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KNOWLEDGE BASE ARTICLE

List Filter Online Query Builder: Conditions, Groups and the CAML Query Behind Them

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Overview

The **Query Builder** is the part of the Vitextra **List** Filter Online **web part** where a page editor defines the **predefined filter** - the set of conditions that every item must satisfy before it appears in the web part. Users cannot see or remove this filter; they only narrow the result further with the filter pane and the column header filters.

The predefined filter is stored as a tree of conditions and groups and is translated into a **query** that **SharePoint** executes on the server. Nothing is loaded into the browser and filtered afterwards: the list returns only the items that match, page by page, which is what keeps the web part fast on large lists.

Typical uses of the predefined filter:

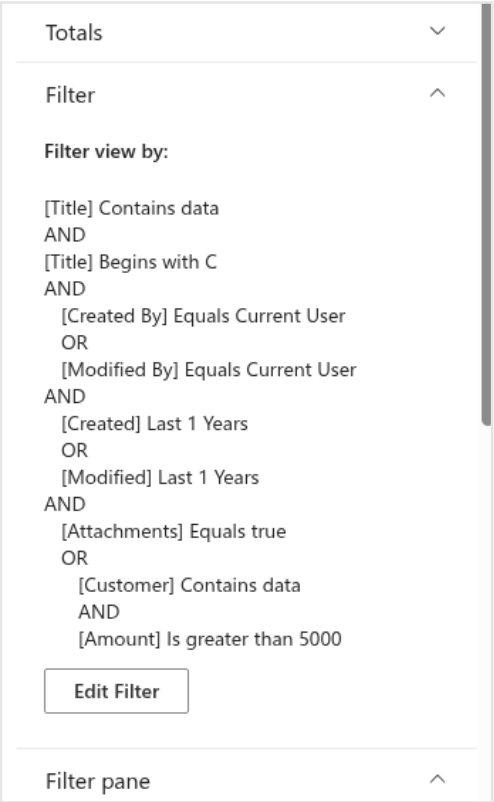
- Show only the documents **created or modified by the current user**.
- Show only the records of the **last 12 months** on a dashboard page.
- Show only **approved** items, items **with attachments**, or items whose **Status** is not *Closed*.
- Build a page per department from one list without creating a **view** per department.

Note

The Query Builder defines the filter that is always applied. The controls that users see in the filter pane are configured separately - see KB10255. Filter Pane Controls and Supported Column Types in List Filter Online.

Where to find the Query Builder

1 Open the page in edit mode and select **Edit web part** on the List Filter Online web part.
2 In the property pane, scroll to the **Filter** group. The label **Filter view by:** is followed by a preview of the current filter - **No filter applied** when nothing is defined yet.
3 Select **Edit Filter**. The Query Builder opens in a large side panel.
4 Build the query, then select **Save** to apply it or **Cancel** to discard the changes. The web part re-renders immediately with the new filter.



The Filter group of the property pane with the filter preview and the Edit Filter button

The Query Builder is available only after the **site** and the **list or library** are selected in the **Data source** group, because the list of fields and their types comes from the selected list.

Conditions and groups

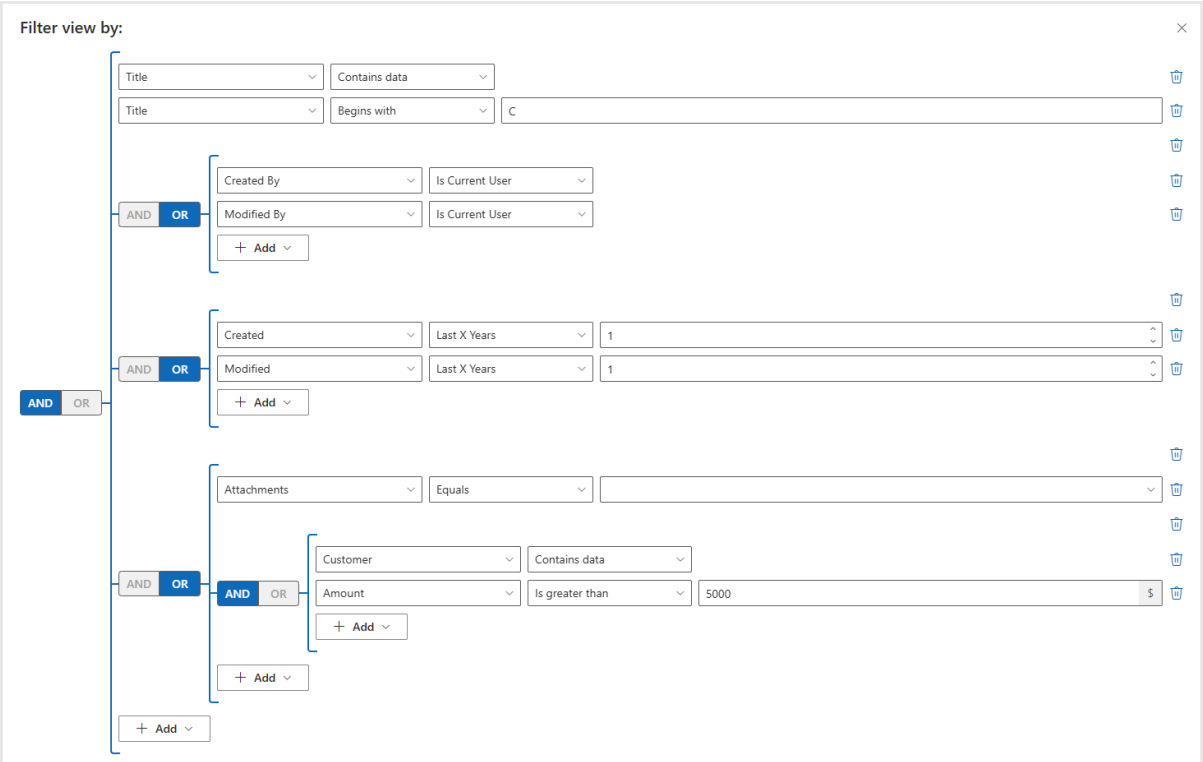
A query consists of two kinds of building blocks.

- A **condition** is one comparison: *field* - *operator* - *value*, for example `Amount` - *Is greater than* - `5000`. Some operators need no value (*Contains data*, *Is Current User*, *Today*).
- A **group** holds conditions and other groups and joins them with one logical operator - **AND** (every member must be true) or **OR** (at least one member must be true). The toggle on the left edge of the group switches between the two.

The panel always has one **root group**; it cannot be deleted. Inside any group, the **Add** button offers two commands:

- **Condition** - adds an empty row to the current group;
- **Group** - adds a nested group (AND by default) that you fill in the same way.

Groups can be nested inside other groups. Every row and every nested group has a delete icon on the right; deleting a group deletes everything inside it.



A query with nested AND/OR groups in the Query Builder

The query in the figure reads: *Title is not empty and begins with "C"* **and** *(created by me or modified by me)* **and** *(created in the last year or modified in the last year)* **and** *(has attachments, or the Customer is filled in and the Amount is greater than 5,000)*.

Tip

Keep the root group **AND** and put each alternative set of conditions into its own **OR** group. A query shaped this way is easy to read in the preview and easy to extend later.

Operators by column type

The **operator** list of a row depends on the type of the selected field. The table lists the operators the Query Builder offers for each supported column type.

Column type	Operators
Single line of text, **Multiple lines of text**, **Hyperlink or Picture**	Equals, Does not equal, Begins with, Contains, Contains data, Does not contain data
Choice	Equals, Does not equal, Begins with,

Column type	Operators
	Contains, Contains data, Does not contain data
Choice (multiple values), **Lookup**, **Calculated** (text result)	Equals, Does not equal, Contains data, Does not contain data (Calculated also offers Begins with and Contains)
Number, **Currency**, **ID**	Equals, Does not equal, Is greater than, Is greater than or equal to, Is less than, Is less than or equal to (Number also offers Contains data, Does not contain data)
Date and Time	On, Not on, On or after, After, On or before, Before, Between, Today, Last X Days, Last X Weeks, Last X Months, Last X Years, Next X Days, Next X Weeks, Next X Months, Next X Years, Contains data, Does not contain data
Yes/No	Equals, Does not equal, Contains data, Does not contain data
Attachments	Equals, Does not equal (value: Yes / No)
Person or Group	Equals, Does not equal, Is Current User, Is not Current User, Contains data, Does not contain data
Managed Metadata (single and multiple values)	Equals, Does not equal, Contains, Does not contain, Contains data, Does not contain data
Approval Status	Equals, Does not equal (value: a list of statuses)
Rating, **Likes**	Equals, Does not equal, Contains data, Does not contain data (Likes: Contains data, Does not contain data only)

Contains data and *Does not contain data* test whether the column has any value, the same way **IsNotNull** and **IsNull** do in CAML.

The **value** editor also follows the column type: a date picker for dates (two date pickers for *Between*), a numeric field for numbers and currency, a people picker for **Person or Group**, a term picker for **Managed Metadata**, a *Yes / No* list for Yes/No and Attachments, a list of statuses for **Approval Status**, and a text box for text, choice and lookup columns.

Warning

System and read-only columns (for example *ID*, *Unique ID*, *Version* or *Checked Out To*) are not offered in the field list. Columns of types that cannot be compared in CAML - such as *Image*, *Location* or *Recurrence* - are not offered either.

Static and dynamic conditions

A **static** condition compares the column with a fixed value you enter: a date, a number, a text, a person. The value is written into the query as is. *Between* covers both dates inclusively, by calendar day; if only one of the two dates is set, the condition becomes an open-ended *On or after* or *On or before*.

A **dynamic** condition is resolved by SharePoint **at the moment the query runs**, so the same page shows different items to different users and on different days:

Operator	How it is resolved
Is Current User / **Is not Current User**	Compares the person column with the ID of the signed-in user (`<UserID />` in CAML).
Today	Compares the date column with the current date (`<Today />`).
Last X Days / Weeks / Months / Years	A range from *today minus X* (days, weeks, months or years) to *today*.
Next X Days / Weeks / Months / Years	A range from *today* to *today plus X*.

The number for *Last X* and *Next X* is entered in the value field of the row. **Last X Months** and **Last X Years** are converted to a start date when the query is generated, so a page that says *Modified - Last X Years - 1* always covers the last twelve months without anyone editing the filter.

Note

SharePoint evaluates the query on the server. The month and year boundaries are calculated in the browser when the query is generated, while `<Today />` is resolved by SharePoint. A document modified late in the evening may therefore fall into a different day than your local clock suggests.

How the predefined filter combines with user filters

When a user applies a filter in the filter pane or in a column header, the web part does not replace the predefined filter. It builds a new query in which the **predefined filter and the user filters are joined with AND**:

```
<Where>
  <And>
  </And>
</Where>
```

Consequences worth knowing:

- Users can narrow the result but never widen it beyond the predefined filter. A page filtered to *Created By - Is Current User* never shows another person's items, whatever the user selects in the pane.
- Sorting, grouping, totals and the Excel export all work on the combined result.
- Saved filters and filter links (see KB10253. Saving Filters and Sharing a Link to a Filtered View in List Filter Online) store only the user part of the query. The predefined filter is part of the page configuration and travels with the page.

From the tree to CAML

CAML, the query language of SharePoint lists, allows **exactly two operands** inside `<And>` and `<Or>`. A group with three or more members therefore cannot be written as one element; it has to be folded into a chain of nested pairs. The Query Builder does this folding for you, together with the type-specific details: the `Type` attribute of every value, `LookupId` for lookup columns and `IncludeTimeValue` for date comparisons.

The query from the figure above produces a `<Where>` clause of about 70 lines. Its

skeleton - with the comparisons shortened - looks like this:

```
<Where>
  <And>
    <Or>
      <Eq><FieldRef Name="Author" /><Value
Type="Integer"><UserID /></Value></Eq>
      <Eq><FieldRef Name="Editor" /><Value
Type="Integer"><UserID /></Value></Eq>
    </Or>
    <And>
      <Or>
        <And> <Geq Created 2025-10-21 /> <Leq Created <Today
/> /> </And>
        <And> <Geq Modified 2025-10-21 /> <Leq Modified
<Today /> /> </And>
      </Or>
      <And>
        <Or>
          <And> <IsNotNull Customer /> <Gt Amount 5000 /> </
And>
          <Eq Attachments 1 />
        </Or>
        <And> <IsNotNull Title /> <BeginsWith Title "C" />
</And>
      </And>
    </And>
  </And>
</Where>
```

Each *Last X Years* row became an `<And>` of two date comparisons, each OR group became an `<Or>` element, and the four members of the root AND group became three nested `<And>` elements.

Viewing the generated query

To see the exact CAML that the web part sends - including the predefined filter, the current user filters, the view fields, the row limit and the grouping:

1 In the property pane, expand **Developer tools** and switch on **Enable developer mode**.
2 Save the page. A developer tools menu appears at the right end of the command bar of the web part.

3 Select **CAML Query**. The query opens in a dialog and can be copied.



The CAML Query dialog shows the exact query sent to SharePoint

Tip

Switch developer mode off again when the filter is ready. The menu is visible to everyone who can see the web part.

Predefined filters on large lists

On lists with more than 5,000 items SharePoint executes a query only if the **first** condition that narrows the result uses an **indexed** column and sufficiently reduces the number of items. The predefined filter is the first thing that runs, so it decides whether the page opens at all.

- Start the root group with a condition on an indexed column (check columns such as *Created*, *Modified*, *Author*, *Editor* and *ID*, and create indexes in the list settings where needed).
- Prefer AND at the root: an OR between two non-indexed columns cannot use any index.
- Dynamic date conditions (*Last X Months*, *Today*) are good first conditions when the

date column is indexed.

The details, the index warning in the filter configurator and the one-click index creation are described in KB10257. Filtering Large Lists: Indexed Columns and the 5,000-Item Threshold.

Limitations

- The Query Builder works with the columns of **one list or library** - the one selected in the data source. Conditions on columns of other lists are not possible.
- Lookup and choice values are matched by the **text you type**; there is no picker for them in the Query Builder.
- A nested group that contains no conditions is ignored when the query is generated.
- In practice two or three levels cover almost every scenario; a deeper tree is hard to read in the preview.
- The predefined filter is not shown to users. If users need to know why some items are missing, say so in the web part title or on the page.

Terms

List
A list is a storage unit in SharePoint. A list can contain columns of different types, content types, and views. A document library is a special type of list and therefore inherits the functionality of a list.

SharePoint
SharePoint is a web-based collaboration platform that provides content management, document management, workflow applications, search, and other tools that empower employees and teams to work together. SharePoint is also a secure place to store, organize, and access shared information.

View
A view is a saved configuration that determines which items of a list or library are displayed and how, including the columns, sorting, filtering, grouping, and layout. Views can be personal or public.

Web Part
A web part is a primary building block of functionality or content placed on a SharePoint page. Some web parts support customization, such as configuring the web part or changing its appearance.