.
3. Enter the desired information for the following fields:
   - **Name** - the title of the field category
   - **Order** - determines where the field category appears within the view drop-down list. Items that share the same value are sorted in alphanumeric order.
     - Order can be any integer (positive or negative). No decimals are allowed. You can use the **View Order** button to see how items are currently ordered.

       Note: Ordering by 10's, starting with 10, then 20, then 30, etc. is recommended because you can insert an item into any position later in the workspace, without the need to reorder all items.
4. Click **Save** to create the new field category.

12.2 Viewing fields associated with a field category

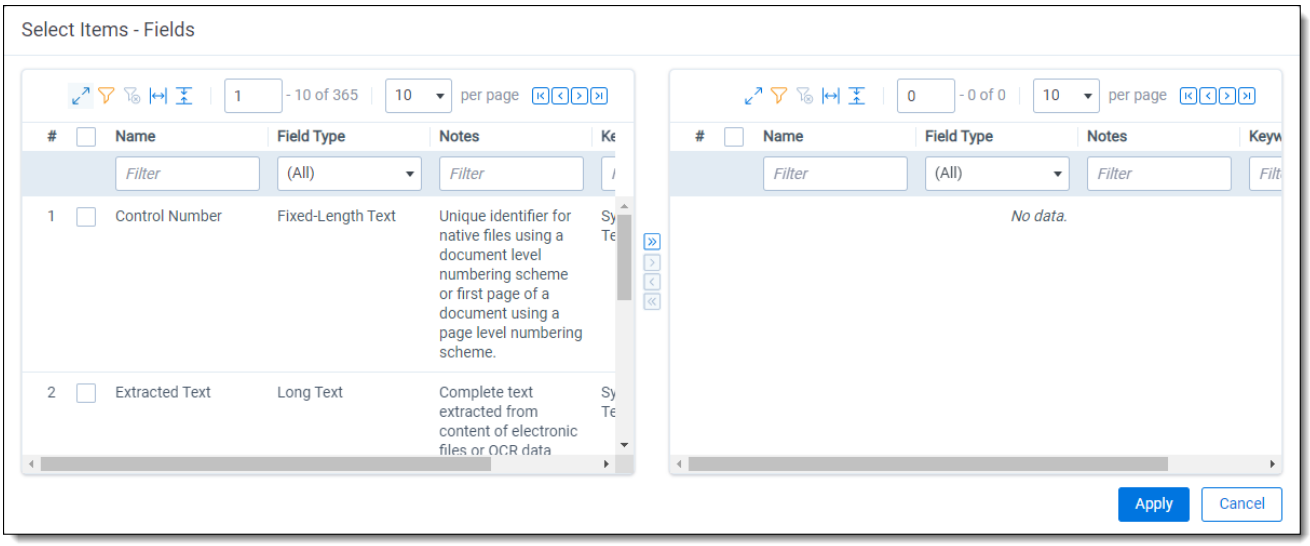
Before linking and unlinking fields to a field category, it can be helpful to see what fields are associated with each field category. To do this, add the Fields field to the desired field category view and select that view on the Field Categories tab.



12.3 Link a field or fields to a field category

To link a field or fields to a field category, do the following:

1. Navigate to the **Field Categories** tab.
2. Click on the desired field category in the list.
3. Click **Link**.



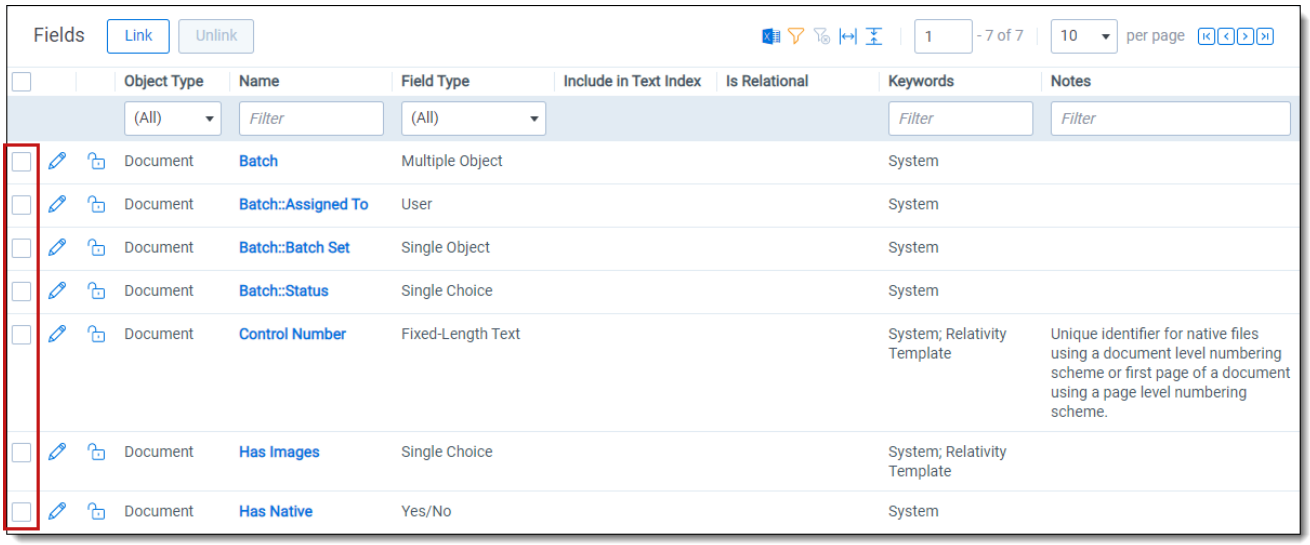
4. Filter the field list as needed and check any desired fields.
5. Once the desired fields have been selected, click the **Move selected left to right** icon.

6. Click **Apply**.
   The selected fields are linked to the field category and display in the Fields section.

12.4 Unlink a field or fields from a field category

To unlink a field or fields from a field category, do the following:

1. Navigate to the **Field Categories** tab.
2. Click on the desired field category in the list.
3. Click the checkbox on the left side of the row for any fields you wish to unlink.



4. Click **Unlink**.
5. Click **Unlink** again in the pop-up.
   The selected fields are no longer linked to the field category.

13 Optimized indexing

Optimized indexing requires some knowledge of your data. The time it takes to scrub your data before indexing will be rewarded in time saved when creating an index and returning search results. Consider the following when creating an index:

- Consider removing file types that have no searchable content, such as system or program files.
- Use a separate index for searching database files and large Excel files.
  - Even if your database has only a small number of these files, creating an index without them improves searching speed, especially numeric range searching.
- Set up multiple dtSearch indexes, including one with a smaller document set based on one or more of the following criteria:
  - date ranges
  - custodians
  - text size (extracted or OCR text)
    - Small (< 2 MB)
    - Medium (> 2 MB and < 10 MB)
    - Large (> 10 MB and < 25 MB)
    - Very large (> 25 MB)
- Set a dtSearch index to recognize and/or ignore words, characters, and digits as necessary.
  - Noise Words (Ex: Include “sample” as a part of the noise world list for a dtSearch index containing Excel documents.)
  - Alphabet file list (Ex: Index the character “£.”)
  - Remove numbers from the alphabet file list if only searching for words – this reduces the size of the index and disables numeric range searching.
- Enable dtSearch indexes to automatically recognize dates, email addresses, and credit card numbers only when necessary. Enabling this setting increases build time.
- Consider using a pair of dtSearch indexes when adding new data. You can have one index updated in the background and then swap out the outdated index with the current one.

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