AmpliFund

Custom Reporting Guide

Contents

28 Appendix

Custom Reporting Overview

The Custom Reporting allows Enterprise client users to create, save, and share ad-hoc reports using AmpliFund's data mart. Advanced client users will have custom reports configured for them by our Customer Success team. Custom reports are only available with the Custom Reporting advanced segment.

Although creating custom reports does not require coding knowledge, it does require a technical understanding of data tables and joins, as well as access to AmpliFund's data dictionary and data mart. Contact your Customer Success team contact or create a support ticket for access. We also recommend that users have their reporting requirements defined before attempting to create a custom report.

Custom Report Basics

This section details the basics of custom reporting, such as creating, viewing, and editing a custom report.

Icons

- Print
- Help
- Create
- Edit
- Delete
- Save
- Make Private
- Make Public

Custom Reports

For clients with Custom Reporting

Custom reports allows Organizational Admin, Department Admin, and Fund Admin to create ad-hoc reports using AmpliFund's data mart, including applicant data. Custom reports are available for Grantor, Grantee, and Lifecycle clients. These reports can be accessed by Organizational Admin, Department Admin and Users, Project Admin and Users, Fund Admin and Users, Grant Managers, Opportunity Managers, and Additional Staff.

Although creating custom reports does not require coding knowledge, it does require a technical understanding of data tables and joins, as well as access to AmpliFund's data dictionary and data mart. We also recommend that users have their reporting requirements defined before attempting to create a custom report.

How To View a Custom Report

1. Open **Reports>Custom Reports**.
2. Click a **report name**.

How To Create a Custom Report

Prerequisite: Must be Organizational Admin, Department Admin, or Fund Admin

1. Open **Reports>Custom Reports**.
2. Click the **+ (Add)** icon in the *Icon Bar*.
3. Add a **report name**.
4. Select the **Custom Reports folder** for a public report (will be visible to others in your organization) or the **Custom Reports>Private folder** for a private report (only visible to you).

5. Add a **report description** (optional). This description will appear on *Reports>Custom Reports*.

Categories

6. Open the **Categories tab**.
7. Select a **data category** to add to your report. This category corresponds to a data table in the data mart.
8. Click the **arrow button** to add the category. Additional related categories can be added to a report.

Note

Once the first category has been added, only categories that are related by joins can be subsequently added.

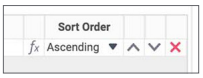
Sorts

9. Open the **Sorts tab**.
10. Select a **data category** to sort. Data table columns for that category will be shown. Data columns correspond to AmpliFund fields.

Note
Sorts are hierarchical, with the topmost sort applied first.

11. Select a **column name** to sort data. Click the **arrow button** to add column.

12. Select **sort order**.

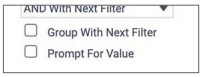


Filters

13. Open the **Filters tab**.
14. Select a **data field** to filter by. This will affect which data is shown in the report by default.
15. Click the **arrow button** to add field.

16. Add a **data condition**. This is the criteria that must be met for data to show on the report.

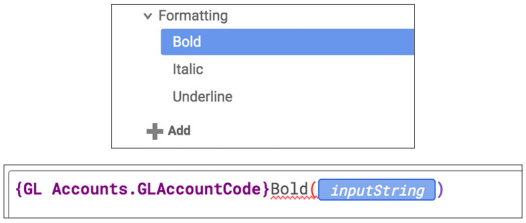
17. Check the **Prompt For Value checkbox** to prompt the user for a filter value before report is run.



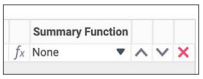
Layout

18. Open the **Layout tab**.
19. Select a **field** to show on the report. The field name will appear as a column, with each row being a corresponding entry.
20. Click the **arrow button** to add field.

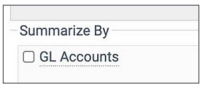
21. To display a formula/calculation instead of field data, click the **fx (Formula icon)** (optional).
    a. In the pop-up window, select a **function type** and click **+Add**, or edit the **formula** directly in the formula text field.



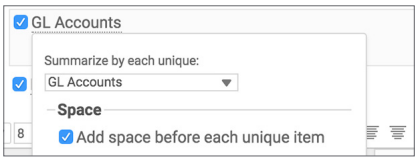
    b. Click **Okay**.
22. Select a **summary function** (optional). This indicates how the total for the column is calculated, such as a sum or count.



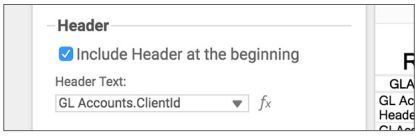
23. In the *Summarize By* field, select **categories** to group by (optional). Click the category name for additional formatting options.



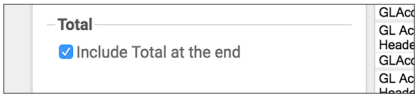
    a. Check the **Add space before each unique item checkbox** to add a blank row before each group.



    b. Check the **Include Header at the beginning checkbox** to put a field value above each group. Choose which field to use, or click the formula icon to create a formula for the text.



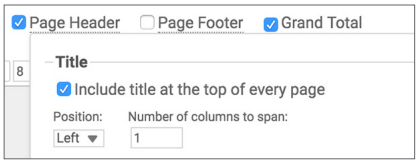
    c. Check the **Include Total at the end checkbox** to include the summary values at the end of every group.



24. To add a header at the top of each page, check the **Page Header**

checkbox. This is selected by default.

25. Click **Page Header** for additional formatting options.
    a. To add report titles, check the **Include title at the top of every page checkbox**. This is selected by default.

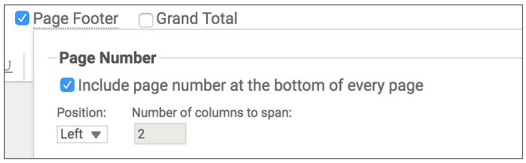


    b. To add images, check the **Include image at the top of every page checkbox** and click **Change Image** to select a file from your computer.

    c. If both images and titles are shown, select the **position** and **number of columns to span** for each.

26. To add a footer at the bottom of each page, check the **Page Footer checkbox**.

27. Click **Page Footer** for additional formatting options.
    a. To add a page numbers, check the **Include page number at the bottom of every page checkbox**.

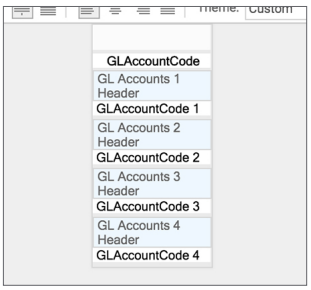


    b. To add images, check the **Include image at the bottom of every page checkbox** and click **Change Image** to select a file from your computer.

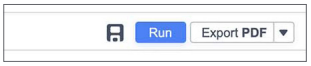
c. If both images and page numbers are shown, select the **position** and **number of columns to span** for each.

28. Check the **Grant Total checkbox** to summarize all data fields at the end of the report.

29. In the preview pane, click a **sample cell** and adjust formatting with the format toolbar as needed.



30. Click the **(Save icon)**.



How To Edit a Custom Report

1. Open **Reports>Custom Reports>report name**.
2. Click the **(Edit icon)** in the *Icon Bar*.
3. Update information as necessary.
4. Click the **(Save icon)**.

How To Delete a Custom Report

1. Open **Reports>Custom Reports>report name**.
2. Click the **(Delete icon)** in the *Icon Bar*.
3. In the confirmation pop-up window, click **Delete**.

How To Make a Public Custom Report Private

By making the custom report private, other users will no longer be able to view or run the report.

1. Open **Reports>Custom Reports>report name**.
2. Click the **(Make Private icon)** in the *Icon Bar*.
3. In the confirmation pop-up window, click **Make Private**.

How To Make a Private Custom Report Public

By making the custom report public, other users in your organization will be able to view and run the report.

1. Open **Reports>Custom Reports>report name**.
2. Click the **(Make Public icon)** in the *Icon Bar*.
3. In the confirmation pop-up window, click **Make Public**.

Custom Report Features

This section details each section and feature within the AmpliFund reporting engine.

Icons

- Print
- Help
- Create
- Edit
- Save

Name

The Name section allows users to specify the report name, save location, and create a report description. From this section, users can save the report as public (visible to your organization) or private.

Report Name

Report names cannot contain slashes (/), backslashes (\), colons (:), asterisks (*), question marks (?), quotation marks ("), less than symbols (<), greater than symbols (>), or vertical bars (|).

Public Reports

Public reports are available to all Organizational Admin, Department Admin and Users, Grant Managers, Opportunity Managers, and Additional Staff in your organization. Public reports are saved in the *Custom Reports* folder. On the *Custom Reports* list, public reports are indicated by a **No** in the *Is Private* column.

Private Reports

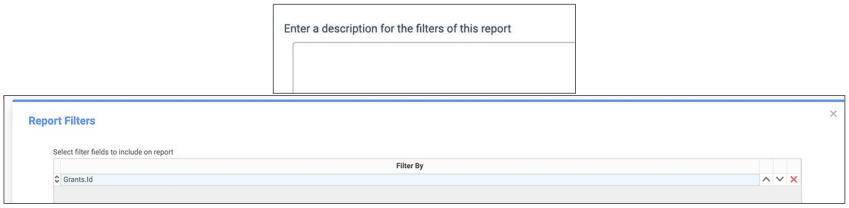
Private reports are only available to the user who created them. Private reports are saved in the Custom *Reports>Private* folder. On the *Custom Reports* list, private reports are indicated by a **Yes** in the *Is Private* column.

Report Description

Report descriptions are optional, but encouraged. Report descriptions are visible on *Reports>Custom Reports*.

Filter Description

Filter descriptions are visible if the user is prompted to select a value before running the report. This filter is available by checking the **Prompt For Value checkbox** on the *Filter tab*.


Enter a description for the filters of this report
Report Filters
Select filter fields to include on report
Filter By
Grants.Id

Icons

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- Help
- Create
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- Save

Categories

The Categories section allows users to select what data will appear on the report. Data categories correspond to AmpliFund data tables, which are organized by rows and columns. Columns correspond to AmpliFund data fields; rows correspond to data entries.

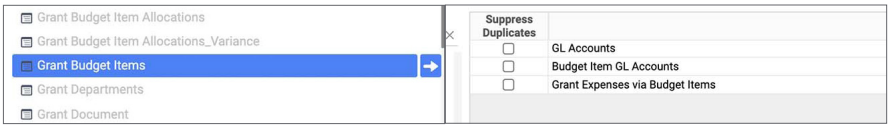
For example, the data table of Grant Additional Staff would have columns of Grant ID, Individual ID, and Individual. You can view AmpliFund data table names and columns in the AmpliFund Data Dictionary or Data Mart Schema documents.

Grant Additional Staff		
Grant ID	**Individual ID**	**Individual**
101	1888	Raymond Chandler
101	1894	Dashiell Hammett
101	1892	James M. Cain

Adding Categories

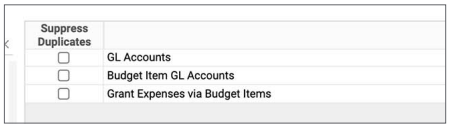
Entire categories (data tables) are added to report at a time. From there, you can filter which columns (fields) are visible on the report. Categories can be added by clicking the category name and arrow button. Once the first category is added, only related categories can be added. As more categories are added, more related categories may become available.

Categories are related by joins. You can view table joins in the AmpliFund Data Mart Schema document.



Suppress Duplicates

Because of the relationship between categories, duplicate values may appear when you run your report. For example, on a report of Additional Staff and Grant, the same staff members may be attached to multiple grants. This could result in duplicate staff members appearing when your run your report. By checking the **Suppress Duplicates checkbox** next to a category, only the first instance of a staff name will appear, and the following rows will appear blank.



Icons

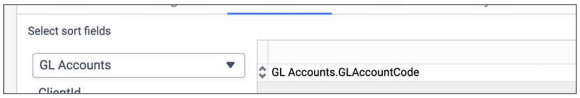
- Print
- Help
- Create
- Edit
- Save

Sorts

The Sorts section allows users to determine the default order for the entry data. You can select which columns (fields) will be used to sort the rows for each category (data table). The type of data will determine how the data can be sorted.

Selecting Columns

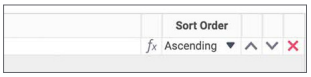
Users can select columns from each data table by clicking the column name and arrow button. The column name will then appear in the Sort By section.



Sort Order

Once columns have been added, users can select how the data will be ordered. Sorts are hierarchical with the topmost sort applied first. Options will vary based on data type.

Numeric	Ascending (lowest number on top) or descending (highest number on top) order
Date	Ascending (oldest date on top) or descending (newest date on top)
Text	Ascending (A on top) or descending (Z on top)



Icons

- Print
- Help
- Create
- Edit
- Save

Filters

The Filters section allows users to determine which rows (data entries) from a category (data table) are displayed.

Adding Fields

Users can select categories from the dropdown, and then select fields (columns) to filter by. Fields can be selected by clicking the column name and arrow button. The column name will then appear in the Filter By section.

Filter Conditions

Users can select a filter condition for each field. Only rows that meet the condition will appear on the report. To create a condition, click the field name in the Filter By section, and then select a condition and parameters.

Condition	Data Type	Example Filter	Example Results
Equal To	Any	08/08/2019	08/08/2019 08/08/2019 12:00 AM **Not included:** 08/08 08/08/2019 2:00 PM
Not Equal To	Any	08/08/2019	08/08 08/08/2019 2:00 PM
Less Than	Numeric, Date	08/08/2019	08/07/2019
Less Than Or Equal To	Numeric, Date	08/08/2019	08/07/2019 08/08/2019
Greater Than	Numeric, Date	08/08/2019	08/08/2019 5:00 PM 08/09/2019
Greater Than Or Equal To	Numeric, Date	08/08/2019	08/08/2019 08/09/2019
Starts With	Text, Numeric	101	10112345
Not Starts With	Text, Numeric	101	55512345
Ends With	Text, Numeric	101	12345101
Does Not End With	Text, Numeric	101	12345555
Contains	Text, Number	101	555101555

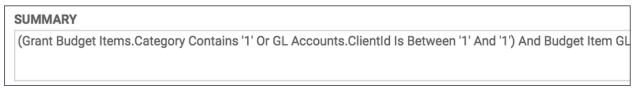
Condition	Data Type	Example Filter	Example Results
Does Not Contain	Text, Number	101	55555555
Is Between	Numeric, Date	1, 3	1 1.5 2 3
Is Not Between	Numeric, Date	1, 3	0.999 4
Is One Of	Any	1, 3	1 3
Is Not One Of	Any	1, 3	5

Grouping Filters

If you have multiple filters, you can choose how they should be grouped. Check the **Group With Next Filter checkbox** to group the current filter with the next filter in the list.

You can reorder filters with the ^ up and ⌄ down arrows in the Filter By section.

Filters that are grouped together will appear in parentheses in the Summary field.



Filters that are grouped together can have an *And* or *Or* relationship. An *And* relationship means that both filter conditions must be met for data to display. An *Or* relationship means that data will display if either condition is met.

Prompt For Value

If you want the report to request a filter value when the report is run, select the **Prompt For Value checkbox**. If you added a filter description on the Name tab, it will appear in the pop-up prompt when the report is run.

Icons

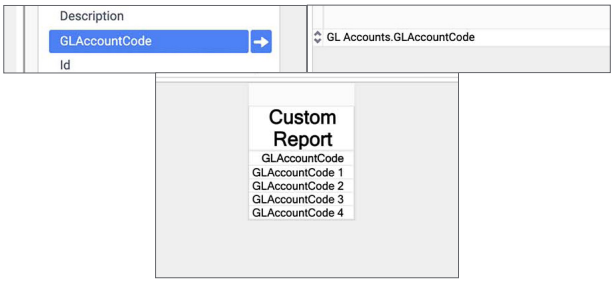
- Print
- Help
- Create
- Edit
- Save

Layout

The Layout section allows users to determine the data visible and look of the report. For each data field added, the report will create a column header. Additionally, subtotals, grand totals, and page headers and footers can be added.

Adding Fields

Users can select categories from the dropdown, and then select fields (columns) to add to the report. Fields can be selected by clicking the column name and arrow button. The column name will then appear in the Data Field section. Once added, the field will appear in the Preview section with a header and placeholder values.

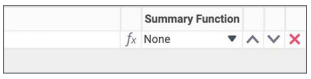


Formulas

If desired, you can add a formula instead of data from a field by clicking the **fx (Formula icon)**. You can then select and add a function type from a preexisting list, or edit the formula directly in the formula text field. See **Formula Types** for more information.

Summary Functions and Summarize By

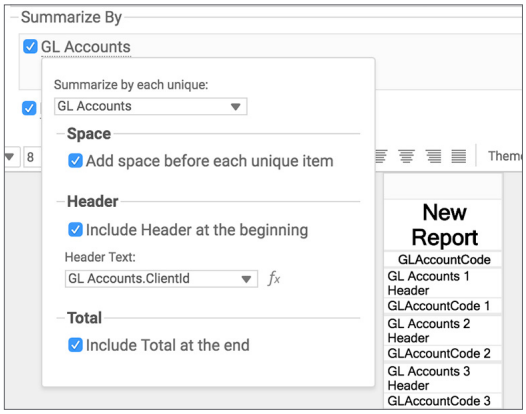
The Summary Function column is used to make subtotals and grand totals.



Sum	Totals the all of the data in the data field.
Count	Returns the number of rows in the data field.
Average	Takes the mean of the data in the data field.
Minimum	Displays the lowest value in the data field.
Maximum	Displays the highest value in the data field.

To display summary, check the **data field name checkbox** in the *Summarize By* area.

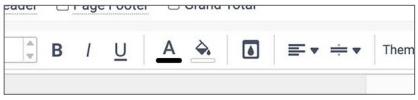
In the *Summarize By* area, click the **data field name** to configure summary options, such as summary field type, spacing, header, and footer for each category.



Page Header

Page headers will display information at the top of every page of the report.

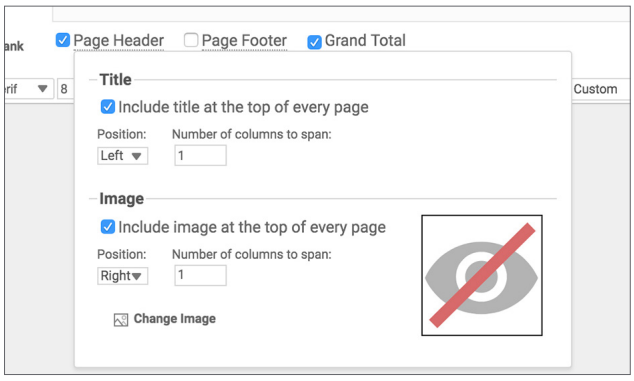
To display header, check the **Page Header checkbox** below the *Summarize By* area.



Note

Position and column span can only be configured if both title and image are selected.

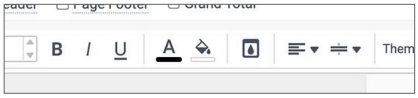
Click **Page Header** to configure header options, such as report title and image position and column span.



Page Footer

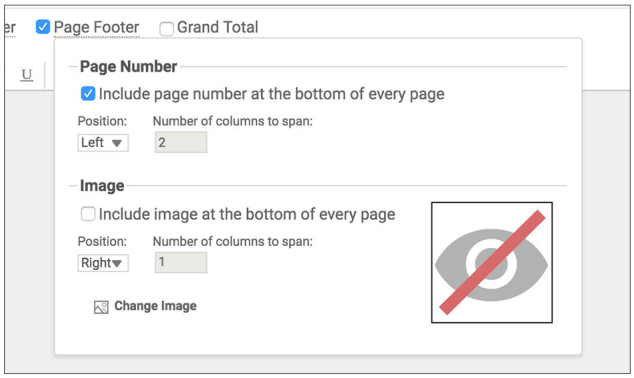
Page footers will display information at the bottom of every page of the report.

To display footer, check the **Page Footer checkbox** below the *Summarize By* area.



Note
Position and column span can only be configured if both title and image are selected.

Click **Page Footer** to configure footer options, such as report title and image position and column span.



Grand Total

Grand totals display the total summary for a data field, based on the summary function selected. To display grand totals for the report, check the Grand Total checkbox. This will display totals for each data field selected in the *Summarize By* area.

Preview and Formatting

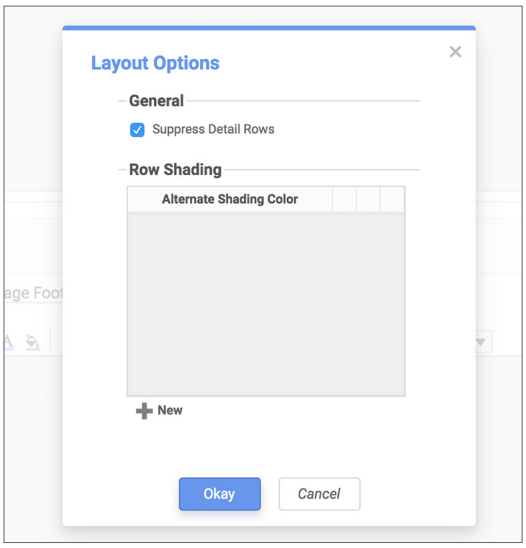
At the bottom of the Layout tab, a preview will display how the report will appear based on the fields that have been added. To change the text in a header or footer, double-click the cell and edit the text. To resize columns, drag the left or right border of the column. To insert a blank column between two data fields, click between to columns then click **+ Add Blank**.

To style a cell, click the cell use the format bar to style.

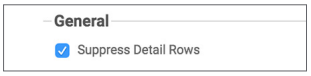
Undo and Redo

The undo and redo buttons allow users to undo and redo styling as needed.

Layout Options



The Layout Options menu allows users to hide rows and add background colors to rows. To hide the data rows for the selected field, check the **Suppress Detail Rows checkbox**.



To add row background colors, click **+ New**.

To change the color, click the **color shade** (white by default). In the menu, select a **color**. Add additional colors for alternating rows.

Font

Users can select a font, size, and styling for the cell text.

Color

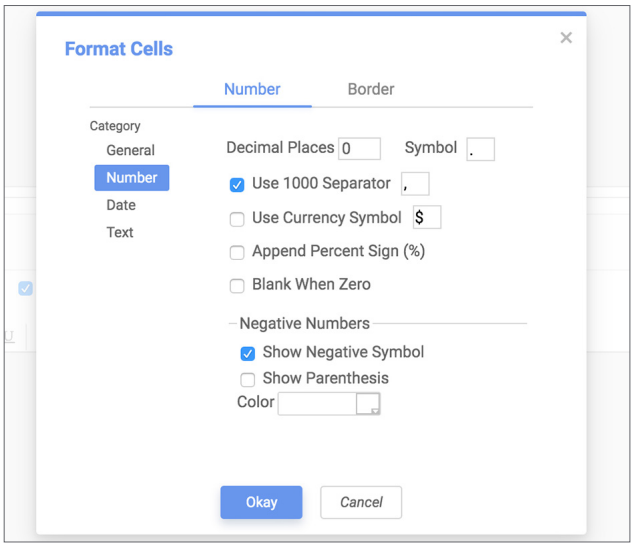
Users can select a color for the text and for the background of the cell.

Format Cells

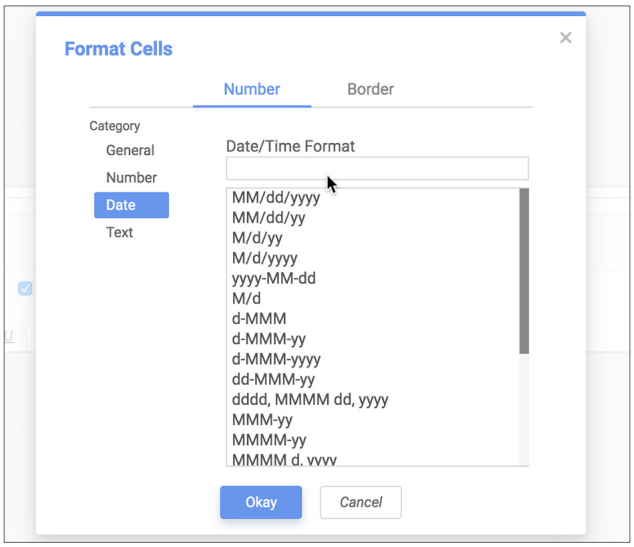
Users can configure cell content format.

General — Values can have any format.

Number — Specify number of decimal places, commas, symbols, and negative value formatting for number values.



Date — Specify date value format.



Text — Values must be text format.

Border — The Border tab allows users to format the borders around cells.

Alignment

Users can select how cell contents should align to the cell vertically (top, middle, bottom) and paragraph alignment (left, center, right, full-justified).

Icons

- Print
- Help
- Create
- Edit
- Save

Options

The Options section allows users to determine report information and output, filter prompts, export options, and report type.

General Options

Include Set Up

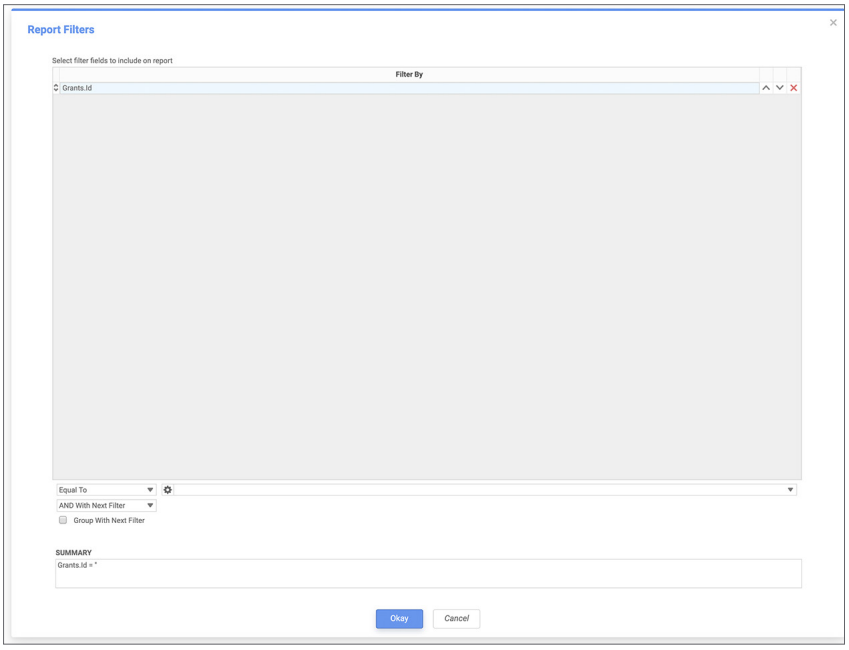
On the General tab, users can choose to display the selected data categories, sorts and filters for the report. If displayed, the report set up information can be appear as the first or last page of the report.

Filter Execution Window

The filter execution window determines the type of filter menu displays for reports which have a prompt for filter values before running. If the Always Show Filters in Report Viewer is checked, the filter will be shown each time the report is run.

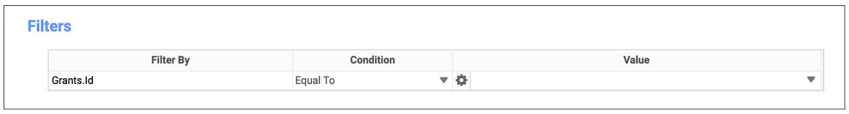
Default and Standard

Displays a standard filter menu where the filter, conditions, and values can be changed. Filters can also be grouped. For AmpliFund, the default and standard filters are the same.



Simple with Operator

Displays a simplified filter menu where only the condition and value can be changed.



Simple without Operator

Displays a simplified filter menu where only the filter value can be changed.

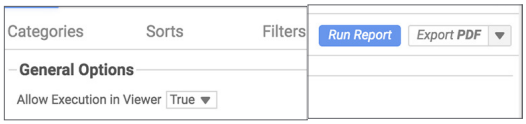
No Data Qualify Display Mode

If there is no qualifying data for the report, an error message or an empty report can be displayed.

Export Options

Allow Execution in Viewer

The export options dropdown can be shown (True) or hidden (False) for the custom report.



Allowed Export Types

Users can select which export options are available in the export dropdown.

Default Export Type

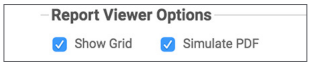
Users can select the default export type shown in the export options dropdown menu. In AmpliFund, PDF is the default.

Report Tree Shortcut

Users can select if the report runs or exports by default from the Custom Reports page.

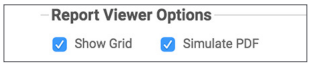
Show Grid

Users can select if the report will show grid lines by checking the Show Grid checkbox.



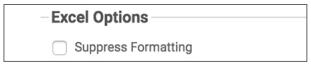
Simulate PDF

Users can select if the report will appear as if on a PDF page.



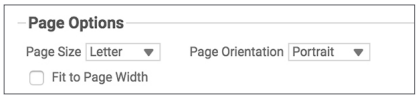
Excel Options

By checking the Suppress Formatting checkbox, the report will export report data only to Excel, without any formatting.



Page Options

Users can configure page size, orientation, and content fit.



Advanced Options

Warning

This action cannot be undone. Do not proceed until you have received Advanced Report Development training.

Convert Express Report to an Advanced Report

Custom reports can be converted to Advance Custom Reports. This feature set requires additional training. To proceed, contact your Account Management Representative **before** converting your report.

Appendix

Formula Types

Arithmetic and Geometric

Basic mathematical functions, as well as number field manipulation like truncation and rounding.

Function Type	Description	Example Formula	Example Return
Abs	Returns the absolute value of a number.	Abs(-23.1)	23.1
Acos	Returns the arccosine, or inverse cosine, of a number. Input must be from -1 to 1.	Acos(-.231)	1.8039016825 5052
Acosh	Returns the inverse hyperbolic cosine of the given number. Input must be a real number greater than or equal to 1.	Acosh(10)	2.993223
Asin	Returns the arcsine of the given number in radians, in the range -Pi/2 to Pi/2. Input is the sine of the angle you want and must be in the range from -1 to 1.	Asin(-0.5)	0.5236
Asinh	Returns the inverse hyperbolic sine of a number.	Asinh(-2.5)	-1.64723
Atan	Returns the arctangent, or inverse tangent, of a number. Atan returns an angle given in radians in the range -Pi/2 to Pi/2.	Atan(1)	0.785398 (pi/4)
Atan2	Returns the angle from the x-axis to a line containing the origin (0, 0) and a point with coordinates (x,y). Input requires two values, the x and y coordinates.	Atan2(1, 1)	0.785398 (pi/4)
Atanh	Returns the inverse hyperbolic tangent of a number. The input must be from -1 to 1.	Atanh(.76159416)	1

Function Type	Description	Example Formula	Example Return
Ceiling	Returns the number rounded up to the nearest multiple of significance. Input requires two values, the number to be rounded and the multiple of significance.	Ceiling(4.42,.05)	4.45
Cos	Returns the cosine, of an angle in radians	Cos(1.047)	0.500171
Cosh	Returns the hyperbolic cosine of a number.	Cos(4)	27.30823
Even	Returns a number rounded up to the nearest even integer.	Even(1.5)	2
Exp	Returns *e* raised to the power of the input.	Exp(1)	2.718282
Fixed	Returns the first argument rounded to the number of decimal places specified in the second argument. Can optionally add TRUE/FALSE to omit commas. Default is FALSE (to include commas).	Fixed(1234.5678, 2)	1,234.56
Floor	Rounds the number down to the nearest multiple of significance. Input requires two values, the number to be rounded, and the multiple of significance.	Floor(2.6, .5)	2.5
Global Numeric Format	Returns a numeric string value whose format is based on the session format.	GlobalNumericFormat ({Region.Population})	*5,000* (population)
Int	Rounds a number down to the nearest integer.	Int(2.6)	2`
Ln	Returns the natural logarithm of a number.	Ln(86)	4.454347
Log10	Returns the base 10 logarithm of a number.	Log10(86)	1.934498451
Mod	Returns the remainder after first argument is divided by the second argument.	Mod(27,5)	2

Function Type	Description	Example Formula	Example Return
Odd	Returns a number rounded up to the nearest odd integer.	Mod(1.5)	3
Pi	Returns *pi* accurate to 15 digits.	Pi()	3.14159265358979
Power	Returns the result of the first argument raised to the second argument. Can also use ^ symbol.	Power(5,2) --OR-- 5^2	25
Product	Returns the product of the arguments. Can also use * symbol.	Product(5,2) --OR-- 5*2	10
Quotient	Returns the integer of a division, does not include remainder. Can also use / symbol.	Quotient(5,2) --OR-- 5/2	2
Rand	Returns an evenly distributed random number between 0 and 1 (inclusive).	Rand()	0
Round	Returns a rounded number. The first argument is the number to round. The second argument is the number of decimal places.	Round(5.236, 2)	5.24
Sin	Returns the sine of a number.	Sin(1.047)	0.8659266112 87823
Sinh	Returns the hyperbolic sine of a number.	Sinh(4)	27.18991719712 78
Sqrt	Returns the positive square root of a number.	Sqrt(25)	5
Tan	Returns the tangent of a number.	Tan(.785)	0.99920
Tanh	Returns the hyperbolic tangent of a number.	Tanh(-2)	0.96403
Truncate	Truncates a number to an integer.	Truncate(9.9)	9

Database and Data Type

Database and data type functions are used for determining the type of information

contained in a cell. This can be helpful for error and validation checks.

Function Type	Description	Example Formula	Example Return
DataRowCount	Returns the number of rows retrieved from the data source.	DataRowCount()	*10* (number of rows/entries)
IsEven	Checks if a value is an even number.	IsEven([A1])	*TRUE* if even number, *FALSE* if odd number
IsLogical	Checks if a value is TRUE or FALSE.	IsLogical([A1])	*TRUE* (if cell [A1] is "TRUE/FALSE")
IsNoData Qualified	Returns TRUE if no data qualified for the report execution. Otherwise it returns FALSE.	IsNoDataQualified()	*FALSE* (if report can be run)
IsNonText	Checks if a value is not text, such as dates, numbers, images, and blank cells.	IsNonText([A1])	*FALSE* (if cell [A1] is "TRUE/FALSE")
IsNumber	Checks if a value is a number.	IsNumber([A1])	*FALSE* (if cell [A1] is "TRUE/FALSE")
IsOdd	Checks if a value is an odd number.	IsOdd([A1])	*TRUE* (if cell [A1] is "15")
IsText	Checks if a value is text.	IsText([A1])	*TRUE* (if cell [A1] is "TRUE/FALSE")
Null	Returns a null value	Null	
Type	Identifies the value type as a number (1) or text (2).	Type("John Smith")	2

Date

Date functions can be used to do calculations and formatting on Date values.

Function Type	Description	Example Formula	Example Return
Date	Creates a date value from numeric year, month, and day.	Date(2019,7,4)	July 4, 2019

Function Type	Description	Example Formula	Example Return
DateAdd	Returns the sum of a date and a quantity of time with three arguments. First argument is string of interval to add: years (yyyy), quarters (q), months (m), weeks (w), weeks of year (ww), days (d), hours (h), minutes (m), seconds (s). Second argument is number of time to add. Third argument is date value.	DateAdd('h',1,Now())	*8/09/2019* (date and time 1 hour from now)
Date Custom Format	Modifies date format. Defaults to MM/DD/YY.	DateCustomFormat (Date(2018,2,24), "MM-dd-yy")	02-24-18
DateDiff	Returns the amount of time between two dates as an integer with three arguments. First argument is string of interval to subtract: years (yyyy), quarters (q), months (m), weeks (w), weeks of year (ww), days (d), hours (h), minutes (m), seconds (s). Second argument is a date value to be subtracted from base value. Third argument is base value.	DateDiff('yyyy', Date(1787,9,17), Now())	*231* (number of years since 9/17/1787)
DateValue	Converts a date in text format (e.g. '30-jan-2008') to a date value. Time is always ignored. Returns represent midnight in server's local time.	DateValue('30-jun- 2011')	6/30/2011
Day	Returns the day portion of a date as an integer.	Day({Appointment. Date})	*15* (date of appointment)
Day360	Returns the number of days between two dates based on a 360-day year.	Day360({Appointment. Date}, Today())	*5* (number of days between today and appointment)

Function Type	Description	Example Formula	Example Return
GlobalDate Format	Returns a DATE value with format based on the session format.	GlobalDateFormat ({Appointment.Date})	*July 15th* (date of appointment with session format)
GlobalDate TimeFormat	Returns a DATETIME value with format based on the session format.	GlobalDateTime Format({Appointment. Date})	*July 15th 2pm* (date and time with session format)
Hour	Returns the hour of a time value ranging from 0 (12:00 AM) to 23 (11:00 PM).	Hour("2:50:05 PM")	14
Minute	Returns the minute of a time value ranging from 0 to 59.	Minute("2:50:05 PM")	50
Month	Returns the month of a date value ranging from 1 (January) to 12 (December)	Month({Appointment. Date})	*7* (month of the appointment)
MonthName	Returns the name of the month for a given date.	MonthName(2) --OR-- MonthName("02/24/1991")	February
Now	Returns today's date and time (in local server time). If embedding in other functions use Now('false').	Now()	*8/08/2019 2:50:05 PM* (current date and time)
QuarterName	Returns the fiscal quarter for a given date, as text from Q1 to Q4.	Quarter("02/24/1991")	Q1
Quarter Number	Returns the fiscal quarter for a given date, as a number from 1 to 4.	Quarter("02/24/1991")	1
Second	Returns the seconds of a time value ranging from 0 to 59. If no seconds, 0 is assumed.	Second("2:50:05 PM")	5
Time	Returns the number of ticks in a period of hours, minutes and seconds (h,m,s).	Time(14,50,5)	534050000000

Function Type	Description	Example Formula	Example Return
TimeFormat1	Returns the time component of a DATETIME input as a time object. Note: Cell must be formatted as text.	TimeFormat1 ({Appointment.Date})	*2:50 PM* (time of appoint-ment)
TimeValue	Converts a time in text format (i.e., "02-50-05") to a time value. Must include time separator (i.e., 12:00, not 1200). AM is assumed by default, do not use periods (i.e., AM not A.M.). Note: Cell must be formatted as text.	TimeValue(Time(14,50,5))	14:50:05
Today	Returns today's date with no time. If embedding in other functions use Today('false'). Use Now function for date with time.	Today()	*8/08/2019* (current date)
Year	Returns the year of a date as a whole number, ranging from 1 to 9999.	Year(Today())	*2019* (this year)

Financial

Common methods for monetary calculations such as interest and depreciation.

Function Type	Description	Example Formula	Example Return
Db	Returns the depreciation of an asset using the fixed-declining balance method. First argument is initial cost. Second argument is salvage value at the end of depreciation. Third argument is useful life in number of years. Fourth argument is year to be calculated. Fifth argument is number of months in the first year.	Db(1000000,100000,6,1,7) Db([initial cost], [salvage value], [life], [year], [number of months in first year])	*186,083.33* (Depreciation in first year, with only 7 months calculated)

Function Type	Description	Example Formula	Example Return
Ddb	Returns the depreciation of an asset using the double-declining balance method. First argument is initial cost. Second argument is salvage value at the end of depreciation. Third argument is useful life in number of years. Fourth argument is year to be calculated. Fifth argument is the rate at which the balance declines (default is 2).	Ddb(2400,300,10,1,2) Ddb([initial cost], [salvage], [life], [period], [rate])	*480.00* (first year's depreciation)
Fv	Returns the future value of an investment based on periodic, constant payments and a constant interest rate. First argument is interest rate. Second argument is number of payments. Third argument is amount per payment. Fourth argument is present value. Fifth argument is when payments are due: beginning (1) or end (0) of period.	Fv(.06/12, 10, -200, -500, 1) Fv([annual interest rate]/12, [number of payments], [payment amount], [present value], [when payment is due])	*2,581.40* (future value of investment)
IntRate	Returns the interest rate for a fully invested security. First argument is settlement date. Second argument is maturity date. Third argument is investment amount. Fourth argument is redemption value. Fifth argument is actual/360 basis.	IntRate (Date(2008,2,15), Date(2008,5,15), 1000000, 1014420,2) IntRate([settlement date], [maturity date], [investment], [redemption value], [basis])	*0.05768* (discount rate)

Function Type	Description	Example Formula	Example Return
Ipmt	Returns the interest payment for a given period for an investment based on periodic, constant payments and a constant interest rate. First argument is annual interest. Second argument is year. Third argument is years of loan. Fourth argument is present value of loan.	Ipmt(.1/12, 1*3, 3, 8000) Ipmt([interest rate], [period], [years of loan], [present value])	*-22.41* (interest due in the first month)
Nper	Returns the number of periods for an investment based on periodic, constant payments and a constant interest rate. First argument is annual interest rate. Second argument is payment per period. Third argument is present value. Fourth argument is future value. Fifth argument is when payments are due: beginning (1) or end (0) of period.	Nper(.012/12, -100, -1000, 10000, 1) Nper([interest rate], [payment], [present value], [future value], [when payments are due])	*60* (number of periods for the investment)
Npv	Calculates the net present value of an investment by using a discount rate and a series of future payments (negative values) and income (positive values). Rate is the rate of discount over the length of one period. First argument is annual discount rate. Second argument is initial cost of investment. Third argument is return from first year. Fourth argument is return from second year.	Npv(.10, -10000, 3000, 4200) Npv([annual discount rate], [initial cost of investment], [return from first year], [return from second year])	*1,188.44* (net present value of the investment)

Function Type	Description	Example Formula	Example Return
Pmt	Calculates the payment for a loan based on constant payments and a constant interest rate. First argument is annual interest rate. Second argument is number of months of payments. Third argument is loan amount.	Pmt(.08/12, 10, 10000) Pmt([annual interest rate]/12, [number of months of payments], [loan amount], 0, 1)	*-1,037.03* (monthly payment for loan)
Ppmt	Returns the payment on the principal for an investment based on constant payments and a constant interest rate. First argument is annual interest rate. Second argument is when payments are due: beginning (1) or end (0) of period. Third argument is number of years. Fourth argument is loan amount.	Ppmt(.10/12, 1, 2*12, 2000) Ppmt([annual interest rate]/12, [when payments are due], [number of years of loan]*12, [loan amount])	-75.62 (payment on principle for the first month of the loan)
Pv	Returns the present value of an investment. First argument is interest rate. Second argument is number of years money will be paid out. Third argument is amount paid out per period. Fourth argument is future value. Fifth argument is when payments are due: beginning (1) or end (0) of period.	Pv(.08/12, 12*20, 500, , 0) Pv([interest rate on money paid out]/12, 12*[number of years till payout], [amount paid], [future value], [when payments are due])	*-59,777.15* (present value of annuity)
Rate	Returns the interest rate per period of an annuity. First argument is years of loan (multiplied by 12 for number of months). Second argument is payment Third argument is loan amount.	Rate(4*12, -200, 8000) Rate([years of loan]*12, [monthly payment], [loan amount])	*.01* (monthly rate of loan)

Function Type	Description	Example Formula	Example Return
Sln	Returns the straight-line depreciation of an asset for one period. First argument is initial cost of asset. Second argument is salvage value. Third argument is useful life of asset.	Sln(30000, 7500, 10) Sln([initial cost], [salvage], [life])	*2250* (depreciation allowance for each year)
Syd	Returns the sum-of-years' digits depreciation of an asset for a specified period. First argument is initial cost of asset. Second argument is salvage value. Third argument is useful life of asset. Fourth argument is period and must use same unit as life.	Syd(30000, 7500, 10, 1) Syd([initial cost], [salvage], [lifespan], [period])	*4,090.91* (yearly depreciation allowance for the first year)

Formatting

Applies bold, underline, or italic formatting to the input.

Function Type	Description	Example Formula	Example Return
Bold	Applies bold formatting to the input.	Bold('This is bold.')	**This is bold.**
Italic	Applies italic formatting to the input.	Italic ('This is italic.')	*This is italic.*
Underline	Applies underline formatting to the input.	Underline ('This is underlined.')	<u>This is underlined.</u>

Logical

Logical functions can be used to handle conditional information.

Function Type	Description	Example Formula	Example Return
And	Returns *TRUE* if all arguments are true, or *FALSE* if any are false. Can take more than two arguments.	AND(2+2=4,2+3=6)	FALSE
False	Displays *FALSE*	FALSE	FALSE

Function Type	Description	Example Formula	Example Return
If	If a condition is true, then the first input is returned. If it is false, then the second input is returned.	if({OrderDetail.Price}= 0,'FREE',{OrderDetail.Price})	*FREE* if price is 0, or displays price
Not	Reverses value of argument. Argument must be True/ False.	Not(FALSE)	TRUE
Or	If any argument is true, return *TRUE*. Can take more than two arguments.	OR(2+2=4,2+3=6)	TRUE
Switch	This function should be used instead of placing if() functions inside of if() functions. Takes any even number of inputs arguments. All arguments will be tested against the first argument in sequence until one is found to be true, then the next argument is returned. If no arguments are found to be true, second argument is returned.	Switch({Categories. CategoryName}, "NOT FOUND", "Beverages", "Drink up!", "Condiments", "Enhance", "Confections", "Sweet Tooth")	If none are true, *NOT FOUND*. If Beverages category is true, *Drink Up!*
True	Displays TRUE	TRUE	TRUE

Operators

Symbols that denote operations.

Function Type	Description	Example Formula	Example Return
&	And	"These"&"go"&"together"	These go together
+	Plus	10+5	15
-	Minus	10-5	5
*	Multiplied by	10*5	50
/	Divided By	10/5	2

Other

Miscellaneous functions that do not fit into other categories.

Function Type	Description	Example Formula	Example Return
CellValue	Returns the value of the current cell. This function is only used in conditional formatting.	CellValue()>150	*TRUE* (if price is grater than 150)
ExcelFormula	Passes an Excel formula to an Excel report.	ExcelFormula ("SUM(A1:A100)")	Will pass *SUM(A1:A100)* to Excel
ExportType	Returns the exported format type.	ExportType()	PDF
FilterValue	Returns the current value of a filter as a string for display purposes. First argument is filter value. Second argument is sub-index if there are multiple values.	FilterValue(2,2)	Second item in filtered list.
Hyperlink	Creates a hyperlink to an external website. First argument is URL of website. Second argument is display text (optional).	Hyperlink('www.amplifund.com', 'AmpliFund')	**AmpliFund**
LoadImage	Loads a server side image based on the input path into the cell.	LoadImage({Categories.Picture})	
PageNumber	Returns the current page number for HTML, PDF, and RTF reports.	PageNumber()	1
StripHTMLTags	Removes any HTML tags from the input string.	StripHtmlTags(" This is heading 1 ")	This is heading 1

String

Commonly used for interpreting and manipulating text fields.

Function Type	Description	Example Formula	Example Return
Concatenate	Joins several text strings into one text string. Can also use & symbol.	Concatenate("This ", "is ", "one string!") --OR-- "This"&"is"&"one string!"	This is one string!

Function Type	Description	Example Formula	Example Return
Left	Returns the first character(s) of a text string. First argument is string. Second argument is number of characters to display.	Left(“example”, 2)	ex
Len	Converts all uppercase letters in a text string to lowercase.	Lower(“EXAMPLE”)	example
Mid	Returns a specific number of characters from a text string starting where you specify. First argument is string. Second argument is starting character. Third argument is number of characters to display.	Mid(“example” , 2, 3)	xam
NewLine	Begins a new line of text.	NewLine()	
Replace	Replaces part of a text string. First argument is string. Second argument is starting character. Third argument is number of characters to replace. Fourth argument is string to insert.	Replace("example", 2, 3, "*")	e*ple
Right	Returns the last characters in a text string. First argument is string. Second argument is number of characters to display.	Right("example", 2)	le
Trim	Removes all spaces from text except for single spaces between words.	Trim("This sentence has weird spacing.", 2)	This sentence has weird spacing.
Upper	Converts text to uppercase.	Upper("example")	EXAMPLE
Value	Converts a text string that represents a number to a number.	Value("$1,000")	1000