# Query Wizard

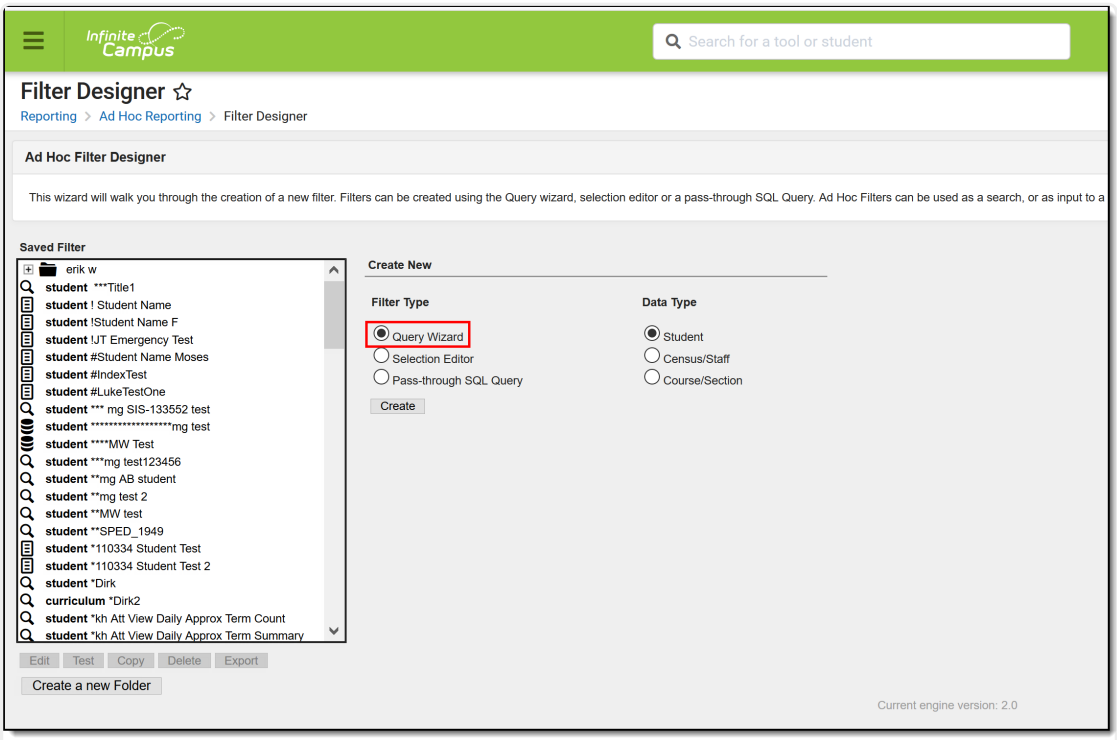
Last Modified on 10/22/2022 10:00 am CDT

Query Wizard Features | Create a Filter | Manage Filters | Manage State Ad hoc Filters

**Classic View:** Ad Hoc Reporting > Filter Designer > Query Wizard

**Search Term:** Filter Designer

In the Query Wizard, elements are organized in a straightforward pattern, so it is easy to select the elements needed. Filters can be designed with student information, census/staff information or course/section information. Queries for students and course/section data pulls results from the calendar selected in the Campus toolbar. Census/Staff data pulls results from the entire Campus database, regardless of the calendar selected.




*Query Wizard*

Unless using the Data Warehouse, queries should be created in such a way to avoid large results. Generating large queries may cause performance issues.

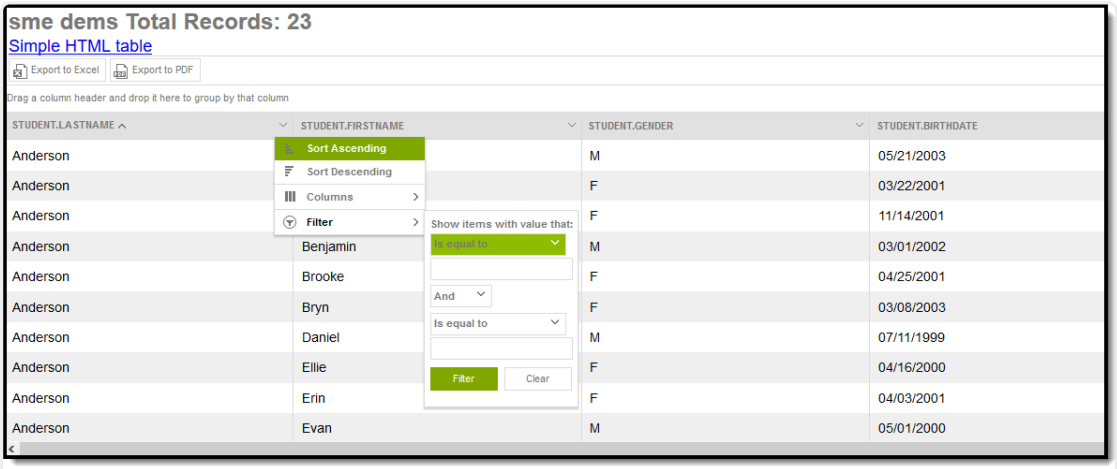
An ad hoc row limit is set on the database at 5 million rows. Any query that returns more than this is shortened. A warning message displays when this occurs.
When generating large queries and the Ad hoc Row Limit is met:

- Select fewer fields to include in the query
- Add more filters (see Functions) to reduce the number of records
- Use direct SQL access

Filters including GPA fields may task the server. It is recommended that these queries be

generated after normal school hours.

Filters built in the the Filter Designer display in HTML format. The HTML output allows for column sorting, filtering, grouping, and exporting to Excel or PDF.




*HTML Filter Display*

To view the output in a simple HTML table, click the link at the top of the output. This displays the output without the ability to sort, group and organize the columns.

Query Wizard functionality allows users to easily create Ad hoc filters by organizing elements in a straightforward manner. Query Wizard filters are dynamic and always pull current information from the database based on the fields and filter options selected.

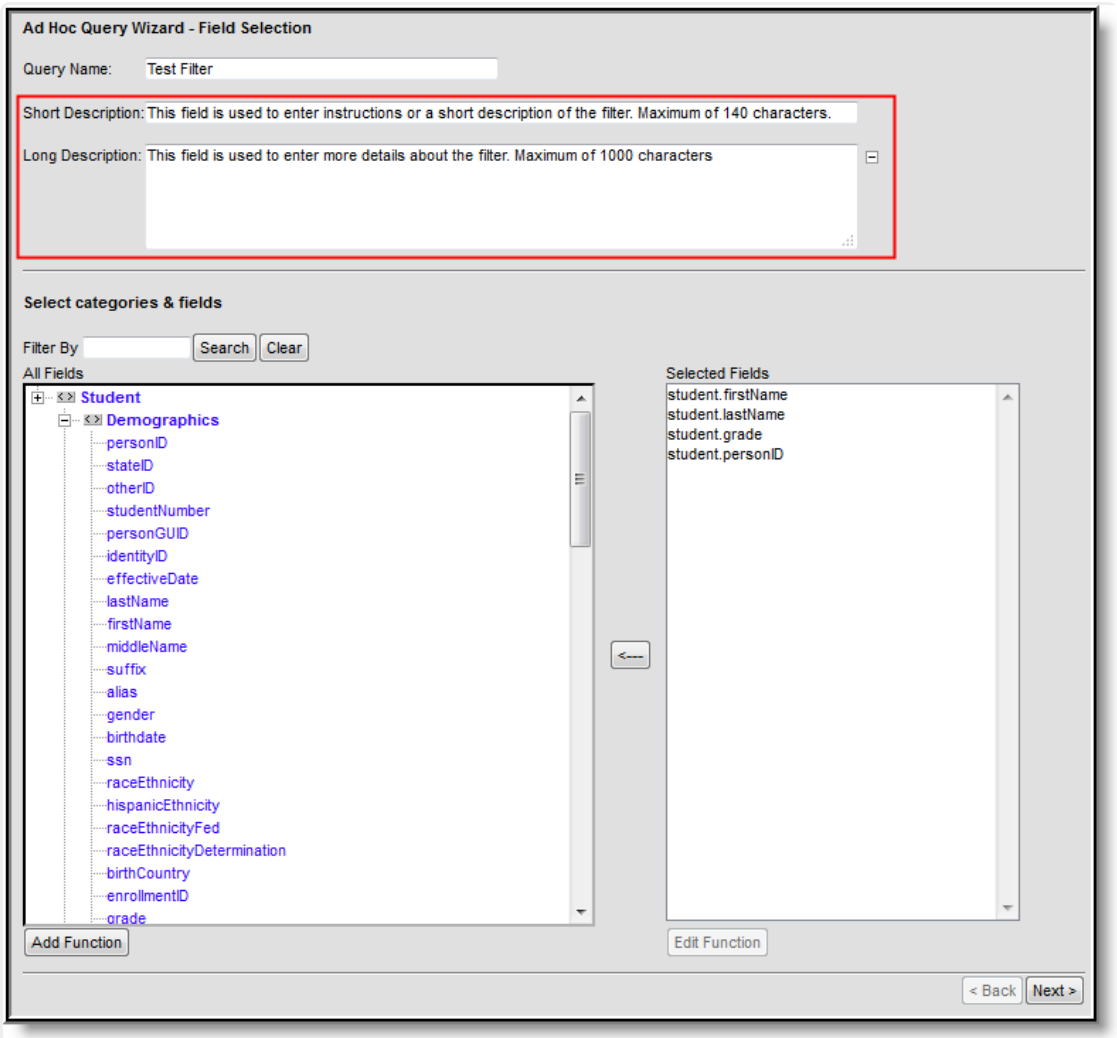
When using Custom Tab fields within Ad Hoc Query Wizard, all students are included in the results even if the student does not have a record within the custom dated tab. To exclude students without records for fields from a custom tab that is Table or List Element tab type, set the statusDate Operator to **IS NOT NULL**. When pulling in fields from a custom tab that is a Table or List Element tab type, Ad Hoc logic outputs every possible combination based on a specific date and time. The Table Tab Type stores specific times. The List Element Tab type always stores 12:00 AM. See the Custom article for more information.

# Query Wizard Features

Short and Long Filter Descriptions | Filter Operators | Logical Expressions | Functions | Output Formatting | Grouping and Aggregation Descriptions

## Short and Long Filter Descriptions

This provides additional information and context about the filter. It's displayed when a user selects that filter from the Saved Filters list and when the filter is being modified.

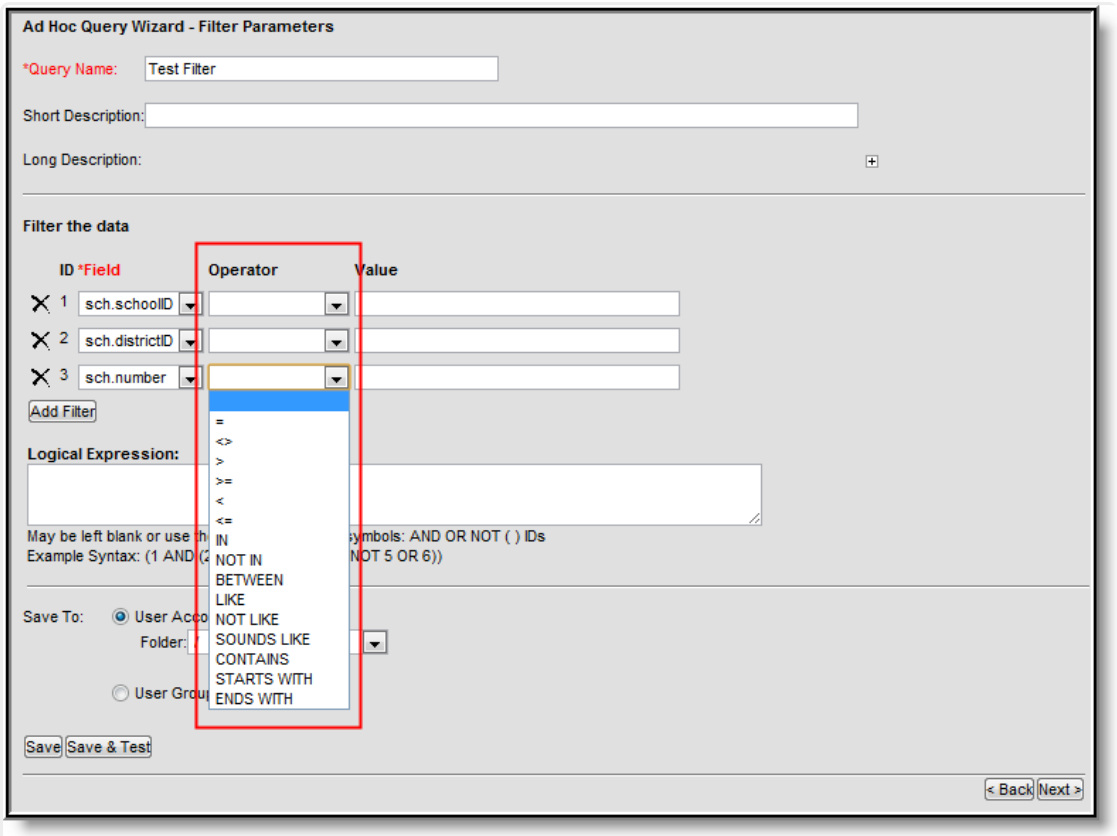



*Short Descriptions, Long Descriptions*

Click here to expand...

# Filter Operators

Filter operators allow users to set specific parameters per field within a filter. These parameters uniquely filter each field while maintaining the filter as a whole.




*Operator Options*

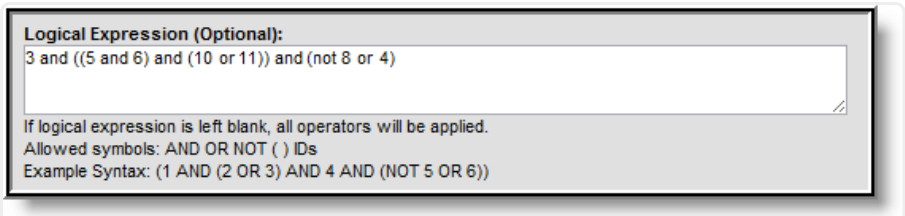
Users may apply multiple operators to the same field by clicking the **Add Filter** button and selecting a field. If a **Logical Expression** exists, all fields assigned an Operator must be included within the expression.

Click here to expand...

# Logical Expressions

The Logical Expression field allows users to incorporate conditions between fields within a filter. This field provides an effective way to use the OR, AND, and NOT conditions between fields and groups of fields.

- Only fields assigned an **Operator** are allowed to be included within logical expressions.
- Logical Expressions are created using the ID number associated with each field.



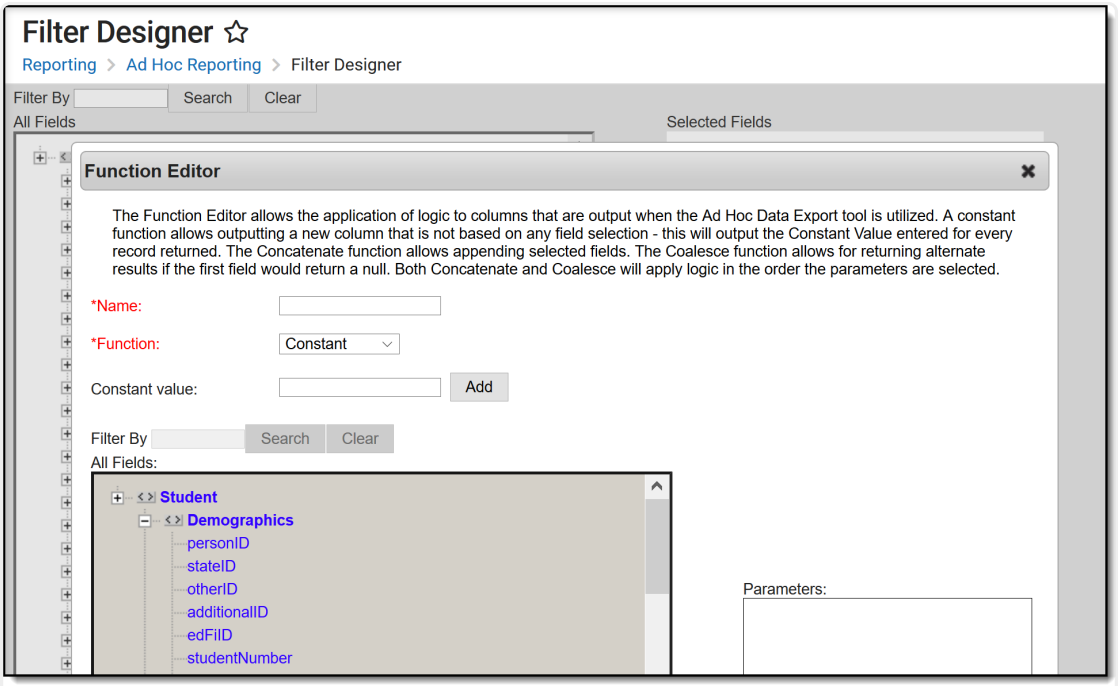

*Logical Expression with a Filter*

Logical expressions can be grouped using ( ) symbols and the ID number to define the order in which the tool should include or exclude a person. In the example above, the ( ) symbols indicate the tool should determine the student's End Date (5) and the student's grade (6) and include these students depending upon if they are Asian (10) or White (11). This determination and group of students is then applied to the remaining parts of the logical expression.

Using ( ) symbols are especially useful when using the OR condition as users are able to include or exclude people based on whether or not they meet the criteria for the fields included within a group of fields. For example, students who have a State ID less than 1000 (8) or an End Status populated (4) are not included in the remaining calculation for the logical expression.

# Functions

Functions can be added to filters which allow logic to be applied to field columns when the filter is generated via the Data Export tool. Add a function to a filter by selecting the **Add Function** button. The **Function Editor** appears in a new window.

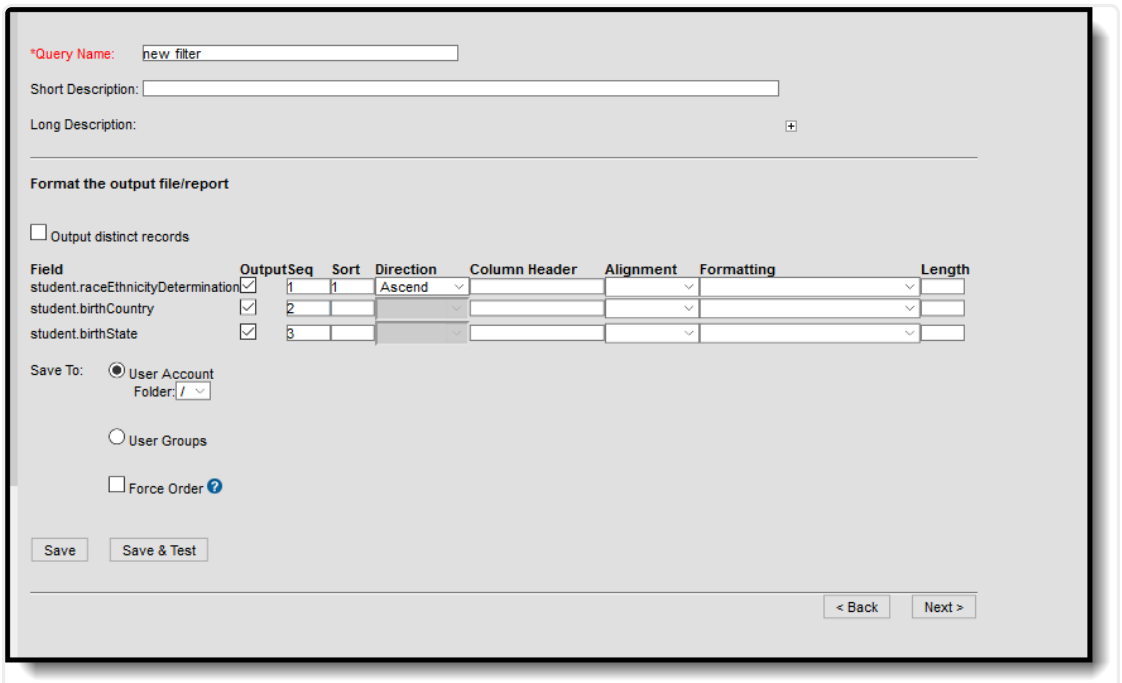



*Add Function*

Click here to expand...

# Output Formatting

The Output Formatting editor allows users to control how each field is reported and displayed when exported.

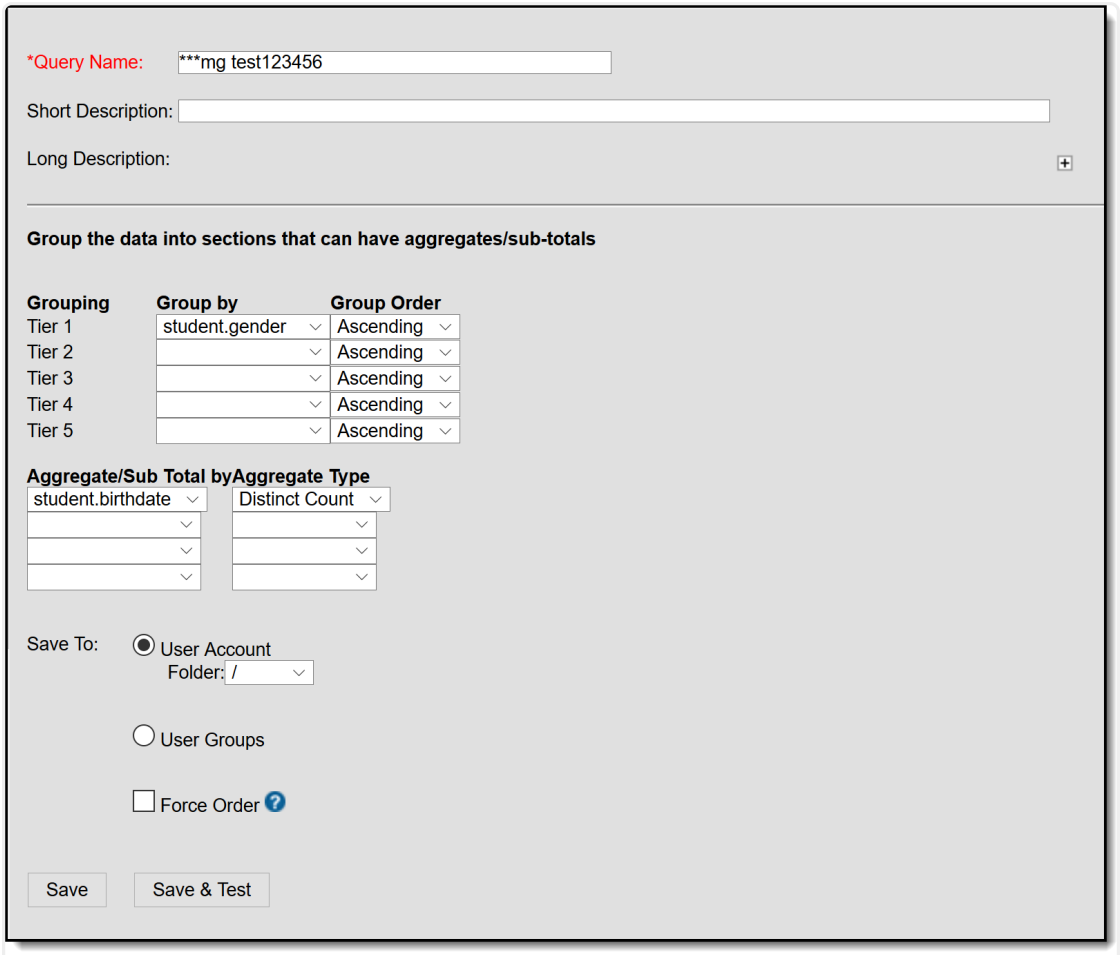



*Output Formatting Editor*

Click here to expand...

# Grouping and Aggregation Descriptions

Grouping and aggregation places results into groups and calculations can be performed on the results. Aggregations display at the bottom of each data group when extracting the data. These options are not available for fixed width output formats.




*Grouping and Aggregation Options*

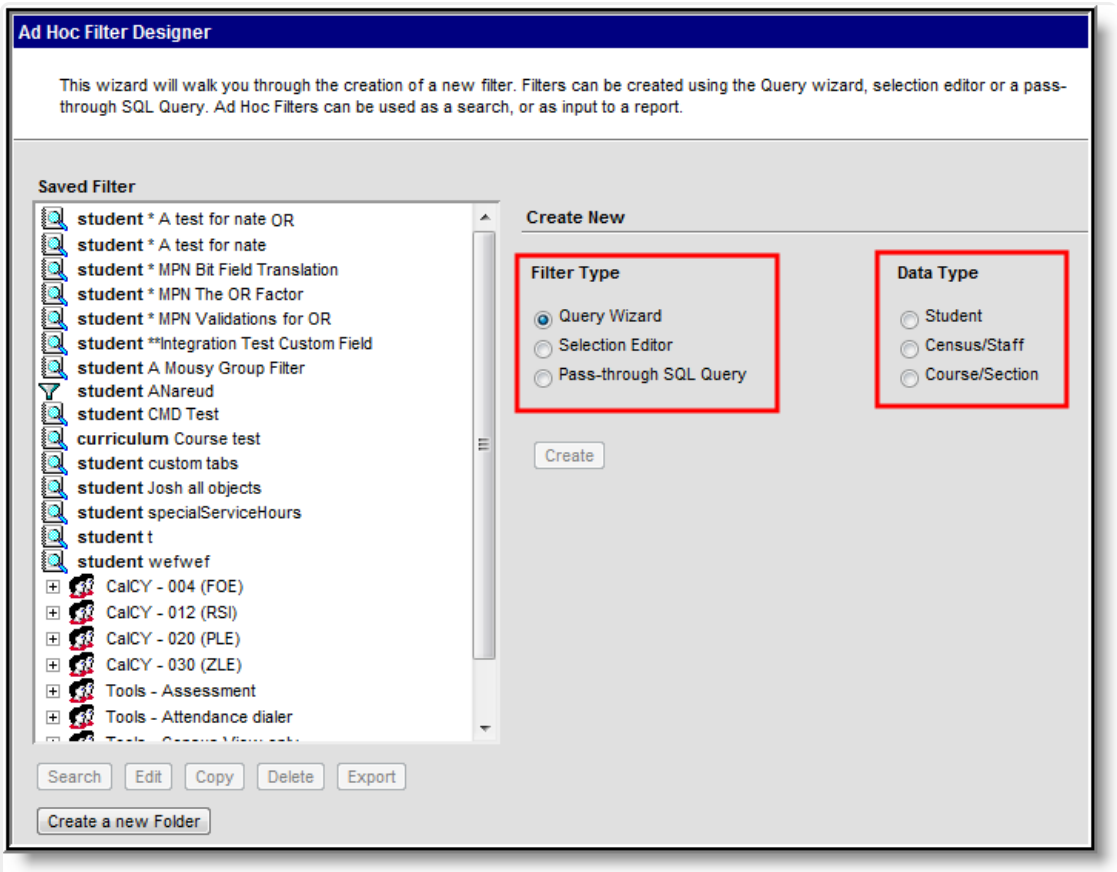
Click here to expand...

# Create a Filter

The following is a basic workflow of how to create a filter. See the Query Wizard Features for additional formatting and modification that can be done for more advanced filters.

## Step 1. Choose Filter and Data Type

1. Select the **Query Wizard** radio button.
2. Select a **Data Type**. This determines which type of fields are available for selection: **Student**, **Census/Staff** or **Course/Section**.
3. Click the **Next** button. The screen displays a list of fields to select in order to create the filter.

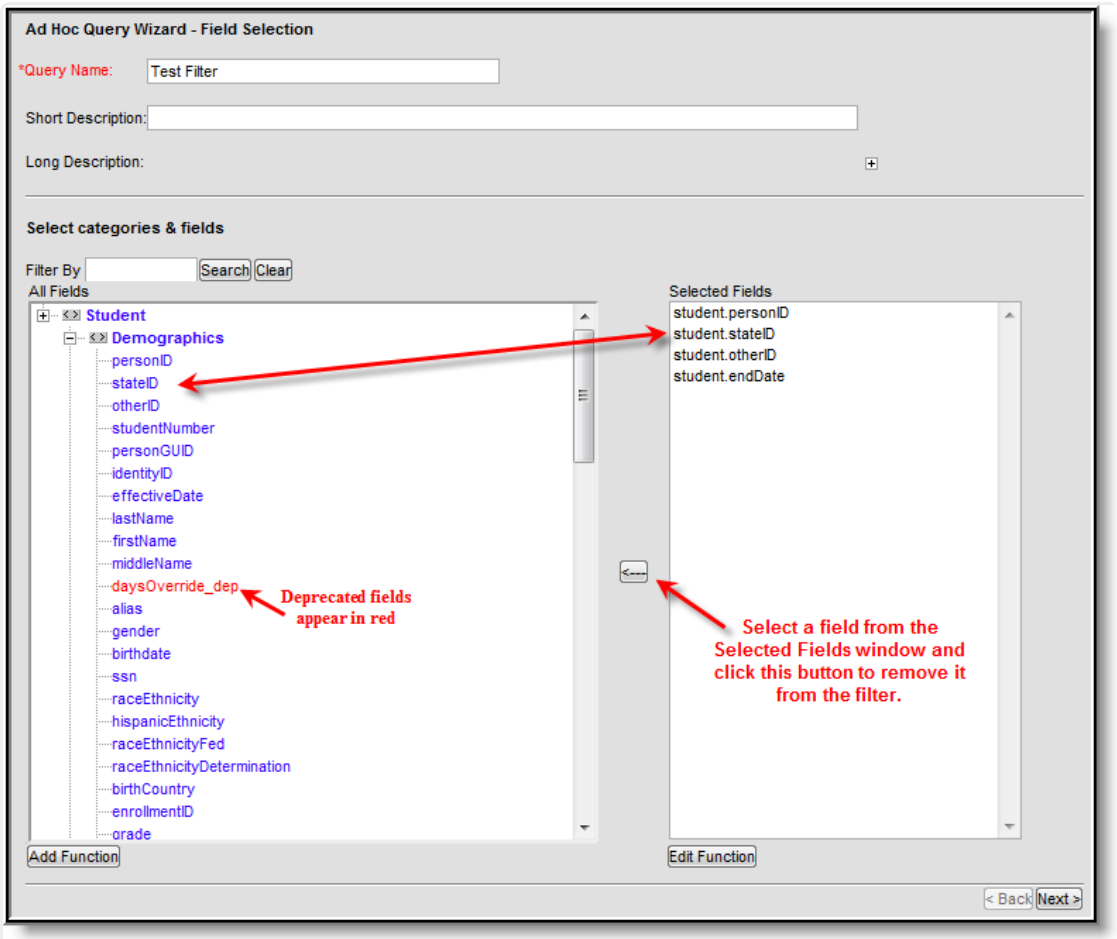



*Filter Type, Data Type Selection*

# Step 2. Select Categories and Fields

Campus fields are organized into specific categories relating to the Filter Data Type selected on the previous screen. Categories are organized in a hierarchy format, where selecting the (+) open savailable fields and additional subcategories within the category. Users may include Campus and user-created custom fields when building filters.

1. Enter a **Query  Name** for the filter.
2. Enter a **Short** and or **Long Description** about the filter (if applicable).
3. Select the data elements form the **All Fields** list by clicking on them. The fields move to the Selected Fields list. To remove a field from the Selected Fields list, click on it to highlight and click the left pointing arrow button.
4. Select the **Add Function** button to add a function to the filter.
5. To search for a particular field, enter part of the name of the field in the **Filter By** section and click the **Search** button. Select the appropriate options for the query. All fields that contain that name display in the All Fields list. To clear the selection, click the **Clear** button and all available fields display again.
6. To save the filter right now without testing it or modifying any results of the selected fields, choose **Save** or **Save and Test**.
7. To continue, click the **Next** button to continue creating the filter, narrow returned results and sort the filter into the desired order.



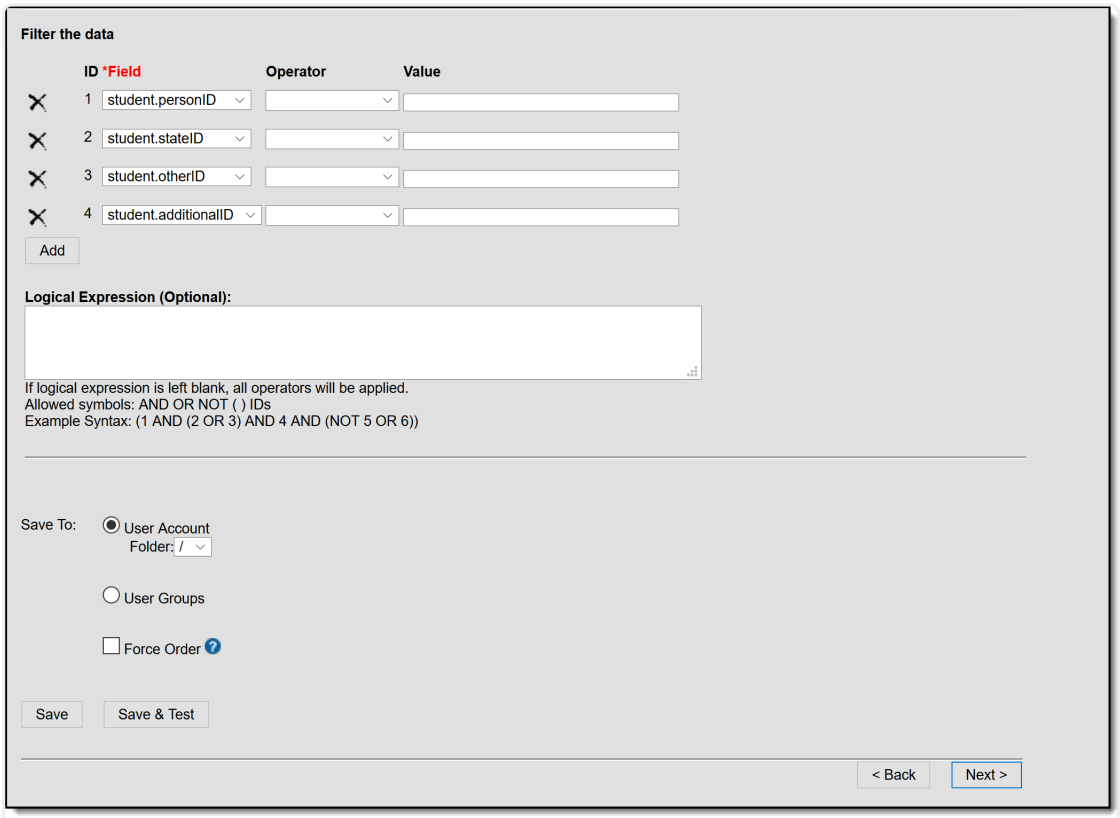

*Adding/Removing Filter Fields*

# Step 3. Enter Filter Parameters

Filter parameters allow users to define specific constraints for how each field is filtered within the filter. This tool allows users to filter very specific data within reports and other exported files.

1. Enter the **Query Name** and a **Short/Long Description** (if applicable).
2. Select the **Operator** for each Field. Available fields are based on data elements selected in the previous Field Selection screen.
3. Enter the **Value** for each Operator. This is the value being used in conjunction with the Operator selected (*i.e.*, student.age > 5, where 5 is the value entered and the output is all students older than 5 years of age).
4. If a BETWEEN Operator was selected, fill in all appropriate fields.
5. To apply multiple operators to the same field(s), click the **Add Filter** button. Selecting this button adds an additional field area where users can select an already existing filter field and apply additional operators.
6. Enter a **Logical Expression** , if necessary.
7. For complicated filters that report data from several calendars and/or have many fields from many different areas, mark the **Force Order** checkbox. When marked, the database fields in the query are executed in a particular order to increase performance of the filter. When a filter is taking several minutes to generate, try generating it again with this checkbox marked. It is not recommended to mark this on every filter.

8. To save the filter right now without testing it or modifying any results of the selected fields, choose **Save** or **Save and Test**.
9. If output formatting and/or group data needs to be defined for the filter, select the **Next** button.



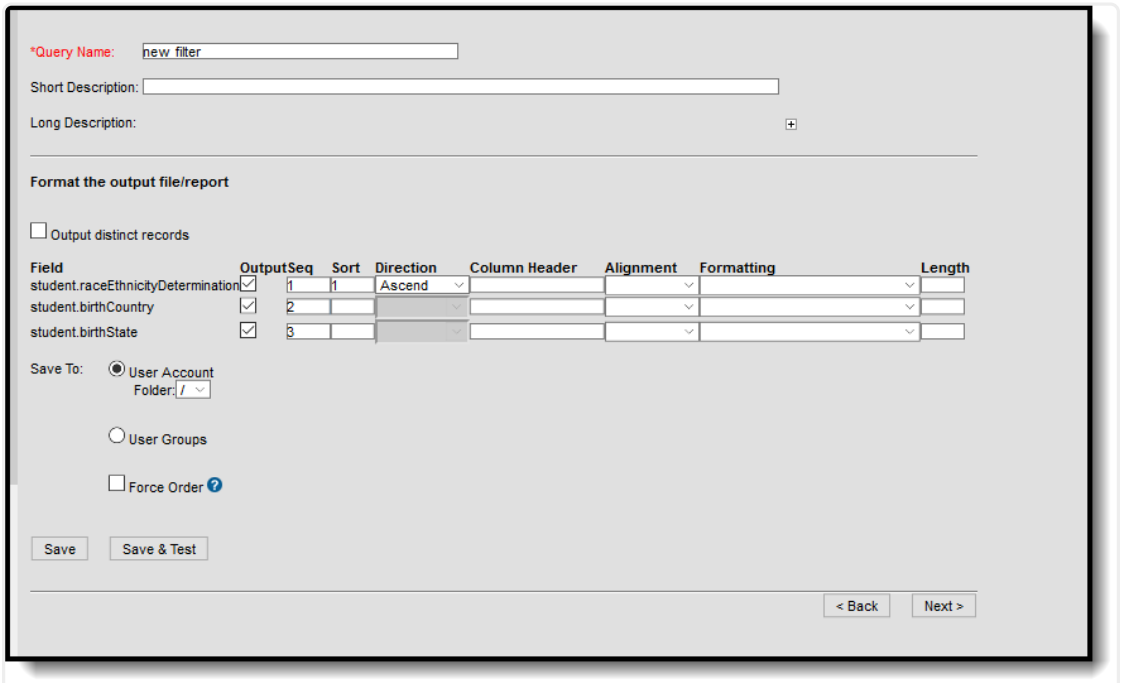

*Filter Parameters*

# Step 4. Enter Output Formatting Values

1. Enter the **Query Name** and a **Short/Long Description** (if applicable).
2. If data should output in unduplicated records based on field values, mark the **Output distinct records** checkbox.
3. If the field should appear in the filter output, verify the **Output** checkbox is marked. If it is not marked, the field does not display in the output but is used to filter data. For example, the field student.activeToday might be chosen to filter out inactive students (student.activeToday = 1), but the Output checkbox could be unselected so that field is not included in the output.
4. Enter the **Seq**uence. This number places the field in that order on the output.
5. Enter a number in the **Sort** field. This determines the order in which fields are sorted.
6. If a number was entered in the Sort field, determine how the field should be sorted by selecting a **Direction**. Data can be sorted by ascending or descending direction. If the Sequence and Sort fields are left blank, the fields display in the order selected and sort how the elements appear on the screen.
7. Enter a **Column Header** for each field. This is the header that display in the column relating to the field. If no header is entered, the field name is used as the header for the column (*i.e.*, student.otherID displays a column name of student.otherID if no header is entered).
8. Determine the field's **Alignment** on files exported via the Data Export tool.
9. Select the **Formatting** of outputted field data. These options allow users to specify how data

is reported in exported files.

10. Enter the field **Length**. This field determines the maximum amount of characters the field reports data before truncation. If data is exported using the Fixed Width format, each field with the Output checkbox checked must have a length value entered.
11. To save the filter right now without testing it or modifying any results of the selected fields, choose **Save** or **Save and Test**.
12. To continue, click the **Next** button to continue creating the filter, narrow returned results and sort the filter into the desired order.

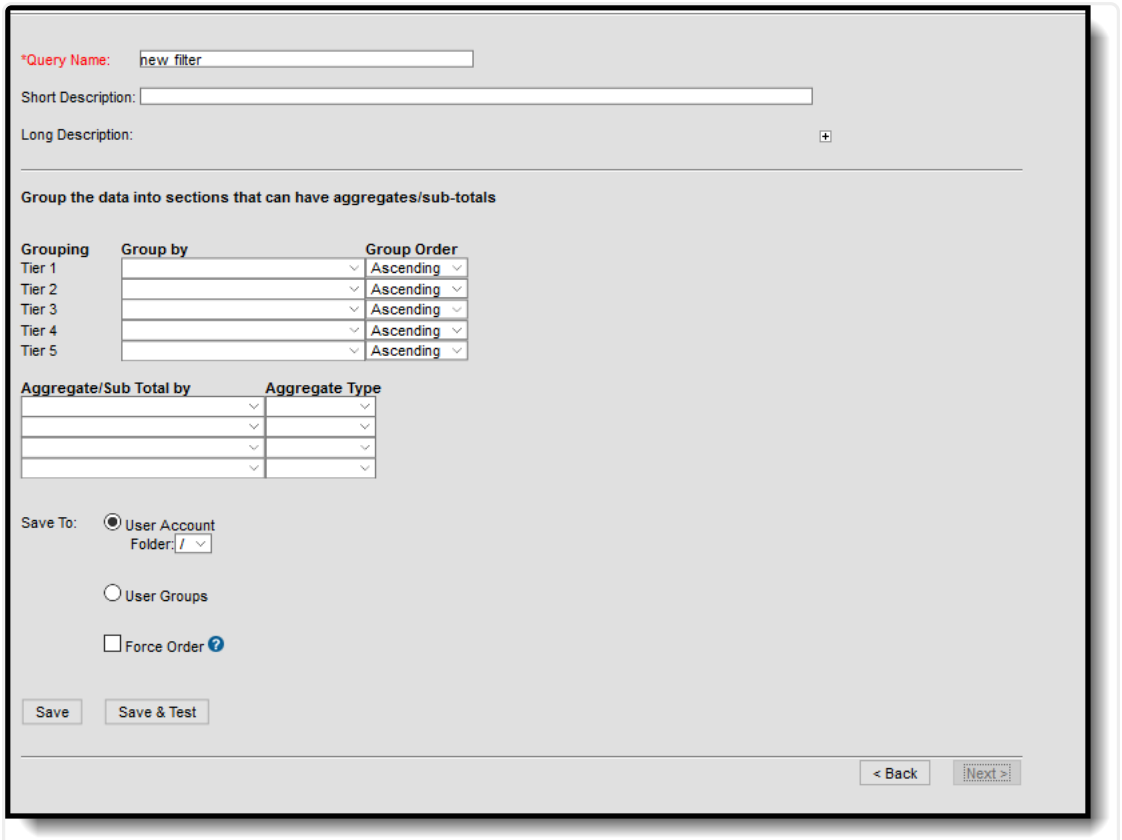



*Output Formatting Values*

# Step 5. Define Data Filter Grouping, Calculations and Subtotals

The Grouping and Aggregation editor allows users to group fields into sections and report specific aggregates/sub-totals for each section.

1. Enter the **Query Name** and a **Short/Long Description** (if applicable).
2. Select each field to **Group By** for each tier. This field determines which fields are grouped into sections, allowing the field to have separate aggregate/sub-totals reported.
3. Select each tier **Group Order**. This determines how aggregate/sub-total data is reported for the tier.
4. Select the field and determine the **Aggregate/Sub Total by Aggregate Type**. Data within each group aggregates based on the field and Aggregate Type selected. See the table below for information about each available aggregate type



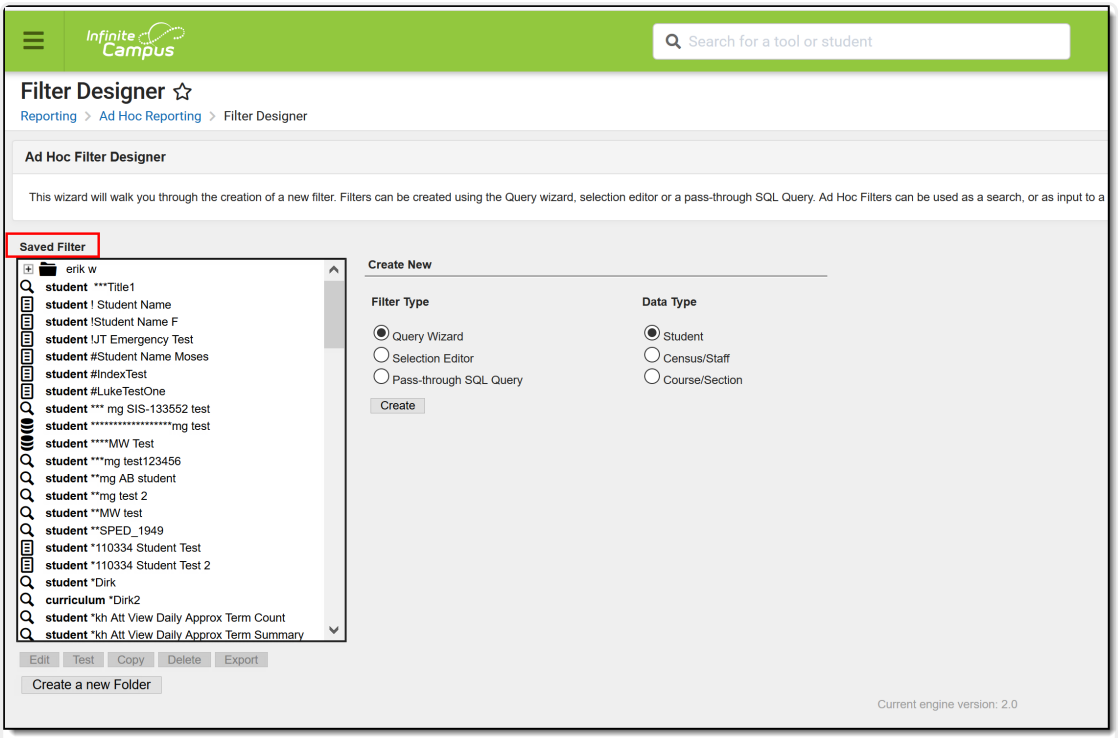

*Grouping and Aggregation*

# Step 6. Save the Filter

To quickly save the filter, click the **Save** button. To quickly save and verify the filter returns data, click the **Save and Test** button. Both of these options save the filter and it can be found in the Saved Filter list. The Save and Test option saves the filter and generates the filter in HTML format for a quick review of the selected fields and format. Users must have pop-ups enabled on the web browser in order to view Test results.

For more advanced save features, follow the procedures below.

1. Determine if the filter needs to be saved to a **User Account Folder**. If yes, choose that radio button and select the appropriate folder.
2. Determine if the filter needs to be available to particular User Groups. If yes, choose that radio button and select the appropriate user groups. If a filter is saved to more than one User Group, a separate copy is stored for each group. Each group can independently edit the filter without affecting another group's copy.
3. For complicated filters that report data from several calendars and/or have many fields from many different areas, mark the **Force Order** checkbox. When marked, the database fields in the query are executed in a particular order to increase performance of the filter. When a filter is taking several minutes to generate, try generating it again with this checkbox marked. It is not recommended to mark this on every filter.
4. Select the **Save** icon. The filter is now saved and can be selected from the **Saved Filter** list on the main page of the Filter Designer.



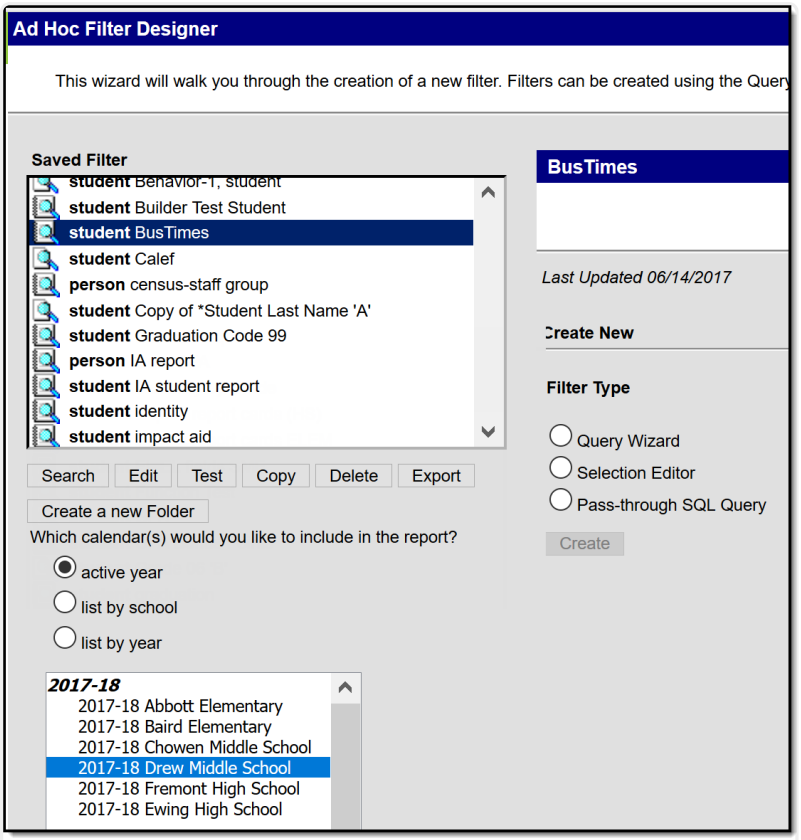

*Saved Filter List*

To generate a save filter, select the desired filter to generate. Choose the appropriate Calendar.

Select a **saved Student Data Type** and **saved Course/Section** filters and select from which calendars to report data. Select calendars by the active year, by the school name or by year. Select calendars by the active year, by the school name or by year. If a calendar is selected in the Campus Toolbar, that calendar is already selected.

Calendars cannot be selected if the query is for Census/Staff Data Types.

Only calendars to which the user is assigned calendar rights are available for selection.




*Save Filters*

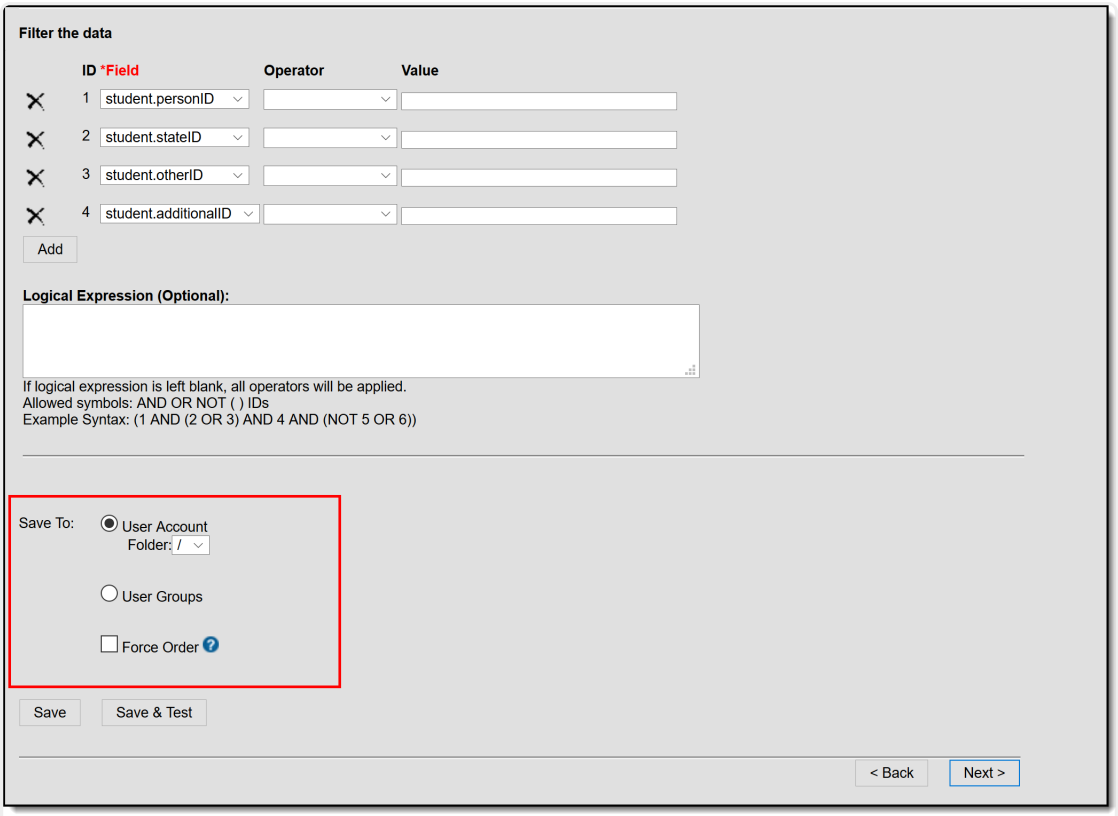
# Manage Filters

Save Filters to Folders | Remove Fields from the Filter Parameters Editor | Create Folders for Filters | Add a Saved Query to a Folder | Move Filters between Folders | Copy Filters | Delete Filters | Modify a Query Created by Another User | Test Saved Filters | Last Updated, Last Run, and Last Run By Information

## Save Filters to Folders

Ad hoc filters can be saved to specific folders created within the Filter Designer tool. Filters can be saved to User Accounts or User Groups.

For complicated filters that report data from several calendars and/or have many fields from many different areas, mark the **Force Order** checkbox. When marked, the database fields in the query are executed in a particular order to increase performance of the filter. When a filter is taking several minutes to generate, try generating it again with this checkbox marked. It is not recommended to mark this on every filter.

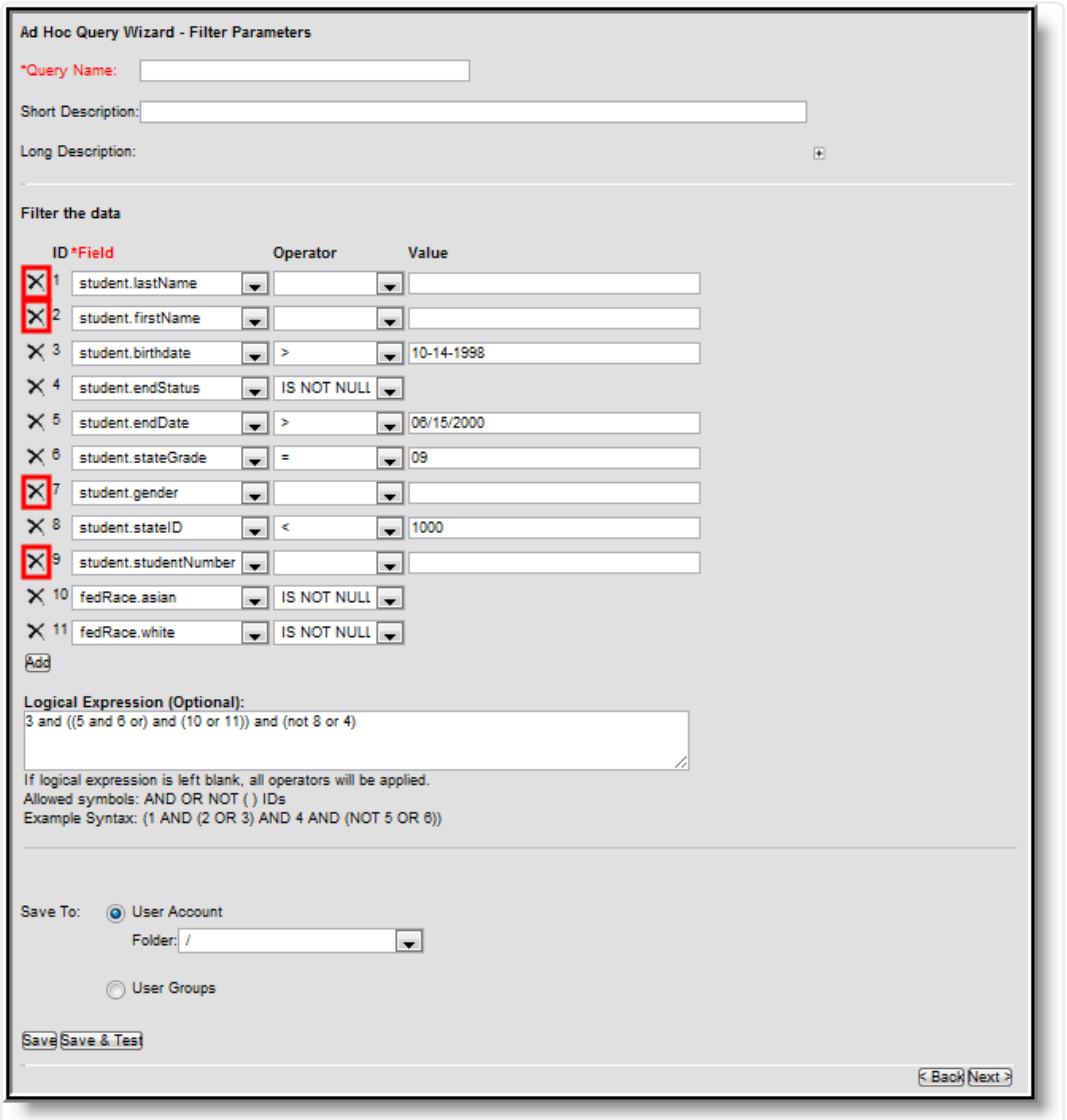



*Saving a FIlter to a FOlder*

# Remove Fields from the Filter Parameters Editor

Fields can be removed from the Filter Parameters editor without being removed from the filter as a whole. This allows users to reduce the Filter Parameters editor to only those fields in which operators are assigned or only those fields in which the user wants to see.

Fields removed from the Filter Parameters editor are not removed from the filter, only the user's view of the editor.




*Removing Fields from the Filter Parameters Editor*

To remove fields from the Filter Parameters Editor, select the **X** next to each field.

> Removing a field from the list does not remove it from the filter output.

All fields not assigned an Operator were removed and the field IDs were automatically renumbered. The Logical Expression automatically updates to match new field IDs.

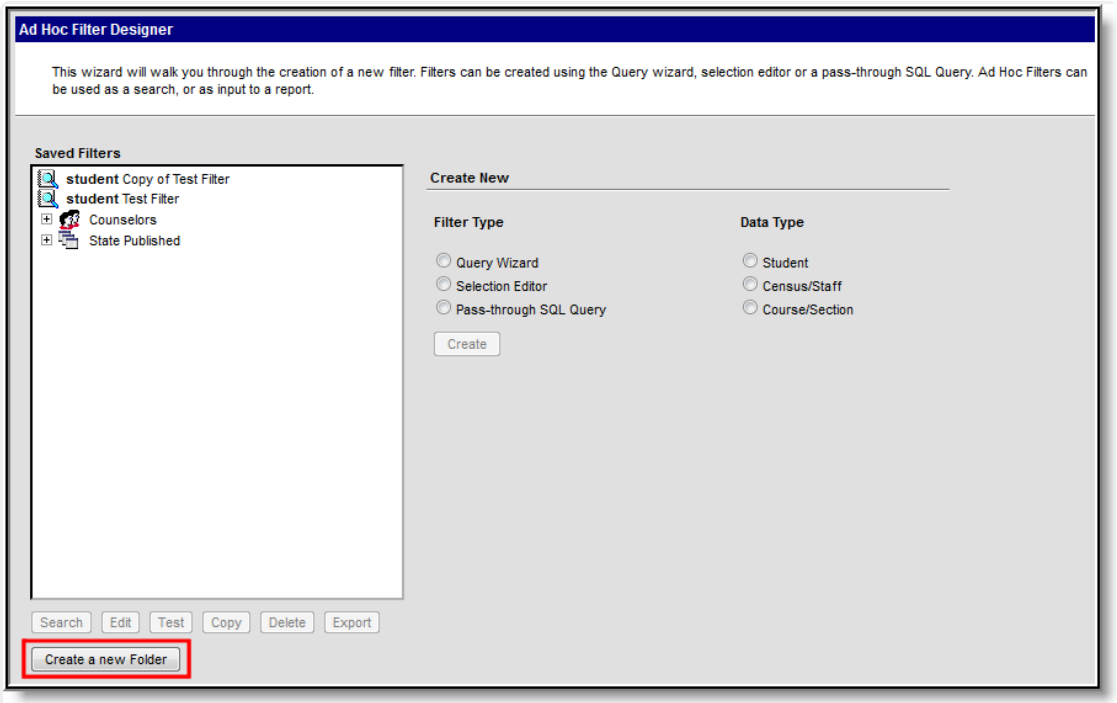
The Filter Designer tool allows users to create folders for organizing and storing Ad hoc filters. Folders can be organized in a hierarchy format, where sub-folders exist within parent folders. By creating folders, users can better manage large volumes of existing Ad hoc filters and group them in a logical order.

> If a field in the query has been deactivated (displays in red), use the Element Replacement

Tool to update the filter. This removes the deactivated field and adds the equivalent field to the filter.

# Create Folders for Filters

Folders allow users to better manage Ad hoc filters within the Filter Designer tool.

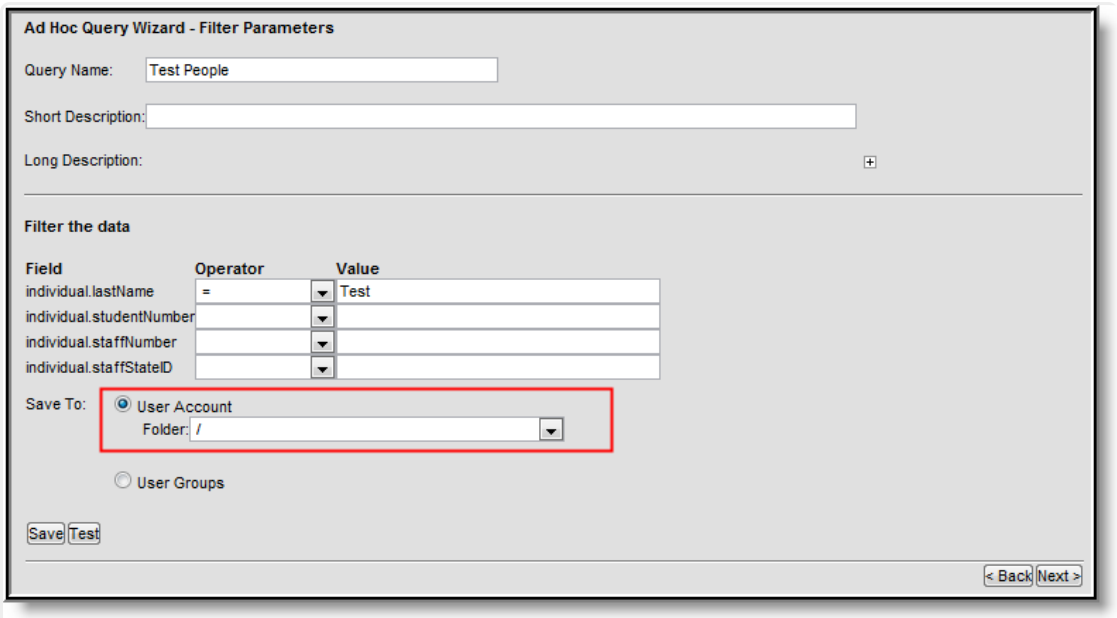



*Create a New Folder*

Click here to expand...

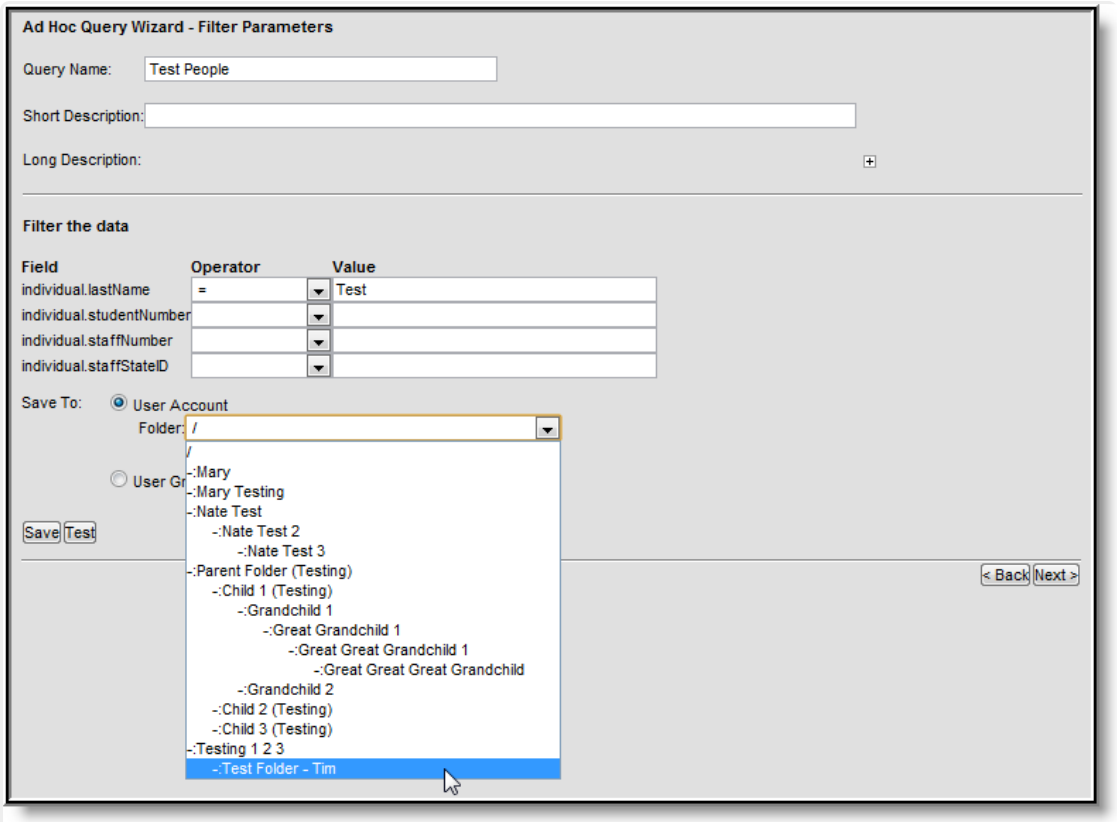
# Add a Saved Query to a Folder

Once folders have been created, Ad hoc filters can now be assigned to those folders.



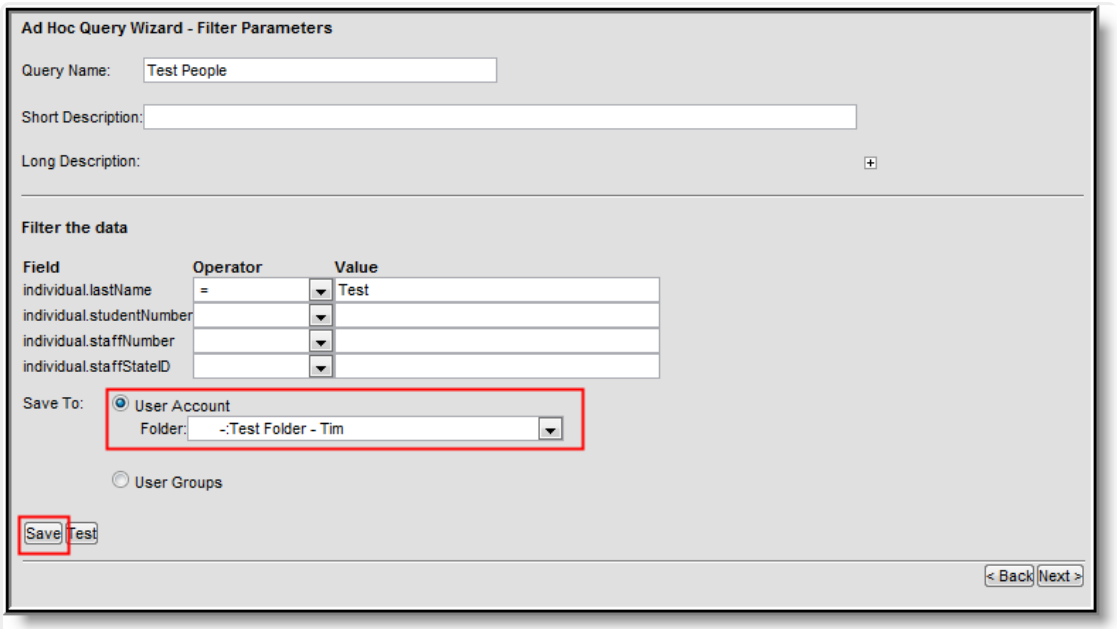

*Saving an Ad hoc Filter to a Folder*

To assign an Ad hoc filter to a folder, click the **User Account** radio button and select the folder from the **Folder** field.



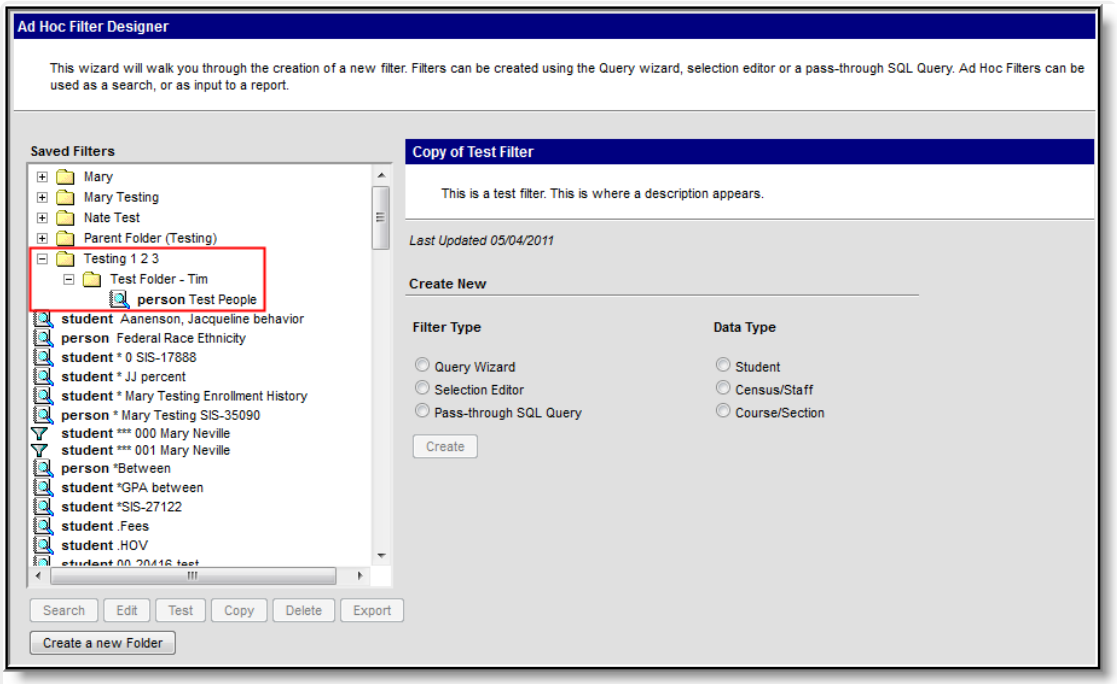

*Selecting the Saved Folder*

In the example above, the Ad hoc filter is being assigned to the Test Folder - Tim folder.




*Saving the Ad hoc Filter to a Folder*

Once the folder is selected, the **Folder** field displays the folder name. Select the **Save** button to save the filter to the folder.

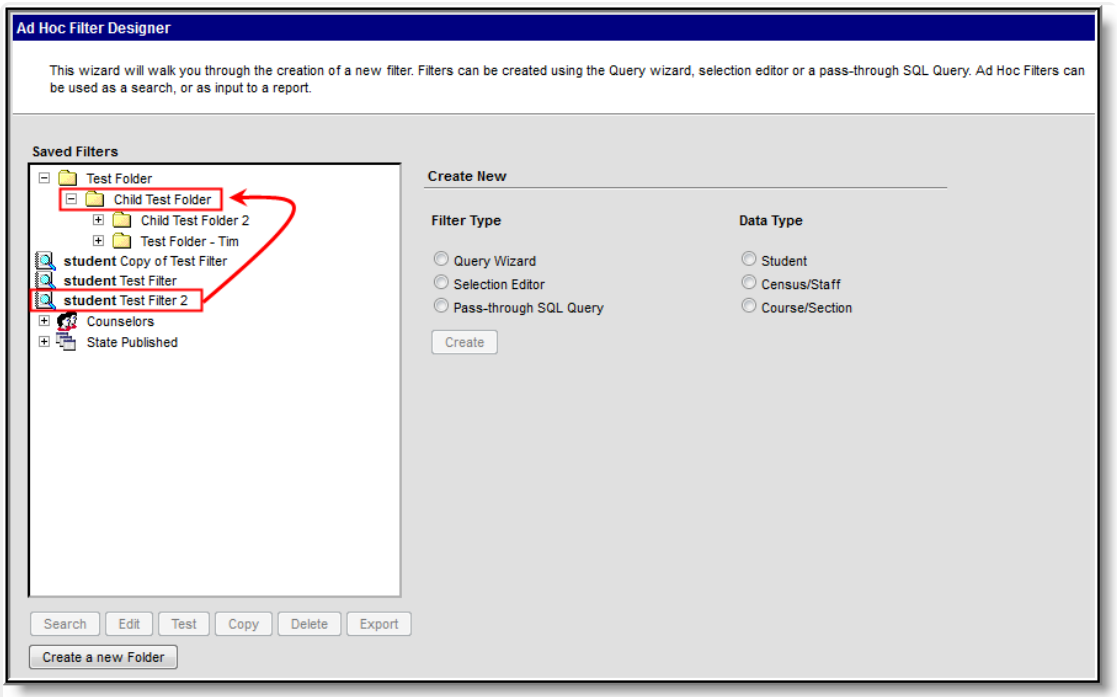



*Viewing the Saved Filter in the Folder*

The Ad hoc filter is now saved and accessible within the assigned folder.

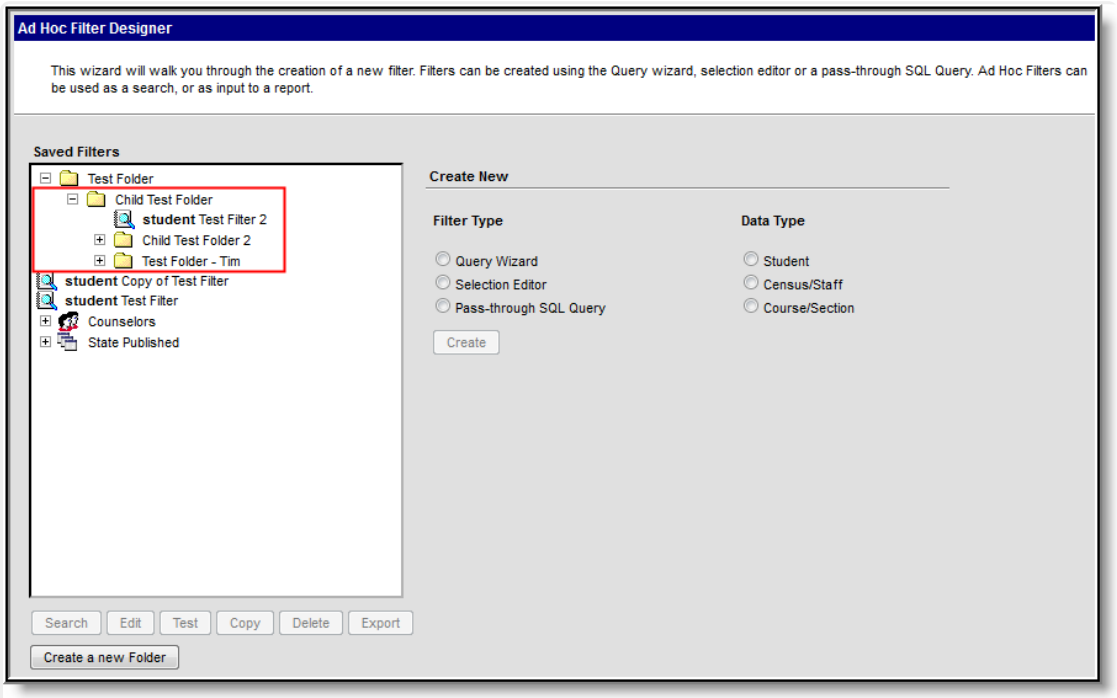
# Move Filters between Folders

Ad hoc filters can be easily moved and organized between folders.




*Moving an Ad hoc Filter to a Folder*

To move an Ad hoc filter into an existing folder, left-click, hold and drag the filter into the designated folder. A pop-up message displays, asking the user to confirm the action. Select the **OK** button to move the Ad hoc filter.




*Viewing a Moved Ad hoc Filter*

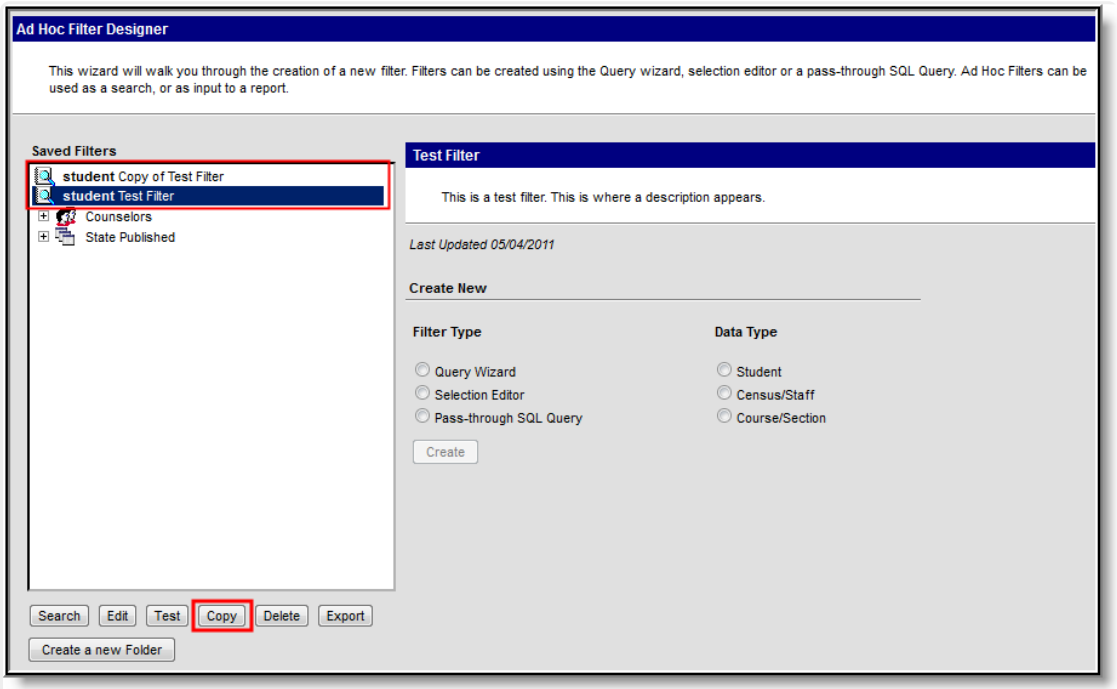
The moved now displays under the appropriate folder.

This functionality works for moving filters in, out and to another folder.

Existing filters can be easily copied, if desired. This keeps the original version of the filter and lets users change a filter to add new fields and functions.

# Copy Filters

Filters can be copied for additional editing. Select a saved filter and click the **Copy** button. A pop-up message displays indicating the filter has been copied. Copied filters are named Copy of [Original Filter Name].

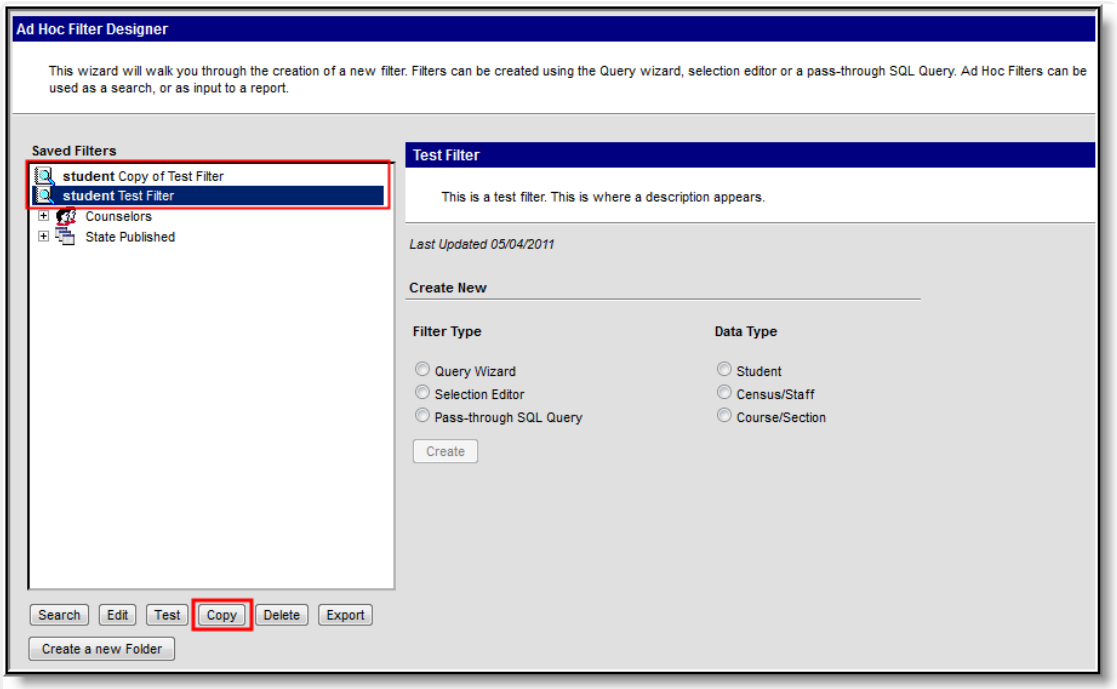



*Copied Filters*

# Delete Filters

A saved filter created by a user can also be deleted by that user. Because filters can be shared with other users, only the person who created the filter has the ability to delete it.

District users cannot delete State-Published filters.




*Deleting a Filter*

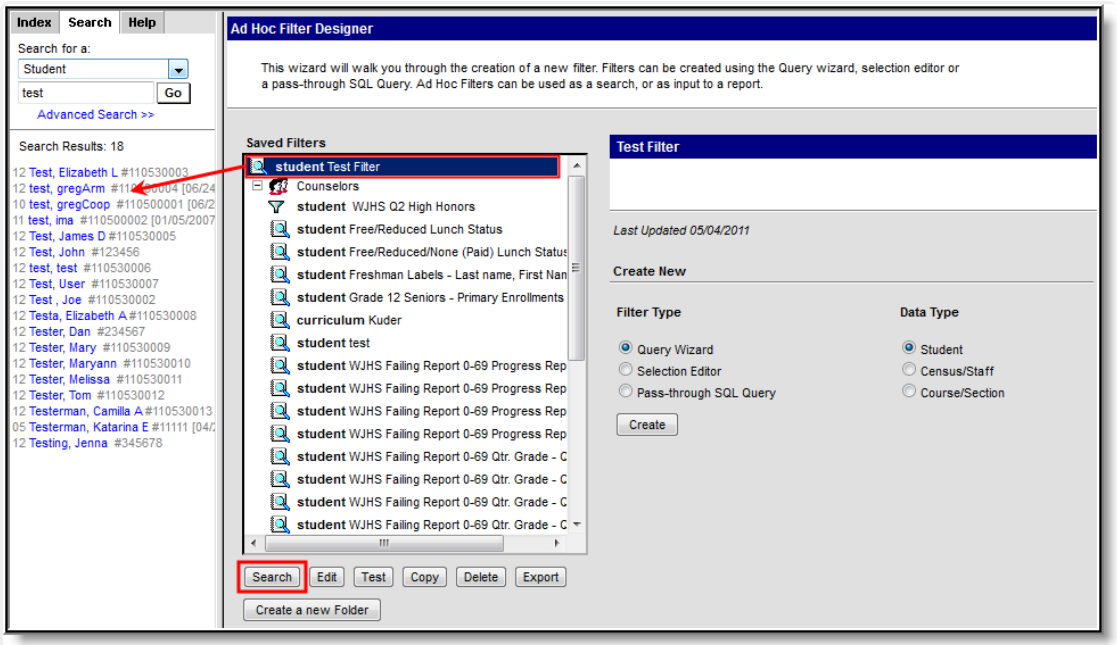
To delete a filter, select the filter from the Saved Filters window and click the **Delete** button. A pop-up message displays, confirming deletion of the filter.

Users who have updated to Release Pack E.1246 or greater have the ability to delete multiple filters at the same time by holding the **Ctrl** key, selecting each filter and clicking the **Delete** button.

# Modify a Query Created by Another User

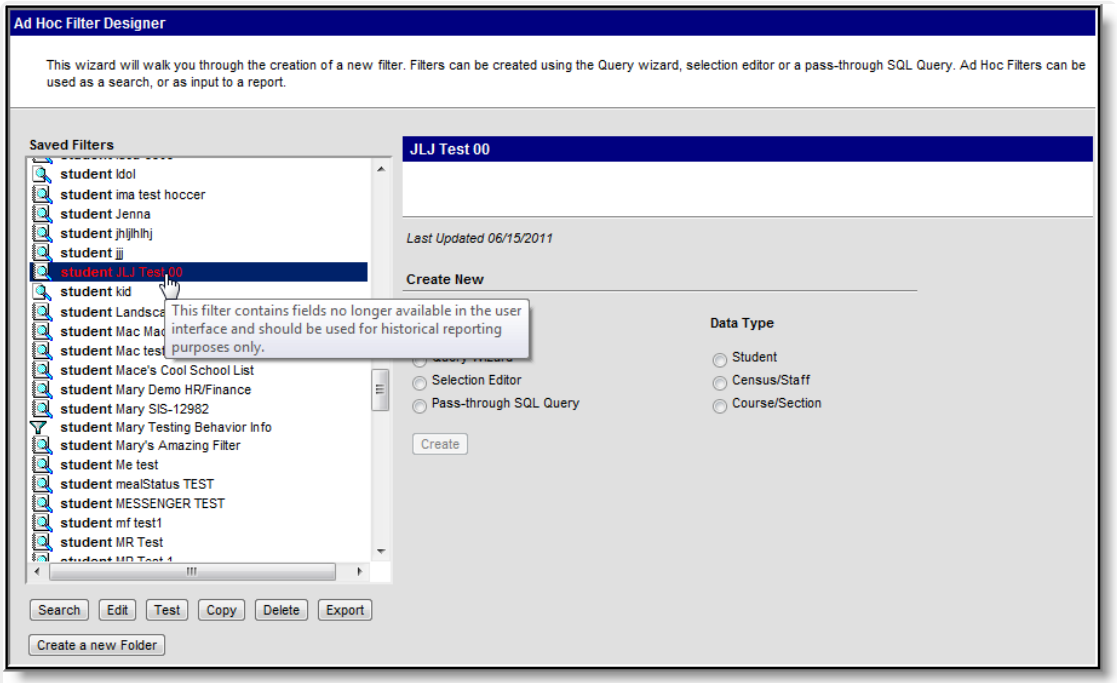
Saved filters can be edited at any time by selecting the filter and clicking the **Edit** button. This displays the filter so users can modify the selected fields and verify the operations and export options.

Search results on the Search tab can be populated with saved filters. When a saved filter is selected, click the **Search** button. Results returned in the filter displays in the Search tab.




*Searching with a Filter*

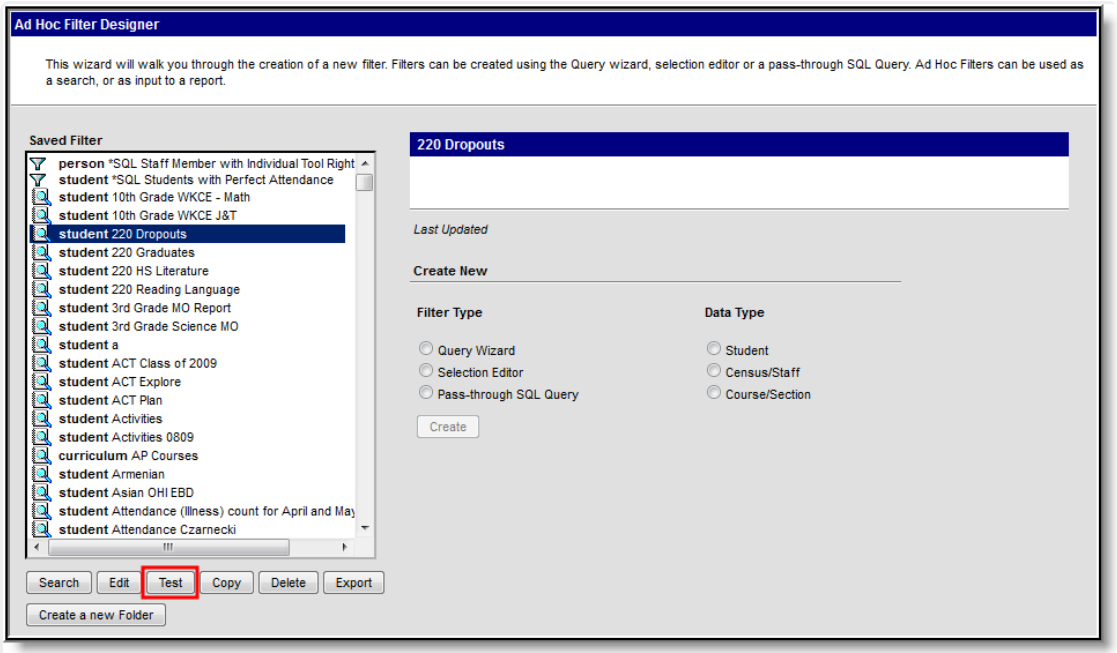
If a saved filter contains deprecated fields, the filter is highlighted in red within the Saved Filters window.




*Filter Containing Deprecated Fields*

# Test Saved Filters

To test an existing filter, select the filter from the Saved Filter window and click the **Test** button. A separate window displays, displaying filter results in HTML format.

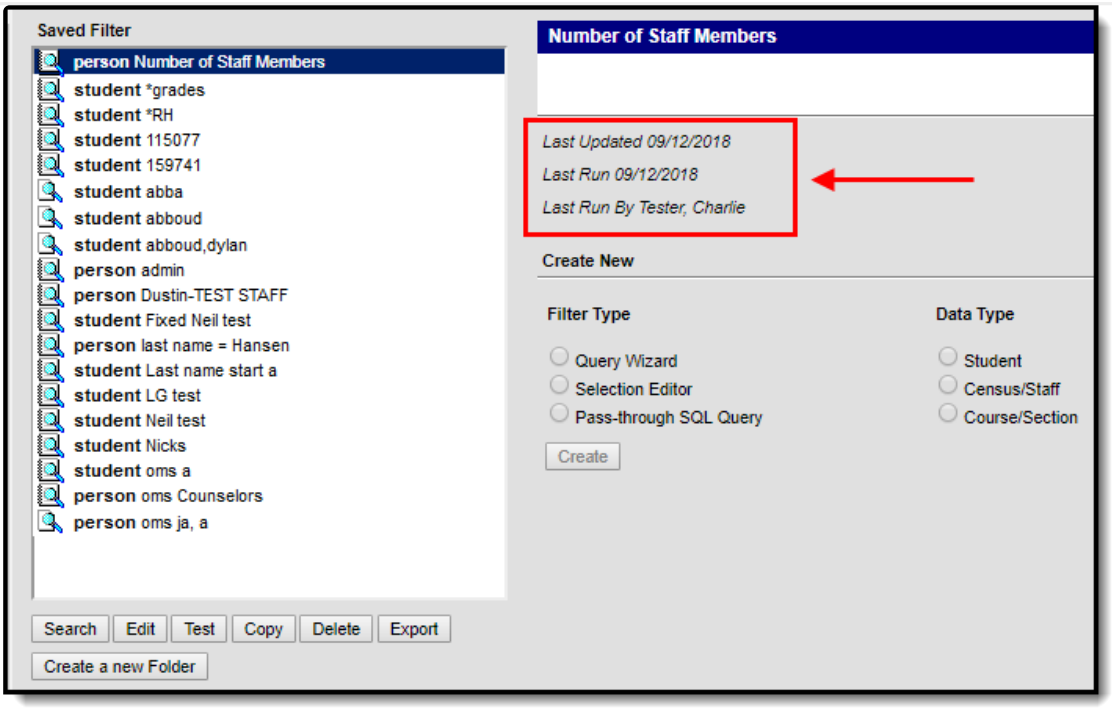



*Testing an Existing Filter*

# Last Updated, Last Run, and Last Run By Information

Users can view the last time an existing filter was updated, the last time a test of the filter was run, and who ran the last test of the filter.

If the timestamp or user is unknown, a value of Unknown is reported.




*Example of a Filter Tracking Information*

# Manage State Ad hoc Filters

Ad hoc filter publishing allows State Edition users to create and maintain Ad hoc filters which are automatically published to districts connected to the State Edition via DIS. Through this functionality, State Edition users can publish filters to connected districts, unpublish or remove State filters, and revise and republish filters back to districts, as necessary. District users also have the ability to export Ad hoc filters into a file which can be imported into State Edition.

Click here to expand...