

DATASETS



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1. Understanding Datasets

1.1 Understanding Datasets

Datasets function as an additional layer between Data Sources and elements created in Metric Insights. This functionality gives users without a technical background the ability to utilize data. With Datasets there is no need to understand the structure of source database, know SQL or the syntax of other BI tools. Datasets allow:

- Data to be easily staged to support business users in creating their own Metric Insights content without having to understand underlying Data Sources
- Snapshots of data from a Data Source without having to create and maintain "staging reports".
- Creation of exception and change reports from any Data Source without having to understand Data Source-specific syntax or SQL See also [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#)
- Utilization of dynamic filtering to identify exceptions and changes in large, complex data sets without any dimensional restrictions

For more details refer to: [Create a Dataset](#)

1.2 Create a Dataset from any Data Source

Datasets serve as a staging layer between Data Sources and Metric Insights elements (Metrics and Reports).

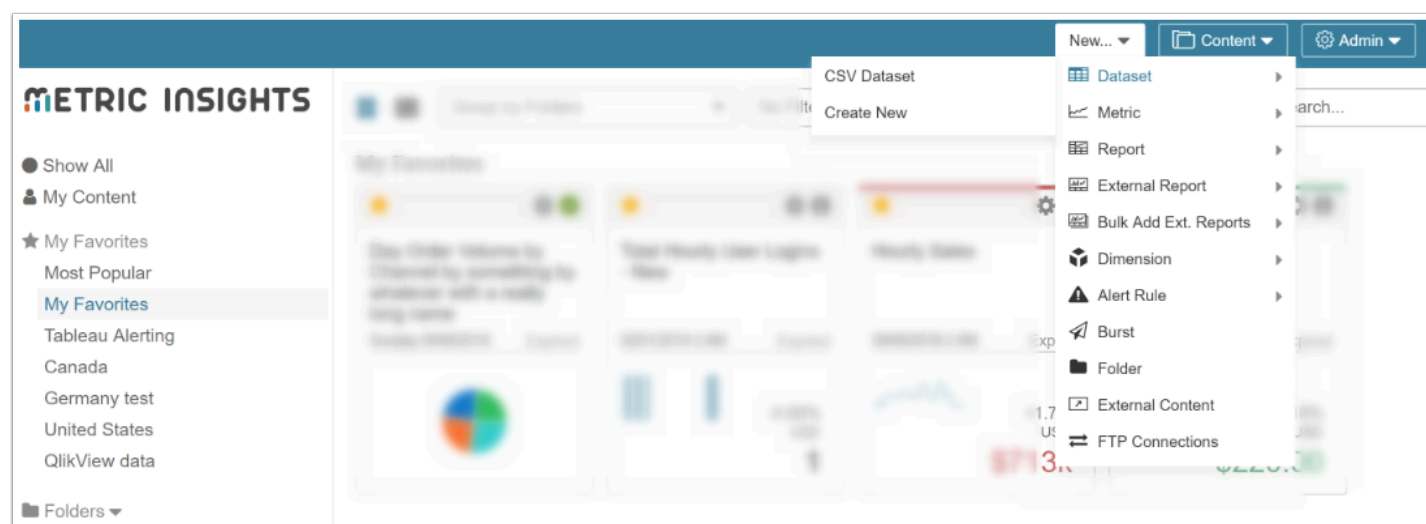
The ultimate goal of Dataset functionality is to separate data loading, staging and discovery from data display and distribution. A Dataset (and its Dataset Views) can be used as the source for multiple Reports and Metrics, allowing a single source for many different elements and use-cases.

! To understand how our Security model interacts with Datasets, see [Datasets](#) in the *Controlling Access within Metric Insights* manual.

Video Tutorial

1. Access New or Content menu > Datasets

1.1. New Menu > Dataset > Create New



1.2. Content menu > Datasets > New dataset

The screenshot shows the 'Datasets' page. At the top, there's a navigation bar with 'Datasets' selected. Below it, there are filter dropdowns for 'Data Source', 'Created by', and 'Type', all set to 'All'. A search bar is also present. The main area displays a table of datasets. The first row is 'Daily Sales Dataset' with a 'Full Refresh' type and 'manual' data source. Below the table, there is a '+ New dataset' button and a 'Selected datasets' button. An arrow points to the '+ New dataset' button.

Below the grid, click **[+ New dataset]**

1.3. Add Dataset from a Dataset view (Materialize a Dataset)

New feature in Release 6.2.2 is the ability to Create a new Dataset from a Dataset View via the Actions dropdown.

The screenshot shows the 'Cost greater than Sales' dataset view. The top navigation bar shows 'Datasets / Daily sales (Demo) / Cost greater than Sales'. The main area shows the dataset view with filters and a table of columns. An arrow points to the 'Materialize as Dataset' option in the Actions dropdown menu.

Dataset Columns

Column Name	Reference Name	Type	Length	Display Mask
Country	country	text	14	
Channel	channel	text	16	
Product Category	product_category	text	14	
Product Subcategory	product_subcategory	text	13	
Sum of Units	sum_of_units	decimal		
Sum of Cost	sum_of_cost	decimal		
Sum of Sales	sum_of_sales	decimal		

The new Dataset is automatically created and enabled. Continue with the steps below to modify any of the defaults as needed.

💡 One new Dataset may be created from a View. After one is created, you will no longer see the option on the Action Dropdown.

2. [Info tab] Define the basics

The screenshot shows the 'New Dataset' form in the Metric Insights interface. The 'Info' tab is selected. The form includes the following fields and controls:

- Measured:** A dropdown menu set to 'Daily'.
- Collecting is:** Radio buttons for 'enabled' and 'disabled'. The 'disabled' option is selected.
- Name:** A text input field containing 'Sales data by Country and Channel'.
- Description:** A text area containing 'Dataset sourced from SQL DB to create reports on Sales by Country and Channel'.
- Category:** A dropdown menu set to 'Revenue'.

A red banner at the top right of the form states 'Data Collection is disabled'. Numbered callouts 1, 2, and 3 point to the 'Measured', 'Collecting is', and 'Name' fields respectively.

1. **Measured:** select the measurement interval that applies to the level of aggregation that you want in your result set.
2. **Collecting:** new Datasets are always disabled by default to make sure that you can take time to configure them properly before enabling. This setting is duplicated at the top of the screen.
3. **Name:** provide a unique name for your dataset. Preferably, the dataset name should explain what kind of data it contains.

Move to the *Data* tab to define the source of data and how often it should be updated.

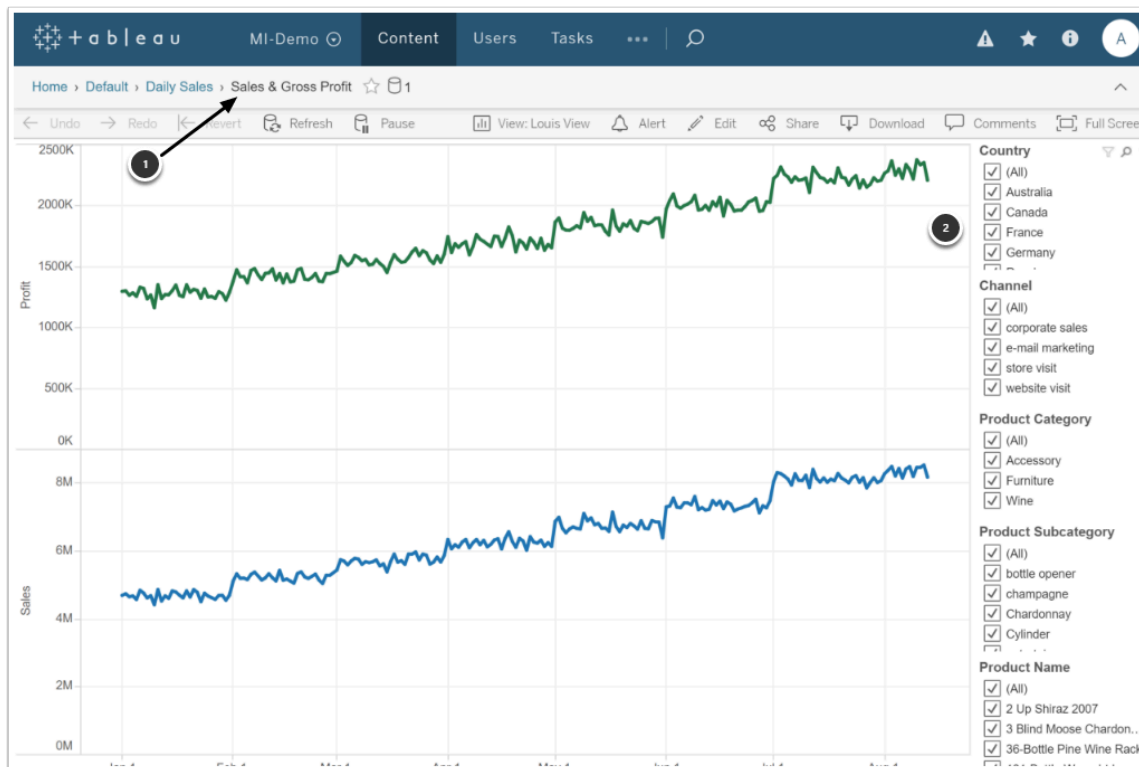
3. [Data tab] Configure data collection

3.1. [Data tab] for a Plug-in (Tableau example)

💡 **PREREQUISITES:**

- **Data Source:** Metric Insights must have a working data source connection to Tableau. If you have not yet configured a data source connection, see instructions for your particular BI Tool here: [Connecting To Data Sources](#).

3.1.1. First find the Tableau Report you want to further use as a Dataset



At the Tableau dashboard pay attention to:

1. **Worksheet name:** You will need to remember this when defining your Data Source
2. You can filter elements sourced from your BI Tool, see [Setting](#) Filters below. You can also include some of these filter values into your fetch command. Both of these will enable MI to load data selectively, choosing only the values you really need instead of fetching all the data from this worksheet.

3.1.2. [Configuration tab] This is the 5.6 version, your display may differ

Assets / New Dataset (23)

New... Content Admin Anna

Data Collection is disabled

Data Advanced Views & Elements Access History

1 Data Source: Tableau - prod_MI (Plug-in)

2 Data collection trigger: 1_5-day-refresh

3 Tableau Worksheet: Daily Sales 2016 / Gross Profit by Sales Channels

Manage Filters

There are no Filters defined. Click Manage Filters to add a Filter.

Plugin command: Visual Command

Select Columns

Validate

You may use :measurement_time in your statement to bind in a date or series of date values.

1. **Data Source:** Select the Tableau plug-in serving as a Data Source for this Dataset. For more info, see: [Establish Connectivity to Tableau Server](#)
2. Set the **Data Collection Trigger** which is going to initiate updating information in a Metric or Dimension Values. If there is no option matching your requirements, scroll down to the bottom of the drop-down list and click **Add New Data Collection Trigger**.
3. Select the **Tableau Worksheet** from the drop-down list.

3.1.3. Setting Filters

For more details, see examples in [Pre-filtering BI tools \(External Reports\)](#)

Add Tableau Filter

Your new filter will be added to the **Gross Profit by Sales Channels** View.

1. **Tableau Filter Name**:
 You must select a Filter name that **exactly matches** the Filter name in Tableau. [How do I find my Filter name in Tableau?](#)

2. **Display Name**:

3. **Filter Values**: ☒ Dataset
☒ Map to Dimension Values
☐ Enter Manually
☐ Date

4. **Dimension**:

5. **Values** grid:

Name	
corporate sales	Test
e-mail marketing	Test
store visit	Test
website visit	Test

6. **Save** or **cancel**

1. Select **Manage Filters**
2. The **Add Tableau Filter** pop-up opens
3. You must exactly match the Filter Names used in Tableau - see [First find the Tableau Report you want to further use as a Dataset](#) above or select the on-screen Help link.
4. You can enter the **Filter Values** manually or by mapping to existing Filters in Dimensions or other Datasets
5. The **Values** grid will be populated with your choice
6. **Save** the changes made and optionally add more Filters

3.1.4. Optionally you can limit the values

Tableau Worksheet **Daily Sales 2016 / Gross Profit by Sales Channels** [Manage Filters](#)

Tableau Filter Defaults	
Tableau Filter	Tableau Values
Channel	All 4 Values

Tableau Filter Values ✕

Use ☐ All Values ☒ Only Selected Values ☐ Ignore Filter

Choose values for "Channel" Filter

<input type="checkbox"/>	Filter Values
<input checked="" type="checkbox"/>	corporate sales
<input checked="" type="checkbox"/>	e-mail marketing
<input type="checkbox"/>	store visit
<input checked="" type="checkbox"/>	website visit

Save or [cancel](#)

By default, filters are set to 'All'. To change this setting:

1. Click **Edit** (a **Pencil** icon)
2. The *Tableau Filter Values* pop-up opens
3. You have 3 options to choose from:
 - **'Use All Values'**
 - **'Use Only Selected Values'**
 - **'Ignore Filter'**
4. In case you need to include only certain values, select them in the list.

3.1.5. Plugin Command: [Option 1] Visual Editor

The screenshot shows the Tableau Visual Editor interface. At the top, there's a 'Tableau Worksheet' header with the title 'Daily Sales 2016 / Gross Profit by Sales Channels' and a 'Manage Filters' button. Below this is a 'Tableau Filter Defaults' section with a table:

Tableau Filter	Tableau Values
Channel	3 Values: corporate sales, e-mail marketing, and 1 other

Below the filter defaults, there are two tabs: 'Visual' and 'Command'. The 'Visual' tab is selected. In the 'Visual' tab, there's a 'Field' column and a 'Type' column. A 'Select Columns' button is highlighted with a red circle and a number 2. An arrow points from this button to the 'Tableau Query Builder' pop-up window.

The 'Tableau Query Builder' pop-up window has a 'Fields' tab and an 'Advanced' tab. The 'Fields' tab is selected. It shows a table with columns: Field, Alias, Type, Override, and Aggregation. The table contains the following data:

Field	Alias	Type	Override	Aggregation
<input checked="" type="checkbox"/> Channel	Add	Text	---	---
<input checked="" type="checkbox"/> Month of Calendar Date	Add	Text	---	---
<input checked="" type="checkbox"/> Sales	Add	Decimal	---	---
<input checked="" type="checkbox"/> Total Gross Profit	Add	Decimal	---	---

Below the table, there are buttons for '+ Derived field' and '+ Count'. A note states: '3 separate requests of your Tableau server are required to fetch the above data.' At the bottom, there are 'Save' and 'Cancel' buttons.

Numbered steps in the image:

1. Plugin command
2. Select Columns
3. Tableau Query Builder
4. Select the parameters you would like to include to your Plugin command
5. Save

1. Select the **Visual** Editor option.
2. **Select Columns**
3. The *Tableau Query Builder* pop-up opens
4. Select the parameters you would like to include to your Plugin command
5. **Save** your selection.

3.1.6. Plugin Command: [Option 2] Manual Entry

Tableau Worksheet **Daily Sales 2016 / Gross Profit by Sales Channels** [Manage Filters](#)

Tableau Filter Defaults

Tableau Filter	Tableau Values
Channel	3 Values: corporate sales, e-mail marketing, and 1 other

1 Plugin command **Visual** **Command**

2

```
fields = "Channel", "Month of Calendar Date", "Sales", "Total Gross Profit"
```

1. In the **Plugin command** box choose the **Command** option.
2. Write your command. For a hint on plugin commands, refer to [Plugin commands](#)

3.1.7. Select "Validate" to preview data

Plugin command **Visual** **Command**

Field	Type	Override	Aggregation
Channel	Text		
Month of Calendar Date			
Sales	Decimal		
Total Gross Profit	Decimal		

[Modify Columns](#)

[Validate](#)

Rows Preview

Channel	Month of Calendar Date	Sales	Total Gross Profit
corporate sales	January	36162723.81	9810309.12
corporate sales	February	36468302.49	9928012.97
corporate sales	March	44241723.49	12005077.68
corporate sales	April	45587065.02	12274612.65
corporate sales	May	51977821.36	14137300.08
corporate sales	June	55252601.81	15020272.1

3.2. [Data tab] for SQL (Database example)

Data Source: Demo DB (SQL)

Data collection schedule: daily-post-processing

SQL statement:

```
SELECT
  calendar_date,
  channel,
  country,
  sum(total_unit_count),
  sum(total_amount)
from daily_order_summary o, product
Where o.product_id = product.product_id
and calendar_date = :measurement_time
Group by 1,2
```

Validate: [Show validation rows](#)

Validation performed for: 2016-04-06 [Change this value](#)

Save the Dataset to see the columns list

calendar_date	channel	country	sum(total_unit_count)	sum(total_amount)
2016-04-06 00:00:00	corporate sales	Australia	27369	1466736.64
2016-04-06 00:00:00	e-mail marketing	Canada	26006	1408415.7
2016-04-06 00:00:00	store visit	Australia	31371	1690740.66
2016-04-06 00:00:00	website visit	Canada	28841	1585492.58

- Data Source:** Choose a data fetch method from drop-down list. A SQL-based Data Source is used in this example. For more details on other available data sources and specific fetch method requirements, see [Understanding Data Sources](#)
- Data Collection Schedule:** select how often data should be recollected for this Dataset to ensure that it contains relevant data.
- Write a **SQL Statement** defining the data to be extracted from the database. You may use **:measurement_time** in your statement to bind in a date or series of date values. See also: [How do I use the :measurement_time bind variable?](#)
- Validate** your statement. If you have included **:measurement_time** parameter in your statement, it is required to specify Measurement Time for Parameter Substitution.
- If the statement is valid, a **Validation Rows Preview** section pops-up at the bottom of the screen. You can also open it by clicking **Show validation rows** under the **SQL Statement** box.

4. Optionally, customize the display of your Dataset values

4.1. SQL example

The first screenshot shows the 'New Dataset' screen. The 'Data Source' is 'Demo DB (SQL)'. The 'Data collection schedule' is 'daily-post-processing'. The 'SQL statement' is:

```
SELECT
  calendar_date,
  channel,
  country,
  sum(total_unit_count),
  sum(total_amount)
from daily_order_summary o, product
Where o.product_id = product.product_id
and calendar_date = :measurement_time
Group by 1,2
```

The 'Save' button is highlighted with a red circle and an arrow pointing to the second screenshot. The second screenshot shows the 'Dataset Columns' table:

Column Name	Reference Name	Type	Precision
calendar_date	calendar_date	datetime	
channel	channel	text	
country	country	text	
sum_total_unit_count	sum_total_unit_count	float	2
sum_total_amount	sum_total_amount	float	2

The 'gear' icon for the 'sum_total_unit_count' column is highlighted with a red circle and an arrow pointing to the third screenshot. The third screenshot shows the 'Edit Dataset Column' pop-up for 'Total Units'. The 'Column Name' is 'Total Units'. The 'Precision' dropdown is set to 2, and the 'digit(s)' field is highlighted with a red circle.

1. Click **Save** to display the **Dataset Columns** table.
2. Dataset Columns: This table can be used to rename column names and define precision for numeric fields if needed. In the given example, there are a few fields that could use better Column Names and let's say we would like the Total_unit_count to be a whole number rather than the default value of 2 decimal points.
3. Click the **Gear** for each field you would like to rename
4. On the resulting pop-up:
 - Type in a new **Column Name**
 - If the data element is a floating-point integer, you can also change the number of decimals to display using the drop-down list on the **Precision** field.

4.2. BI Tool example

The screenshot shows the 'Tableau Query Builder' dialog box. At the top, there are tabs for 'Visual' and 'Command'. Below these is a table with columns: Field, Type, Override, and Aggregation. The table lists fields: Channel (Text), Month of Calendar Date (Text), Sales (Decimal), and Total Gross Profit (Decimal). A blue button labeled 'Modify Columns' is positioned over the 'Month of Calendar Date' row. A black arrow points from this button to the 'Tableau Query Builder' dialog box below. The dialog box has tabs for 'Fields' and 'Advanced'. The 'Fields' tab is active, showing a table with columns: Field, Alias, Type, Override, and Aggregation. The table lists fields: Channel (Text), Month of Calendar Date (Text), Sales (Decimal), and Total Gross Profit (Decimal). The 'Month of Calendar Date' row is highlighted in yellow. Below the table are buttons for '+ Derived field' and '+ Count'. At the bottom, there is a 'Save' button and a 'Cancel' button. A note at the bottom states: '3 separate requests of your Tableau server are required to fetch the above data.'

1. Select **Modify Columns**
2. **Query Builder** opens
3. Apply **Overrides** and **Aggregations** as needed

4.3. Special and accented characters

⚠ Special and accented characters (Éé Êê Èè Ëë Ââ Àà Ää Ìì Îî Üü Ôô Ùù ÿ Çç Ôô Öö ?ß Ææ Œœ)

Regardless of the Dataset's Data Source, Metric Insights supports special and accented characters. Please note, that after the command is validated, and data is distributed to columns and the **Dataset Columns** table is shown, the special characters may be converted to the underscore symbol [_] in the **Reference Name** column. This behavior is only characteristic for the *Dataset Editor* and doesn't cause issues in the Viewer.

InfoDataAdvancedViews & ElementsAccessCollection History

ViewSavedUpdate Data

Tableau Filters

Tableau Filter	Tableau Values
NÉéamÉée	4 Values: AÆælex, KÜüolyan, and 2 others

+ Tableau Filter

Plugin command

VisualCommand

FieldTypeOverrideAggregation

Select Columns

Validate

Show validation rows

You may use :measurement_time in your statement to bind in a date or series of date values.

Dataset Columns

Column Name	Reference Name	Type	Display Mask	Contain NULLS?	
NÉéamÉée	n__am__e	text		No	⚙
Year of DÜüaÜütÜüe	year_of_d__a__t__e	int		No	⚙
CÉéoÄäuÄänÄätirily	c__o__u__n__t__r__y	text		No	⚙
SÿyaÇçlÔôaßßrÆæyCœea	s__a__l__a__r__y__a	int		No	⚙
lééd	i__d	int		No	⚙

5. Advanced settings

Validation performed for: 2016-04-06 [Change this value](#)

Dataset Columns

Column Name	Reference Name	Type	Precision	
Order Date	calendar_date	datetime		⚙
channel	channel	text		⚙
country	country	text		⚙
Total Units	sum_total_unit_count_	float	0	⚙
Total Sales Amt	sum_total_amount_	float	2	⚙

1 Snapshot Dataset? ☒ yes | ☐ no (keep history)

Save a full copy of the data (a 'snapshot') each time it is collected, and append the collection time to all the snapshot values. This is useful when you want to compare Datasets over time that do not have timestamps in them natively.

2 Can historical instances be backfilled? ☒ yes | ☐ no

Include current Day ☒ yes | ☐ no

Max empty instances to fetch

1. Snapshot Datasets are associated with keeping Dataset history and having the ability to compare Dataset instances over time.

If this the Dataset is not defined as a Snapshot dataset (this field is set to 'no'), then only the most recent instance of the Dataset will be retained

If it is a Snapshot Dataset (the history is going to be kept, for more details refer to: [Snapshot Datasets: Comparing Instances](#)), then an additional setting will be exposed below, namely, **Can historical instances be backfilled?** (see below)

Datasets

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2. This field is shown for Snapshot Datasets only.

- If the **Can historical instances be backfilled?** field is set to 'no', then only one instance of the Dataset will be computed at run time and it is required to set the value for the ':measurement_time' variable in the field below. It's important to note that while only one instance of the Dataset will be computed at run time, a new instance of the Dataset will be computed at each succeeding refresh interval. Since history is kept (the *Snapshot Dataset?* field is set to 'yes'), all instances will be retained. This technique can be used to create 'snapshots' of your underlying data at fixed time intervals.
- If this field is set to 'yes', then multiple instances of the Dataset can be computed at run time and the ':measurement_time' variable is defined automatically by the system.

See also: [How do I use the: measurement_time bind variable?](#)

At the upper right corner of the screen, click **Enable and Publish**.

6. Enable and Publish to open the Dataset Viewer

The screenshot displays the Dataset Viewer interface with two examples. The top example, 'SQL example', shows a dataset named 'Sales data by Country and Channel' with fields like Order Date, channel, country, Total Units, and Total Sales Amt. The bottom example, 'Plugin example', shows a dataset named 'Tableau Dataset (Gross Profit)' with fields like Channel, Month of Calendar Date, Sales, and Total Gross Profit. Both examples include a 'Results' table and a 'Define filters' section.

Order Date	channel	country	Total Units	Total Sales Amt
2006-01-01 00:00:00	corporate sales	Australia	390	16447.61
2006-01-01 00:00:00	corporate sales	Canada	668	35430.78
2006-01-01 00:00:00	corporate sales	France	480	22245.95
2006-01-01 00:00:00	corporate sales	Germany	304	14726.84

Channel	Month of Calendar Date	Sales	Total Gross Profit
corporate sales	January	36.2M	9.81M
corporate sales	February	36.5M	9.93M
corporate sales	March	44.2M	12.0M

Your Dataset is now ready for use.

7. What would you like to do next?

- You may start working with it by filtering data and saving separate [Dataset Views](#)
- [Creating Elements from Datasets](#)
- If you chose to create a Snapshot Dataset, you may find this article useful: [Snapshot Datasets: Comparing Past Instances](#)
- Create a [User Map](#)

1.3 Create a Dataset View

Datasets are designed to serve as pool of data and as data sources for new elements, such as Metrics and Reports.

Additionally, you can seed out specific data by creating Dataset Views.

This article answers the following questions:

- How to create a View from the Dataset Viewer?
- How to define additional rules and conditions by which to filter the data?

PREREQUISITES:

- [Create a Dataset from any Data Source](#)
- *Optionally:* [Create an Access Map](#) and [Apply an Access Map to a Dataset](#)

1. Access New > View

New Dataset View



1 Dataset

2 Name

3 Visibility ☒ Public | ☐ Private

New Dataset View or [cancel](#)

On the *New Dataset View*:

1. **Dataset:** select a dataset that should serve as a Data Source for new View
2. **Name:** should be unique and descriptive
3. **Visibility:** define whether you create this View for your own use or if it can be available for other users with permission to access the Dataset. Views may have 2 visibility modes:
 - **Public:** Can be created by Admins and Power Users with the appropriate **Privileges and Permissions** (see [Understanding Power Users \(Release 5.3 and beyond\)](#) and accessed by anyone who can view the Dataset; see [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#))
 - Metrics and Reports can be created only from **Public** Views

- **Private:** Can only be accessed by Admins or the user who created the View

Click **New Dataset View** to proceed with defining criteria for this new View in the *Dataset Viewer*.

2. Choose fields for this View

Columns in 'Daily Sales Dataset'

The screenshot shows the 'Daily Sales Dataset' table with columns: name, product_category, product_subcategory, channel, country, sales, units, and sales_per_unit. Below the table is a navigation bar with 'New...', 'Content', 'Admin', and a user profile 'Alex'. The main configuration panel has tabs for 'Select Fields' and 'Track Changes'. Under 'Select Fields', there are two sections: 'Select text & date fields' and 'Select numeric fields'. Callout 1 points to the 'Select text & date fields' section, which contains checkboxes for 'name', 'product_category', 'product_subcategory', 'channel', and 'country'. Callout 2 points to the 'Select numeric fields' section, which contains checkboxes for 'sales', 'units', and 'sales_per_unit'. The 'sales' checkbox is checked, and a dropdown menu shows 'Sum' as the aggregation method. Callout 3 points to the 'Define filters' section, which has buttons for 'AND', 'OR', and a count of 3. Callout 4 points to the 'Apply Changes' button at the bottom right.

name	product_category	product_subcategory	channel	country	sales	units	sales_per_unit
Wine Magician	wine accessory	bottle opener	store visit	Australia	275401.98	60322	4.565531
Wine Magician	wine accessory	bottle opener	e-mail marketing	Australia	277269.91	60875	4.554742
Wine Magician	wine accessory	bottle opener	website visit	Australia	280812.98	61954	4.532605
Wine Magician	wine accessory	bottle opener	corporate sales	Australia	282989.15	62186	4.550689
Wine Magician	wine accessory	bottle opener	corporate sales	Russia	351384.66	77450	4.536923
Stainless Steel ...	wine accessory	entertain	store visit	Australia	356093.15	59605	5.974216

1. Select text, date and numeric fields that should be included into your View
2. Choose aggregation method for numeric fields (Sum, Avg, Min, Max, Count)
3. Define additional filters the total dataset.
4. Click **Apply Changes** to limit the results set to the selected fields

- Results are displayed below the *Select Field* box
- Save** this View

4. Alternatively, Views can be created right from the Dataset Viewer

The screenshot shows the 'Daily Sales Dataset / All data' view. At the top, there's a navigation bar with 'New...', 'Content', 'Admin', and a user profile 'Alex'. Below this, a dropdown menu is set to 'All data'. A 'Save as View' button is highlighted with a circled '3'. To the right of this button is an 'Actions' dropdown and a settings gear icon. Below the navigation bar, there's a section for 'Single Instance' with a date selector set to 'Monday 12/19/2016'. Below this, there's a 'Select Fields' panel with two tabs: 'Select Fields' and 'Track Changes'. The 'Select Fields' panel has two sections: 'Select text & date fields' and 'Select numeric fields'. In the 'Select text & date fields' section, 'name', 'channel', and 'country' are checked. In the 'Select numeric fields' section, 'sales', 'units', and 'sales_per_unit' are checked. To the right of the 'Select Fields' panel is a 'Define filters' section with 'AND' and 'OR' buttons, and '+ Rule' and '+ Group' buttons. At the bottom right, there's a green 'Apply Changes' button with a checkmark and a circled '2'.

1. Open any View (select 'All data' for full range of fields)
2. Complete Steps 2 and 3 as above
3. At the top of the page click **Save as View** and the pop-up will allow you to create a new View as shown in Step 1

5. Defining Filters (Conditions)

Dataset Views allow seeding out the required information using conditional filtering. You may mix several simple or compound **AND / OR] filters** to focus on a highly specific data slice. The results set will be displayed right on the same page.

Let's review the use cases given below.

5.1. Example of Simple Filter criteria

Use Case: Show any product sales of more than \$20,000 in Australia via corporate sales channel. Note that all of the filters are **AND filters**, since we want to find data matching **all** of these criteria.

1. Select the following columns from the dataset for the view: Product Name, Channel, Country, Sales, Units, Sales Per Unit.
2. **Define filters:** click **[+ Rule]** and define criteria for each new rule.

- Note that all of the filters are **AND filters**, since we need to find data matching ALL of these criteria.
- Apply Changes** to update the **Results**

You may create a separate View out of this data slice by clicking **Save as View** at the top of the page.

Results

name	channel	country	sales	units	sales_per_unit
Wine Magician	corporate sales	Australia	282989.15	62186	4.550689
Stainless Steel Hors D'oeuvres	corporate sales	Australia	378049.78	63754	5.929821
Dramas Stemware Set	corporate sales	Australia	422921.25	61954	6.826375

5.2. Example of Compound Filter criteria

Use Case: Include any product sales for more than \$20,000 in Canada for any channel **OR** for more than \$10,000 in Australia for any channel.

- Select the following columns from the Dataset for the view: Product Name, Channel, Country, Sales, Units, Sales Per Unit.
- Define filters:** Our use case consists of 2 groups of conditions: click **[+ Group]** and define criteria for the first and second group:
 - [Group 1]:** country = Canada **AND** sales > 20,000
 - [Group 2]:** country = Australia **AND** sales > 10,000
- Choose the **OR filter** to define relations between the Groups
- Apply Changes** to update the **Results** set

You may create a separate View out of this data slice by clicking **Save as View** at the top of the page.

[Home](#)
[Datasets / Daily Sales / All data](#)

[New...](#)
[Content](#)
[Admin](#)

Alex

All data

Save as View

Actions

Single Instance

Monday 12/19/2016

Last Two Instances

Current: Monday 12/19/2016

Select Fields

Track Changes

1

Select text & date fields

☒ name
 ☐ product_category
 ☐ product_subcategory
 ☒ channel
 ☒ country

Select numeric fields

☒ sales
 ☐ units
 ☒ sales_per_unit

3

Define filters

AND OR

AND OR

sales

is more than or

a value

20000

AND

country

exactly matches

a value

Canada

2

OR

AND OR

sales

is more than or

a value

10000

AND

country

exactly matches

a value

Australia

4

Changes Applied

Results

Show: All

of 640 rows

name	channel	country	sales	units	sales_per_unit
Wine Connoisseur's Ultim...	website visit	Canada	15780299.69	158526	99.543921
36-Bottle Pine Wine Rack	corporate sales	Canada	15816986.87	158863	99.563692
36-Bottle Pine Wine Rack	website visit	Canada	15859199.59	159066	99.702008

What would you like to do next?

- [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#)
- [Delete](#) an unnecessary Dataset View?
- [Compare Past Dataset View Instances](#)
- [Create a Report from a Dataset View](#)
- [Create a Metric from a Dataset View](#)

1.4 Dataset Viewer - Exception Detection (select fields / define derived fields and filters)

In the sections below, this article answers the following questions:

- How to limit results to selected fields?
- How to define filters?
- Apply a Rule versus a Group?
- How to use AND/OR operators?
- How to track data changes
- How to save changes as a separate View?

For release 5.0.5 and beyond:

- How to add Derived Fields to a Dataset's Result set?
- How to compare Dataset date fields to Snapshot (historical) dates?

The screenshot displays the 'Dataset Viewer' interface for the 'Daily Sales Dataset'. The interface is divided into several sections:

- Top Bar:** Shows the dataset name 'Daily Sales Dataset / All data', a 'New...' button, 'Content' dropdown, 'Admin' dropdown, user 'Alex', and a help icon.
- View Management:** Includes a 'Save as View' button (labeled 8), an 'Actions' dropdown, and a settings icon.
- Instance Selection:** A dropdown menu shows 'Single Instance' selected for 'Monday 04/17/2017', with an option for 'Last Two Instances'. It also displays 'Current: Monday 04/17/2017' and 'Prior: Sunday 04/16/2017'.
- Select Fields (labeled 1):**
 - Select text & date fields:** A list of fields with checkboxes: name, product_category, product_subcategory, channel, and country.
 - Select numeric fields:** A list of fields with dropdowns: sales, units, and sales_per_unit.
 - Derived Field (labeled 2):** A section with a '+ Derived Field' button and a 'Sales - 30%' field.
- Define filters (labeled 3):**
 - Filter 1:** 'country' exactly matches 'a value' 'Spain'.
 - Filter 2 (labeled 5):** An 'AND' group containing:
 - 'channel' contains 'a value' 'corporate'.
 - 'name' does not contain 'a value' 'magician'.
- Buttons (labeled 4):** '+ Rule' and '+ Group' buttons for adding new filters.
- Apply Changes (labeled 7):** A green button at the bottom right to save the configuration.

1. Fields Selector

The screenshot displays the 'Fields Selector' interface. On the left, under the 'Select Fields' tab, there are two sections: 'Select text & date fields' and 'Select numeric fields'. In the first section, 'calendar_date', 'country', and 'product_category' are selected (checked), while 'channel' and 'name' are not. In the second section, 'sales' is selected (checked) and has a dropdown arrow next to it, while 'units' is not. On the right, the 'Define filters' section contains 'AND' and 'OR' buttons, '+ Rule' and '+ Group' buttons, and an 'Apply Changes' button with a checkmark. Below the selector, the 'Results' section shows a table with 1568 rows. The table has three columns: 'calendar_date', 'sales', and 'country'. An arrow points from the 'calendar_date' field in the 'Select Fields' section to the first column of the results table. The table shows three rows of data, all from Australia on 2017-01-29 00:00:00, with sales values of 1499.7, 1098, and 621.

Select Fields | Track Changes

Select text & date fields

- ☒ calendar_date
- ☐ channel
- ☒ country
- ☐ name
- ☐ product_category

Select numeric fields

- ☐ units
- ☒ sales

Define filters

AND OR

+ Rule + Group

✓ Apply Changes

Results

Show: All of 1568 rows

calendar_date	sales	country
2017-01-29 00:00:00	1499.7	Australia
2017-01-29 00:00:00	1098	Australia
2017-01-29 00:00:00	621	Australia

You can limit the display of Dataset's **All Data** only to those fields that are required for your data analysis.

Just select the fields you need in the **Select Fields** section, click **Apply Changes** in the right side of the screen and the **Result** set is going to be updated and only those columns that you have selected are going to be displayed.

2. [Version 5.0.5 and further] How to add Derived Fields to Dataset's Result set?

Construct Derived Field ✕

Name

Sales - 30%

Precision

2

▼ digit(s)

Expression

[sales]-([sales]*0.3)

Use **Tab** to open autosuggest or it will be opened automatically after typing "["
Learn the [Expression Syntax](#)

Update Field

or [cancel](#)

Derived fields include values that do not exist in a Data Source itself but are calculated from one or more existing numeric fields via basic arithmetic expressions and non-aggregate numeric functions.

For more details refer to:

- [Derived fields for Data Processing \(Overview / Create / Aggregate\)](#)
- [Expression Syntax for Derived Fields Formulas](#)

3. Defining Filters

In addition to selecting specific fields, you can filter data using custom conditions. The process of creating a filter is similar to constructing a sentence: you choose a subject, comparison conditions and the values which are going to serve as a reference for filtering.

Define filters

The screenshot shows the 'Define filters' interface. It has a header with 'AND' and 'OR' buttons. Below this is a filter rule configuration area. The 'Subject' dropdown is set to 'name'. The 'Condition' dropdown is set to 'contains'. The 'Value' input field contains '%hill%'. A blue arrow points from the 'Subject' label to the 'name' dropdown. An orange arrow points from the 'Condition' label to the 'contains' dropdown. A green arrow points from the 'Value' label to the '%hill%' input. The interface also features '+ Rule' and '+ Group' buttons, and a 'Changes Applied' button.

Part	Description	Example
Subject	The column you want to base the filter on. This drop-down list includes the same values as those displayed in the the Filed Selector to the left of the Filter section.	name, units, country
Condition	<p>Contains a set of comparison operators which define the Subject. This drop-down list includes different values depending on whether the values in the selected subject are text or integer:</p> <p><i>For text columns:</i> exactly matches, contains, is in list, is not empty, does not equal, starts with.</p> <p><i>For integer columns:</i> equals, is more than, is more than or equal to, is less than, is less than or equal to, does not equal.</p> <p>Some of the conditions define the relationship between the Subject and the Value that follows; others function independently and do not require a specific Value.</p>	Different for text and integer fields
Value	The Value of the subject you're basing the filter on: <i>keyword, text or numeric value</i> . Value may be added with wildcard (%%)representing alphanumeric characters.	corporate sales, 5000, Spain

4. Types of Filters

You can use filters to seed out the required information using conditional filtering. You may mix and match several simple Rules or compound filters (Groups) as defined in [Create a Dataset View](#) aggregated via [**AND / OR**] operators to focus on a highly specific data slice. The Results set will be displayed right on the same page.

Rule (Simple Filter Criteria)

Define filters

AND

OR

country

exactly matches

a value

Spain

OR

channel

contains

a value

corporate

OR

units

is less than

a value

20

+ Rule

+ Group

✓ Apply Changes

Group (Compound Filter Criteria)

Define filters

AND

OR

+ Rule

+ Group

AND

OR

channel

contains

a value

corporate

OR

country

exactly matches

a value

Spain

AND

AND

OR

sales

equals

a value

300

OR

product_category

exactly matches

a value

wine

+ Rule

+ Group

✓ Apply Changes

5. AND / OR Operators

When you're using multiple Rules and Groups of conditions, you can use an **AND / OR** switches. You can not mix and match AND / OR for the set of applied filters but if you add a group of conditions, you may apply an alternative operator to it.

In the example below the following filters are applied to a dataset. All of them are aggregated by the AND operator, meaning that all of 3 filters should be TRUE:

1. Simple Rule
2. A Group of 3 conditions aggregated by the OR operator (ANY of 3 conditions should be TRUE)
3. A Group of 2 conditions aggregated by the OR operator (ANY of 2 conditions should be TRUE)

Define filters

1

Rule

2

Group

3

Group

AND OR

+ Rule + Group

country exactly match a value Spain

AND

AND OR

+ Rule + Group

channel contains a value corporate

OR

name contains a value %hill%

OR

product_category starts with a value wine

AND

AND OR

+ Rule + Group

units is more than a value 25

OR

sales is more than a value 200

AND

Changes Applied

Operator	Description
AND	We return all rows that match ALL of the filters.
OR	We return all rows that match ANY of the filters.

6. [Version 5.0.5] How to compare Dataset date fields to Snapshot (historical) dates

In Versions prior to 5.0.5 date comparisons could be performed to a constant or if there is more than one date field in a Data Source - to other date fields.

In version 5.0.5 a new comparison option has been added - **snapshot date**. Snapshot date is the date when the Dataset has been collected or updated.

Datasets may be:

- **Single Instance:** show only when the Dataset has been collected (as shown in the picture below)
- **Multi-Instance** (Snapshot dataset): keeps history of Data updates.

User can filter on a date field by comparing the field to the dataset effective date for a *single instance* or *multi-instance* dataset.

The image shows two screenshots of the Metric Insights interface, specifically the 'All data' view. Both screenshots show the 'Define filters' section with a filter rule: 'last_login_time is more than a value'. The first screenshot shows the 'a value' dropdown menu open, with options 'a value', 'a value', and 'last_updated_time'. A callout box points to the 'a value' option, stating 'Versions prior to 5.0.5'. The second screenshot shows the 'a value' dropdown menu open, with options 'a value', 'a value', and 'last_updated_time'. A callout box points to the 'a value' option, stating 'Version 5.0.5'. Both screenshots also show a 'Dataset collected: Monday 04/24/2017' label.

Multi-Instance Dataset Example (click to open)

The image shows a screenshot of the Metric Insights interface, specifically the 'All data' view. It shows the 'Single Instance' tab selected, with a dropdown menu open showing dates: 'Tuesday 04/11/2017', 'Thursday 04/13/2017', 'Wednesday 04/12/2017', and 'Tuesday 04/11/2017'. A callout box points to the 'Tuesday 04/11/2017' option, stating 'Current: Tuesday 04/11/2017'. The 'Define filters' section shows a filter rule: 'last_login_time is less than snapshot date by 1 day'. The 'Changes Applied' button is visible at the bottom right.

7. How to track changes - comparing instances

You can compare the data from the current period to the prior period to highlight changes. For more details refer to this article: [Snapshot Datasets: Comparing Instances](#).

8. Saving field selection and applied filters as a separate View


- There is no need to apply the same filters to review the same **Results** set later. You can save the Results set with selected fields and applied filters as a separate **View**. To learn more about Views, refer to: [Create a Dataset View](#)
- Dataset Views can serve to quickly create Reports / Metrics. Refer to [Create a Report from a Dataset View](#) or [Create a Metric from a Dataset View](#) for more details.

1.5 Create a Statistical Model (Datasets)

The new functionality implemented in Version 5 allows Users to easily create a statistical model to find anomalies in data containing a large number of dimension values. This process can surface specific anomalies across thousand of records and dimensions, allowing reports and metrics to be easily created with this reduced information.

For an example, we will create a Stats Model from an existing Dataset containing Sales data from our test database. We want to find any values of 'Cost of Product', 'Sales Amount' or 'Gross Profit' that fall outside of 2 standard deviations from a 30-day moving average. We want to perform this evaluation across these dimensions: Country, Channel, and Product sub-category.

 You can only create Stats Models on Datasets that 'keep history', aka Snapshot Datasets, and you need to use the 'All Data' View.

 Security requirements for Power Users;
See [Understanding Power Users \(Release 5.3 and beyond\)](#) and [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#)

1. Creating Statistical Models from the Dataset Viewer

 Stats Models can only be created from the 'All Data' Views

Dataset collected: Sunday 12/31/2017

Results

calendar_date	country	channel	product_subcategory	1 sum(total_cost)	2 sum(total_sales_amount)	3 sum(total_gross_profit)	4 avg(percent_gross_margin)
08/03/17	Australia	corporate sales	bottle opener	\$5,486	\$8,537	\$3,051	37.9
08/03/17	Australia	corporate sales	champagne	\$18,315	\$24,542	\$6,227	27.4
08/03/17	Australia	corporate sales	Chardonnay	\$9,735	\$16,613	\$6,878	41.6
08/03/17	Australia	corporate sales	Cylinder	\$7,607	\$11,550	\$3,943	34.1

In our example, the **All data View** of the Dataset provides the following:

Measures :

1. Cost of product
2. Sales amount
3. Gross profit amount

Dimensions:

- Product_subcategory
- Country
- Channel

2. Actions > Build Stats Model will open the Stats Model editor

The screenshot shows the 'Stats Model editor' interface for a dataset named 'Daily Sales Data'. The interface includes a sidebar with numbered callouts 1 through 5, a main configuration area with callouts 6 through 8, and a 'Results' table at the bottom.

Callouts:

- 1. Name: Daily Sales Data Statistical Model
- 2. Date column: calendar_date
- 3. Moving Average Interval: 10 days
- 4. Calculate UCL and LCL based on: 3 standard deviations
- 5. Only include rows where volatility is greater than: 3 standard deviations
- 6. Compute volatility for: Latest calendar_date
- 7. Dimensions: country
- 8. Measure: sum(total_cost)

Results Table:

calendar_date	country	channel	product_subcategory	sum(total_cost)	sum(total_sales_amount)	sum(total_gross_profit)	avg(percent_gross_margin)
08/03/17	Australia	corporate sales	bottle opener	\$5,486	\$8,537	\$3,051	37.9
08/03/17	Australia	corporate sales	champagne	\$18,315	\$24,542	\$6,227	27.4
08/03/17	Australia	corporate sales	Chardonnay	\$9,735	\$16,613	\$6,878	41.6

1. **Name** - default is 'Statistical Model' appended to your Dataset Name - Name may be modified.
2. **Date column** - choose a *Date* from the Results field or use 'Snapshot Date' if your Dataset is snapshotted.
3. **Moving Average Interval** - select a moving average range that will produce statistically relevant data.
4. **Upper and Lower Control Limits** provide calculations used in I-MR statistics. Provide the multiplier used to generate upper and lower control boundaries.
5. The generated Stats Model returns only records that fall outside of a specified number of standard deviations. Lower numbers will include more results, higher numbers fewer records but significantly anomalous results. Set your Volatility limit to control the number of records returned in your stats model.
6. You can compute volatility for the either the *current(latest) Calendar date* or for *all Calendar values*.
7. Dimension value is defaulted but can be changed or added to by clicking on [+ Dimension]
8. Measure values is also defaulted but can be changed or added to by clicking on [+ Field]

3. Select Dimensions (filters) and Measures for your Stats Model Results

Datasets / Daily Sales Data / All data ▲ 0 New... Content Admin Alex ?

Dataset Collected: Monday 01/01/2018

Back All data

Name: Daily Sales Data Statistical Model

Date column: calendar_date

Moving Average Interval: 30 days

Calculate UCL and LCL based on 3 standard deviations

Only include rows where volatility is greater than 2 standard deviations

Compute volatility for: Latest calendar_date

1 Dimensions

- country
- channel
- product_subcategory

☒ Include totals for each Dimension

Show Dimensions with NULL values as N/A

2 Measure

- sum(total_cost)
- sum(total_sales_amount)
- sum(total_gross_profit)

3 + Derived Field

4 ☒ Include column to show particular measure(s) where the anomaly occurs

5 ☒ List one measure per row

6 Save or cancel

Results

Show: All of 62588 rows

calendar_date	country	channel	product_subcategory	sum(total_cost)	sum(total_sales_amount)	sum(total_gross_profit)
2017-08-03 00:00:00	Australia	e-mail marketing	white wine	8,069	12,863	4,795
2017-08-03 00:00:00	Australia	e-mail marketing	wine glasses	10,890	16,133	5,243
2017-08-03 00:00:00	Australia	e-mail marketing	wine rack	3,762	5,174	1,412
2017-08-03 00:00:00	Australia	store visit	bottle opener	7,812	12,084	4,272

- 1. Dimensions** - We have selected 3 filters. We have also selected Include Totals for each dimension to generate stats for every unique combination of filter values against all other filter values including aggregated totals. In this example, a Total value will be calculated for All Countries, All Channels, All Product-subcategories, as well as all channels and products for each country, all countries and products for each channel, etc.
- 2. Measures** - select those measures you are interested in
- You can add any number of computed fields via [+ **Derived Field**]
- Check to Include a generated column that concatenates all Measure Names greater than your specified volatility limit (in this example, all measures with values greater than 2 standard deviations from 30-day moving average)
- If you have checked #4, you may elect to alternately display one row for each separate measure with an anomaly instead of concatenating.
- 6. Save** to create your Stat Dataset - note that this may take some time and that you can exit this page while this processing occurs

4. Review Results of one row per Measure setting

Dataset: Daily Sales Data Statistical Model / All data

Save as View

Actions Edit

Single Instance Sunday 12/31/2017 Last Two Instances Current: Sunday 12/31/2017 Prior: Saturday 12/30/2017

Select Fields Track Changes

Define filters

AND OR

+ Rule + Group

Apply Changes

Note there is one row for each Measure where SD > 2

Number of rows reduced to 21

Results

country	channel	product_subcategory	Measure	Value	Average	SD	NUM SD	UCL	LCL
Australia	corporate sales	full cabinet	sum(total_cost)	82,863	35,823	19,367	2.43	93,925	-22,279.4
Australia	corporate sales	wine rack	sum(total_cost)	18,380	9,781	4,258	2.02	22,556	-2,993.7
Australia	e-mail marketing	Chardonnay	sum(total_cost)	35,831	20,990	6,442	2.30	40,317	1,663
Australia	e-mail marketing	half cabinet	sum(total_cost)	5,385	2,081	1,483	2.23	6,530	-2,387.5
Australia	e-mail marketing	red wine	sum(total_cost)	142,418	79,644	26,636	2.36	159,557	-269.9
Australia	e-mail marketing	white wine	sum(total_cost)	72,581	39,161	14,739	2.27	83,377	-5,055.2
Germany	corporate sales	champagne	sum(total_cost)	18,769	46,743	13,885	2.01	68,397	5,089
Australia	corporate sales	full cabinet	sum(total_sales_amount)	117,405	52,293	27,273	2.39	134,113	-29,525.8
Australia	corporate sales	wine rack	sum(total_sales_amount)	25,012	13,392	5,800	2.00	30,792	-4,008.3
Australia	e-mail marketing	Chardonnay	sum(total_sales_amount)	61,316	35,945	10,980	2.31	68,885	3,006
Australia	e-mail marketing	half cabinet	sum(total_sales_amount)	10,618	4,030	2,925	2.25	12,805	-4,745.2
Australia	e-mail marketing	red wine	sum(total_sales_amount)	216,856	122,494	40,952	2.30	245,348	-360.6
Australia	e-mail marketing	white wine	sum(total_sales_amount)	121,667	63,049	26,067	2.22	142,048	-14,351.2
Germany	corporate sales	champagne	sum(total_sales_amount)	17,882	44,556	13,211	2.01	84,190	4,923
Australia	corporate sales	full cabinet	sum(total_gross_profit)	34,542	16,471	7,952	2.27	40,326	-7,384.2

Show: All of 21 rows

5. To change options, simply Edit > Statistical Model

Dataset: Daily Sales Data Statistical Model / All data

Save as View

Actions Edit

Single Instance Sunday 12/31/2017 Last Two Instances Current: Sunday 12/31/2017 Prior: Saturday 12/30/2017

Select Fields Track Changes

Define filters

AND OR

+ Rule + Group

Changes Applied

Edit Dataset Edit Stats Model

Dataset Collected: Sunday 12/31/2017

Name: Daily Sales Data Statistical Model

Date column: calendar_date

Moving Average Interval: 10 days

Calculate UCL and LCL based on: 3 standard deviations

Only include rows where volatility is greater than: 2 standard deviations

Compute volatility for: Latest calendar_date

Dimensions

country

channel

product_subcategory

+ Dimension

Include totals for each Dimension

Show Dimensions with NULL values as: N/A

Measure

sum(total_cost)

sum(total_sales_amount)

sum(total_gross_profit)

+ Field + Derived Field

Include column to show particular measure(s) where the anomaly occurs

List one measure per row

Remove the option to List one measure per row - and Save

Save or cancel

6. Review Results of this Model will quickly highlight those elements with Anomalies

Datasets / Daily Sales Data Statistical Model / All data

Daily Sales Data Statistical Model

Save as View

Single Instance

Sunday 12/31/2017

Last Two Instances

Current: Sunday 12/31/2017

Prior: Saturday 12/30/2017

Select Fields

Track Changes

Select text & date fields

country

channel

product_subcategory

Measures over 2 Standard Deviations

calendar_date

Select numeric fields

sum(total_cost)

sum(total_sales_amount)

sum(total_gross_profit)

sum(total_cost) NUM SD

sum(total_cost) SD

Define filters

AND

OR

Rule

Group

Apply Changes

Results

country	channel	product_sa...	Measures over 2 Standard Deviations	calendar_d_...	sum(total_...	sum(total_...	sum(total_...	sum(total_...	sum(total_...	sum(total_...	sum(total_...	sum(total_...	sum(total_...	sum(tot...	sum(tot...	sum(tot...
Australia	corporate sa...	full cabinet	sum(total_cost), sum(total_sales_amount), sum(total_gross_profit)	2017-12-31 ...	82,863	117,405	34,542	2.43	19,367	35,823	93,925	-22,279.4	2.39	27,273	52,293	134...
Australia	corporate sa...	wine rack	sum(total_cost), sum(total_sales_amount)	2017-12-31 ...	18,380	25,012	6,632	2.02	4,258	9,781	22,556	-2,993.7	2.00	5,800	13,392	30.7
Australia	e-mail mark...	Chardonnay	sum(total_cost), sum(total_sales_amount), sum(total_gross_profit)	2017-12-31 ...	35,831	61,316	25,484	2.30	6,442	20,990	40,317	1,663	2.31	10,900	35,945	68.8
Australia	e-mail mark...	half cabinet	sum(total_cost), sum(total_sales_amount), sum(total_gross_profit)	2017-12-31 ...	5,385	10,618	5,232	2.23	1,483	2,081	6,530	-2,367.5	2.25	2,925	4,030	12.8
Australia	e-mail mark...	red wine	sum(total_cost), sum(total_sales_amount), sum(total_gross_profit)	2017-12-31 ...	142,418	216,856	74,439	2.36	26,638	79,644	159,557	-269.9	2.30	40,952	122,484	245.
Australia	e-mail mark...	white wine	sum(total_cost), sum(total_sales_amount), sum(total_gross_profit)	2017-12-31 ...	72,581	121,667	49,086	2.27	14,739	39,161	83,377	-5,055.2	2.22	26,067	63,849	142.
Australia	website visit	gift set	sum(total_gross_profit)	2017-12-31 ...	25,554	32,579	7,025	1.90	8,873	42,397	69,015	15,780	1.96	11,424	54,954	89.2
Germany	corporate sa...	champagne	sum(total_cost), sum(total_sales_amount)	2017-12-31 ...	18,769	17,962	-787.8	2.01	13,885	46,743	88,397	5,089	2.01	13,211	44,556	84.1
Germany	website visit	champagne	sum(total_gross_profit)	2017-12-31 ...	60,291	56,549	-3,741.6	0.68	14,130	50,863	93,052	8,274	0.62	13,800	48,039	89.4

1. For email Marketing in Australia, Chardonnay has anomalies in all 3 Measures - *Total Cost*, *Total Sales Amount*, *Total Gross Profit*
2. For Website Visits in Australia, the Gift Set has only one measure showing an anomaly - *Total Gross Profit*
3. And Germany is showing anomalies for Champagne in two channels

7. Save this new Stat Model as a new View

Add Dataset View

Name: Daily Sales Statistical Model with multiple measures per row

Visibility: Public Private

Save or cancel

Save as View

All data

new sort

view one

Daily Sales Data Statistical Model


- Daily Sales Statistical Model with separate rows

- Daily Sales Statistical Model with multiple measures per row

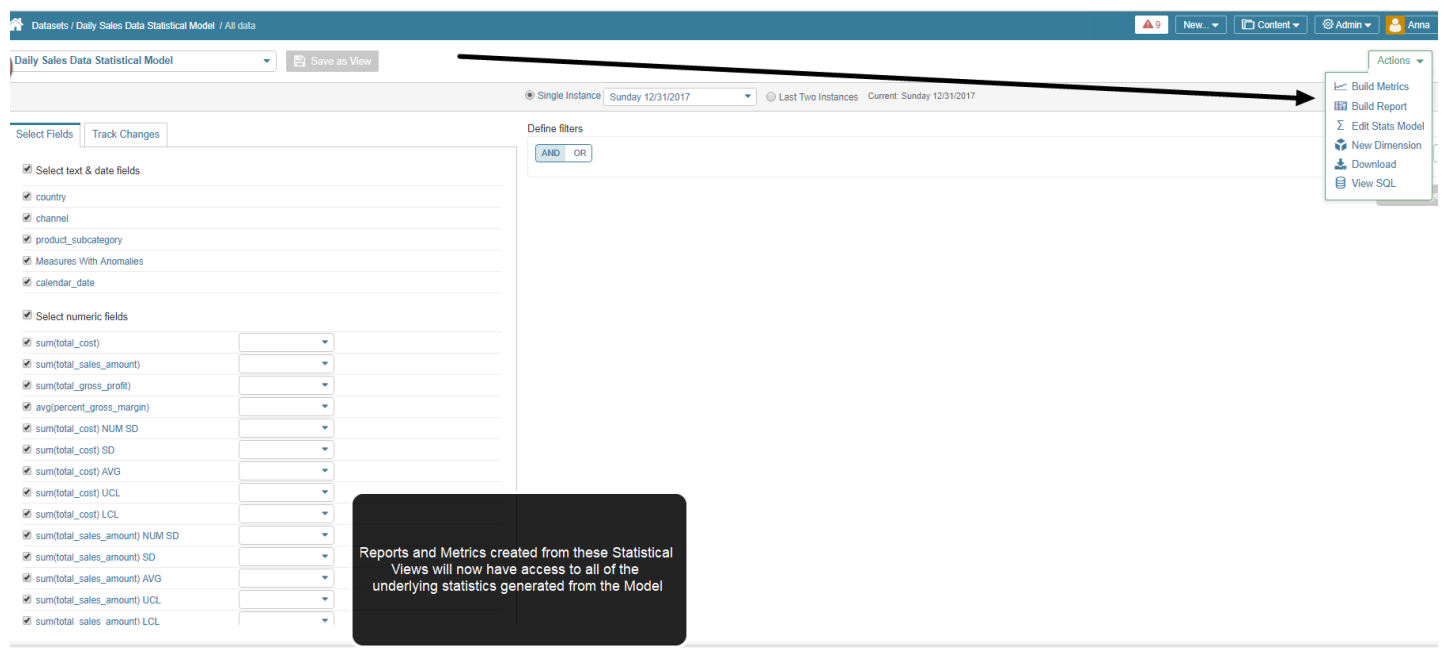
You can create Rules against the Stats dataset and save these as views (in example, Stats Records where the total sales are over 1 Million, etc.)

1. Click **[Save as View]**
2. Add meaningful **Name** for your View on the Pop-up

3. Select **Public** if you want others to be able to View and Use this Stat Model, otherwise it this view will only be available to you
4. **Save**
5. Statistical Models are saved as Views

 All editing of Statistical Models must be done from the Dataset Viewer as Stat Datasets will not appear in Content > Dataset menu

8. Now you can easily create multiple reports and metrics directly from this View



Reports and Metrics created from these Statistical Views will now have access to all of the underlying statistics generated from the Model

Selecting **Action > Build Report** will take you directly to a defaulted report that you can edit, or simply Publish and Enable to display on your Homepage

 For details on creating elements from Statistical Datasets refer to this article for more information: [Sourcing Reports / Metrics / Dimensions from "Existing Datasets - SQL"](#)

We can simply edit this newly created report to just display the fields we are interested in and then [Enable & publish]

Then the Report can be Viewed, Burst, or Shared

Datasets

9. How to create a 'Derived Field'

Construct Derived Field

Name

Expression

Use Tab to open autosuggest
Learn the [Expression Syntax](#)

Add Field or cancel

any Measures set in your Dataset will be available in the dropdown

Measure

sum(total_cost)
sum(total_sales_amount)
sum(total_gross_profit)
avg(percent_gross_margin)



For details on Constructing Derived fields see: [Derived fields for Data Processing \(Overview / Create / Aggregate\)](#) and [Expression Syntax for Derived Fields Formulas](#)

1.6 Create a Dataset from a Regular Report

! The Migrate from Report to a Dataset function will not be supported in Version 6 - please migrate any Reports prior to installation of V6.

Reports and Datasets have similar nature: each of them displays data in the form of a Table.

Datasets provide extended functionality by providing the ability to choose certain fields, create complex filters and save your selection as custom Views which can be further used for creating new Reports and Metrics in few clicks. Datasets are aimed at automating system behavior and releasing Administrators from ineffective routine tasks. Taking this into account, we offer the ability to effortlessly migrate data from regular Reports into Datasets.

Follow the steps in this article to learn how to do it.

Review Power User access requirements in [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#) and [Understanding Power Users \(Release 5.3 and beyond\)](#)

PREREQUISITE: Allow to use a Report as a Source

1 Reports / Sales by Channel and Country (example)

2

Info Data Report Content Report Distribution Associations Advanced

Preview Report Saved Update live Report

Column Name	Display Name	Currency?	Format	Description	Results?	Totals?	
calendar_date	calendar date		Default		<input checked="" type="checkbox"/>		↑ ↓
channel	channel				<input checked="" type="checkbox"/>		↑ ↓
country	country				<input checked="" type="checkbox"/>		↑ ↓
units	units	<input type="checkbox"/>	Default		<input checked="" type="checkbox"/>	<input type="checkbox"/>	↑ ↓
sales	sales	<input checked="" type="checkbox"/>	Default		<input checked="" type="checkbox"/>	<input type="checkbox"/>	↑ ↓

+ Add formatted field

Snapshot Report ☐ yes | ☒ no (keep history)

Save a full copy of the data (a 'snapshot') each time it is collected, and append the collection time to all the snapshot values. This is useful when you want to compare datasets over time that do not have timestamps in them natively.

Set :measurement_time value Yesterday +

Use Report as Source (save as system table) ☒ yes | ☐ no

Saved in Table: [dashboard_report_data_segment_0.sales_by_channel_and_country_example](#)

Use the results in this Report as a service to build other Reports. Selecting 'Yes' will save the Report as a table that can be queried from other elements.

1. Choose the Report that you want to turn into a Dataset, open its editor. **NOTE:** This option is only available for Reports sourced from configurable Data Sources, such as a SQL database or from a plugin.
2. Open the *Data* tab in the *Report Editor*
3. At the bottom of the page set the **Use Report as Source** field to 'yes'. The system saves data in a Table and generates the Table name below as shown at the picture above.

Now this Report can be converted to a Dataset.

1. Access Admin > Utilities > Migrate Report to Dataset

Migrate Report to Dataset



1

Report

Sales by Channel and Country (example) ▼

2

Dataset Name

Sales by Channel and Country (example)

Report Data will be migrated to a Dataset, and the Report will be disabled.

Only enabled reports with data saved in a system table are eligible for migration. Change reports and reports sourced from data files, metrics, or other existing reports can **not** be migrated.


3

Migrate to Dataset

1. Select the Report which should serve as a source for a future Dataset from the drop-down list. (This drop-down list is populated with the Reports that are **(1)** sourced from a configurable Data Source (SQL / Plugin) and **(2)** may be used as Source (are saved as system table as shown at the previous screen). If you invoke the Migration Utility from the *Report Editor* or *Report Viewer*, this report will be default in this drop-down list.
2. Define the name of a future Dataset, The system automatically offers the same name as the source Report has, however, you can change it to a unique descriptive name of your choice.
3. Click **Migrate to Dataset**

2. View the resulting Dataset

Migrate Report to Dataset ✕

Report 

Dataset Name

Report Data will be migrated to a Dataset, and the Report will be disabled.

Only enabled reports with data saved in a system table are eligible for migration. Change reports and reports sourced from data files, metrics, or other existing reports can **not** be migrated.

Migrate to Dataset

2

Sales by Channel and Country (example) is now available as Dataset.

[View / Edit](#)

1

The following element were previously associated with the Report and need to be re-associated with the Dataset:

- [Sales by country \(example\)](#)

1. If the Report that you used to create a Dataset also serves as a Data Source for some Metric or another Report, the system will display a reminder to re-associate those elements with the new Dataset.
2. Click **View** to open the *Dataset Viewer* and **Edit** to open the *Dataset Editor*.

3. Settings / Permissions

- **Settings:** Dataset settings which are identical to those that Reports have (**Measure, Category, Snapshot dataset?**) are automatically duplicated from Report settings.
- **Permissions:** NO Permissions (can be viewer at the *Report Editor > Advanced tab > Permissions*) are automatically delegated from Reports to Datasets.
- **Dimensioned Reports:** If the Report which serves as source for a new Dataset is Dimensioned, a column with Dimension Values is going to be added to a Dataset.

Result

Home
Datasets / Sales by Channel and Country (example) / All data
New...
Content
Admin
Julia

All data
Save as View
Actions
Settings

Dataset collected: Thursday 02/02/2017

Select text & date fields

☒ calendar_date
 ☒ channel
 ☒ country

Select numeric fields

☒ units
 ☒ sales

Define filters

AND
OR

+ Rule
+ Group

Changes Applied

Results

Show: All of 32 rows

calendar_date	channel	country	units	sales
2017-02-02 00:00:00	corporate sales	Australia	3999	200399.66
2017-02-02 00:00:00	corporate sales	Canada	13707	790380.48
2017-02-02 00:00:00	corporate sales	France	12831	698511.97
2017-02-02 00:00:00	corporate sales	Germany	4644	235151.13
2017-02-02 00:00:00	corporate sales	Russia	4820	261975.14
2017-02-02 00:00:00	corporate sales	Spain	5796	306099.96
2017-02-02 00:00:00	corporate sales	United Kingdom	7235	429919.56
2017-02-02 00:00:00	corporate sales	United States	23520	1267512.17
2017-02-02 00:00:00	e-mail marketing	Australia	4634	253325.43

What would you like to do next?

- Learn what you can do from the [Dataset Viewer](#)
- You may start by filtering data to [Create a Dataset View](#)
- If you chose to create a Snapshot Dataset, you may find this article useful: [Snapshot Datasets: Comparing Past Instances](#)
- Create a [User Map](#) and apply it to this Dataset to limit access to data
- [Create a Tableau Dataset](#)

1.7 Delete a Dataset View

Removing a View is subject to the following rules:

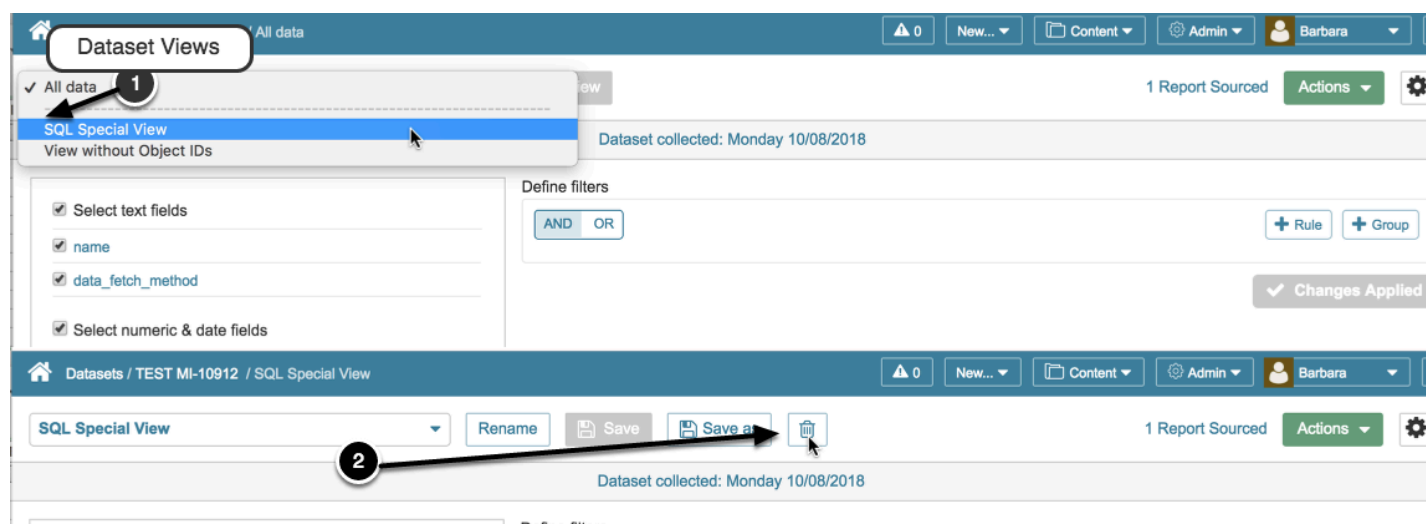
- Admins may delete any Dataset View except the default "All Data"
- Users are able to delete Views that they create.

CAUTION: Views that have been used to create Content can only be deleted after all related objects have been deleted, one by one.

Dataset Views are listed in the drop-down list found at the top left corner of the *Dataset Viewer*. A view can be deleted using one of the following methods:

1. When a View is opened, using the **Trashcan** (delete) icon to the right of **Save as** button
2. From the Dataset Editor > Views & Elements tab, using the **Delete Selected Views** button that is enabled when one or more Views is/are selected

1. Using the Trashcan on a Selected View on the Dataset Viewer



1. Select a View and click on its Name to open
2. Click on the **Trashcan** icon and confirm the delete

2. Using Dataset Editor > Elements and Views tab

Views

Name	Owner	Visibility	Reports	Metrics	Last Updated
<input checked="" type="checkbox"/> TEST MI-10912 - SQL Special View	Barbara Randlett	Public	1	0	2018-10-09 22:26:19
<input checked="" type="checkbox"/> TEST MI-10912 - View without Object IDs	Barbara Randlett	Public	0	0	2018-10-09 22:26:50
<input type="checkbox"/> TEST MI-10912	System	Public	1	0	2018-10-08 00:00:00

+ New View Selected Views

Click the **Edit (Gear)** icon at the top right corner of the *Dataset Viewer* to open the *Dataset Editor*

1. Click the *Views & Elements* tab
2. In the Views grid, select one or more Views
3. Click **Delete Selected Views**.
4. At the top right corner of the screen click **Update Data** to make sure that the respective changes are going to be made at the *Dataset Viewer*.

2. Comparing "Last Two Instances" / Track Changes

2.1 Snapshot Datasets: Comparing "Last Two Instances" / Track Changes


The following article describes how to track changes in paired datasets instances.

This article answers the following questions:

1. [How to enable Snapshot Dataset mode](#)
2. [How to find rows that have been added/removed or changed](#) since the previous data collection
3. [How to apply filters to Changed, New and/or Removed rows](#)
4. [How to use Derived Fields when comparing instances](#)

PREREQUISITES:

- [Create a Dataset](#)

 This article describes the functioning of Snapshot Dataset that was updated in Version 5.0. If you are using an earlier version of Metric Insights, please see [Snapshot Datasets: Comparing Instances \(older versions\)](#)

1. Comparing Instances is only available for Snapshot Datasets

Dataset Editor

Datasets / Daily Sales Data

Info Data Advanced Views & Elements Access Collection History

Dataset Columns

Column Name	Reference Name	Type	Precision	Contain NULLS?
calendar_date	calendar_date	datetime		No
channel	channel	text		No
country	country	text		No
name	name	text		No
product_category	product_category	text		No
units	units	float	2	No
sales	sales	float	2	No

Snapshot Dataset? (keep history) ☒ yes ☐ no

Save a full copy of the data (a 'snapshot') each time it is collected, and append the collection time to all the snapshot values. This is useful when you want to compare Datasets over time that do not have timestamps in them natively.

Dataset Viewer

Datasets / Daily Sales Data / All data

All data Save as View

Single Instance Monday 04/17/2017 Last Two Instances Current: Monday 04/17/2017 Prior: Sunday 04/16/2017

If in the *Dataset Editor* > *Data* tab the **Snapshot dataset?** field is set to 'yes', then in the *Dataset Viewer* the following options are available:

- Reviewing a **Single Instance** of this Dataset; e.g., yesterday
- Tracking changes in the **Last Two Instances** of this Dataset; e.g., yesterday's data compared to what occurred the day before yesterday).

NOTE: You can compare ANY instance saved during previous data collections to its instance collected the day before.

Choose the date which you want to compare to the prior one

Datasets / Daily Sales Data / All data

All data Save as View

Single Instance Friday 04/14/2017 Last Two Instances Current: Friday 04/14/2017 Prior: Thursday 04/13/2017

Monday 04/17/2017
Sunday 04/16/2017
Saturday 04/15/2017
Friday 04/14/2017
Thursday 04/13/2017
Wednesday 04/12/2017

+ Rule + Group

Example: In this example, the instance collected on Friday 04/14/2017 is used, meaning that it will automatically be compared to the instance collected prior to it on Thursday 04/13/2017.

2. Tracking Changed, New and Removed rows

Results

calendar_date	sales	Change Type
2017-04-16 00:00:00	333.20	Changed
2017-04-16 00:00:00	2147.85	Changed
2017-04-16 00:00:00	2799.65	Changed
2017-04-15 00:00:00	2744.00	Removed
2017-04-15 00:00:00	2860.00	Removed
2017-04-15 00:00:00	2882.60	Removed

i The **Track Changes** function allows fetching a selection of **New** and/or **Removed** and/or **Changed** rows. Whenever you choose to include more than one Type of rows' alteration; e.g., **Changed+New**, **Changed+New+Removed**, then each row in the **Results** set is assigned a corresponding label in the **Change Type** column.

To compare values and track changes/updates in Last Two instances:

1. Switch to the **Last Two Instances** mode
2. The **Track Changes** option is now available for use
3. Define whether you want to see which rows have been changed / new / removed since the previous date by selecting the appropriate check boxes
4. **For each field:** specify the field (parameter) by which the comparison is going to be performed
5. Click **Apply Changes** to update the **Results** set

Results: Only those rows where the values defined during Step 4 have been changed / new / removed since collecting the prior instance are shown.

3. Applying filters to Changed, New and/or Removed rows

The screenshot shows the Metric Insights interface for 'Daily Sales Data'. The 'Track Changes' panel is active, showing filters for 'Changed', 'New', and 'Removed' rows. The 'Results' table displays the filtered data.

Define filters for changes

- country: exactly matches: a value: Canada

Define filters for new and removed

- name: exactly matches: a value: 101-Bottle Wrought Iron

Results

calendar_date	sales	country	name	Change Type
2017-04-16 00:00:00	2425.50	Canada	Alois Lageder Pinot Grigio 2007	Changed
2017-04-16 00:00:00	4941.60	Canada	Agricola Ferrero Brunello di Montalcino 2005	Changed
2017-04-16 00:00:00	1572.75	Canada	Wine N' Dine Buffet Set	Changed
2017-04-16 00:00:00	333.20	Canada	Stainless Steel Hors D'Oeuvres Forks	Changed
2017-04-15 00:00:00	249.95	Australia	101-Bottle Wrought Iron Wine Jail	Removed
2017-04-15 00:00:00	3499.30	United States	101-Bottle Wrought Iron Wine Jail	Removed
2017-04-15 00:00:00	249.95	France	101-Bottle Wrought Iron Wine Jail	Removed

NOTE: For detailed information on filters used for comparing instances, refer to: [Applying Filters when comparing "Last two Instances"](#)

You can apply different set of filters to the rows that are **Changed** and to those which are **New or Removed**.

- In the example above we defined the following filters:
 - For **Changed** rows: only rows where Country = 'Canada'
 - For **New/Removed** rows: where Name = '101-Bottle Wrought Iron Wine Jail'
- Apply Changes** to update the Results set
- In the **Results** set, only requested rows have been fetched.


4. Using Derived Fields when Comparing Instances

Derived Fileds include values that do not exist in a Data Source itself but are calculated from one or more existing numeric fields via basic arithmetic expressions and non-aggregate numeric functions.

NOTE: For detailed information on derived fields, refer to: [Understanding Derived Fields](#)

4.1. [Option 1] Constructing Complex Formulas

When constructing a formula for a Derived field in the **Last Two Instances** mode, you can include the same field, but from **current** and **prior** instances.

 Derived fields with formulas including **current** and **prior** values become UNAVAILABLE when switching to a **Single Instance** mode.

Construct Derived Field ✕

Name

Precision ▼ digit(s)

Expression

Use **Tab** to open autosuggest or it will be opened automatically after typing "["
Learn the [Expression Syntax](#)

or [cancel](#)

4.2. [Option 2] Using Derived fields when constructing Filters

Derived fields can also be used to construct filters. In this case they are treated the same way as regular fields if the formula contains **only current values** (The drop-down lists in filters section will include **current** and **prior** value options). See the image below.

Alternatively, if the complex formula of a Derived Field includes **both current and prior** values which are required for calculation (as shown above), the drop-down lists in filters section will include only **current** value option.

- [Get more information on filters available in the "Last Two Instances" mode](#)
- [Learn about Derived fields in Datasets](#)

- [Create a Report from a Dataset View](#)
- [Create one or multiple Metrics from a Dataset View \(Version 5.1 and beyond\)](#)
- [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#)

2.2 Filter combinations for comparing "Last two Instances"

Datasets offer an easy and intuitive way to refine data when comparing history instances. This way, it is easy to know which rows have been added / deleted or changed. For introductory information on Snapshot Datasets and comparing data instances, refer to: [Snapshot Datasets: Comparing "Last Two Instances" / Track Changes](#).

To narrow the data to specific requirements / parameters, users can build sophisticated filters. This article provides a basic understanding of how to use filters when comparing instances.

This article answers the following questions:

1. [How to compare specific values](#) for current and prior period (for example, compare sales made via a specific channel yesterday and day before yesterday)?
2. [How to add simple filters?](#)
3. [How to add compound filter criteria?](#)

1. Comparing current and prior values for a specific field

The screenshot shows the 'Datasets / Daily Sales Data / All data' interface. The 'Track Changes' tab is selected. Under 'Define filters for changes', a filter is configured: 'sales' is less than 'Prior sales' by a percent of 10. The 'Results' table shows data for 'channel', 'country', 'name', 'units', 'sales', and 'Prior sales'.

channel	country	name	units	sales	Prior sales
e-mail marketing	Australia	Chateau d'Yquem	5.00	11500.00	13512.40
e-mail marketing	Australia	Chateau Mouton-Rothschild	4.00	11500.00	13512.40
e-mail marketing	Australia	112-Bottle Pine Mega Storag...	55.00	8845.00	11500.00
e-mail marketing	Australia	112-Bottle Pine Mega Storag...	55.00	8845.00	11500.00

1. Filters allow defining additional criteria to compare current and prior values by various conditions. **NOTE:** Current and prior filters are shown only in the **Track Changes** mode.
2. **Results:** Sales and Prior Sales columns are shown in the **Results** set and only those rows where the condition is met are shown.

2. How to add simple filters

The screenshot shows the 'Track Changes' configuration interface. On the left, under 'Select Fields', the 'Track Changes' tab is active. It shows 'Show rows that are:' with 'Changed' selected, and 'For each fields:' with 'country' and 'channel' selected. In the center, 'Define filters for changes' shows a rule: 'sales is greater than Prior sales by any amount'. On the right, there are buttons for '+ Rule', '+ Group', and 'Apply Changes'. At the bottom, the 'Results' table displays columns for 'country', 'channel', 'name', 'units', 'sales', and 'Prior sales'. The table shows three rows of data for Australia, all with 'e-mail marketing' as the channel. The 'sales' column is highlighted in yellow, and the 'Prior sales' column is also highlighted. A summary bar above the table states 'For each country and channel include: all changes.'

country	channel	name	units	sales	Prior sales
Australia	e-mail marketing	Chateau d'Yquem	5.00	11500.00	660.00
Australia	e-mail marketing	Chateau Mouton-Rothschild	4.00	11500.00	2325.00
Australia	e-mail marketing	Chateau Mouton-Rothschild	4.00	11500.00	1701.00

Use Case: Include rows if the sales in any country have increased by any amount over the prior day.

1. **For each fields:** Select the field with constant (or unchanged) values. This field will serve as the basis for comparing other changed values. In this example, such fields are Channel and Country; i.e., allows identifying changes when Channel and Country are unchanged
2. Click **[+ Rule]**.
3. Construct a Rule by selecting parameters for comparing current and previous values from the drop-down lists. You may add as many Rules as required to remove unnecessary data.
4. **Apply changes** to update the **Results** set
5. **Results:** Sales and Prior Sales columns are shown in the **Results** set and only those rows where the condition is met are shown.

i You may create a separate View out of this data slice by clicking **Save as View** at the top of the page.

3. How to add compound filter criteria

Define filters for changes

AND OR

units is greater than Prior units by any amount

AND

channel exactly match a value website visit

OR

sales is greater than Prior sales by a percent 10

AND

channel exactly match a value website visit

Changes Applied

For each country include: all changes.

Results

name	channel	country	units	Prior units	sales	Prior sales
Wine Magician	website visit	Australia	61954.00	60322.00	280812.98	275401.98
Stainless Steel Hors D'Oeuvre...	website visit	Australia	62289.00	60322.00	369840.30	275401.98
Dramas Stemware Set	website visit	Australia	62746.00	60322.00	428196.93	275401.98
A-Mano Primitivo 2007	website visit	Australia	63171.00	60322.00	565081.43	275401.98

Use Case: Include rows if **units** sold via 'website visit' channel **have increased** over the prior day **OR** if **sales** made via 'website visit' channel are **10% higher** than over the prior day.

Identify the key fields across which changes will be tracked included in the **Select Field** list. In this example, you should select **ONLY** Channel, Country, units, and sales for inclusion in the display.

- For each field:** Select the field with constant (or unchanged) values. The Id fields should be Channel and Country
- Define filters:** Apply filters. In this use case, this consists of 2 groups of conditions: click **[+ Group]** and define criteria for the first and second group:
 - [Group 1]:** units increased in 'website visit' channel
 - [Group 2]:** sales are 10% higher in 'website visit' channel
- Choose **OR filter** to define relations between the Groups
- Apply changes** to update the **Results**
- Results:** Units / Prior units and Sales / Prior Sales columns are displayed in the **Results** set and only those rows where the condition is met are shown.

i You may create a separate View out of this data slice by clicking **Save as View** at the top of the page.

2.3 Snapshot Datasets: Comparing Instances (older versions)

- 💡 While the Video Tutorial is still valid and useful, newer versions of Metric Insights also allow you to find rows that have been **changed** in addition to those added or removed.

See [Snapshot Datasets: Comparing "Last Two Instances" / Track Changes \(Version 5.0.5\)](#)

The following article describes how to track changes in paired datasets instances.

This article answers the following questions:

- How to find rows have been [added and removed](#) over the prior period
- How to [compare specific values for current and prior period](#) (for example, compare sales made via a specific channel yesterday and day before yesterday).

PREREQUISITES:

- [Create a Dataset](#)

Video Tutorial

This option is only available for Views of Snapshot Datasets

The screenshot shows the 'Dataset Editor' interface for 'Daily Sales for countries and channels'. The 'Data' tab is active, displaying a table of dataset columns:

Column Name	Reference Name	Type
calendar_date	calendar_date	datetime
channel	channel	text
country	country	text
units	units	float
sales	sales	float

Below the table, the 'Snapshot Dataset? (keep history)' field is set to 'yes'. A tooltip explains: 'Save a full copy of the data (a 'snapshot') each time it is collected, and append the collection time to all the snapshot values. This is useful when you want to compare datasets over time that do not have timestamps in them natively.'

The 'Dataset Viewer' interface shows the 'All data' view. The 'Single Instance' option is selected, and the date 'Tuesday 12/20/2016' is chosen. The 'Last Two Instances' option is also visible, showing 'Current: Tuesday 12/20/2016' and 'Prior: Monday 12/19/2016'.

If in the *Dataset Editor* > *Data tab* the **Snapshot dataset?** field is set to 'yes', then in the *Dataset Viewer* the following options are available:

- Reviewing a **Single Instance** of this Dataset (for example, yesterday), or
- Tracking changes in the **Last Two Instances** of this Dataset (for example, yesterday's data compared to what occurred the day before yesterday).

NOTE: You can compare ANY instance saved during previous data collections to its instance collected the day before.

1. Choose the date that you want to compare to the prior one

The screenshot shows the 'Dataset Viewer' interface. The 'Single Instance' option is selected, and the date 'Saturday 12/17/2016' is chosen. A dropdown menu is open, showing a list of dates from 'Tuesday 12/20/2016' down to 'Tuesday 12/13/2016'. The 'Saturday 12/17/2016' date is highlighted. The 'Last Two Instances' option is also visible, showing 'Current: Saturday 12/17/2016' and 'Prior: Friday 12/16/2016'.

Example: In the example, we choose the instance collected on Saturday 12/17/2016, meaning that it will automatically be compared to the instance collected prior to it on Friday 12/16/2016.

2. Tracking New and Removed rows

The screenshot shows the Metric Insights interface for tracking changes. The top navigation bar includes 'Datasets / Daily Sales for countries and channels / All data', 'New...', 'Content', 'Admin', and a user profile 'Julia'. The main content area has a 'Select Fields' tab and a 'Track Changes' tab. The 'Track Changes' tab is active, showing options for 'Single Instance' (Saturday 12/17/2016) and 'Last Two Instances' (Current: Saturday 12/17/2016, Prior: Friday 12/16/2016). The 'Show rows that are:' section has checkboxes for 'New' and 'Removed'. The 'Id fields' section shows 'units' and 'calendar_date' selected. The 'Results' table at the bottom shows 64 rows of data.

Change Type	calendar_date	channel	country	units	sales
New	2016-12-17 00:00:00	corporate sales	Australia	3647	206877.43
New	2016-12-17 00:00:00	corporate sales	Canada	7899	522280.14
New	2016-12-17 00:00:00	corporate sales	France	8739	498869.6
New	2016-12-17 00:00:00	corporate sales	Germany	4760	278456.63
New	2016-12-17 00:00:00	corporate sales	Russia	3373	211984.25

1. Select **Last Two Instances** mode
2. The **Track Changes** option is now available for use
3. You can now specify whether you want to see what fields have been added to the instance, the fields have been removed or both since prior period
4. **Id fields:**
5. Click **Apply Changes** to update the **Results**

Only those rows where the values defined in **Id fields** have been changed/added/removed since collecting the prior instance are shown.

Use case: If there are no rows in the Result set

In the example above, values from the **calendar_date** column are going to be new every day, since it includes values collected for a new day; values from **units** and **sales** are also highly likely to be different, unless the same amount of product units has been purchased or the sum of sales for current period is identical to the sum of sales for the prior period. The Dataset compares instances by values in **channel** and **country** columns:

New sales have been made in all countries and by all channels, but values in **country** and **channel** columns remained the same; e.g., Country = Australia, Canada, France, Germany with

Channel = corporate sales, store visit, website visit, email marketing), so the system has no changes to display in the **Results** set.

The screenshot shows the METRIC INSIGHTS interface in 'Track Changes' mode. The top navigation bar includes 'Datasets / Daily Sales for countries and channels / All data', 'New...', 'Content', 'Admin', and a user profile 'Julia'. Below the navigation bar, there's a dropdown for 'All data' and a 'Save as View' button. The main area is divided into 'Select Fields' and 'Track Changes' tabs. Under 'Track Changes', there's a section 'Show rows that are:' with checkboxes for 'New' and 'Removed'. Below this is a section 'Id fields:' with a list of fields: 'country' and 'channel'. A '+ Field' button is next to the list. To the right, there's a 'Define filters' section with 'AND' and 'OR' buttons, and '+ Rule' and '+ Group' buttons. At the bottom right, there's a 'Changes Applied' button. The results area at the bottom shows 'There are no rows to display.'

3. Defining additional filters

The screenshot shows the METRIC INSIGHTS interface in 'Track Changes' mode. The top navigation bar includes 'Datasets / Daily Sales for countries and channels / All data', 'New...', 'Content', 'Admin', and a user profile 'Bk'. Below the navigation bar, there's a dropdown for 'All data' and a 'Save as View' button. The main area is divided into 'Select Fields' and 'Track Changes' tabs. Under 'Track Changes', there's a section 'Show rows that are:' with checkboxes for 'New' and 'Removed'. Below this is a section 'For each fields:' with a list of fields: 'channel' and 'country'. A '+ Field' button is next to the list. To the right, there's a 'Define filters for changes' section with 'AND' and 'OR' buttons, and '+ Rule' and '+ Group' buttons. A rule is defined: 'Current sales is more than Prior sales by any amount'. The results area at the bottom shows 'Apply Changes'.

1. Filters allow defining additional criteria to compare current and prior values by various conditions. **NOTE:** Current and prior filters are shown only in the **Track Changes** mode.
2. If additional filters are applied to the results set, choose unchanged parameters (as in the example above) in the **Id fields** section. See the following example:

3.1. Simple Filter criteria

Use Case: Include rows if the sales in any country have increased by any amount over the prior day.

1. **By field:** Select the field with constant (or unchanged) values. This field will serve as a basis for comparing other changed values. The Id fields are Channel and Country, analyzing changes when Channel and Country are unchanged
2. Click **[+ Rule]**.
3. Define the parameters for comparing current and previous values from the drop-down lists.
4. **Apply changes** to update the **Results** set

More rules can be added to the filters.

You may create a separate View out of this data slice by clicking **Save as View** at the top of the page.

Track Changes

Define filters for changes

AND OR

Current sales is more than Prior sales by any amount

Changes Applied

Current Sales Prior Day Sales

Results

Change Type	calendar_date	channel	country	units	sales	Prior sales
Changed	2017-01-02 00:00:00	corporate sales	Australia	1264	76854.55	61310.13
Changed	2017-01-02 00:00:00	corporate sales	France	3665	219063.32	137985.99
Changed	2017-01-02 00:00:00	corporate sales	Russia	1851	78117.51	49574.26

3.2. Compound Filter criteria

Use Case: Include rows if **units** sold via 'website visit' channel **have increased** over the prior day **OR** if **sales** made via 'website visit' channel are **10% higher** than over the prior day.

You want the key fields across which changes will be tracked included in the **Select Field** list. In this example, you should select ONLY Channel, Country, units, and sales for inclusion in the display.

1. **By field:** Select the field with constant (or unchanged) values. The Id fields should be Channel and Country (i.e. you are looking for changes when Channel and Country are unchanged)
2. **Define filters:** Then you can apply filters. In our use case, this consists of 2 groups of conditions: click **[+ Group]** and define criteria for the first and second group:
 - **[Group 1]:** units increased in 'website visit' channel
 - **[Group 2]:** sales are 10% higher in 'website visit' channel
3. Choose **OR filter** to define relations between the Groups
4. **Apply changes** to update the **Results**

You may create a separate View out of this data slice by clicking **Save as View** at the top of the page.

For each country and channel include: New, Removed and Changed rows.


Change Type	calendar_date	channel	country	Current Units	Prior Day Units	Current Sales	Prior Day Sales
Changed	2017-01-02 00:00:00	website visit	Canada	2858	2808	152060.84	168768.84
Changed	2017-01-02 00:00:00	website visit	Germany	1339	1166	67217.88	74812.56
Changed	2017-01-02 00:00:00	website visit	Spain	2078	1755	93870.69	113814.52
Changed	2017-01-02 00:00:00	website visit	United States	6865	6669	387657.27	376556.34
Changed	2017-01-02 00:00:00	website visit	France	4186	4620	270470.87	244088.13

4. What would you like to do next?

- [Create a Report from a Dataset View](#)
- [Create one or multiple Metrics from a Dataset View \(Version 5.1 and beyond\)](#)
- [Dataset/User Map Security Overview \(Release 5.2.1 and beyond\)](#)

3. Creating Elements from Datasets

3.1 Create one or multiple Metrics from a Dataset View

 This article describes the procedure that is applicable to Version 5.1 and newer. For prior Versions refer to [Create a Metric from a Dataset View \(prior to 5.1 release\)](#).

User Interfaces may vary slightly from release to release.

Datasets offer a quick and highly automated way of building new Metrics. This article describes step-by-step process of creating Metrics IN BULK from a specific Dataset.

Admins and Power Users have an ability to create one or **multiple** metrics from a Dataset View. This easy-to-use proces helps to minimize the number of data entry fields that are usually required to be completed in order to create a Metric.

Since Metrics always represent time series data, the source Dataset View must contain a date column and a column with values.

PREREQUISITES:

1. [Create a Dataset from any Data Source](#)
2. [Create a Dataset View](#)

1. Open a Public Dataset View

Profit higher than 4000

Dataset collected: Thursday 07/13/2017

Select text & date fields

- ☒ Day of Calendar Date
- ☒ Channel
- ☒ Country
- ☒ Product Category

Select numeric fields

- ☒ Total Gross Profit
- ☒ Total Sales Amount

Define filters

AND OR

Total Gross Profit is greater than or equal a value 4000

Actions

- Build Metrics
- Build Report
- New Dimension
- Download
- View SQL
- Make Private

Changes Applied

Results

Day of Calendar Date	Total Gross Profit	Total Sales Amount	Channel	Country	Product Category
2016-01-24 00:00:00	5208.75	24728.05	corporate sales	France	Accessory
2016-04-23 00:00:00	5481.59	40838.65	corporate sales	France	Accessory
2016-02-26 00:00:00	5672.51	39166.20	corporate sales	France	Accessory
2016-03-20 00:00:00	5838.22	31273.85	corporate sales	France	Accessory

1. Open the Dataset View to be used as the Data Source of the Metric
2. Ensure that the selectedView has a date column and a column containing values. If your Dataset is a snapshot, the Snapshot date may serve as a date column. Refer to: [Snapshot Datasets: Comparing Instances](#)
3. At the top right corner of the page, open the **Actions** menu
4. Select the **Build Metric** option.
 1. If this Dataset View is Private, the system will automatically make it accessible to other users (Public)
 2. If at least one element (Report or Metric) has already been built from this View, it cannot be changed to private.

2. Define the basic settings

Add Metric 0 Metrics defined

This data is Measured... **1** Monthly

Value column **2** Total Gross Profit

Date column **3** Day of Calendar Date

Name **4** Monthly Profit

Aggregate using Sum

Dimension using this column (optional) **5** Country

Channel
Country
Product Category
Add Metric

Metrics defined will appear here.

Add a Metric and select it to see a preview.

Results Show: All of 17364 rows

Day of Calendar Date	Total Gross Profit	Total Sales Amount	Channel	Country	Product Category
2016-01-24 00:00:00	5208.75	24728.05	corporate sales	France	Accessory
2016-04-23 00:00:00	5481.59	40838.65	corporate sales	France	Accessory
2016-02-26 00:00:00	5672.51	39166.20	corporate sales	France	Accessory

Define the basic settings for the Metric being created. This is accomplished by choosing the correct column name from the respective drop-down list. The list for each field is populated based on its Column Type; for example, the **Date column** drop-down list will only contain options representing date values. Since the **Results** set is always visible below, you see exactly what you are including in the Metric.

- Measurement Interval:** select the Measurement Interval that applies to the level of aggregation that you want in your result set
- Value column:** Select the name of a numeric field containing values
- Date column:** This may be either a date column from the Dataset or the Snapshot date, if applicable
- Name:** is populated automatically based on the selection made in the fields above, but you can change it to a unique and descriptive name of your choice.

Optional. For creating dimensioned Metrics only.

- Dimension using column:** Dataset's text columns may serve to dimension the Metric, meaning create a separate Chart per each Dimension Value. With a column used in this example (**Country**), separate Charts are created for each Dimension Value; e.g., France, Australia, Germany. This allows different sets of Alert Rules to be applied to each Chart and specific security Permissions to be granted to individual Users subscribed to the Alert.
 - Map to Dimension in Metric Insights:** if you already have a Dimension with values matching to those in the selected Dataset column, you can choose it from the drop-down list; otherwise, you can create one on the fly by clicking: "None - create new Dimension".

Preview the resulting Metric

If only one Metric is being built, click **Build Metric** and let the system finish the procedure.



3. Build additional Metrics

The screenshot shows the 'Metric Insights' interface. At the top, there's a navigation bar with 'Datasets / Profit Data / Profit higher than 4000'. Below this, a 'Back' button and 'Profit higher than 4000' are visible. The main section is titled 'Add Metric' (2). It includes fields for 'This data is Measured...' (Monthly), 'Value column' (Total Gross Profit), 'Date column' (Day of Calendar Date), 'Name' (empty), 'Aggregate using' (Sum), 'Dimension using this column (optional)' (Country), and 'Map to Dimension in Metric Insights' (Country). A 'Build All Metrics' button (4) is at the bottom. On the right, a 'Preview for "Profit by Country"' section shows a bar chart with a line graph overlay. The chart displays profit by country from Jan '16 to Jul '16, with a 'Maximum ever' line at 10M. The chart is titled 'Profit by Country'.

1. Each time you click **Add Metric**, the **# Metrics defined** displayed in the middle of the screen is incremented

⚠ These Metrics are just prepared, they are not built yet.

2. Change the settings in the **Add Metric** section to build another element
3. Preview any of the prepared Metrics by clicking the name of the Metric that is currently shown **bolded** in the **Preview**
4. When ready to publish all Metrics, click **Build All Metrics**.

Result

The Metrics that have been built are available on the Homepage.

3.2 Create a Change Report from a Dataset

With Datasets, it is easy to create Reports displaying changes in data. Now, the Dataset Viewer allows the creation of separate Views that surface relevant data changes. These views can be used to build Change Reports. A detailed step-by-step instruction is provided below.

PREQUISITE:

Build a Dataset that keeps history (a Snapshot Dataset). For details, see:

- [Snapshot Datasets: Comparing "Last Two Instances" / Track Changes \(Version 5.0.5\)](#)

! Beginning in Version 5.3, creating Reports has been greatly enhanced by using the new Dataset Reporting feature - please see: [Dataset Reports Overview \(New in 5.3\)](#) But the major steps to create a default report are the same.

1. Access Dataset Viewer

The screenshot shows the Qlik Sense Datasets interface. The top navigation bar includes 'Content', 'Admin', and a user profile 'Yana'. The main navigation pane on the left has tabs for 'Views', 'Datasets', and 'User Maps'. A red circle with the number '1' highlights the 'Datasets' tab. A dropdown menu is open from the 'Datasets' tab, showing options like 'Elements', 'Bursts', 'Views', 'Folders', 'Alerts', 'Favorite Folders', 'Categories', 'Dimensions', 'Tags', 'FTP Connections', and 'Slideshows'. A red circle with the number '2' highlights the 'Qlik Sense Sales Dataset' in the main list. A red circle with the number '3' highlights the 'View' button in the top right corner of the dataset details pane. The dataset details pane shows the 'Data Source' as 'Qlik Sense - Qlik Sense Demo Server (Plug-in)' and the 'Data collection schedule' as 'daily-reporting-refresh'.

1. Access **Content** > **Datasets**

2. Choose a **Source Dataset** for your Change Report
3. In the Dataset Editor **click [View]** to open Dataset Viewer

2. Display data changes in Dataset View

The image shows two screenshots of the 'Dataset Editor' interface for a dataset named 'Qlik Sense Sales Dataset'. The top screenshot shows the 'Select Fields' tab where fields like 'country', 'channel', 'product_category', and 'Sales' are selected. The bottom screenshot shows the 'Track Changes' tab where filters are defined for changes, such as 'Sum of Sales' being 'less than' the 'Prior Sum of Sales' by a certain percentage. Both screenshots have numbered callouts (1-4) indicating the steps: 1. Select Fields, 2. Track Changes, 3. Define filters for changes, and 4. Apply Changes.

Step 1: Select Fields

- Select text & date fields:
 - ☒ country
 - ☒ channel
 - ☒ product_category
- Select numeric fields:
 - ☒ Sales (Sum as Sum of Sales)

Step 2: Track Changes

Show rows that are:

- ☒ Changed
- ☐ New
- ☐ Removed

For each field:

- country

Fields are being aggregated, changes can only be tracked by: country, channel and product_category.

Step 3: Define filters for changes

Define filters:

- Sum of Sales is less than Prior Sum of Sales by a percent 20

Step 4: Apply Changes

Results

country	channel	product_category	Sales
Australia	website visit	wine furniture	33,508
Australia	store visit	wine furniture	4,019
Germany	store visit	wine accessory	44,743
Canada	website visit	wine furniture	18,595

1. *Select Fields* tab: select data to be included in the Dataset View
2. *Track Changes* tab: determine those changes need to be monitored
3. Define filters to be used to surface changes
4. Apply Changes

3. Verify the display of changes

The screenshot shows the Qlik Sense interface for the 'Qlik Sense Sales Dataset'. The top navigation bar includes 'Datasets / Qlik Sense Sales Dataset / All data', a user profile 'Yana', and a help icon. The main area is divided into 'Select Fields' and 'Track Changes' tabs. The 'Track Changes' tab is active, showing a filter for 'Sum of Sales' and a date range from 'Saturday 08/13/2016' to 'Friday 08/12/2016'. A 'Save as View' button is highlighted with a red box and a red arrow pointing to the 'Add Dataset View' dialog. The dialog has a 'Name' field with 'Sales Drop' and a 'Visibility' section with 'Public' and 'Private' radio buttons. A 'Save' button is at the bottom. The 'Actions' menu is open, showing options like 'Build Metrics', 'Build Report', 'Build Stats Model', 'New Dimension', 'Download', 'View SQL', and 'Make Private'. The 'Build Report' option is highlighted with a red box. Below the dialog, a table titled 'Results' shows data for 'country', 'channel', 'product_category', 'Prior Sum of Sales', and 'Sum of Sales'. The table has 5 rows of data.

country	channel	product_category	Prior Sum of Sales	Sum of Sales
Australia	e-mail marketing	wine	88,096	66,510
Australia	store visit	wine	93,184	68,275
Australia	store visit	wine accessory	53,694	38,301
Australia	store visit	wine furniture	23,065	4,019

1. Check **Results** to see how data is displayed (with *Changes Applied*, only data that reflects these changes will be shown)
2. Save changes as a new **View**
3. Click **Actions > Build Report**

NEXT: User is taken to the Report Editor

4. Verify the Report defaults (using older legacy report format)

Reports / Sales Drop Report

Info Data Report Content Report Distribution Associations Advanced

Report Type ☒ Standard Report ☐ Change Report

Measured

Data Source

Data collection schedule

Dataset & View

[Show data](#) [Show Data Preview](#)

[Run history](#)

Column Name	Display Name	Currency?	Format	Description	Results?	Totals?
country	country				<input checked="" type="checkbox"/>	
channel	channel				<input checked="" type="checkbox"/>	
product_category	product category				<input checked="" type="checkbox"/>	
Prior Sum of Sales	Prior Sum of Sales	<input type="checkbox"/>	Default		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sum of Sales	Sum of Sales	<input type="checkbox"/>	Default		<input checked="" type="checkbox"/>	<input type="checkbox"/>

[+ Add formatted field](#)

☒ Snapshot Report (keep history) ☐ no

Save a full copy of the data (a 'snapshot') each time it is collected, and append the collection time to all the snapshot values. This is useful when you want to compare Datasets over time that do not have timestamps in them natively.

☒ Can historical instances be backfilled ☐ no

In the Report Editor:

1. *Info tab* > **Report type** is set to Standard
2. *Data tab* > **Snapshot Report** is set to "Yes"
3. *Data tab* > **Historical Instances can be backfilled** is set to "Yes"

5. Enable and Publish Report

Reports / Sales Drop Report

Info Data Report Content Report Distribution Associations Advanced

Report Type ☒ Standard Report ☐ Change Report

Measured Daily

Dimension it by Not Dimensioned

Collecting is ☐ enabled ☒ disabled

Name Sales Drop Report

Enable & Publish

Update Report History

Do you want to update historical instances of this Report

☒ yes ☐ no

Update Report Instances

☒ from specified date ☐ within specified date range

Update all Report Instances

Since 2016-08-01 00:00:00

If you have made changes to this Report's definition since its live report was last updated, and you want those changes reflected for other historical instances of this report, select the "Yes" radio button above.

Update or cancel

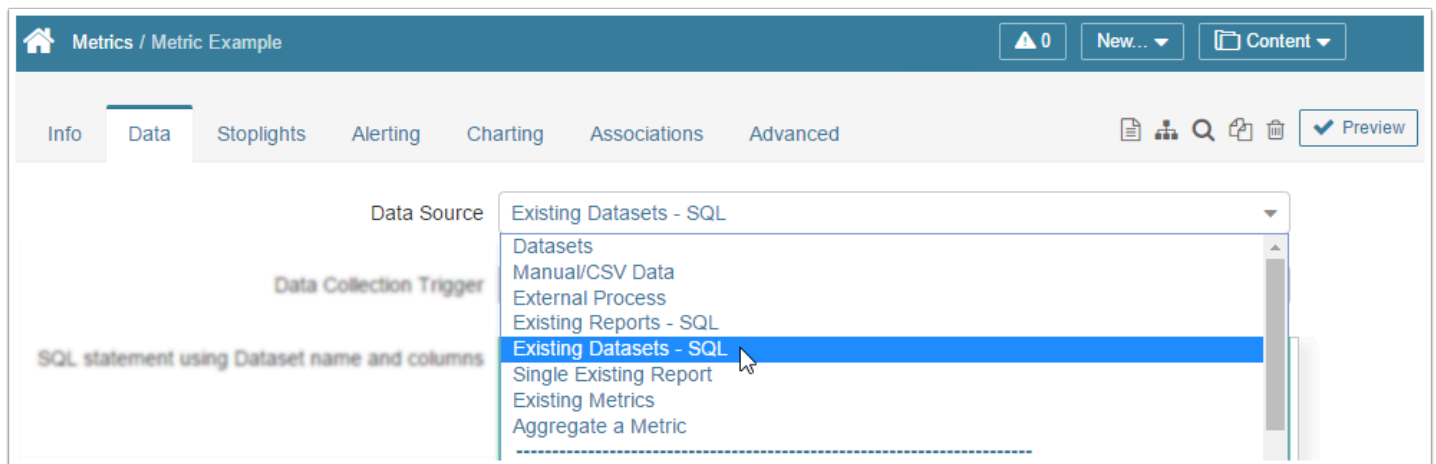
1. **Enable and publish** the Report (Data Collection will be activated and the pop-up will prompt to Update Report History)
2. **Update Report History** to be able to see data changes in the Report Viewer

3.3 Sourcing Reports / Metrics / Dimensions from "Existing Datasets - SQL"

All Datasets created in the system are saved as SQL tables that can be used to source data for creating new objects: Reports, Metrics and Dimensions. Refer to the respective section below.

- Sourcing a Report
- Sourcing a Metric
- Sourcing a Dimension

The method described in this article represents an alternative to: [Create a Report from a Dataset View](#)



💡 POWER USERS NOTE:

In order to grant Power users access to this feature (creating Reports / Metrics from the "Existing Datasets - SQL" Data Source), a specific **Privilege** is required. see [Dataset/ User Map Security Overview \(Release 5.2.1 and beyond\)](#)

See also [Understanding Power Users \(Release 5.3 and beyond\)](#)

Add Privilege to User ✕

Select all Select none

☐ Allow Power Users to grant Dataset access to any User or Group

☐ Allow Power Users to grant Dimension access to any User or Group

☐ Create content using CSV Files

☐ Create content using Datasets

☒ Create content using Existing Datasets

☐ Create content using Existing Metrics

☐ Create content using Existing Reports

☐ Create content using Single Report

☐ Create/Edit Datasets

Save or [cancel](#)

Sourcing a Report (Introduced in Version 5.0.5)

1. Access New > Report

New Report New... Content

Name & choose type

1 Name the Report

Choose type...

☒ Standard Report
A standard Report pulls data from a database or BI tool.

☐ Change Report
A Change Report compares two instances (snapshots) of a standard Report and surfaces the changes.
To be build a Change Report you must first create a standard Report to use as your source.

Create Standard Report

2 Reported

3 Category +

Create dimensioned Report ☐ yes | ☒ no

4 Next: Define Report or [cancel](#)

Datasets

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1. **Name the Report:** Define a unique descriptive name of your element
2. **Reported:** choose the Measurement Interval from the drop-down list
3. **Category:** select a Category for this element
4. To define Data Collection details, click **Next: Define Report**

2. Full Editor displays the Data Collection tab

The screenshot displays the 'Data' tab in the Metric Insights Full Editor. The interface includes a top navigation bar with 'New...', 'Content', 'Admin', and user 'Alex'. Below is a sub-navigation bar with 'Info', 'Data', 'Report Content', 'Report Distribution', 'Associations', and 'Advanced'. The 'Data' tab is active. The main area shows 'Data Source' set to 'Existing Datasets - SQL', 'Data collection schedule' set to '1_5-day-refresh', and an 'SQL statement using report names and columns' text box containing 'SELECT channel, country, sales, units from dataset_1'. A 'Source Dataset' panel on the right shows 'Available Datasets' with 'Daily Sales Dataset (dataset_1)' selected, and a table of columns and data types. A 'SQL builder' button is at the bottom right. A 'Show data' button is at the bottom left.

Column name	Data type
measurement_time	datetime
name	varchar
product_category	varchar
product_subcategory	varchar
channel	varchar

1. **Data Source:** select "Existing Datasets - SQL"
2. Click the **Source of Reports** icon to view the Datasets that have been saved as source tables
3. Open the **Available Datasets** drop-down list to select a source Report and view its associated fields
4. In the **SQL Statement using report names and columns** text box, define the fetch command required to extract data from existing Dataset's table
5. Alternatively, use a **SQL Builder** tool to select report(s)

NOTE: Approach constructing the fetch command in the same manner as sourcing a Metric from an Existing Report

3. Verify your Statement

SQL statement using report names and columns

```
SELECT channel, country, sales, units
from
dataset_1
```

SQL builder

Daily Sales Dataset (dataset_1)

Table name
dataset_1

Column name	Data type
measurement_time	datetime
name	varchar
product_category	varchar
product_subcategory	varchar
channel	varchar
country	varchar
sales	double
units	double

✓ Show data

Sample result set

channel	country	sales	units
store visit	Australia	\$275,402	60,322
e-mail marketing	Australia	\$277,270	60,875
website visit	Australia	\$280,813	61,954

Click **Show data** below the SQL statement box. If your command is valid, the command box is **green** and the **Report Columns** are shown in the table below; if there are any errors, the box is colored in **red** and errors are explained below the statement box.

At the upper right corner of the screen click **Enable and Publish**.

Sourcing a Metric (Introduced in Version 5.1)

1. Access New > Metric

New Metric

0 New... Content

1 Measured Daily

Dimension it by Not Dimensioned +

2 Name Example Metric

3 Category Uncategorized +

4 Next: define details

Provide the basic information required for creating a new metric:

1. Select the **Measurement Interval** that applies to your element. Your Metric Insights instance comes with a standard set of **Measurement Intervals**, each of which has a series of settings that control such behavior as display of values, alert parameters, default naming conventions, and chart labels.
2. Give the element a unique **Name**
3. *Optionally*, assign a **Category**
4. Click **Next: define details** to proceed with data collection

2. Full Editor displays the Data Collection tab

Metrics / Metric Example

0 New... Content Admin Julia ?

Info Data Stoplights Alerting Charting Associations Advanced

Preview Saved Enable & publish

1 Data Source Existing Datasets - SQL

Data Collection Trigger daily-reporting-refresh

SQL statement using Dataset name and columns

4 SELECT day_of_calendar_date, sum_total_gross_profit_ from dataset_1

Source Dataset

3 Available Datasets dataset

2 Table name dataset

Column name	Data type
dataset_id	int

Validate

1. **Data Source:** select "Existing Datasets - SQL"
2. Click the **Source of Reports** icon to view the Datasets that have been saved as source tables
3. Open the **Available Datasets** drop-down list to select a source Report and view its associated fields.
4. In the **SQL Statement using Dataset names and columns** text box, define the fetch command required to extract data from existing Dataset's table


NOTE: Approach constructing the fetch command in the same manner as sourcing a Metric from an Existing Report

3. Validate your SQL statement and Collect data

SQL statement using Dataset name and columns

```
SELECT day_of_calendar_date, sum_total_gross_profit_  
from dataset_1
```


1

 **Validate**

1728 records in total


This is the first record:
2015-07-27 00:00:00, 20622.8

2

 **Collect data**

1. Click **Validate** below the SQL statement box. If your command is valid, the command box is **green** and the number of records available for collecting is shown below; if there are any errors, the box is colored in **red** and errors are explained below the statement box.
2. **Collect data**

Once the data is collected, in the upper right corner fo the screen click **Enable & Publish**.

 To learn about other settings in the Metric Editor, refer to: [Metric Editor \(Data, Stoplights, Alerting, Charting, Associations\)](#)

3.4 Create a Metric from a Dataset View (prior to 5.1 release)

Datasets offer a quick and highly automated way of building new Metrics. This article describes step-by-step process of creating a Metric out of the specific Dataset View.

Since Metrics always represent time series data, in order to create a Metric your Dataset View must contain a column with dates and a column containing values.

PREREQUISITES:

- [Create a Dataset View](#)

! Newer releases have a simplified method of creating metrics from a Dataset. See [Create one or multiple Metrics from a Dataset View \(Version 5.1x\)](#)

1. Open a Public Dataset View

The screenshot shows the Tableau interface for a dataset named 'Corporate Sales in Australia'. The top navigation bar includes 'Datasets / Gross Profit from Tableau / Corporate Sales in Australia', 'New...', 'Content', 'Admin', and a user profile 'Alex'. The left sidebar has a dropdown for 'Corporate Sales in Australia' and buttons for 'Save' and 'Save as'. The main area is divided into 'Select text & date fields' and 'Select numeric fields'. Under 'Select text & date fields', 'Day of Calendar Date' is checked and labeled 'dates' with annotation 2. Under 'Select numeric fields', 'Total Gross Profit' is checked and labeled 'values' with annotation 2. The 'Define filters' section shows filters for 'Channel' and 'Country'. The 'Results' table at the bottom shows 450 rows of data with columns: Day of Calendar Date, Total Gross Profit, Channel, and Country. Annotations 1, 3, and 4 highlight other UI elements: 1. Dataset name, 3. Actions menu, and 4. Build Metric option.

Day of Calendar Date	Total Gross Profit	Channel	Country
2015-01-06 00:00:00	3845.02	corporate sales	Australia
2015-03-25 00:00:00	9142.2	corporate sales	Australia
2015-01-10 00:00:00	9376.11	corporate sales	Australia
2015-04-05 00:00:00	9541.63	corporate sales	Australia
2015-04-07 00:00:00	9577.86	corporate sales	Australia

1. Open the Dataset View that is to be the data source of the Metric.

2. Make sure that your View includes a columns with dates and values
3. At the top right corner of the screen, open the **Actions** menu
4. Select the **Build Metric** option.
 1. If this Dataset View is Private, the system will offer to automatically make it Public and accessible to other users
 2. If at least one element (Report or Metric) has been built from this View, it can no longer be designated as private

You are redirected to the *Metric Editor*.

2. [Info tab] Define the basics

The screenshot shows the 'Metric Editor' interface with the 'Info' tab selected. The top navigation bar includes 'Metrics / Corporate Sales in Australia Metric', 'New...', 'Content', 'Admin', 'Alex', and a help icon. The main navigation bar includes 'Info', 'Data', 'Stoplights', 'Alerting', 'Charting', 'Associations', and 'Advanced'. The 'Info' tab contains the following fields:

- Measure of:** Sales (dropdown menu)
- Measured:** Daily (dropdown menu)
- Dimension it by:** Not Dimensioned (dropdown menu)
- Collecting is:** enabled (radio button) | disabled (radio button)
- Name:** Corporate Sales in Australia Metric (text input)
- Description:** Corporate Sales in Australia Metric (text input, 2500 character maximum)
- Category:** Revenue (dropdown menu)
- Certified:** yes (radio button) | no (radio button)
- Topics:** Sales (text input with a search icon)

Annotations 1 and 2 point to the 'Name' and 'Optional settings' (Category, Certified, Topics) sections respectively.

1. Name: is populated automatically with the name of the Dataset View. You can change it to a unique and descriptive name of your choice.
2. *Optional settings:*
 - **Category:** helps organizing tiles at the Homepage. You can grant access to elements through Categories. or more details refer to: [Create a Category](#)
 - **Certified:** this setting serves to identify elements that have been approved as being valid and accurate. For more details refer to: [Certifying an Element](#)
 - **Topics/Tags:** relate elements to each other. For more details refer to: [Create a Topic](#)

3. [Data tab] Check Data Collection Configuration

Metrics / Corporate Sales in Australia Metric

New... Content Admin Alex ?

Info Data Stoplights Alerting Charting Associations Advanced

Save & preview Save Enable & publish On Homepage

1 Data Source Datasets

2 Data Collection Trigger 1_5-day-refresh

3 Dataset & View Gross Profit from Tableau - Corporate Sales in Australia

4 Date column Day of Calendar Date

Value column Total Gross Profit (numeric)

Aggregate using Sum

5 Include Only new data All data

Check for data

Collect data

All the fields that define the Data Collection process are populated automatically based on the selection made in Dataset View.

1. **Data Source:** in this example a Dataset is the selected Data Source
2. **Data Collection Trigger:** Set the Trigger to initiate updating information in the Metric
3. **Dataset & View:** Select the combination of a Dataset and its View from the drop-down list
4. **Date / Value column:** make sure that date and value columns display the expected data
5. **Include:** specify whether you want to fetch all data, or rows after a certain date

3.1. Check for available data

Metrics / Corporate Sales in Australia Metric

New... Content Admin Alex ?

Info Data Stoplights Alerting Charting Associations Advanced

Save & preview Save Enable & publish On Homepage

Include Only new data All data

1 Check for data

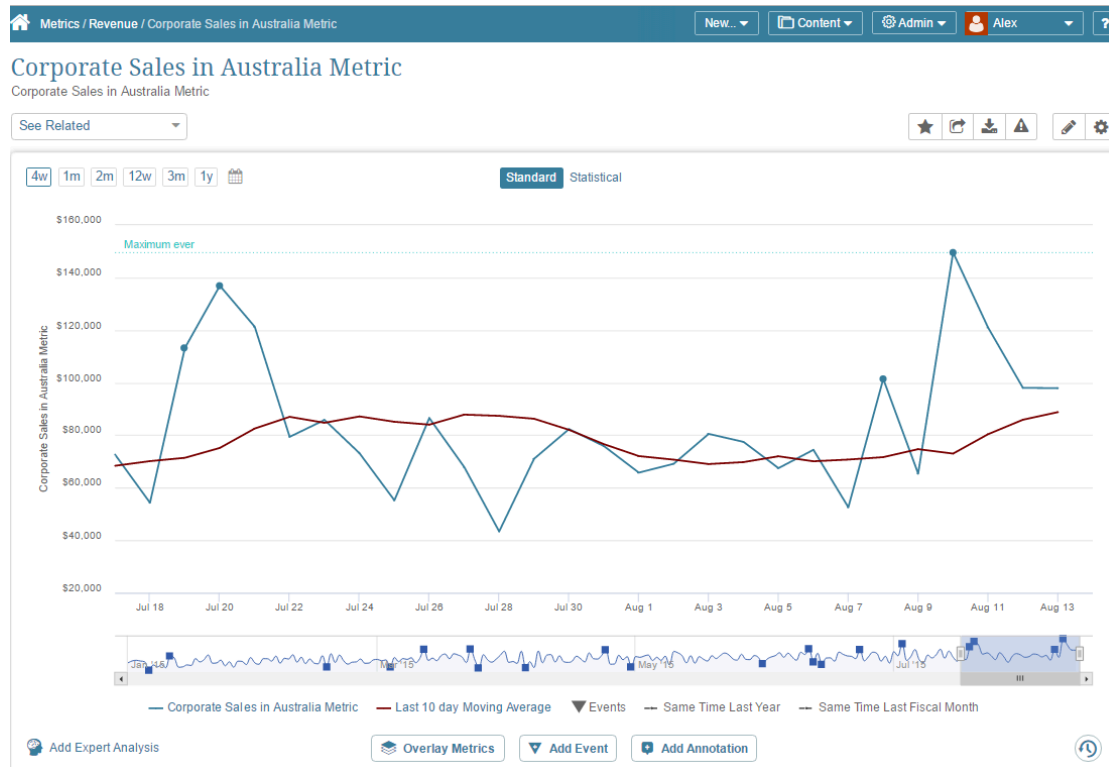
2 225 records in total
This is the first record:
2015-01-01 00:00:00, 40140.84

3 Collect data

1. Click **Check for data** to see what records are available for collecting
2. The number of available records and an example of a first one is displayed in the results shown below
3. Click **Collect** data to fetch rows for the Metric.

Enable and Publish the Metric.

Result



3.5 Create a Report from a Dataset View (prior to 5.1 release)

Datasets offer a quick and highly automated way of building new Reports. This article describes the step-by-step process of creating a Report from a specific Dataset View.

PREREQUISITES:

- [Create a Dataset View](#)

! Due to extensive enhancements, the new Dataset Reports (versions after 5.1) are expanded and can be referenced in this chapter: [Dataset Reports - new in 5.3](#)

1. Open a Public Dataset View

The screenshot displays the Metric Insights interface for a dataset view named 'Corporate Sales'. The top navigation bar includes links for 'New...', 'Content', 'Admin', and a user profile 'Julia'. The left sidebar shows the 'Corporate Sales' view selected. The main content area has a 'Select Fields' section with checkboxes for 'calendar_date', 'channel', 'country', 'name', and 'product_category', and a 'Select numeric fields' section with checkboxes for 'units' and 'sales'. The 'Define filters for changes' section shows a filter for 'channel' containing 'a value' and another for 'sales' being more than '5000'. The 'Actions' menu is open, showing options: 'Build Metric', 'Build Report', 'Download', 'View SQL', and 'Make Private'. The 'Build Report' option is highlighted. The 'Results' table at the bottom shows 65 rows of data with columns: 'calendar_date', 'channel', 'country', 'name', 'product_category', 'units', and 'sales'.

calendar_date	channel	country	name	product_category	units	sales
2017-01-03 00:00:00	corporate sales	Australia	36-Bottle Pine Wi...	wine furniture	71	7064.5
2017-01-03 00:00:00	corporate sales	Canada	112-Bottle Pine ...	wine furniture	34	5185
2017-01-03 00:00:00	corporate sales	Canada	36-Bottle Pine Wi...	wine furniture	57	5671.5
2017-01-03 00:00:00	corporate sales	Canada	Agricola Ferrero ...	wine	119	12251.05

1. Open the Dataset View to be the source of the Report
2. At the top right corner of the page, click the **Actions** menu
3. Select the **Build Report** option.

1. If this Dataset View is Private, the system will offer to automatically make it Public and accessible to other users.

You are redirected to the *Report Editor*.

2. [Info tab] Define the basics

The screenshot shows the 'Info' tab of the 'Corporate Sales Report (Version 2)' in the Metric Insights system. The interface includes a top navigation bar with 'New...', 'Content', 'Admin', and user 'Julia'. Below this is a tabbed interface with 'Info', 'Data', 'Report Content', 'Report Distribution', 'Associations', and 'Advanced'. The 'Info' tab is active, showing three numbered sections:

- 1. Report Type:** Includes radio buttons for 'Standard Report' (selected) and 'Change Report'. Below is a 'Measured' dropdown set to 'Daily'. A note states: 'Dimension it by Reports sourced from a Dataset that uses an User Map cannot be dimensioned'. There are also radio buttons for 'Collecting is' set to 'enabled'.
- 2. Name:** A text field containing 'Corporate Sales Data'. Below it is a 'Description' text area containing 'Corporate Sales Report' with a '2500 character maximum' limit.
- 3. Other settings:** A box containing a 'Category' dropdown set to 'Revenue', a 'Certified' section with 'yes' and 'no' radio buttons (where 'no' is selected), and a 'Topics' field with 'Sales' entered. A note at the bottom says: 'Start typing to find or create Topics, then press the Enter key to save.'

On the right side of the 'Info' tab, there are buttons for 'Save & preview', 'Save', 'Enable & publish', and 'On Homepage'.

1. **Report Type:** Choose the type of Report is to be contented. Change Reports provide the ability to effectively analyze trends in data over a period of time. For more details refer to: [Create a Change Report](#)
2. **Name:** is populated automatically with the name of the Dataset View. You can change it to a unique and descriptive name of your choice.
3. **Other settings:**
 - **Category:** helps organizing tiles at the Homepage. You can grant access to elements through Categories. For more details refer to: [Create a Category](#)
 - **Certified:** this setting serves to identify elements that have been approved as being valid and accurate. For more details refer to: [Certifying an Element](#)
 - **Topics/Tags:** relate elements to each other. For more details refer to: [Create a Topic](#)

Move to the *Data* tab.

3. [Data tab] Check Data Collection Configuration

Reports / Corporate Sales Report (Version 2) New... Content Admin Julia ?

Info Data Report Content Report Distribution Associations Advanced Save & preview Save Enable & publish On Homepage

1 Data Source Datasets

2 Expire cached data ☒ on Data Collection Event ☐ after elapsed time

3 Expire on start of daily-metric-refresh + ⚙

4 Dataset & View Daily Sales - Corporate Sales 👁

5

6 Enable & publish

Sample result set

calendar date	channel	country	name	product category	units	sales
2017-01-03 00:00:00	corporate sales	Australia	36-Bottle Pine Wine Rack	wine furniture	71.00	\$7,064
2017-01-03 00:00:00	corporate sales	Canada	112-Bottle Pine Mega Storage Cube	wine furniture	34.00	\$5,185
2017-01-03 00:00:00	corporate sales	Canada	36-Bottle Pine Wine Rack	wine furniture	57.00	\$5,672

All the fields defining the Data Collection process are populated automatically based on the associated Dataset View.

1. **Data Source:** in this example a Dataset serves as a Data Source
2. Expire cached data:
3. **Expire on start of:** Set the trigger which is going to initiate updating information in a Reports
4. **Dataset & View:** Select the combination of a Dataset and its View from the drop-down list
5. Review the **Sample result set**.
6. Once you confirm that the **Sample result set** contains the expected data, click **Enable and Publish** at the top right corner of the screen.

Advanced Settings

Report Display options

Report Columns							
Column Name	Display Name	Currency?	Format	Description	Results?	Totals?	
calendar_date	calendar date		Default		<input checked="" type="checkbox"/>		↑ ↓
channel	channel				<input checked="" type="checkbox"/>		↑ ↓
country	country				<input checked="" type="checkbox"/>		↑ ↓
name	name				<input checked="" type="checkbox"/>		↑ ↓
product_category	product category				<input checked="" type="checkbox"/>		↑ ↓
units	units	<input type="checkbox"/>	Default		<input checked="" type="checkbox"/>	<input type="checkbox"/>	↑ ↓
sales	sales	<input checked="" type="checkbox"/>	Default		<input checked="" type="checkbox"/>	<input type="checkbox"/>	↑ ↓

8 [+ Add formatted field](#)

Optionally, the Report display can be customized using the following options:

1. Modify the **Display Name** of the column header
2. Select to have values appear as **Currency**
3. **Format** numeric value display
4. Enter a **Description** that will be displayed on hover of the column
5. Select the columns to appear in the **Results**
6. Choose to have **Totals** displayed for numeric data
7. Modify the display order of the columns
8. Add a custom **formatted field** to the report if needed

Other Settings

1

Snapshot Report?
(keep history)

☐ yes | ☒ no

Save a full copy of the data (a 'snapshot') each time it is collected, and append the collection time to all the snapshot values. This is useful when you want to compare datasets over time that do not have timestamps in them natively.

2

Set "Data For" Date

Yesterday

▼

+

Use Report as Source
(save as system table)

☐ yes | ☒ no

Use the results in this Report as a service to build other Reports. Selecting 'Yes' will save the Report as a table that can be queried from other elements.

Include date filter based on

Nothing

▼

1. Select whether or not the Report should be saved as a Snapshot (see [What is a Snapshot Report](#))
2. Select the date-time value to be used as the **effective date** value for the Report.
 1. This value is only applicable to reports with saved historical instance.
 2. New Time Command values may be added from drop-down as needed

Additional options:

If you want the complete result set shown in the report (without pivoting the data), set **Save as system table** to 'Yes'

If you want to have a charting interval drop-down in your report ('Last 6 Months', 'Last Year', etc...), specify the date column that should be used to drive this control in **Include date filter based on** from the available choices in the drop-down

4. Result

Corporate Sales Data

Corporate Sales Report



Corporate Sales Data



calendar date	channel	country	name	product category	units	sales
2017-01-03 00:00:00	corporate sales	Australia	36-Bottle Pine Wine Rack	wine furniture	71.00	\$7,064
2017-01-03 00:00:00	corporate sales	Canada	112-Bottle Pine Mega Storage Cube	wine furniture	34.00	\$5,185
2017-01-03 00:00:00	corporate sales	Canada	36-Bottle Pine Wine Rack	wine furniture	57.00	\$5,672
2017-01-03 00:00:00	corporate sales	Canada	Agricola Ferrero Brunello di Montalcino 2005	wine	119....	\$12,251
2017-01-03 00:00:00	corporate sales	Canada	Allegriani Amarone della Valpolicella Classico 2005	wine	146...	\$14,447
2017-01-03 00:00:00	corporate sales	Canada	Allegriani La Grola Veronese 2006	wine	96.00	\$8,827
2017-01-03 00:00:00	corporate sales	Canada	Allegriani Soave 2008	wine	94.00	\$5,259
2017-01-03 00:00:00	corporate sales	Canada	Chateau Mouton-Rothschild	wine	4.00	\$11,500
2017-01-03 00:00:00	corporate sales	Canada	Cheval Blanc	wine	6.00	\$20,269
2017-01-03 00:00:00	corporate sales	Canada	Leonetti Merlot Washington	wine	5.00	\$5,750

 Add Expert Analysis

Add a comment ...

Details

Business owner: Julia Nesova

Technical owner: Julia Nesova

Category: Revenue

4. Dataset Reports - Revised in 5.5

4.1 Dataset Reports Overview

As of Release 5.3, Metric Insights offers new dynamic Reporting capabilities, with the release of 5.5, that functionality has been expanded. Dataset Reports are now in feature parity with Legacy Reports.

This article gives a brief overview of the range of expanded Reporting options available in Release 5.5.

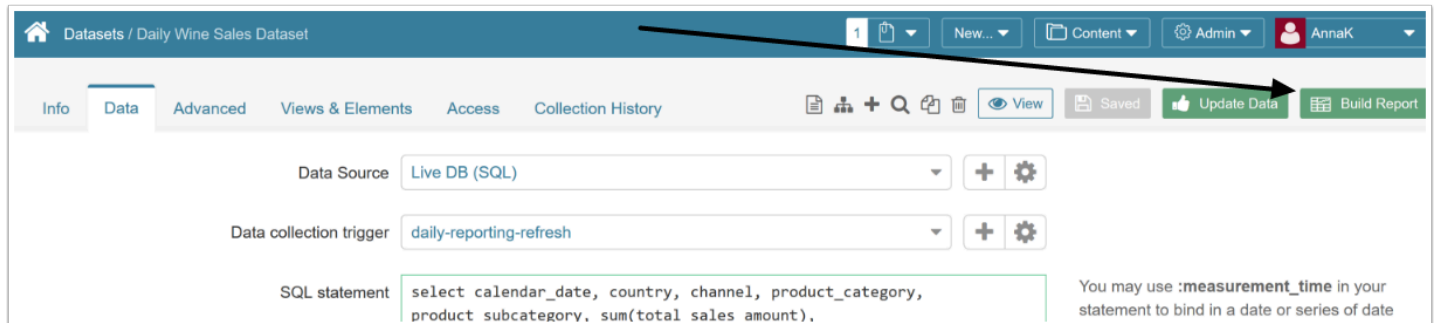
1. [Ways to create a Dataset Report](#)
2. [Update optional data on Info tab](#)
3. [Elements of Data tab](#)
4. [Basics of Report Content tab](#)
5. [Apply Report Filters](#)
6. [Table Formatting options](#)
7. [Apply Column Aggregation](#)
8. [Apply Conditional Formatting](#)
9. [Create a Pivot table](#)
10. [Create Various Charting Displays](#)
11. [Create Banners - Text Displays](#)
12. [Add External Visualizations and easily apply Hyperlinks](#)
13. [Manually apply Hyperlinks](#)
14. [Add attachments such as PDFs and Spreadsheets](#)
15. [Subscribe to Report Notification or Schedule a Burst](#)

PREREQUISITES:

1. An Existing **Dataset** or you can [Create a Dataset](#)

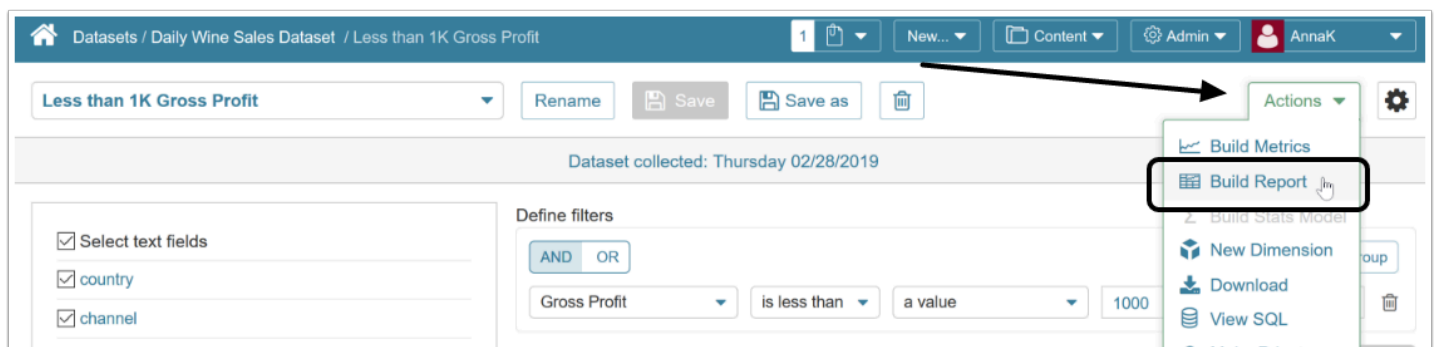
1. Ways to create a new Dataset Report

1.1. Directly from the Dataset Editor

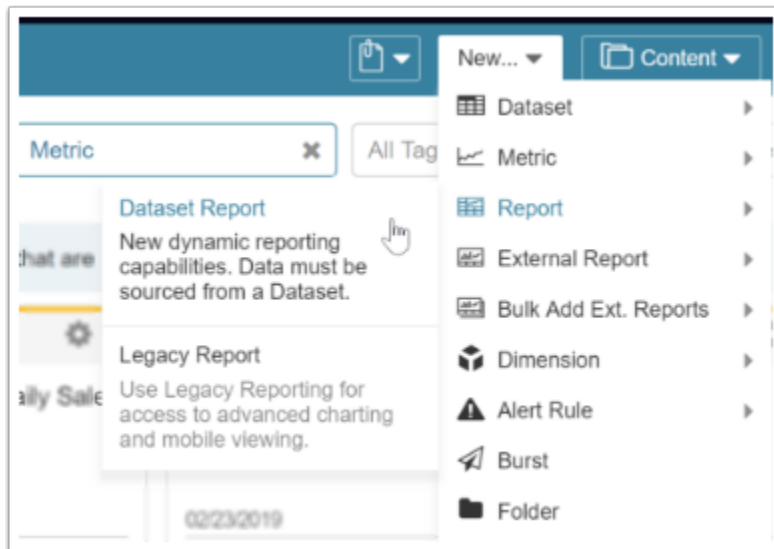


(New in 5.5) Simply select the **[Build Report]** icon from the Data tab of the *Dataset Editor*. This option will use the 'All Data' View by default.

1.2. From any Dataview (Actions > Build Report)



1.3. Access via New > Reports > Dataset Reports



1.3.1. Define the Basics

Dimension it by +

Name

Description G

Category +

Put in Folder

Tags X

Start typing to *find* or *create* Tags, then press the Enter key to save.

Next: define details

Select **Next: define details** to open Full Report Editor

2. Report Editor >Info tab -- update optional fields

Report Editor / Daily Wine Sales Report

Info | Data | Content | Distribution | Associations | Documents | Advanced

1 ☐ Include Report in next [scheduled migration](#)

Dimension it by Not Dimensioned + ⚙

☒ Make visible on Homepage

Name Daily Wine Sales Report

2 Description Daily Wine Sales by Country

2500 character maximum

Category Sales + ⚙

3 Certified ☐ yes ☒ no

4 Tags Daily Sales ✕

Start typing to *find* or *create* Tags, then press the Enter key to save.

1. **[6.1.0]** As of Release 6.1.0, it is possible to flag elements and then Migrate Content using our Export/Import Migration Scripts. Click for details: [Scripted Migration via Category and Element Editors](#)
2. The **Description** field defaults from the Name, but if this is not sufficiently descriptive, you may change it
3. **Certified:** Certification is a means for Admin and Power Users to identify elements that have been approved as being valid and accurate. For details refer to: [Certifying an Element](#)
4. **Tags** (are referred to as **Topics** in Versions prior to 5.1): Tags / Topics are used to relate elements to each other for purposes of identifying similar Charts when the **See Related** drop-down list in the *Metric Viewer* is populated allowing a more in-depth analysis of trends. For details refer to: [Create a Topic / Tag](#)

3. Report Editor > Data tab

Report Editor / Daily Wine Sales Report

Info **Data** Content Distribution Associations Documents Advanced

1 Dataset & View: Daily Wine Sales Dataset - Less than 1K Gross Profit

2 [Show data](#) [Show Data Preview](#)

Date	country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
2019-02-17 00:00...	Germany	store visit	wine accessory	70855.05	1219	bottle opener	482.67
2019-02-23 00:00...	Germany	e-mail marketing	wine furniture	19790.2	252	half cabinet	486.73

1. From the drop-down, select **Dataset & View**
2. Click **[Show Data]** This will also validate the report.
3. **[Save & View]** or just **[Save]**

Your Report is now ready to view, but you will probably want to apply some of the Report Formatting option available in the **Report Content tab**.

4. Basics of the Report Content tab

Report Editor / Daily Wine Sales Dataset

Info Data **Content** Distribution Associations Documents Advanced

Click to add Filters to this Report.

1 Filter Table

Date	country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
01/02/19	Australia	corporate sales	wine	\$54.51K	1,384	red wine	\$19.58K
01/02/19	Australia	corporate sales	wine furniture	\$26.72K	266	full cabinet	\$8.45K
01/02/19	Australia	corporate sales	wine accessory	\$28.14K	569	wine glasses	\$8.10K
01/02/19	Australia	e-mail marketing	wine	\$102.18K	1,881	white wine	\$37.79K
01/02/19	Australia	e-mail marketing	wine furniture	\$52.73K	596	full cabinet	\$16.73K
01/02/19	Australia	e-mail marketing	wine accessory	\$62.86K	1,238	bottle opener	\$19.07K
01/02/19	Australia	store visit	wine	\$75.91K	1,398	red wine	\$28.61K
01/02/19	Australia	store visit	wine furniture	\$21.13K	182	half cabinet	\$6.25K
01/02/19	Australia	store visit	wine accessory	\$37.66K	829	bottle opener	\$10.46K

2 Tables

3 Drop Components Here

1. A full Report Table will be set up with the formatting applied in your Dataset (if any). Selecting **Edit** for any object will produce a slide-out Editor.
2. Additional Objects are created using drag-and-drop to move the icons into the '**Drop Components Here**' area

- **Tables** or **Pivot** tables product separate Editors
- **Text** allows free-form 'banner' sections to be displayed / **External Visualizations** are easily added to the Report
- A variety of pre-formatted **Charts** are also available

3. The **up-down icon** allows you to move the various items within the Report

4.1. Example of drag-and-drop for a Range Chart

The screenshot shows the Metric Insights interface. At the top, there is a table with data. Below the table, a 'Range' icon is highlighted, and an arrow points from it to a 'Range Chart' editor panel. The editor panel contains various settings for the chart.

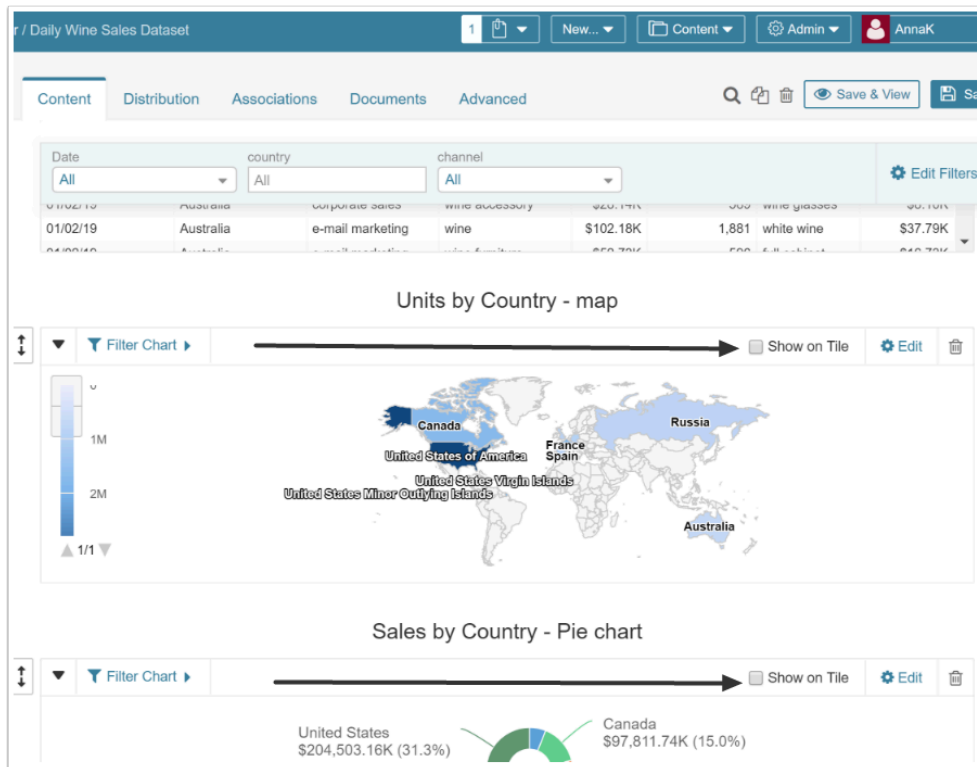
Date	Country	Category	Product	Sales Amt	Units	Product Name	Sales Amt
01/02/19	Australia	e-mail marketing	wine accessory	\$62.86K	1,238	bottle opener	\$19.07K
01/02/19	Australia	store visit	wine	\$75.91K	1,398	red wine	\$28.61K
01/02/19	Australia	store visit	wine furniture	\$21.13K	182	half cabinet	\$6.25K
01/02/19	Australia	store visit	wine accessory	\$37.66K	829	bottle opener	\$10.46K

Range Chart Editor Settings:

- Title: [Empty field]
- One bar per: **Date**
- Range Start: **Min** of **Sales Amt**
- Range End: **Max** of **Sales Amt**
- Value axis Label: [Empty field]
- Drill To (Link to Element): **+ Drill To**
- ☒ Display Value
- Height (px): **600**

The corresponding Editor will slide out from the right based on icon selected.

4.2. Select object to display on Report tile



1. Specify which Chart or Table will appear on the Homepage tile by activating the **Show on Tile** option. Only one object will be allowed, any other checkbox will be de-selected.

5. Apply Filters at Report or Element Level

Report Editor / Daily Wine Sales Report

Info Data **Content** Distribution Associations Documents Advanced

1 Click to add Filters to this Report.

2 Filter Table

Date	country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
02/27/19	Germany	store visit	wine accessory	\$55.35K	1,217	bottle opener	\$0.91K
02/12/19	Germany	website visit	wine furniture	\$27.40K	255	half cabinet	\$0.92K
02/04/19	Germany	corporate sales	wine furniture	\$12.20K	134	full cabinet	\$0.92K
01/23/19	United Kingdom	corporate sales	wine furniture	\$6.29K	33	full cabinet	\$0.92K
01/18/19	Germany	e-mail marketing	wine furniture	\$11.54K	263	full cabinet	\$0.92K
01/04/19	Germany	e-mail marketing	wine furniture	\$11.10K	138	full cabinet	\$0.93K
01/19/19	Germany	corporate sales	wine furniture	\$27.11K	284	half cabinet	\$0.94K
02/16/19	Germany	corporate sales	wine furniture	\$27.26K	289	full cabinet	\$0.94K
01/11/19	Russia	corporate sales	wine furniture	\$6.37K	64	half cabinet	\$1.00K

Drop Components Here

Report Editor / Daily Wine Sales Report

Info Data **Content** Distribution Associations Documents Advanced

1 Date: All, country: Germany

2 Filter Table

Subcategory does not contain a value bottle opener

Date	country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
02/13/19	Germany	e-mail marketing	wine accessory	\$67.38K	1,316	wine glasses	\$-0.12K
01/10/19	Germany	website visit	wine furniture	\$10.51K	149	full cabinet	\$0.12K
01/31/19	Germany	store visit	wine furniture	\$15.23K	184	full cabinet	\$0.16K

1. **Report Filters** work much like the Dimension filters but allow greater diversity. These drop-downs apply to all elements of the report and can be adjusted by anyone viewing the Report.
2. **Table (or Chart) Filters** are defined by the Report creator, apply only to one object, and cannot be manipulated by Users.

For more details see [Applying Filters in Dataset Reports](#)

6. Table Formatting via Edit > Table or Column drop-downs

6.1. Basic Formatting via Table Editor (select Edit icon on top/right)

The screenshot shows the 'Table Editor' interface for a 'Table of Sales'. The table has three columns: 'country', 'product_category', and 'channel'. The header row is highlighted in red. The editor includes various options for formatting, such as font selection, header formatting, limiting rows, column selection, sorting, conditional formatting, and grand totals. Numbered callouts 1 through 8 highlight specific features: 1. Font selection (Arial, Helvetica, sans-serif), 2. Header Format (red background), 3. Limit Rows (checked), 4. Column selection (country, product_category, channel), 5. Edit icon (gear icon), 6. Hide Unused Columns (unchecked), 7. Conditional Formatting (Rule button), 8. Grand Totals (checked, Overall Total).

country	product_category	channel
Australia	wine	corporate sale
Canada	wine	corporate sale
France	wine	corporate sale
Germany	wine	corporate sale
Russia	wine	corporate sale
Spain	wine	corporate sale
United Kingdom	wine	corporate sale
United States	wine	corporate sale
Australia	wine	e-mail market
Canada	wine	e-mail market
France	wine	e-mail market
Germany	wine	e-mail market
Spain	wine	e-mail market
United Kingdom	wine	e-mail market
United States	wine	e-mail market
Australia	wine	store visit
Canada	wine	store visit
France	wine	store visit
Russia	wine	store visit

The **Table Editor** will slide out for your input. The options for formatting a Table are many! To highlight a few:

1. Select a **font** for this Table
2. Format the **Header** - in this example we have chosen to display the Header in red
3. **Limit Rows** - checking this option will display the Show First option for input
4. Drag-and-drop to **order** the Table (Section and Grouping option explained below) or use the **Sort Order** option below the Columns section
5. Select options for individual fields (see below) by using the **Edit icon**
6. [6.1.2] **Hide Unused columns** allows multiple columns to be hidden/unhidden. Option will be activated when one of the columns is unchecked.
7. Apply Rules for Formatting based on specified conditions. The **Conditional Formatting** can also be applied at the field level via the corresponding edit icon, but all conditions will display on the Table Editor
8. Check **Grand Totals** to your data and optionally relabel this field

[**Apply**] to view changes in the Table

Content
Distribution
Associations
Documents
Advanced

Save & View

Date: All
country: Germany
Edit Filter

Full Data Table

Filter Table
Reset Columns
Show on Tile
Edit

channel	country	Category	Sales Amt	# of Units	Subcategory	Gross Profit
e-mail marketing	Germany	wine furniture	\$17.57K	260	half cabinet	\$0.84K
corporate sales	Germany	wine furniture	\$22.68K	378	full cabinet	\$0.90K
website visit	Germany	wine furniture	\$27.40K	255	half cabinet	\$0.92K
corporate sales	Germany	wine furniture	\$12.20K	134	full cabinet	\$0.92K
e-mail marketing	Germany	wine furniture	\$11.54K	263	full cabinet	\$0.92K
e-mail marketing	Germany	wine furniture	\$11.10K	138	full cabinet	\$0.93K
corporate sales	Germany	wine furniture	\$27.11K	284	half cabinet	\$0.94K
corporate sales	Germany	wine furniture	\$27.26K	289	full cabinet	\$0.94K
Overall Total:			\$691.60K	10,899		\$13.70K

6.2. Apply Sections and Groupings in Table Editor

Sections and Grouping provide an easy way to customize your Table for easy viewing.

Sections provide the ability to specify an external break column (sections) for a report grid so that tables can be shown one per value of the column.

Grouping provides the ability to specify that a column should group values. When set, the column values that are repeated are instead shown as a blank.

Example with data collected by Channel, Country, and Category - native Table:

Content Distribution Associations Documents Advanced						
Date 02/28/19						
Filter Table Reset Columns Show on my Edit						
country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
Germany	store visit	wine	\$120.04K	1,980	red wine	\$21.55K
Germany	store visit	wine furniture	\$27.75K	195	full cabinet	\$3.31K
Germany	store visit	wine accessory	\$46.82K	791	bottle opener	\$0.24K
Germany	website visit	wine	\$72.36K	1,476	red wine	\$7.18K
Germany	website visit	wine furniture	\$38.87K	384	half cabinet	\$3.10K
Germany	website visit	wine accessory	\$58.57K	1,079	bottle opener	\$3.73K
Russia	corporate sales	wine	\$128.88K	2,589	red wine	\$31.71K
Russia	corporate sales	wine furniture	\$31.08K	298	half cabinet	\$5.04K
Russia	corporate sales	wine accessory	\$60.64K	1,088	bottle opener	\$12.53K
Russia	e-mail marketing	wine	\$131.55K	3,038	red wine	\$35.27K
Russia	e-mail marketing	wine furniture	\$59.22K	701	half cabinet	\$10.08K
Russia	e-mail marketing	wine accessory	\$80.09K	1,874	bottle opener	\$12.48K
Russia	store visit	wine	\$110.99K	2,232	red wine	\$29.37K

6.2.1. Apply Sections and Grouping via drag-and-drop

Content Distribution Associations Documents Advanced						
Date 02/28/19						
Filter Table						
country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
Germany	store visit	wine	\$120.04K	1,980	red wine	\$21.55K
Germany	store visit	wine furniture	\$27.75K	195	full cabinet	\$3.31K
Germany	store visit	wine accessory	\$46.82K	791	bottle opener	\$0.24K
Germany	website visit	wine	\$72.36K	1,476	red wine	\$7.18K
Germany	website visit	wine furniture	\$38.87K	384	half cabinet	\$3.10K
Germany	website visit	wine accessory	\$58.57K	1,079	bottle opener	\$3.73K
Russia	corporate sales	wine	\$128.88K	2,589	red wine	\$31.71K
Russia	corporate sales	wine furniture	\$31.08K	298	half cabinet	\$5.04K
Russia	corporate sales	wine accessory	\$60.64K	1,088	bottle opener	\$12.53K
Russia	e-mail marketing	wine	\$131.55K	3,038	red wine	\$35.27K
Russia	e-mail marketing	wine furniture	\$59.22K	701	half cabinet	\$10.08K
Russia	e-mail marketing	wine accessory	\$80.09K	1,874	bottle opener	\$12.48K
Russia	store visit	wine	\$110.99K	2,232	red wine	\$29.37K

To apply External break on **Country**, and Group by **Channel** then **Category**:

1. Check the **Sections and Grouping boxes** to open the corresponding input areas
2. Drag the **Country** field from the **Columns** section into **Sections** area
3. Drag both **Channel** and **Category** from the **Columns** section into **Grouping** area
4. The example below also applied basic color formatting by editing separately each of the three fields

Visually Table is less dense and data is clearer

💡 A full description of this process is available in [Using Sections and Groups in Dataset Report Tables](#)

6.3. Via the Column Drop-downs

The screenshot shows the Tableau interface with a data table. The 'Category' column header is selected, and a right-click context menu is open, displaying options for column formatting and manipulation. The menu options are: Sorting, Alignment, Wrap Text, Text Color, Fill Color, Hide Column, Freeze Column, and Edit Column. The background table has columns: channel, country, Category, Sales Amt, # of Units, Subcategory, and Gross Profit.

To edit individual Columns, open the drop-down next to the Column name. You can easily Sort or Hide the column, apply Text and Fill color, etc. Or you can **Edit Column** to slide the full Column Editor.

Example of Column slideout

channel	country	Category
store visit	United Kingdom	wine
store visit	United States	wine
website visit	Russia	wine
website visit	France	wine
website visit	Canada	wine
website visit	Spain	wine
website visit	United Kingdom	wine
website visit	United States	wine

Dataset Column Name:
product_category
✕

Display Name

Hyperlinking

Type "[" to open auto-suggest for list of fields
 Dynamic text link: [[field_name]](http://url/value={field_name})
[Learn about hyperlinking](#)

Column Format

↑
↓
☰
☷
☰
☷
B
I

☐ Override Header Colors

☒ Show Column

7. Aggregation of numeric values

In earlier versions of Dataset Reports, if you wanted to Aggregate values in your Report, you needed to create a new Dataset View with required Field Aggregations and then create a new Report from this.

In 5.5 you can perform this in the Report Editor for multiple Tables simply by setting the Aggregation method at the Table column level. See how here [Aggregation of numeric values](#).

Conditional Formatting allows you to set Rules and Conditions that can highlight when specific conditions occur in your data (aka Anomalies!)

8.1. Edit table

Report Editor / Daily Wine Sales Dataset report

3 Data Content Distribution Associations Documents Advanced

Date
03/02/19 03/04/19 03/05/19

Filter Table

country	channel	Category	Average Sale Am	Ave # Units	Average Gross Profit
Germany	e-mail marketing	wine furniture	\$39.07K	637	\$4.35K
Germany	store visit	wine	\$165.59K	3,232	\$28.78K
Germany	store visit	wine accessory	\$68.35K	1,456	\$3.11K
Germany	store visit	wine furniture	\$53.51K	654	\$3.41K
Germany	website visit	wine	\$146.75K	3,060	\$26.48K
Germany	website visit	wine accessory	\$89.70K	1,866	\$3.85K
Germany	website visit	wine furniture	\$55.59K	618	\$4.95K
Russia	corporate sales	wine	\$110.58K	1,805	\$33.24K
Russia	corporate sales	wine accessory	\$41.25K	870	\$6.43K
Russia	corporate sales	wine furniture	\$32.36K	247	\$6.43K
Russia	e-mail marketing	wine	\$109.30K	1,514	\$34.19K
Russia	e-mail marketing	wine accessory	\$34.80K	774	\$5.55K
Russia	e-mail marketing	wine furniture	\$28.47K	295	\$5.80K

Filter Chart

Units by Country - map

Filter Chart

Sales by Country - Pie chart

Table

Title

Arial, Helvetica, sans-serif 12

Header Format

Columns (drag & drop to sort)

Sections

Grouping

Date (hidden)

country

channel

Category

Average Sale Amt

Ave # Units

Subcategory (hidden)

Average Gross Profit

Sort Order

+ Sort

Conditional Formatting

+ Rule

Select **[+ Rule]** under **Conditional Formatting** to display the options available

You can choice to compare and format any of your data fields; the options available will differ for text, date, and numeric fields as a couple of examples below illustrate.

8.2. Example - comparing a field to a value

The screenshot shows the 'Conditional Formatting' dialog box with the following configuration:

- 1** When:
- 2** is greater than
- 3** apply to
- 4** The dropdown menu for 'to' is open, showing the following options: Entire Row, Date, country, channel, Category, Sales Amt, # of Units, Subcategory, and **Gross Profit** (highlighted).

1. Select any of the data columns from the drop-down
2. Select both the condition, and either **value** or **another data column**. Your options in the drop-downs will vary based on both the **Data** and **Condition** chosen.
3. Select Format options: **text** or **background color**, **bold**, **italic**, or any combination of these by clicking on the icons
4. Select if you want to apply the formatting to a **single value** or **Entire Row**

8.3. Comparing a numeric field to another numeric field

The screenshot shows the 'Conditional Formatting' dialog box with the following configuration:

- When:
- is greater than
- by
- apply to

8.4. All Conditions are expressed in plain language on the Report Editor

Date

03/02/19 03/04/19 03/05/19

▼ Filter Table

country	channel	Category	Average Sale Am	Ave # Units	Average Gross Profit
Germany	e-mail marketing	wine furniture	\$59.07K	617	\$4.35K
Germany	store visit	wine	\$165.58K	3,232	\$28.78K
Germany	store visit	wine accessory	\$68.35K	1,456	\$3.11K
Germany	store visit	wine furniture	\$53.51K	654	\$3.41K
Germany	website visit	wine	\$146.75K	3,060	\$26.48K
Germany	website visit	wine accessory	\$89.70K	1,866	\$3.85K
Germany	website visit	wine furniture	\$55.59K	616	\$4.95K
Russia	corporate sales	wine	\$110.58K	1,805	\$33.24K
Russia	corporate sales	wine accessory	\$41.25K	870	\$6.43K
Russia	corporate sales	wine furniture	\$32.36K	247	\$6.43K
Russia	e-mail marketing	wine	\$109.30K	1,514	\$34.19K
Russia	e-mail marketing	wine accessory	\$34.80K	774	\$5.55K
Russia	e-mail marketing	wine furniture	\$28.47K	295	\$5.80K

► Filter Chart

Units by Country - map

► Filter Chart

Sales by Country - Pie chart

Columns (1 drag & drop to sort) Sections Grouping

Date (hidden)

country

channel

Category

Average Sale Amt

Ave # Units

Subcategory (hidden)

Average Gross Profit

Sort Order

+ Sort

Conditional Formatting

When Ave # Units < 800 apply additional formatting to Ave # Units.

When Average Gross Profit > 33000 apply additional formatting to Average Gross Profit.

When Average Sale Amt > Average Gross Profit by 700% apply additional formatting to entire row.

+ Rule

1. **[Apply]** to produce the Report layout viewed on the left.
2. Rules can be edited or deleted via icons viewed here.

9. Pivot Tables

Pivot Tables function much like other Tables in the Report Editor, but provide fewer options, especially when applying Conditional formatting as this can only be done at the Column level.

💡 For more details see [Pivot Tables in Dataset Reports](#)

Wine Data (BY)

Report Content Report Distribution Association

Reset Columns

Clicking [Apply] displays Pivot Table

Save & View Save

Show on Tile Edit

Sales by Product Category

product_category	Australia	Canada	France	Germany	Russia	Spain	United Kingdom	United States	Total
wine	1.43M	2.97M	3.30M	1.57M	718,942	1.44M	1.58M	5.85M	18.9M
wine accessory	675,896	1.16M	1.37M	685,636	271,699	701,302	646,862	2.42M	7.53M
wine furniture	600,647	1.01M	1.01M	506,502	214,895	436,153	547,541	1.88M	6.20M
Overall Total	2.71M	5.13M	5.68M	2.77M	1.21M	2.58M	2.76M	10.2M	33.0M

1. Specify the **Pivot's Name**
2. Determine **Row Values**
3. Determine **Column Values**
4. Specify **Measure** that will be used to calculate values
5. Optionally, specify if you want to include **Grand Totals for Columns and Rows** and if so, determine their formatting
6. **Apply**

10. Create Various Charting Displays

There are numerous charting options available by simply dragging-and-dropping one of the Chart icon(s). A slide-out will appear from the rights allowing you to select your options.

For details for the various Charts and options available see [Creating Charts in Dataset Reporting](#)

Charts

channel	country	Category	Sales Amt	# of Units	Subcategory	Gross Profit
e-mail marketing	Germany	wine furniture	\$17.57K	260	half cabinet	\$0.84K
corporate sales	Germany	wine furniture	\$22.68K	378	full cabinet	\$0.90K
website visit	Germany	wine furniture	\$27.40K	255	half cabinet	\$0.92K
corporate sales	Germany	wine furniture	\$12.20K	134	full cabinet	\$0.92K
e-mail marketing	Germany	wine furniture	\$11.54K	263	full cabinet	\$0.92K
e-mail marketing	Germany	wine furniture	\$11.10K	138	full cabinet	\$0.93K
corporate sales	Germany	wine furniture	\$27.11K	284	half cabinet	\$0.94K
corporate sales	Germany	wine furniture	\$27.26K	289	full cabinet	\$0.94K
Overall Total:			\$691.60K	10,899		\$13.70K

↑↓

Bubble

Drop Components Here

11. Create Rich Text Blocks

Users can now add blocks of text to your Dataset Reports to make them even more informative and compelling. To use this option, drag the Text tile to the Report Canvas and add the desired information.

Report Editor / BY_Sales and Profit

Info

Data

Content

Distribution

Associations

Documents

Advanced

Wine Sales Market

Text

Table

Chart

1

2

3

4

5

WINE SALES

Wine Sales Revenue

- Domestic \$41.8 billion
- Imports \$20.9 billion
- Total \$62.7 billion

Top Export Destinations

- European Union
- Canada
- Japan
- China
- Mexico

Sales by Product Category

US State	Channel	Product Category	Profit
Alabama	e-mail marketing	wine	5M
Arizona	e-mail marketing	wine	20M
Arkansas	e-mail marketing	wine	25M
California	e-mail marketing	wine	50M

Learn more from [Decanter](#)

Some options are:

1. Formatted Text
2. Bullet and numbered lists
3. Tables
4. Hyper-links
5. Variables

Datasets

Page 114

The following formatting functionality is supported:

- Undo/redo (change history)
- Bold, Italic, text alignment (left, center, right)
- Hyperlinking
- Font color, background-color
- Font family
- Font size
- [5.5.1] Tables
- [5.5.1] Ordered and Unordered lists
- [5.5.1] Source code (HTML) viewing and editing (Variables)

For more details on Text Blocks, see [Working with Text Blocks](#)

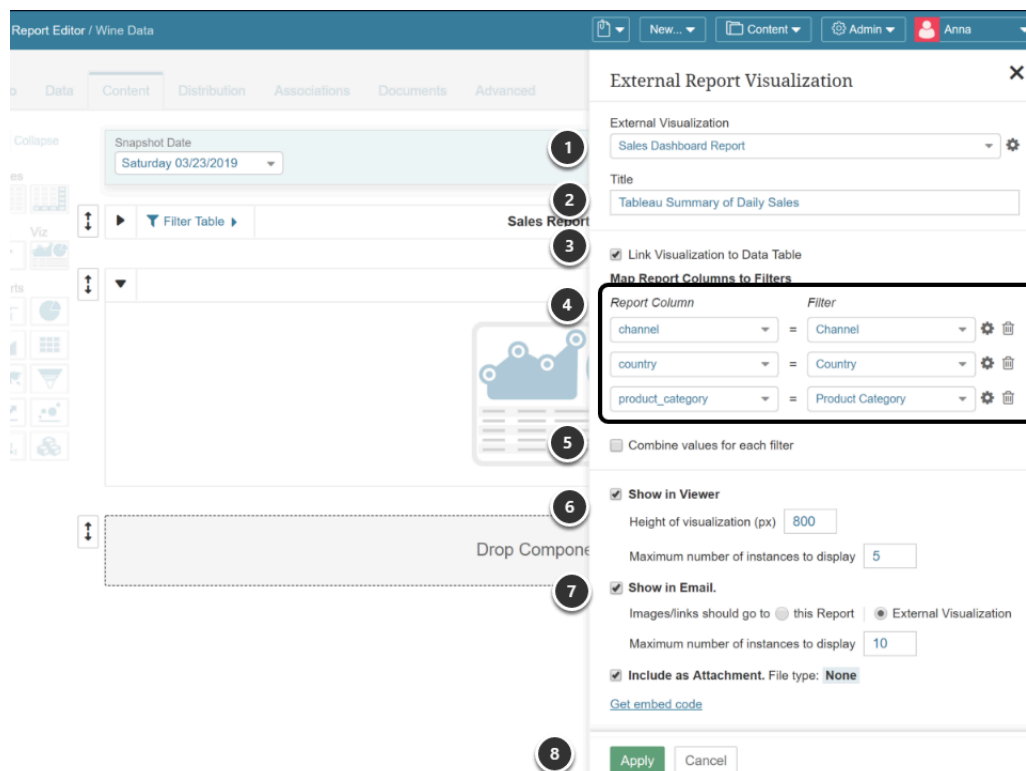
12. External Visualizations and Hyperlinks

12.1. Drag & Drop External Visualizations to expose the Editor

The screenshot shows the 'Report Editor / Wine Data' interface. The top navigation bar includes tabs for Info, Data, Content, Distribution, Associations, Documents, and Advanced. The 'Content' tab is active. On the left sidebar, there are sections for 'Tables', 'Text', 'Viz', and 'Charts'. The 'Viz' section is highlighted, and an arrow points from a chart icon in the 'Charts' section to a dashed box in the main content area, indicating a drag-and-drop action. The main content area displays a table with the following data:

calendar_date	country	channel	product_categ
2019-03-23 00:00:00	France	website visit	wine accessory
2019-03-23 00:00:00	France	website visit	wine accessory
2019-03-23 00:00:00	France	website visit	wine accessory
2019-03-23 00:00:00	France	website visit	wine accessory
2019-03-23 00:00:00	France	website visit	wine accessory
2019-03-23 00:00:00	Germany	corporate sales	wine
2019-03-23 00:00:00	Germany	corporate sales	wine
2019-03-23 00:00:00	Germany	corporate sales	wine
2019-03-23 00:00:00	Germany	corporate sales	wine

12.2. Chose your External Visualization and Click "Link Visualization to Data Table"



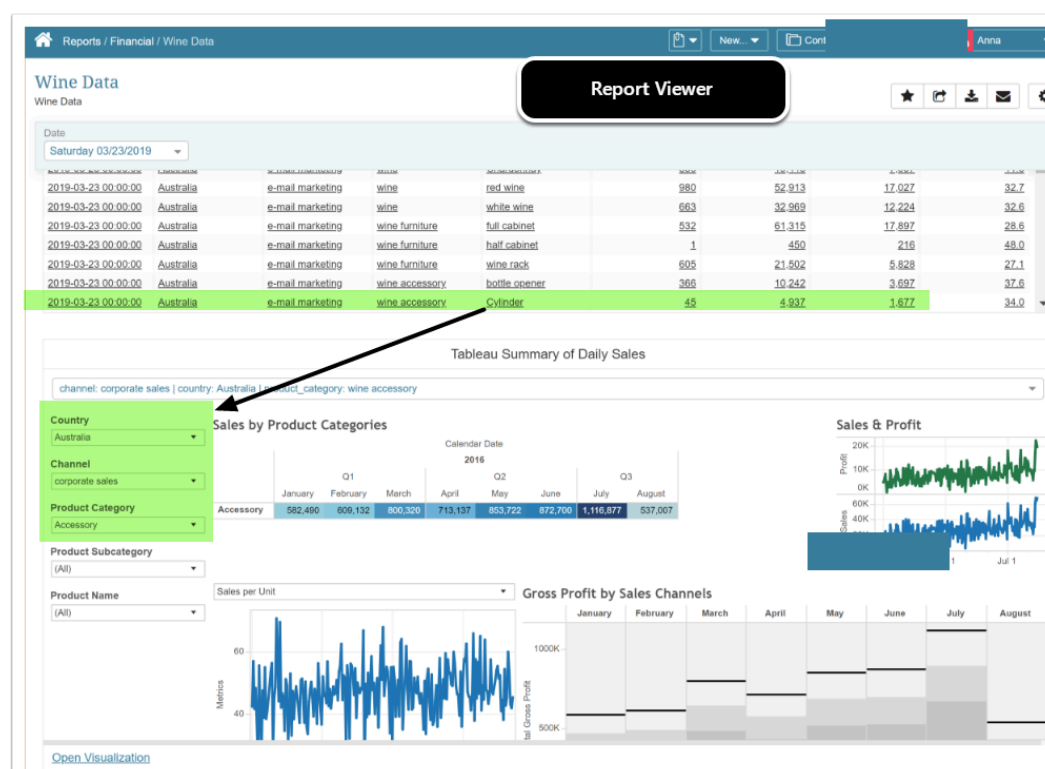
1. From the drop-down, choose **External Report Visualization** with which your Dataset Report will interact.
2. Optionally, create a **Title**.
3. **"Link Visualization to Data Table"** to link Column Values to a Visualization.
 - In the *Dataset Report Editor*, when you click such a link, the Visualization will open on an external webpage.
 - In the *Dataset Report Viewer*, when you click the table link, the Visualization will open in the Viewer.
4. **Map Report Columns to Filters**. Clicking **[+Add]** allows mapping more Report columns to External Filter values.
5. If you select **"Combine values for each filter"**, the same Visualization will be displayed for All Filter Values. If this box is clear, you can select the number of instances to display in Viewer and in an email. Options for **Maximum number of instances to display** will appear in both **Show in Viewer** and **Show in Email**
6. Optionally, select to **Show in Viewer**. You can specify:
 - the Height of Visualization
 - the Maximum number of Instances
7. Optionally, select to **Show in Email**. You can define:
 - whether clicking the image in an email will open your Dataset Report or External web page

- the Maximum number of instances

8. Apply

12.3. Result of Hyperlinks for an External Visualization

- i** When you click a link in the Table, the Visualization will display data filtered for the chosen option(s)



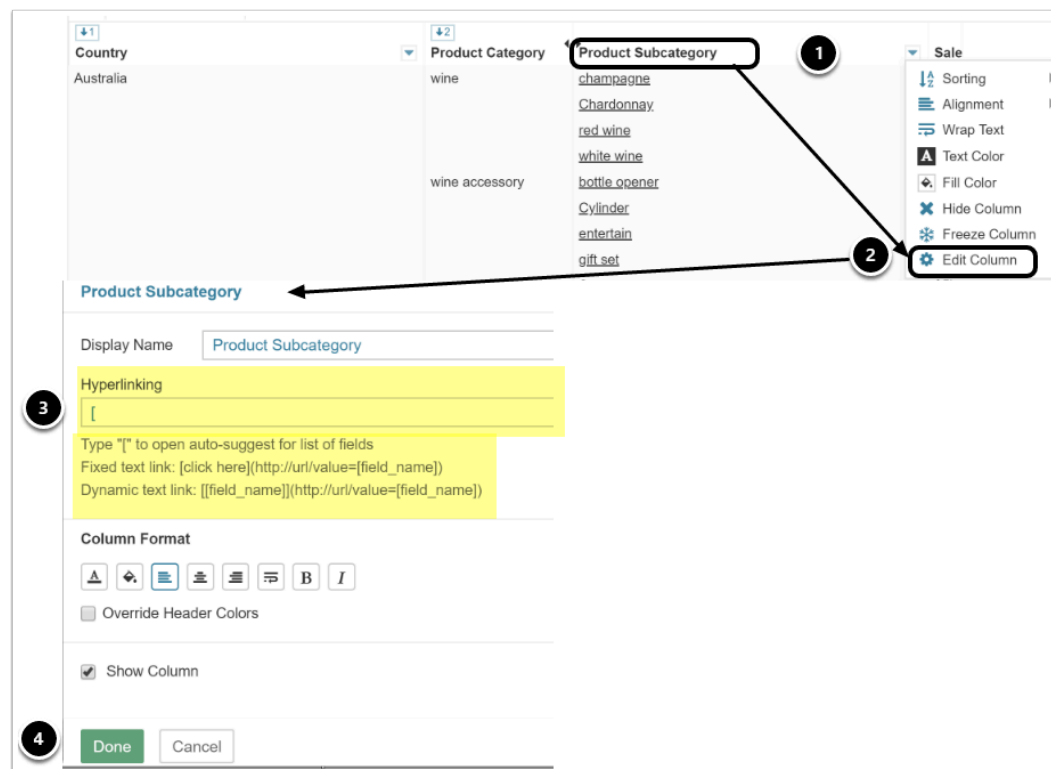
13. How to add Hyperlinks (without including an External Visualization)

If you are not linking to an External Visual contained in your Report, you will need to link each field individually. Basically, you edit the field where the link is being located and manually enter the Hyperlink code to access it.

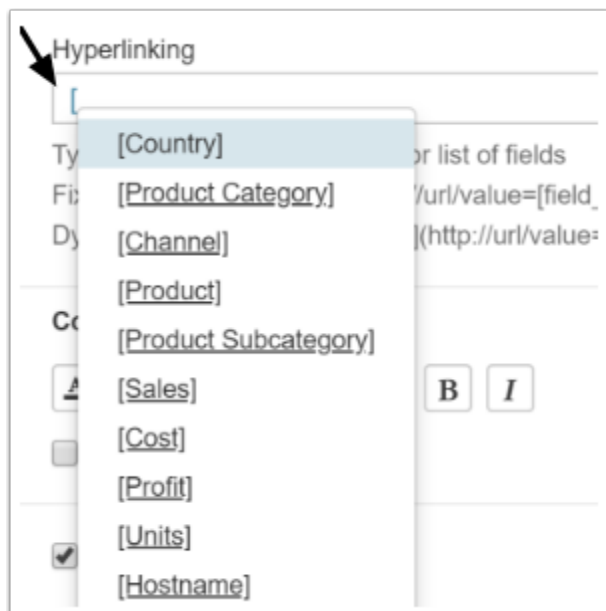
This is more fully explained in [Creating Hyperlinks in a Dataset Report](#).

💡 If you are linking to an External Visual, this process is automated. See details above at [External Visualizations and Hyperlinks](#).

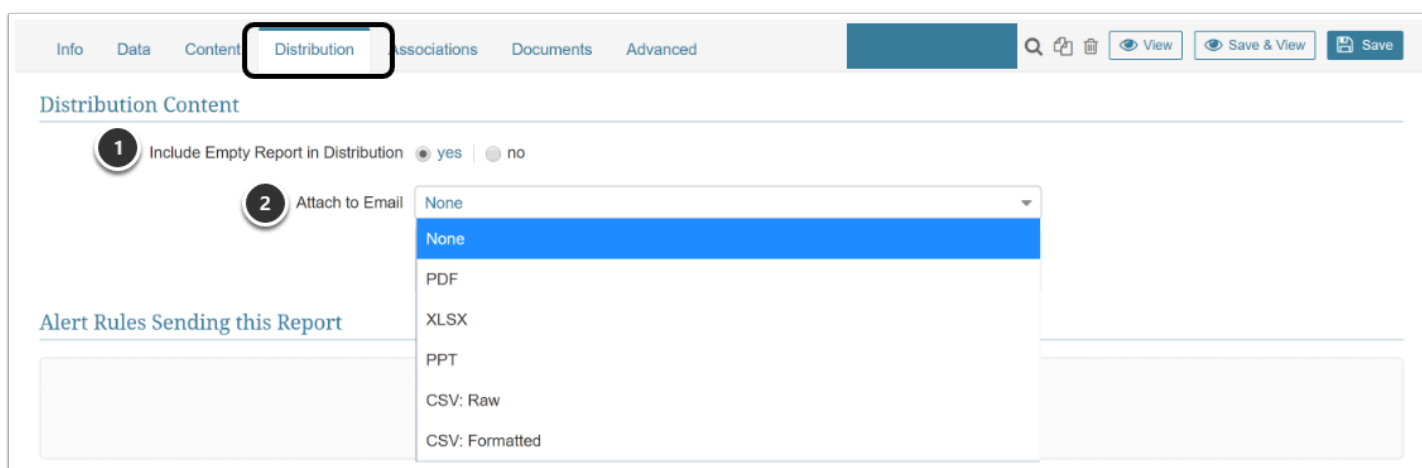
13.1. Where and how to create the link to one column



1. Open Column drop-down
2. Select **Edit Column** to open the **Column Editor**
3. In the **Hyperlinking** field
 1. Type "[" to open auto-suggest for list of fields (see below)
 2. To create a Fixed text link use this format: `[click here](http://url/value=[field_name])`
 3. To create a Dynamic text link use this format: `[[field_name]](http://url/value=[field_name])`
4. **[Done]**

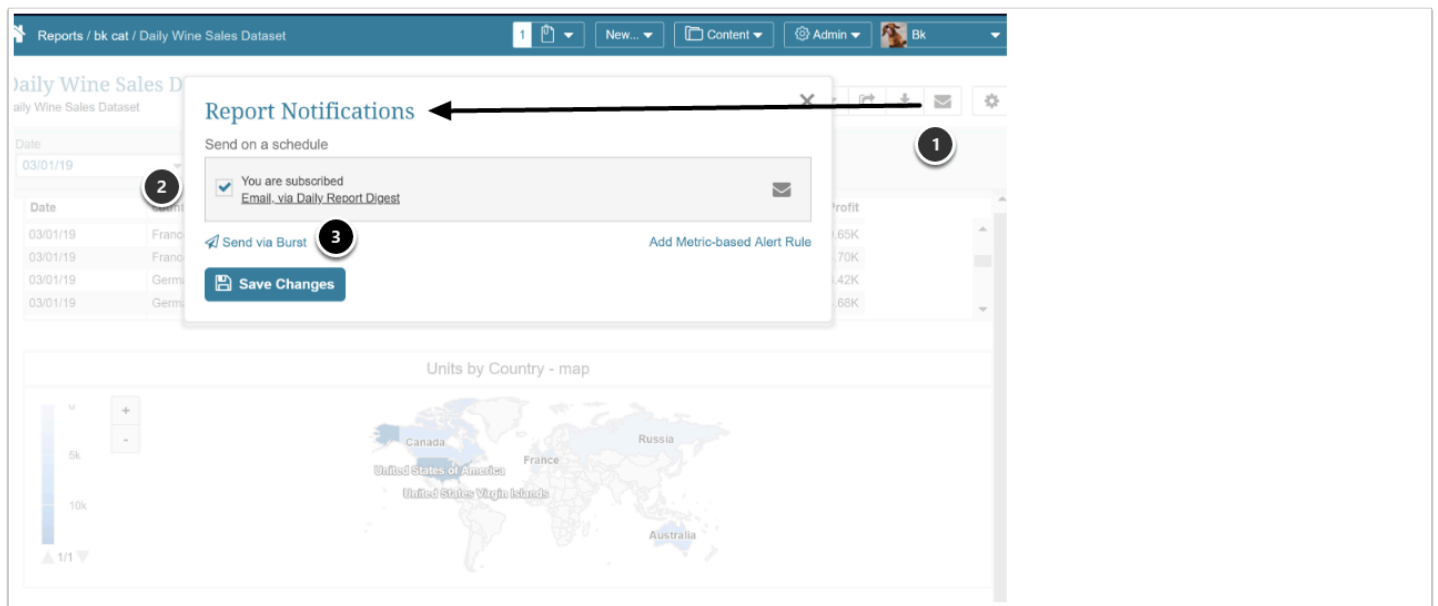


14. Report Distribution tab - set attachment type / empty report option



1. [Release 6.1.1] Specify if you want reports with no data to be distributed. For more details, see [Generating Empty Dataset Reports \(when there is No Data\)](#)
2. If you have chosen to include any **Attachments** to your report, you must specify the format in the **Report Distribution tab**. **Note:** This setting will apply to all Charts and Tables electing to include attachments.

15. Configure Report Notifications (from Report Viewer)



1. Select **Notification icon** in the far right side of Viewer
2. **Check box** to receive this Report Daily
3. Optionally, send this Report in a **Burst**

💡 For more information, refer to [Report Notifications\] Subscription Options, Settings available](#)

4.2 Applying Filters in Dataset Reports

There are two types of Filters available in the Content tab of the Report Editor. These Filters limit the data that is displayed when viewing the Report online or in Notifications such as Bursts or Digests:

1. **Report Filters** apply to **all** of the Report's elements (Tables, Charts, and linked External Visualizations). These appear as drop-downs that can be adjusted by the Viewer, much like Dimension drop-downs in older versions of Metric Insights.
2. **Table Filters** apply to a **single** Table or Chart, are fixed, and can only be modified in the Report Editor.

💡 An Overview of Dataset Report features is available here [Dataset Reports Overview](#)

Access Filters via the Report Editor's Content tab

1. Create Filters applicable to entire Report (Report Filters)

Example of a Report created from a Snapshot Dataset

1. Snapshot Date: Monday 08/13/2018

2. Edit Filters

Total Gross Profit	Channel	Total Sales Amount	Product Category	Country	Total Cost	Total Unit Count
23,692	corporate sales	70,079	wine	Australia	70,186	2,114
19,506	corporate sales	67,161	wine accessory	Australia	67,158	1,414
5,756	corporate sales	20,092	wine furniture	Australia	20,083	2,114
33,093	corporate sales	103,847	wine	Canada	93,198	9,114
3,220	corporate sales	26,203	wine accessory	Canada	23,591	5,114

Example of a Report with dates in BI tool

Click to add Filters to this Report.

Day of Calendar Date	Total Gross Profit	Total Sales Amount	Country	Channel	Product Category
2016-01-01 00:00:00	700	1,340	Australia	store visit	wine furniture
2016-01-01 00:00:00	1,315	4,759	Canada	website visit	wine furniture

Top Image - Report built from Snapshot Datasets

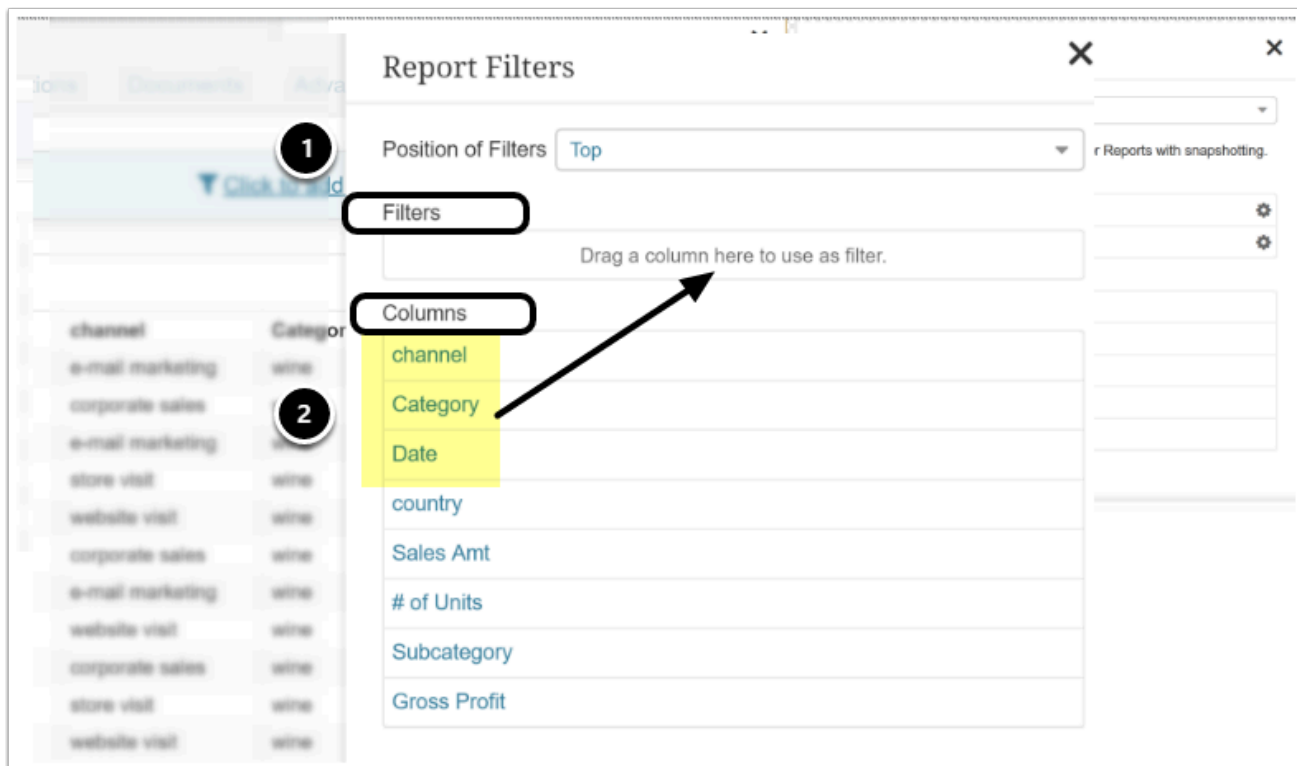
1. A Date Filter is created automatically for all Snapshot Reports
2. To add other Report level Filter(s) select the **Edit Filters** on far right

Lower Image - Report build with dates already present in data

- **Click to add Filters** link

Report Filters Editor will slide out from the right

1.1. Simply drag-and-drop to select Columns for Filtering



1. **Position Filter** display either *Right*, *Left*, or *Center*
2. To select Filters, simply drag fields from **Columns** section to the **Filters** section

1.2. Edit each Filter using the edit gear (or accept Default values)

Report Filters [X]

Position of Filters: Top

Filters

Filter	Edit
Date	
country	
channel	

Columns

Category
Sales Amt
of Units
Subcategory
Gross Profit

1.3. Editor for filter fields displays varies based on field characteristics

Country [X]

1 Label:

2 Filter Type:

Sort:

3 ☒ Include "All" value

Done Cancel

Report Filters [X]

Position of Filters:

Snapshot Date will always show as a filter for Reports with snapshotting.

Filters:

- Country
- Channel

Columns:

- Product Category
- Product Subcategory
- Sales Amount
- Unit Count

4 Apply Cancel

On this slide-out form, you can

1. You can add a **Label** (optional), select **Filter**, and the **Sort** criteria from the drop-downs
2. (new in 6.2.0) When selected **Filter** is "dropdown", the option to Include "All" value is available
3. Click *Done* to return to **Report Filter Editor**
4. **Apply**

1.4. Table will now be viewed based on your Filter choices in both the Editor and the Viewer.

Editor

Distribution Associations Documents Advanced

Date: 02/23/19
country: Russia, Canada
channel: e-mail marketing

Edit Filters

Filter Table

Date	country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
02/23/19	Canada	e-mail marketing	wine	\$264.96K	3,944	red wine	\$76.04K
02/23/19	Canada	e-mail marketing	wine furniture	\$49.54K	601	full cabinet	\$8.54K
02/23/19	Canada	e-mail marketing	wine accessory	\$110.64K	2,417	bottle opener	\$20.32K
02/23/19	Russia	e-mail marketing	wine	\$103.03K	2,164	red wine	\$25.15K
02/23/19	Russia	e-mail marketing	wine furniture	\$14.95K	156	full cabinet	\$2.77K
02/23/19	Russia	e-mail marketing	wine accessory	\$34.22K	884	bottle opener	\$6.73K

Drop Components Here

Daily Wine Sales Dataset

Data for Sunday 03/03/2019

Viewer

Date: 03/01/19
country: Spain, Canada
channel: store visit

Date	country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
03/01/19	Canada	store visit	wine	\$207.51K	4,088	red wine	\$55.99K
03/01/19	Canada	store visit	wine furniture	\$51.85K	587	full cabinet	\$9.39K
03/01/19	Canada	store visit	wine accessory	\$68.46K	1,510	bottle opener	\$10.73K
03/01/19	Spain	store visit	wine	\$137.22K	2,631	red wine	\$50.69K
03/01/19	Spain	store visit	wine furniture	\$50.37K	546	half cabinet	\$14.98K
03/01/19	Spain	store visit	wine accessory	\$67.37K	1,367	wine glasses	\$19.74K

Add Expert Analysis

Add a comment ...

💡 Note that the **Channel** and **Country** Filters were manipulated in the **Viewer example**.

1.5. Example of a Filter slide-out of a Dimensioned Report with snapshot data

Sales Dataset 2018 by Category (dimensioned by Product Category)

0 5 New... Content Admin Anna

Content Distribution Association Documents Advanced

1 2 3

Snapshot Date: Sunday 08/12/2018

Product Category: wine

country: All

Filter Table

product_category	product_subcateg	channel	country	Product
wine	red wine	corporate sales	Australia	2 Up Shiraz 2007
wine	red wine	corporate sales	Australia	2003 Montclair Ca
wine	red wine	corporate sales	Australia	2009 Spring Hills M
wine	Chardonnay	corporate sales	Australia	3 Blind Moose Cha
wine	champagne	corporate sales	Australia	A-Mano Primitivo 2
wine	Chardonnay	corporate sales	Australia	Acacia A by Acacia
wine	Chardonnay	corporate sales	Australia	Acacia Carneros Cl

Report Filters

Position of Filters: Top

Snapshot Date will always show as a filter for Reports with snapshotting.

Dimensions

Product Category

Filters

country

Columns

product_subcategory

channel

Note following differences:

1. **Snapshot Date** does not appear in the Report Filters at all
2. The **Dimension** (Product Category) appears in Report Filters in list of Dimensions (not available for editing)
3. **Country** was added as a Report Filters and can be edited

2. Apply Filters to a single Object in the Report

The top screenshot shows the 'Daily Wine Sales Dataset' report. The table displays the following data:

country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
Canada	corporate sales	wine	\$273.21K	4,759	red wine	\$81.92K

The bottom screenshot shows the 'Filter Table' dialog box. It contains the following elements:

- Filter Table** dropdown menu (circled 2)
- Reset Columns** button
- Show on Tile** checkbox
- Edit** button
- Add a Rule** link (circled 3)
- + Rule** button
- + Group** button
- Apply** button (circled 4)

1. Click Filter icon for selected Table to open field for input
2. Rules and Grouping section opens - this section functions just like the Alert Editor Rules section
3. **Add a Rule** You can add as many Groupings and Rules as you need
4. **Apply**

3. Example of filtering for High Values Sales

Content Distribution Associations Documents Advanced

Search Save & View Save

Date: 02/27/19 country: All channel: All Edit Filters

Filter Table Reset Columns Show on Tile Edit

AND OR

Sales Amt is greater than a value 250000 +Rule +Group Apply

country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
Canada	corporate sales	wine	\$273.21K	4,759	red wine	\$81.92K
Canada	website visit	wine	\$259.14K	4,899	red wine	\$75.17K
France	corporate sales	wine	\$274.62K	4,267	red wine	\$80.68K
France	e-mail marketing	wine	\$325.01K	5,435	red wine	\$94.35K
France	store visit	wine	\$267.14K	5,623	red wine	\$70.82K
United States	corporate sales	wine	\$521.73K	9,394	red wine	\$189.04K
United States	corporate sales	wine accessory	\$250.32K	5,662	bottle opener	\$73.27K
United States	e-mail marketing	wine	\$439.31K	8,391	red wine	\$161.15K
United States	store visit	wine	\$588.93K	9,798	red wine	\$203.37K
United States	store visit	wine accessory	\$250.01K	4,965	bottle opener	\$74.67K
United States	website visit	wine	\$501.74K	9,181	red wine	\$176.78K

3.1. How to remove Filter display or actually remove the Filter Rules

2 Filter Table 1 Reset Columns Show on Tile Edit

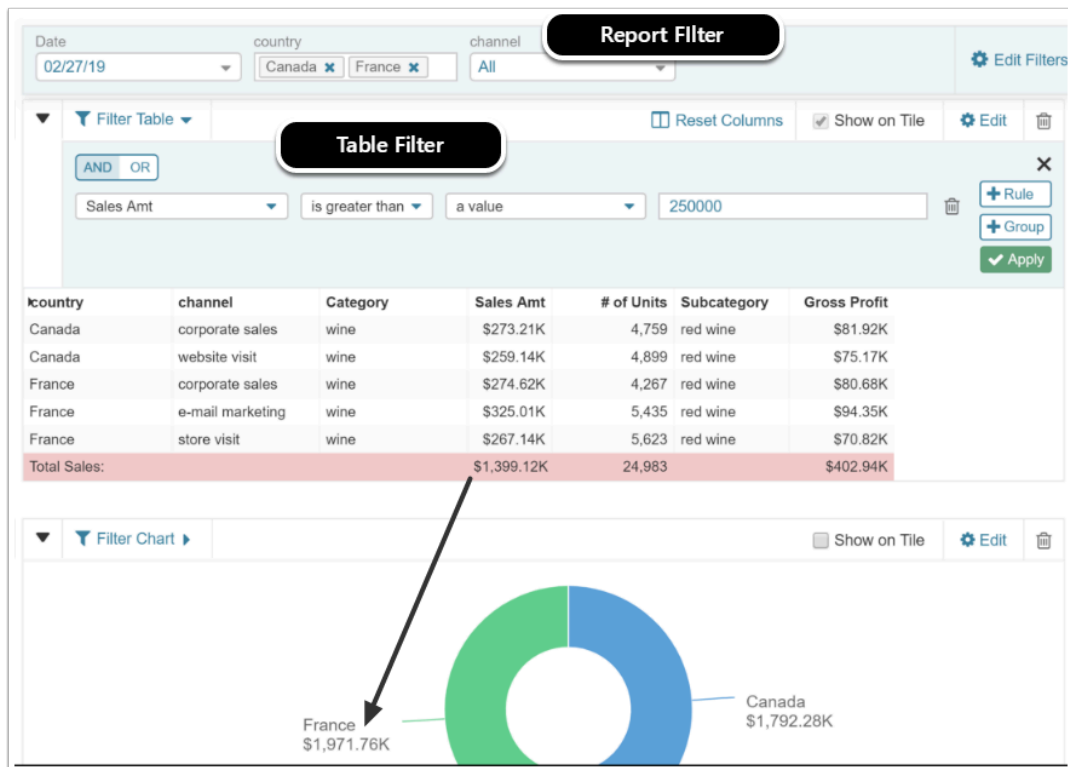
AND OR

Sales Amt is greater than a value 250000 3 +Rule +Group Apply

country	channel	Category	Sales Amt	# of Units	Subcategory	Gross Profit
Canada	corporate sales	wine	\$273.21K	4,759	red wine	\$81.92K
Canada	website visit	wine	\$259.14K	4,899	red wine	\$75.17K
France	corporate sales	wine	\$274.62K	4,267	red wine	\$80.68K
France	e-mail marketing	wine	\$325.01K	5,435	red wine	\$94.35K
France	store visit	wine	\$267.14K	5,623	red wine	\$70.82K
United States	corporate sales	wine	\$521.73K	9,394	red wine	\$189.04K

1. Clicking the 'X' will hide the Filter information, but filtering will still be applied
2. You can expose the Filter for modification by again clicking on the Filter Table icon
3. Rules and Groups can be removed via the associated trashcan icons

4. Example showing how the two filters work on other elements in Report



Note that both the **Table** and the **Pie Chart** are displaying only data for the selected countries of **Canada** and **France** due to the **Report Filter**.

The **Table** is further restricted by the **Table filter (Sales > \$25k)** while the Chart displays **Total Sales** for each country.

4.3 Using Sections and Groups in Dataset Report Tables

Two of the easiest way to enhance the appearance of your Report are explained below.

[Sections](#) provide the ability to specify an external break column (sections) for a report grid so that tables can be shown one per value of the column.

[Grouping](#) provides the ability to specify that a column should group values. When set, the column values that are repeated are instead shown as a blank.

i Example of Grouping and Sections applied to a large table of Sales by Country, Channel, and Product Category extracted from a Tableau Dataset.

1. Initial Report Table

Report Editor / Sales Dataset 2018 - Tableau Table (Version 3)

Info Data **Content** Distribution Associations Documents Advanced

Snapshot Date: Monday 08/13/2018

Filter Table

Country	Channel	Product Category	Total Cost	Total Gross Profit	Total Sales Amount	Total Unit Count
Australia	corporate sales	wine	70,186	23,692	70,079	2,130
Australia	corporate sales	wine accessory	67,158	19,506	67,161	1,480
Australia	corporate sales	wine furniture	20,083	5,756	20,092	222
Canada	corporate sales	wine	93,198	33,093	103,847	918
Canada	corporate sales	wine accessory	23,591	3,220	26,203	570
Canada	corporate sales	wine furniture	18,601	3,419	20,468	91
France	corporate sales	wine	169,935	40,444	169,935	3,285
France	corporate sales	wine accessory	79,685	11,602	79,620	1,554
France	corporate sales	wine furniture	55,856	11,681	55,873	435
Germany	corporate sales	wine	115,164	27,706	115,164	2,075
Germany	corporate sales	wine accessory	44,918	3,283	44,893	820
Germany	corporate sales	wine furniture	40,282	1,190	40,289	539
Russia	corporate sales	wine	163,613	45,166	163,613	3,385
Russia	corporate sales	wine accessory	74,288	11,381	74,266	1,345
Russia	corporate sales	wine furniture	28,348	4,553	28,376	340
Spain	corporate sales	wine	109,137	38,693	109,137	2,125
Spain	corporate sales	wine accessory	41,695	13,434	41,683	944
Spain	corporate sales	wine furniture	31,413	9,689	31,437	416

2. How to apply Grouping (edit the Table)

Report Editor / Sales Dataset 2018 - Tableau Table (Version 3)

Info Data Content Distribution Associations Documents Advanced

Snapshot Date
Monday 08/13/2018

Filter Table

Country	Channel	Product Category	Total Cost
Australia	corporate sales	wine	70,186
Australia	corporate sales	wine accessory	67,158
Australia	corporate sales	wine furniture	20,083
Canada	corporate sales	wine	93,198
Canada	corporate sales	wine accessory	23,591
Canada	corporate sales	wine furniture	18,601
France	corporate sales	wine	169,935
France	corporate sales	wine accessory	79,685
France	corporate sales	wine furniture	55,856
Germany	corporate sales	wine	115,164
Germany	corporate sales	wine accessory	44,918
Germany	corporate sales	wine furniture	40,282
Russia	corporate sales	wine	163,613
Russia	corporate sales	wine accessory	74,288
Russia	corporate sales	wine furniture	28,348
Spain	corporate sales	wine	109,137
Spain	corporate sales	wine accessory	41,695
Spain	corporate sales	wine furniture	31,413

Table

Header Format

Grouping ☒ Sections ☐ Grouping

Country

Channel

Columns (drag & drop to sort)

Total Cost

Total Gross Profit

Total Sales Amount

Product Category

Total Unit Count

Sort Order

Country A to Z

Channel A to Z

Conditional Formatting

1. Check the **Grouping** box
2. Grouping grid opens
3. Use Drag-and-drop to move fields from **Columns** section to **Grouping** section
4. Columns in Grouping will immediately appear in the **Sort Order** section - adjust the sort as needed
5. Use the field level **edit** icon(s) to apply additional formattings, such as Colors or Hyperlinks

Filter Table

AND OR

Total Sales Amount

is greater than or equal

a value

70000

+ Rule

+ Group

✓ Apply

Country	Channel	Total Sales Amount	Total Cost	Total Gross Profit	Product Category	Total Unit Count
Australia	corporate sales	70,079	70,186	23,692	wine	2,130
		70,079	70,186	23,692	wine	2,130
		70,079	70,186	23,692	wine	2,130
		70,079	70,186	23,692	wine	2,130
	website visit	107,485	107,626	40,083	wine	2,222
		107,485	107,626	40,083	wine	2,222
		107,485	107,626	40,083	wine	2,222
		107,485	107,626	40,083	wine	2,222
Canada	corporate sales	103,847	93,198	33,093	wine	918
		103,847	93,198	33,093	wine	918
		103,847	93,198	33,093	wine	918
		103,847	93,198	33,093	wine	918
	store visit	85,773	76,971	24,124	wine	1,064
		85,773	76,971	24,124	wine	1,064
		85,773	76,971	24,124	wine	1,064

1. Grouping one - **Country**
2. Grouping two - **Channel**

3. How to apply Sections (edit the Table)

Content

Distribution

Associations

Documents

Advanced

Snapshot Date

Monday 08/13/2018

Filter Table

Channel	Product Category	Total Sales Amount
website visit	wine	107,485
corporate sales	wine	70,079
website visit	wine	107,485

Table

Title

Arial, Helvetica, sans-serif

12

Header Format

B

I

Sections

1

Country

5

Columns (drag & drop to sort)

Channel

Product Category

Total Sales Amount

Total Cost

Total Gross Profit

Total Unit Count

Sort Order

Country

A to Z

+ Sort

1. Check the **Sections** box
2. Sections grid opens

3. Use Drag-and-drop to move fields from **Columns** grid to **Sections** grid
4. Fields placed in Grouping grid will immediately appear in the **Sort Order** section - adjust the sort as needed
5. Use the field level **edit** icon(s) to apply additional formatting, such as Highlighting

4. Combined Grouping and Sectioning example

The screenshot displays the METRIC INSIGHTS interface. On the left, a table is shown with data grouped by country (Canada and France). The table has columns: channel, product_category, product_subcategory, and total_sales_amount. The data is further grouped by channel (website visit, corporate sales) and product_category (wine, wine accessory, wine furniture). On the right, a 'Table' configuration panel is open, showing settings for the table. The panel includes a 'Title' field, a font selection dropdown (Arial, Helvetica, sans-serif), a font size dropdown (12), and a 'Header Format' section with icons for bold, italic, and underline. Below these are checkboxes for 'Sections' and 'Grouping'. The 'Sections' section shows 'country' as a section. The 'Grouping' section shows 'channel' and 'product_category' as grouped fields. The 'Columns' section shows a list of fields: product_subcategory, total_sales_amount, total_unit_count, total_cost, total_gross_profit, and calendar_date (hidden). The 'Sort Order' section is empty. At the bottom of the panel are 'Apply' and 'Cancel' buttons.

channel	product_category	product_subcategory	total_sales_amount
Canada			
website visit	wine	full cabinet	\$38,711.75
		champagne	\$5,596.49
		Chardonnay	\$13,105.00
		white wine	\$17,209.76
		red wine	\$40,944.73
	wine accessory	Storage	\$841.50
		wine glasses	\$1,879.25
		entertain	\$3,599.85
		Cylinder	\$4,180.00
		bottle opener	\$4,565.50
		gift set	\$21,141.20
	wine furniture	wine rack	\$6,498.65
		full cabinet	\$13,927.40
France			
corporate sales	wine	Chardonnay	\$31,666.00
		champagne	\$34,679.77

1. **Section** by **Country**
2. **Grouping** by **Channel**
3. **Secondary Grouping** by **Product Category**

4.4 Adding Column Aggregation to Dataset Report Tables

In Release 5.5 we have added the ability to aggregate numeric fields directly in the Report without the need to create a new view first. The Report function mimics the ability in the Data Viewer as seen below.

How to access aggregation options:

- via column drop-downs
- via the Column Editor
- via the Table Editor

How aggregation works:

1. Aggregation regardless of type (sum, average, minimum, maximum, etc.) allows to display unique pairs of values. If you choose to aggregate values based on a particular parameter (country, product category), the aggregation function will produce only ONE resulting value that will be a sum, an average, a minimum or a maximum value calculated based on all existing values for that parameter.
2. When aggregation is applied, matching values in all visible columns will be displayed in sets.
3. Since aggregation produces pairs of unique values, sorting will not be applied to the aggregated column.
4. Aggregation can be applied to multiple numeric columns.
5. Both hidden and displayed columns are included in aggregation.

Known issue for 5.5.0:

- After aggregation has been applied to any numeric column, sorting can not be applied to any other column.

Datasets / Wine Sales Dataset / Sum of values

Sum of values

Single Instance Monday 03/04/2019

Select Fields

Track Changes

Define filters

AND OR

Changes Applied

Results

Show: All of 96 row

country	channel	Category	Sum of Gross Profit	Sum of # of Units	Sum of Sales Amt
Australia	corporate sales	wine	\$2,115.73K	114,340	\$5,917.04K
Australia	corporate sales	wine accessory	\$911.52K	63,489	\$3,014.01K
Australia	corporate sales	wine furniture	\$501.40K	16,607	\$1,608.83K
Australia	e-mail marketing	wine	\$1,943.52K	105,204	\$5,437.18K
Australia	e-mail marketing	wine accessory	\$877.36K	62,644	\$2,951.41K
Australia	e-mail marketing	wine furniture	\$488.03K	15,559	\$1,579.10K
Australia	store visit	wine	\$2,014.08K	108,877	\$5,624.95K

Report without Aggregation

Report Editor / Wine Sales Report for the Year

Info Data Content Distribution Associations Documents Advanced

Click to add Filters to this Report.

Tables

Filter Table

Reset Columns Show on Tile Edit

country	channel	Category	Sales Amt	# of Units	Gross Profit
Australia	corporate sales	wine	\$814.09K	17,711	\$207.10K
Australia	corporate sales	wine	\$786.36K	34,956	\$326.84K
Australia	corporate sales	wine	\$2,872.85K	40,667	\$1,025.98K
Australia	corporate sales	wine	\$1,443.74K	21,006	\$555.80K
Australia	corporate sales	wine furniture	\$1,217.33K	9,614	\$382.39K
Australia	corporate sales	wine furniture	\$63.45K	141	\$30.43K
Australia	corporate sales	wine furniture	\$328.05K	6,852	\$88.58K
Australia	corporate sales	wine accessory	\$571.80K	17,397	\$203.63K
Australia	corporate sales	wine accessory	\$281.27K	2,557	\$96.01K
Australia	corporate sales	wine accessory	\$342.58K	10,543	\$105.87K
Australia	corporate sales	wine accessory	\$1,002.30K	16,258	\$235.91K
Australia	corporate sales	wine accessory	\$240.30K	3,715	\$80.30K
Australia	corporate sales	wine accessory	\$575.76K	13,019	\$189.79K
Australia	e-mail marketing	wine	\$774.77K	16,851	\$197.87K
Australia	e-mail marketing	wine	\$694.61K	30,881	\$289.11K
Australia	e-mail marketing	wine	\$2,498.08K	37,636	\$884.29K
Australia	e-mail marketing	wine	\$1,469.73K	19,836	\$572.24K

1. Aggregate via Column drop-downs

Report Editor / Wine Sales Report for the Year

to Data Content Distribution Associations Documents Advanced

Click to add Filters to this Report.

Edit the fields in the Column drop-downs

country	channel	Category	Sales Amt	# of Units	Gross Profit
Australia	corporate sales	wine	\$814.0	7,711	\$207.10K
Australia	corporate sales	wine	\$786.3	4,956	\$326.84K
Australia	corporate sales	wine	\$2,872.8		\$1,025.98K
Australia	corporate sales	wine	\$1,443.7		\$555.80K
Australia	corporate sales	wine furniture	\$1,217.3		\$382.39K
Australia	corporate sales	wine furniture	\$63.4		\$30.43K
Australia	corporate sales	wine furniture	\$328.0		\$88.58K
Australia	corporate sales	wine accessory	\$571.8		\$203.63K
Australia	corporate sales	wine accessory	\$281.27K		\$96.01K

2. Aggregate via Table Editor

Table Editor

Table

Title

Arial, Helvetica, sans-serif

Header Format

Columns (1 drag & drop to sort)

country

channel

Category

Sales Amt

of Units

Subcategory (hidden)

Gross Profit

of Units

Display Name

Display Mask

Aggregation

Hyperlinking

Column Format

Override Header

1. Edit the **Table**
2. Edit the numeric **field(s)**
3. Select type of **Aggregation**

Done / Apply to return to full Table Editor

3. Resulting Table

▼	Filter Table ▶			Reset Columns	Show on Tile	Edit	
country	channel	Category	Sales Amt	# of Units ▶	Gross Profit		
Australia	e-mail marketing	wine furniture	\$1,579.10K	15,559	\$488.03K		
Australia	store visit	wine	\$5,624.95K	108,877	\$2,014.08K		
Australia	store visit	wine accessory	\$2,754.21K	58,658	\$819.66K		
Australia	store visit	wine furniture	\$1,446.64K	14,187	\$452.64K		
Australia	website visit	wine	\$6,197.14K	115,006	\$2,262.94K		
Australia	website visit	wine accessory	\$3,068.29K	63,169	\$913.90K		
Australia	website visit	wine furniture	\$1,568.38K	15,206	\$489.32K		
Canada	corporate sales	wine	\$14,565.13K	271,857	\$4,022.72K		
Canada	corporate sales	wine accessory	\$7,250.06K	152,403	\$1,254.09K		
Canada	corporate sales	wine furniture	\$3,897.58K	38,759	\$763.81K		
Canada	e-mail marketing	wine	\$14,650.09K	270,781	\$4,075.11K		
Canada	e-mail marketing	wine accessory	\$7,013.14K	149,996	\$1,202.74K		
Canada	e-mail marketing	wine furniture	\$3,783.51K	37,634	\$747.04K		

4. Aggregate by 'Ave' instead of 'Sum' - Results

▼	Filter Table ▶					
country	channel	Category	Sales Amt	# of Units ▶	Gross Profit	
Australia	e-mail marketing	wine furniture	\$25.47K	251	\$7.87K	
Australia	store visit	wine	\$90.72K	1,756	\$32.49K	
Australia	store visit	wine accessory	\$44.42K	946	\$13.22K	
Australia	store visit	wine furniture	\$23.33K	229	\$7.30K	
Australia	website visit	wine	\$99.95K	1,855	\$36.50K	
Australia	website visit	wine accessory	\$49.49K	1,019	\$14.74K	
Australia	website visit	wine furniture	\$25.30K	245	\$7.89K	
Canada	corporate sales	wine	\$234.92K	4,385	\$64.88K	
Canada	corporate sales	wine accessory	\$116.94K	2,458	\$20.23K	
Canada	corporate sales	wine furniture	\$62.86K	625	\$12.32K	
Canada	e-mail marketing	wine	\$236.29K	4,367	\$65.73K	
Canada	e-mail marketing	wine accessory	\$113.12K	2,419	\$19.40K	
Canada	e-mail marketing	wine furniture	\$61.02K	607	\$12.05K	

If this is to be your final iteration of the Report, you should Edit the numeric values so that the Field names correctly reflect the values of the data - as seen in the Report Viewer below.

Daily Wine Sales Dataset report

Data for Monday 03/04/2019

Daily Wine Sales Dataset

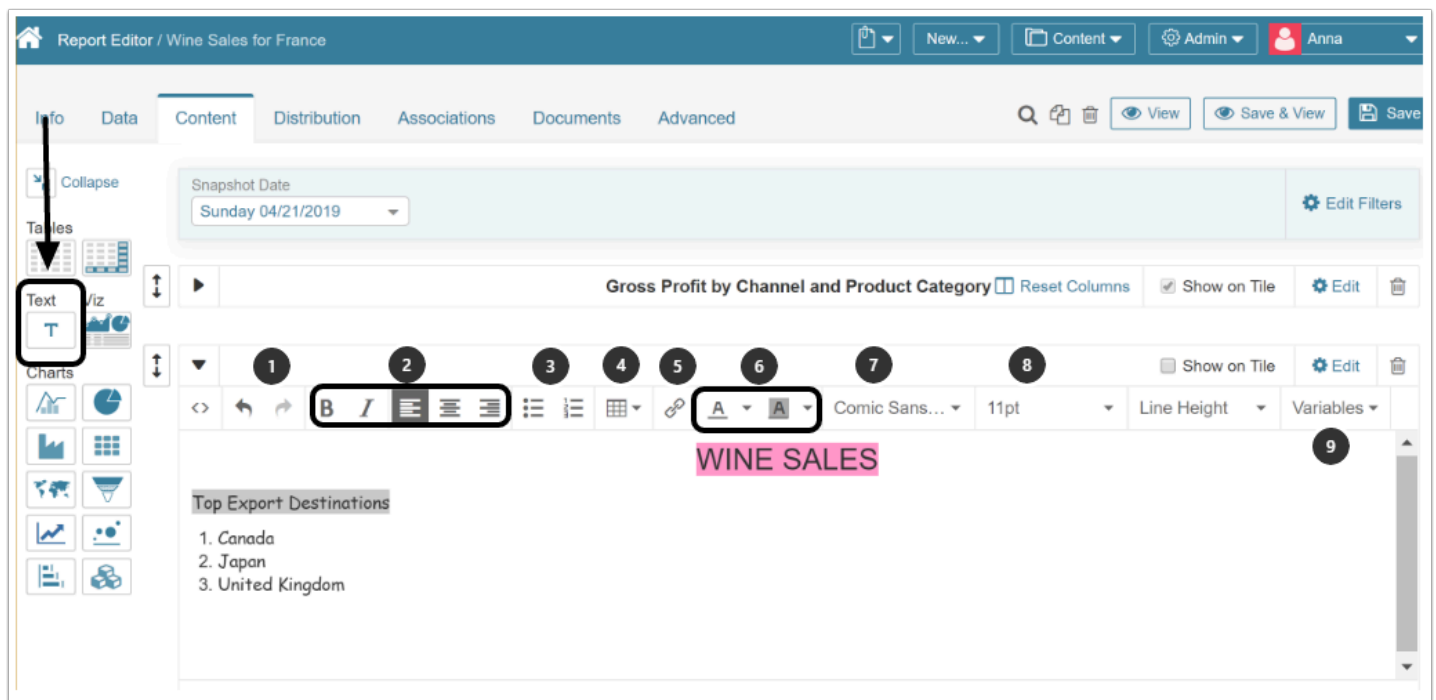
country	channel	Category	Average Sale Am	Ave # Units	Average Gross Profit
Australia	corporate sales	wine	\$95.44K	1,844	\$34.12K
Australia	corporate sales	wine accessory	\$48.61K	1,024	\$14.70K
Australia	corporate sales	wine furniture	\$25.95K	268	\$8.09K
Australia	e-mail marketing	wine	\$87.70K	1,697	\$31.35K
Australia	e-mail marketing	wine accessory	\$47.60K	1,010	\$14.15K
Australia	e-mail marketing	wine furniture	\$25.47K	251	\$7.87K
Australia	store visit	wine	\$90.72K	1,756	\$32.49K
Australia	store visit	wine accessory	\$44.42K	946	\$13.22K
Australia	store visit	wine furniture	\$23.33K	229	\$7.30K
Australia	website visit	wine	\$99.95K	1,855	\$36.50K
Australia	website visit	wine accessory	\$49.49K	1,019	\$14.74K
Australia	website visit	wine furniture	\$25.30K	245	\$7.89K
Canada	corporate sales	wine	\$234.92K	4,385	\$64.88K

4.5 Working with Text Blocks

Users can add blocks of text to Dataset Reports to make them even more informative and compelling. To use this option, drag the **Text** component to the Report Canvas and select options as needed. **Variables** in Text Blocks allow Users to add high-level KPIs to their Dataset Reports.

💡 [6.1.1 new] New option to define your own formulas for Variables in a Text block allowing maximum flexibility in highlighting Issues and Results.

1. Formatting options

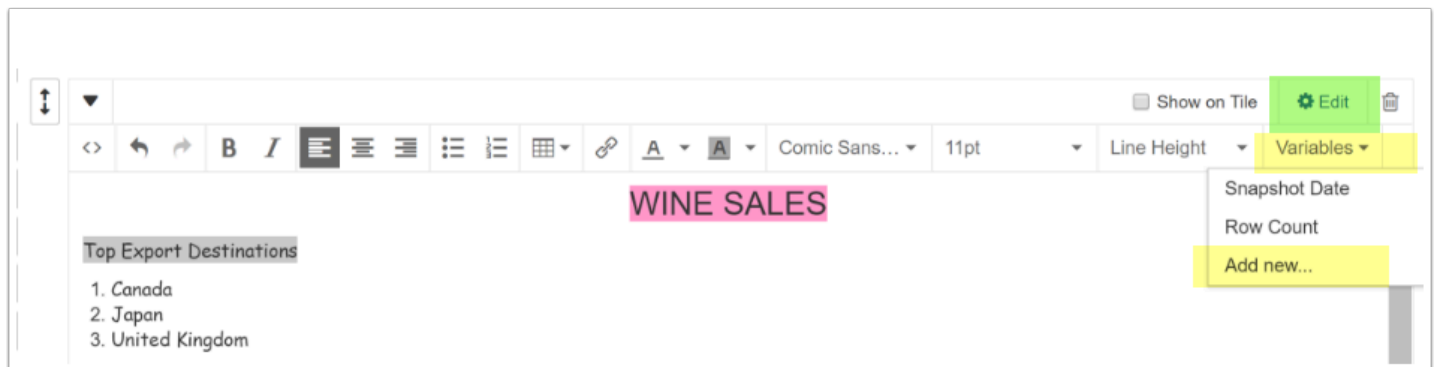


The following formatting functionality is supported:

1. Undo/redo (change history)
2. Bold, Italic, text alignment (left, center, right)
3. [5.5.1] Ordered and Unordered lists
4. [5.5.1] Tables
5. Hyper-linking
6. Font color, background color
7. Font family

8. Font size
9. [5.5.1] Source code (HTML) viewing and editing (Variables)

2. Adding Variables and Formulas



The default list of Variables can be extended from:

1. Text Block Editor via **edit icon**
2. Variables drop-down (**Add new..** will open the Text Block editor)

Text Block editor will slide out for input

2.1. The Text Block Editor - Variables

- 💡 The Formula feature is new in Version 6.1.1—older versions will not display [+ Formula]. Your Formulas will display in the Variables dropdown on the Text Block component.

1. Give the Text Block a descriptive Title (optional)
2. Select [+ Variable] to display drop-down options for:
3. System defined type of aggregation (Sum, Ave, Min, Max...)
4. Variable (field name or formula name)

[Apply] to add these options to your list of Variables in Text Block

The new Variable is now available for use anywhere in your Text Block simply by selecting from the **Variable** dropdown.

2.2. The Text Block Editor - Formulas

💡 Variables must be defined prior to creating the Custom formulas that display them.

The screenshot shows the 'Text Block' editor interface. On the left, a preview of a table with 'KPI Information' is visible. The main editor area is titled 'Text Block' and contains a 'Variables' section with a dropdown set to 'Sum' and a text input 'total_sales_amount'. Below this is a 'Formulas' section with a '+ Formula' button. A second window, titled 'Calculated Gross Profit', is open, showing the configuration for a new formula. It includes a 'Display Name' field with 'Calculated Gross Profit', a 'Formula' field with '[total_sales_amount] - [total_cost]', a 'Display Mask' field with '\$1,234.57K', and a 'Conditional Formatting' section with a '+ Formatting Rule' button. A 'Validate Formula' button is at the bottom. Numbered callouts 1 through 6 point to specific steps in the process: 1. '+ Formula' button, 2. 'Display Name' field, 3. 'Formula' field, 4. 'Display Mask' field, 5. '+ Formatting Rule' button, and 6. 'Validate Formula' button.

1. Select **[+Formula]** to open popup for new Variable + Format
2. Input meaningful **Display Name** (optional)
3. Create your **Formula** using "[" to provide list of available Variables, plus mathematical / arithmetic symbol(s)
4. Select a **Display Mask** if you do not wish to use the default
5. **[+ Formatting Rule]** allows you to use standard formatting to select color, text size, background, etc for the Variable
6. **Validate Formula** allows you to verify result before selecting DONE to return to Variable Editor

2.2.1. Mathematical operations supported

- Add +
- Subtract -
- Multiply *
- Divide /
- Multiple operators (x*y) + z / b
- Power()

- Mod()
- ABS()

2.3. Edit the Text Block to clarify the meaning and then select a Variable from list

the text block

▼

Show on Tile Edit

Comic Sans... 11pt Line Height

Variables

Snapshot Date

Row Count

Avg of avg(percent_gross_margin)

Sum of sum(total_sales_amount)

Add new...

WINE SALES

Top Export Destinations

1. Canada
2. Japan
3. United Kingdom

The current total of Sales is [sum(total_sales_amount)]

The Variable will appear at the point of your cursor and will be replaced in the Viewer and emails with correct value.

Example below show that Formatting may also be applied to these options (Bold, Larger type applied)

Wine Sales for France

Wine Sales for France

Date

Sunday 04/21/2019

Gross Profit by Channel and Product Category

channel	wine	wine accessory	wine furniture	Total
Overall Total	320,361	85,665	75,364	481,389
corporate sales	91,223	23,116	18,035	132,375
e-mail marketing	85,930	16,892	17,861	120,684
store visit	73,473	24,391	22,175	120,039
website visit	69,734	21,265	17,292	108,292

the text block

WINE SALES

Top Export Destinations

1. Canada
2. Japan
3. United Kingdom

The current total of Sales is 2.07M

Add Expert Analysis

4.6 Creating Manual Hyperlinks in a Dataset Report

💡 If you are linking to an **External Visual that is included** in your Report, the hyperlink process is much simplified. See details [here](#)

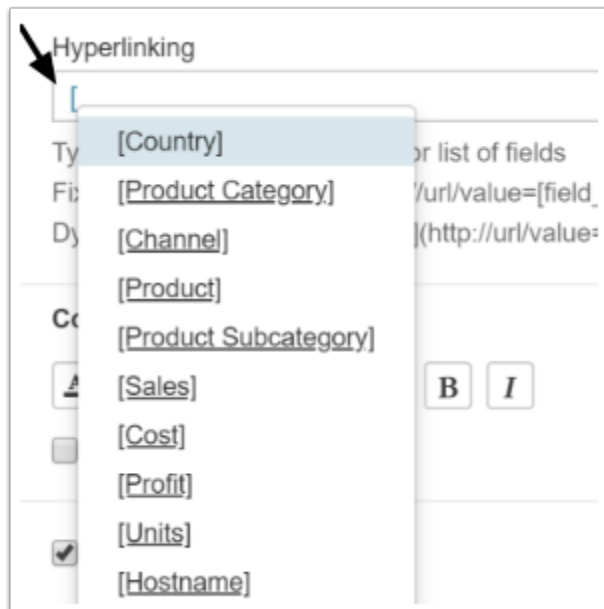
⚠️ The system is expecting numeric hyperlinks to be **unformatted**. If you are linking on a **formatted** numeric field, you can add " (Formatted)" suffix to column name like [Total Sales Amount (Formatted)]. Note: there is a space between the Field Name and (Formatted).

1. How to create the link

The screenshot illustrates the steps to create a manual hyperlink in a dataset report. The interface shows a table with columns: Product Category, Product Subcategory, Product, Sales, and Cost. A context menu is open for the 'Product Subcategory' column, with 'Edit Column' selected. A 'Column Editor' dialog box is shown in the foreground, with the 'Hyperlinking' field highlighted. The dialog box contains fields for 'Display Name', 'Hyperlinking', and 'Column Format'. The 'Hyperlinking' field has a dropdown menu open showing options like 'Type "[\" to open auto-suggest for list of fields', 'Fixed text link: [click here](http://url/value={field_name})', and 'Dynamic text link: [{field_name}](http://url/value={field_name})'. The 'Column Format' section includes icons for text alignment, bold, italic, and a checkbox for 'Override Header Colors'. The 'Show Column' checkbox is checked. The dialog box has 'Done' and 'Cancel' buttons at the bottom.

1. Open Column drop-down (**Subcategory**)
2. Select **Edit Column** to open the **Column Editor**
3. In the **Hyperlinking** field
 1. Type "[\" to open auto-suggest for list of fields in your Report (see below)

2. To create a Fixed text link use this format: `[click here] (http://url/value=[field_name])`
3. To create a Dynamic text link use this format: `[[field_name]] (http://url/value=[field_name])`
4. **[Done]**



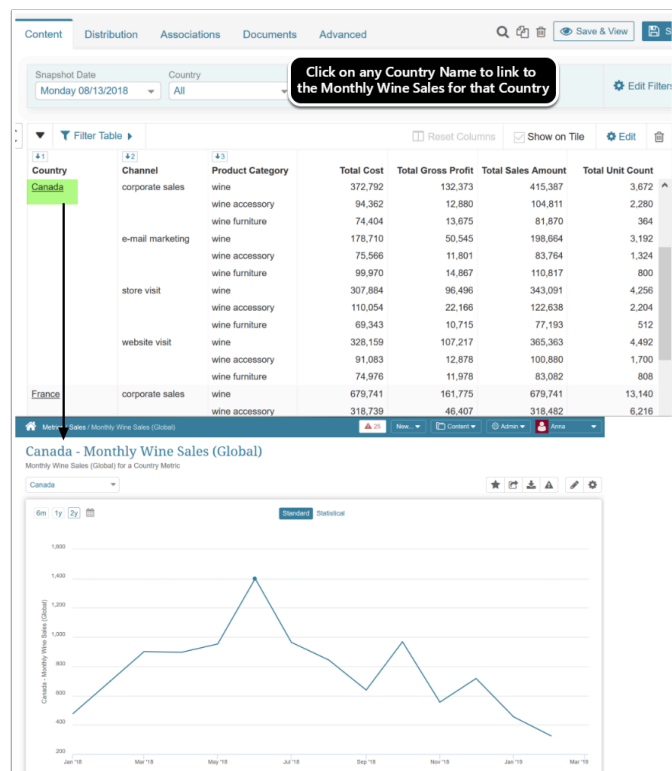
2. How to find the values used in hyperlinks

2.1. Simple example of linking to a Metric dimensioned by Country

Note that if you are linking to a **Dimensioned element**, you will need to change '=' (equals) to '/' (slash) for the Value field:

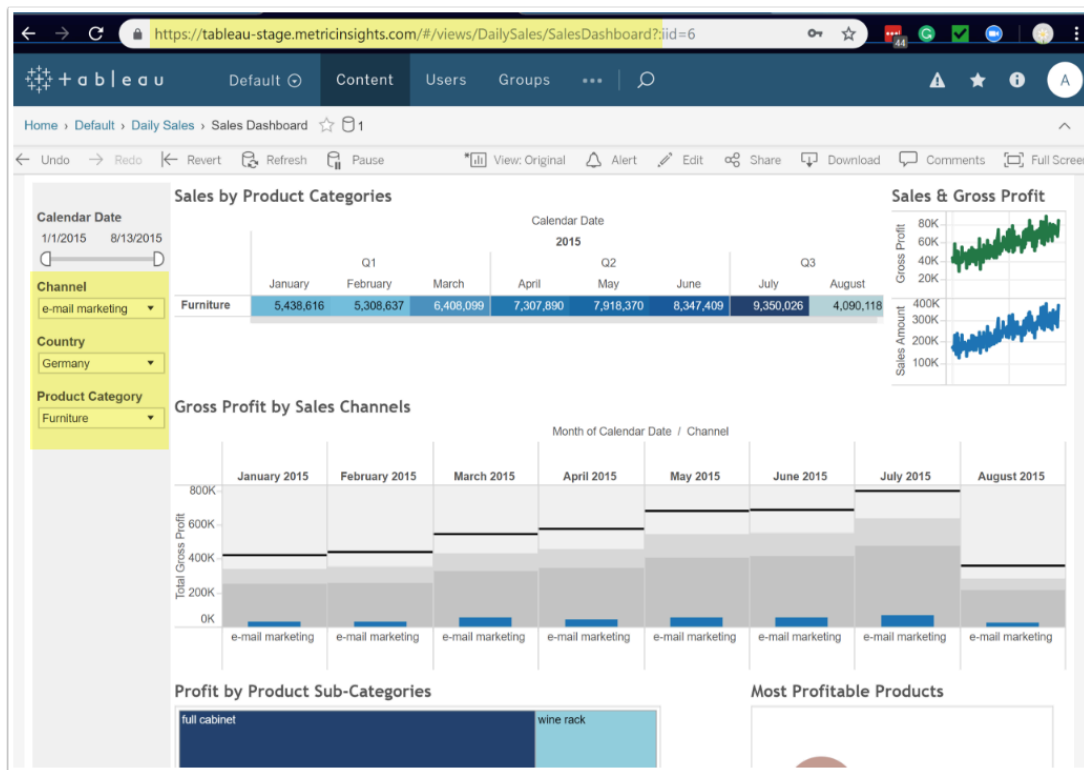
- **Online example:** `[[field_name]](http://url/value=[field_name])`
 - **Change for passing a Dimension:** `[[field_name]](http://url/value/[field_name])`
1. Entering the symbol "[" twice to open a list of fields in your current Report. Simply select the element you want to apply the link to appear on. Enter another "]"
 - Our link is going to be applied to the field = Country
 2. To find the URL of the target of the link, just View the element
 1. entire URL for Metric chart is [https://stg530.metricinsights.com/chart/index/index/element/107913/segment/7558/Country/\[country\]/uco/3311](https://stg530.metricinsights.com/chart/index/index/element/107913/segment/7558/Country/[country]/uco/3311)
 2. This metric is segmented (dimensioned) by *country* - note the exact format of this field. For example, *Country* is capitalized.
 3. Copy the URL up through the element number and replace " http://url " with this value

3. The '**value**' field is the name of the field we are passing to the linked Report. This name must be formatted exactly as it is in the URL above
4. Field_name will again be chosen by entering an '[' and selecting the correct field name in current report
5. So here is the completed formula: [\[\[country\]\]\(https://stg530.metricinsights.com/chart/index/index/element/107913/Country/\[country\]\)](https://stg530.metricinsights.com/chart/index/index/element/107913/Country/[country])
6. [\[\[field_name\]\]\(http://url...../value/\[field_name\]\)](http://url...../value/[field_name])



2.2. Example of linking using multiple fields

In this example we are linking the **Product Category** to a the the Table dashboard filtered by **Channel, Country, and Category** shown below.



Following the simple example above: `[[field_name]](http://url/value=[field_name])`

1. The field_name that will contain our Report field containing the link
2. The URL portion is formatted from the Tableau URL: <https://tableau-stage.metricinsights.com/#/views/DailySales/SalesDashboard?iid=6>
3. To locate the "value=" portions of the formula
 1. If your Report was created from Tableau we need to Access the Dataset Editor
 1. In the Data section of your report, link back to the Dataset View
 2. Click the Edit icon to access the Dataset Editor > Data section
 3. Find the exact Tableau filter names labeled as Reference Name in the Dataset Columns grid

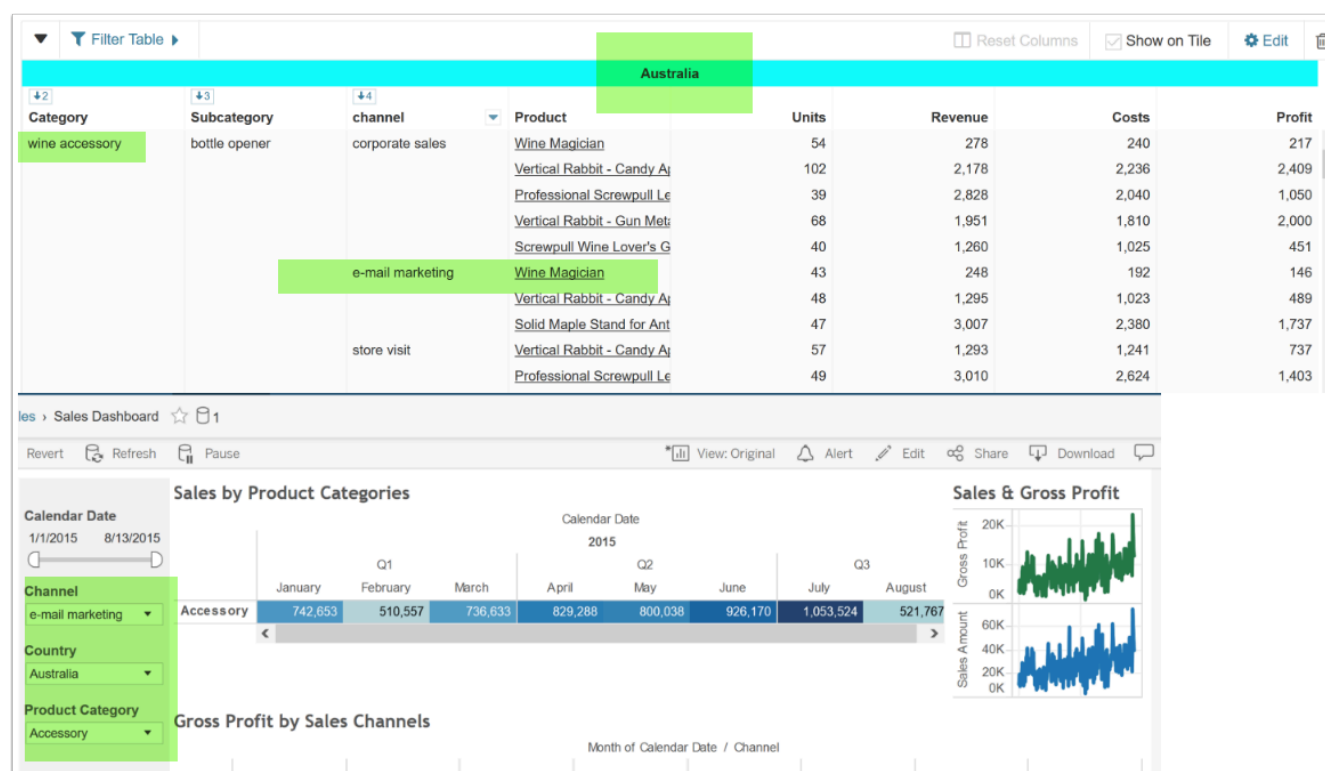
Datasets / Sales Dataset 2018 - Tableau Table				
<div> 0 5 New... Content Admin </div>				
<div> Info Data Advanced Views & Elements Access Collection History View Saved Update Data Build Report </div>				
Dataset Columns				
Column Name	Reference Name	Type	Display Mask	Contain NULLS
Country	country	text		No
Channel	channel	text		No
Product Category	product_category	text		No
Total Cost	total_cost	decimal		No
Total Gross Profit	total_gross_profit	decimal		No
Total Sales Amount	total_sales_amount	decimal		No
Total Unit Count	total_unit_count	int		No

Now you have everything you need to construct the link passing the correct filters:

- Use "[[" to select '**Product**'
- Use the portion of the URL up to and including the '?'
- When linking with multiple filters, all filters must be preceded by an '&'
- Use the **Reference Name** as shown above as the '**value**'. Based on the link-to element, you may have to find the names within the SOL statement instead.
- Use the "[" again to select the correct field from your report to pass as filter
- Repeat for additional filters and complete with a closed quote "]"

```
[[Product]] (https://tableau-stage.metricinsights.com/#/views/DailySales/SalesDashboard?
/&channel=[channel]&country=[country]&product_category=[Category])
```

Do not include any spaces between characters



4.7 Creating Pivot Tables in Dataset Reports

Original full table filtered by Date

Report Editor / Wine Sales by Date

Info Data **Content** Distribution Associations Documents Advanced

calendar_date
2018-08-10 00:00:00

Restrict Data with User Map

product_category	product_subcateg	channel	country	total_unit_count	total_sales_amo	total_cost	total_gross_profit
wine	red wine	corporate sales	Australia	31	\$313.50	\$310.00	\$157.26
wine	red wine	corporate sales	Russia	114	\$1,140.00	\$1,140.00	\$562.02
wine	red wine	corporate sales	France	47	\$470.00	\$470.00	\$231.71
wine	red wine	corporate sales	Germany	25	\$250.00	\$250.00	\$122.75
wine	red wine	corporate sales	Canada	17	\$170.00	\$170.00	\$83.81
wine	red wine	corporate sales	United Kingdom	46	\$460.00	\$460.00	\$226.78
wine	red wine	corporate sales	United States	142	\$1,420.00	\$1,420.00	\$704.32
wine	red wine	e-mail marketing	Australia	43	\$429.00	\$430.00	\$212.28
wine	red wine	e-mail marketing	Russia	43	\$430.00	\$430.00	\$211.99
wine	red wine	e-mail marketing	Germany	85	\$850.00	\$850.00	\$417.35
wine	red wine	e-mail marketing	United Kingdom	74	\$740.00	\$740.00	\$364.82

1. To create a Pivot Table

Info Data **Content** Distribution Associations Documents Advanced

calendar_date
2018-08-10 00:00:00

Restrict Data with User Map

Table

Drop Components Here

1. Drag the **Pivot table** icon into the work area (*Drop Components Here*)

2. Pivot Table editor will slide out from the right

1. Input a meaningful **Title** for your Table (optional)
2. Select one **Row**
3. Select one **Column**
4. Select which **Field** you want to measure and how it should be aggregated (Sum, Min, Max, Avg, Count)
5. Indicate if your Report should include any **Grand Totals**
 1. Click check-box to select Grand Totals for either or both Columns and Rows (or uncheck to omit Totals)
 2. Select location for the Grand Totals and the Label to be used
 3. Select the Format icons available to highlight or change placement

3. Results for a basic Pivot Table as set in #2

Total Sales by Country - Category level									
product_category	Australia	Canada	France	Germany	Russia	Spain	United Kingdom	United States	Category Totals
wine	415322	237750	693821	296084	732389	317238	427648	1649860	4779311
wine accessory	230086	75684	346633	150662	418186	144984	142934	841655	2350825
wine furniture	134508	68281	212575	74473	228522	94537	85411	440206	1338514
Country Totals	780116	381716	1253029	521219	1379097	556760	655992	2931721	8459650

4. Add Conditional Formatting to pinpoint anomalies

The screenshot shows the 'Field Editor' for 'total_sales_amount'. It includes sections for 'Display Mask' (set to '\$1,234K'), 'Hyperlinking', 'Column Format' (with icons for text color, background color, bold, and italic), and 'Conditional Formatting for total_sales_amount values'. A '+ Formatting Rule' button is visible. A second window below shows the 'Conditional Formatting' rule editor with two rules: 'Greater than or equal to 230,000' and 'Less than 100,000'. Each rule has a color selection icon and a 'Formatting Rule' button. Numbered callouts 1 through 5 indicate the sequence of steps: 1. Select the field, 2. Click '+ Formatting Rule', 3. Enter the condition, 4. Select formatting options, 5. Click 'Formatting Rule'.

1. Edit the Field you are measuring
2. Select **[+ Formatting Rule]** at bottom of **Editor**
3. Enter the condition(s) you wish to draw attention to
4. Pick any or all of the following formatting options: Letter color, Area color, Bold, Italic
5. You may add as many Rules as you want

Then click **Done** on **Field Editor** and **Apply** on **Table Editor**

product_category	Australia	Canada	France	Germany	Russia	Spain	United Kingdom	United States	Category Totals
wine	\$416k	\$238k	\$694k	\$296k	\$732k	\$317k	\$428k	\$1,650k	\$4,770k
wine accessory	\$230k	\$76k	\$347k	\$151k	\$418k	\$145k	\$143k	\$842k	\$2,351k
wine furniture	\$135k	\$68k	\$213k	\$74k	\$229k	\$95k	\$85k	\$440k	\$1,339k
Country Totals	\$780k	\$382k	\$1,253k	\$521k	\$1,379k	\$557k	\$656k	\$2,932k	\$8,460k

4.8 Creating Charts in Dataset Reports

As of Release 5.5, Dataset Reports are powered with new charting capabilities. The enhanced functionality allows for better data presentation that will serve a wider range of User needs.

Available charting options include:

1. [Line/Bar/Area charts](#)
2. [Pie charts](#)
3. [Map charts](#)
4. [Bubble charts](#)
5. [Range charts](#)

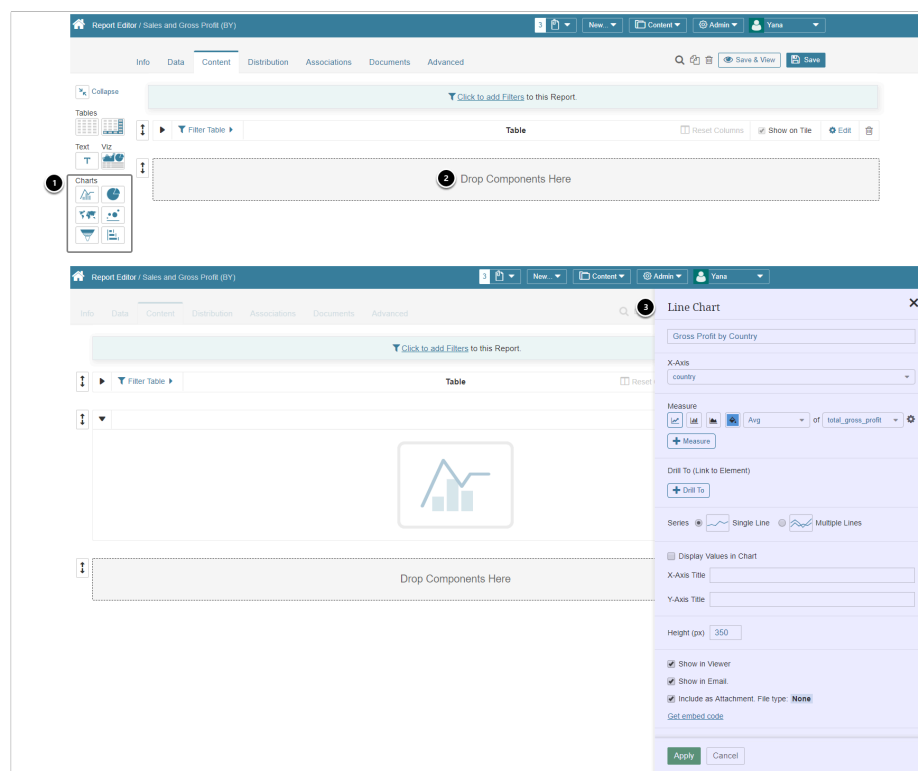
This list can be extended to include custom charts. For details, refer to [Adding Custom Charts to Dataset Reports](#)

PREREQUISITES:

1. Build a **Dataset Report** either from the *Dataset Viewer* (via *Actions > Build Report*) or via *New > Report*
2. Go to the **Content tab** of the *Dataset Report Editor*

For more information on Dataset Reports, go to [Dataset Reports Overview \(New in 5.3\)](#)

How to add a Chart



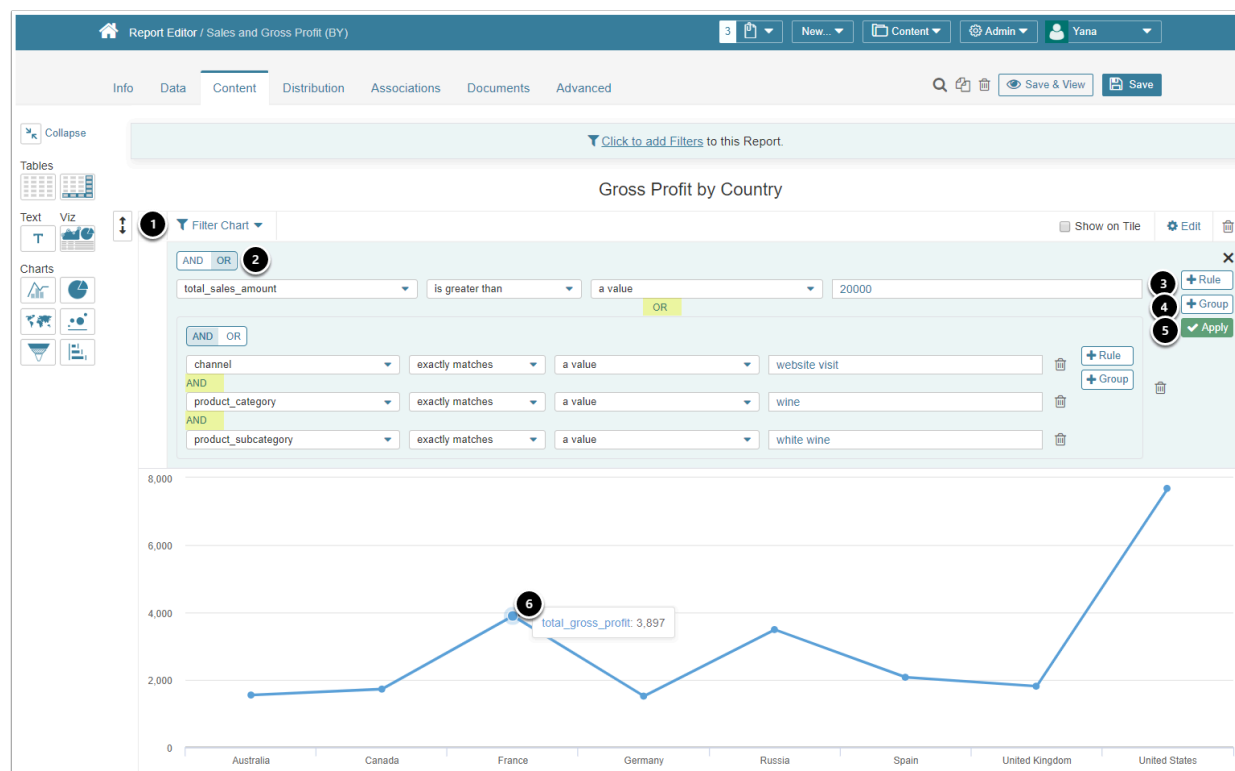
On the **Content** tab:

1. Select the required option from the **Charts** section
2. Drag the Chart tile to the **Drop Components Here** area
3. The **Chart Editor** will open automatically. Configure your Chart using available options

Once the Chart has been added, you can **pre-filter** its data.

How to Filter Chart data

- 💡 For better and more precise control over data visualization, you can add Chart Filters. This can be done after the Chart has been displayed for viewing.

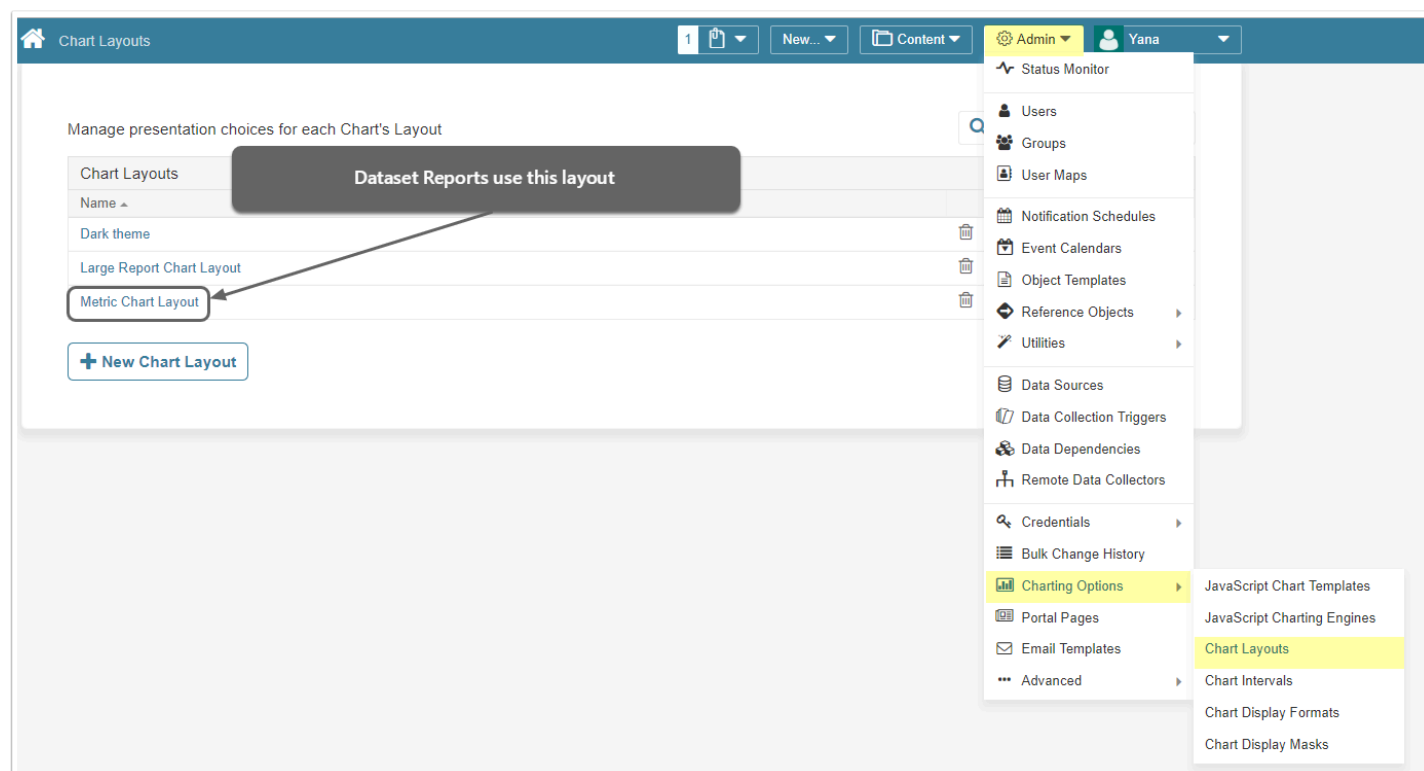


1. Click **[Filter Chart]** to open the section
2. Select the Operator (**AND | OR**) that will be used to filter data
3. Add a Rule by clicking **[+Rule]**
4. To add a Group of Rules, click **[+Group]**
5. **Apply** to see the result
6. Optionally, you can view exact measurement values for your data by selecting a point on the Chart

Change the Charts' default display options

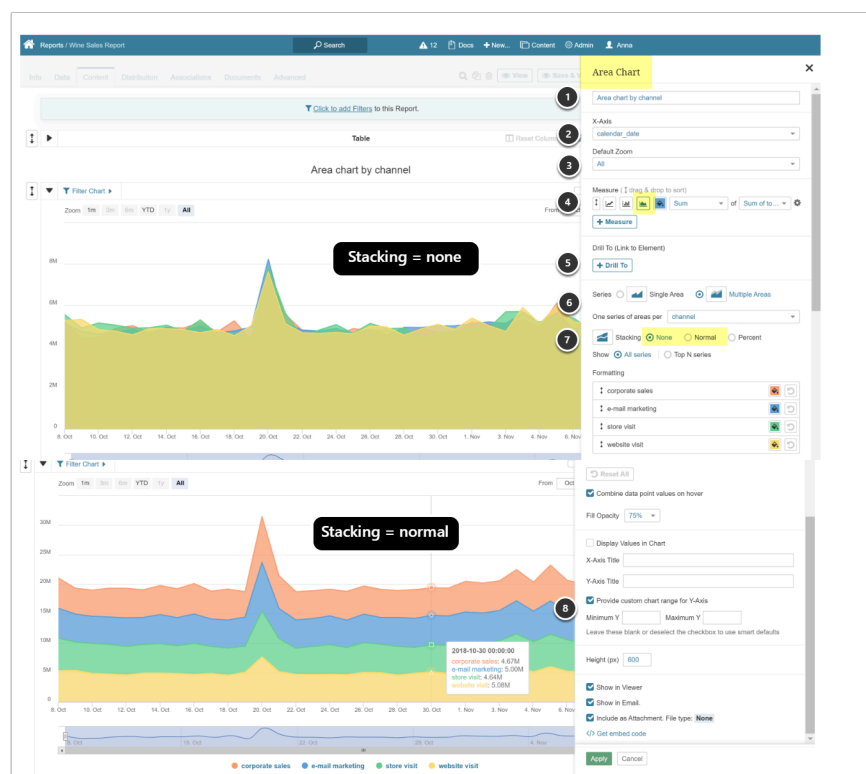
Users can modify the appearance of their Charts (*colors, line width, bar shape, etc.*) from the Chart Layout Editor.

- Access the Editor from **Admin > Charting Options > Chart Layouts** > select **Metric Chart Layout**
- For details, refer to [Change default colors for Charting objects](#)



1. Line/Bar/Area charts

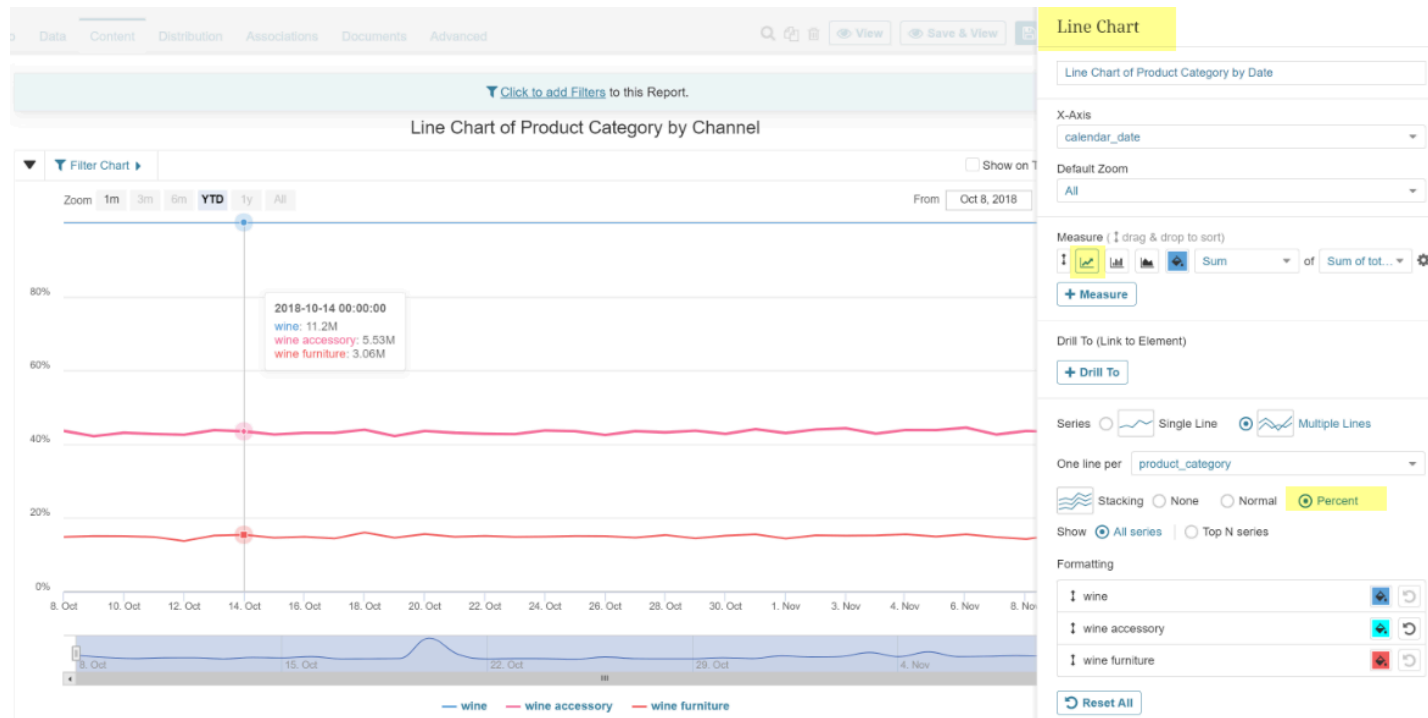
1.1. Line and Area charts



1. Specify the **Name** of your Line/Area Chart
2. Define which measurement values will be displayed on the **X-axis**
3. If applicable, choose a relevant **Date Zoom** option (a month, three months, half a year, year-to-date, a year, or all)
4. **Measure:** choose the type of Chart (Line/Area) by clicking the respective tile; from the dropdown, select the type of aggregation and the column whose values will be aggregated
5. **[+Drill To]:** optionally, click the button to link your chart to another Metric Insights' element
 - The link to the element will instantly be displayed in the Chart Editor
6. **Series:** select "Single" to make your Chart display a single Measure, and "Multiple" to show several Measures
 - By opting to have several Measures represented in your Chart, specify the additional Measure (in our case, **One series of areas per Product Category**) that will be shown on the Chart's X-Axis
7. [new in 6.2.2] To control display, set the **Stacking** control: Upper image display shows the "none" option, the lower image is the "normal" option and "percent" option will display the percents for all data points on the normal image.
8. [new in 6.2.0] To set a **Chart Range** for the Y-axis, click **[Provide custom chart range..]** to open the Minimum and Max value fields for input

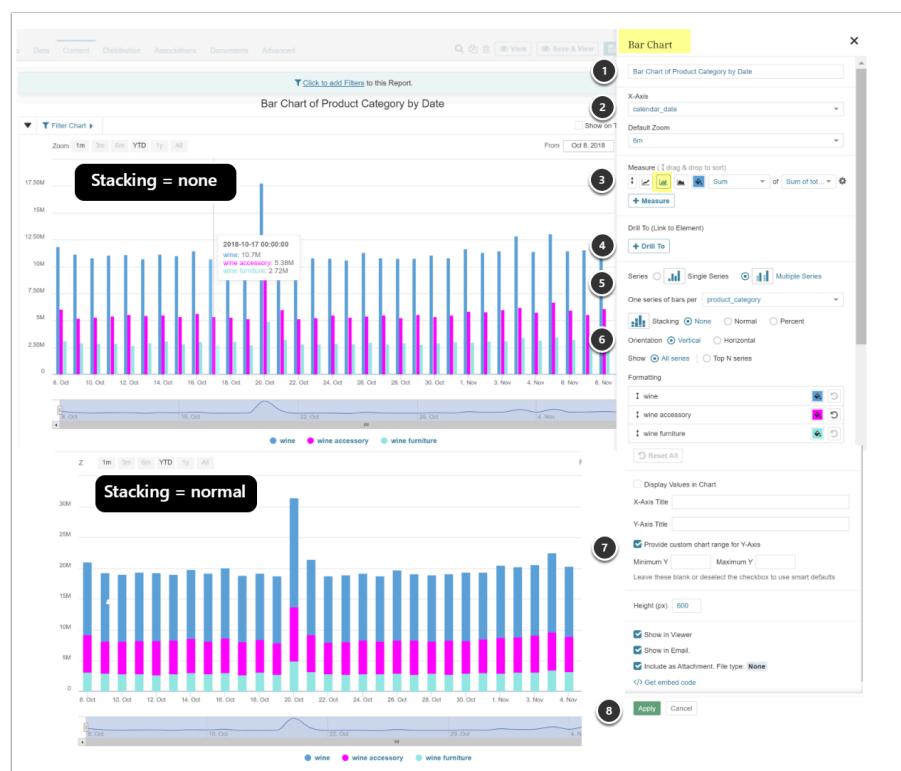
Set other options as desired and click [Apply]

1.2. Example of Line Chart with Stacking set to 'Percent'



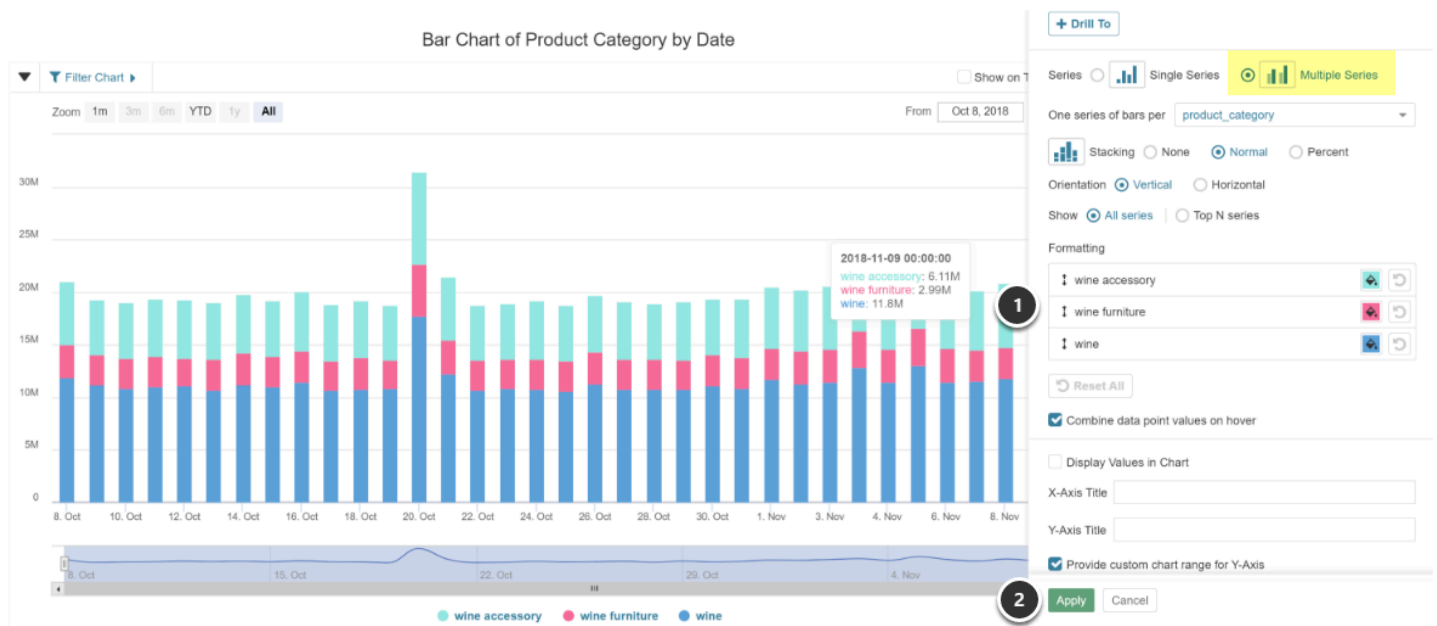
See explanation of settings in 1.1 Area chart

1.3. Bar Charts



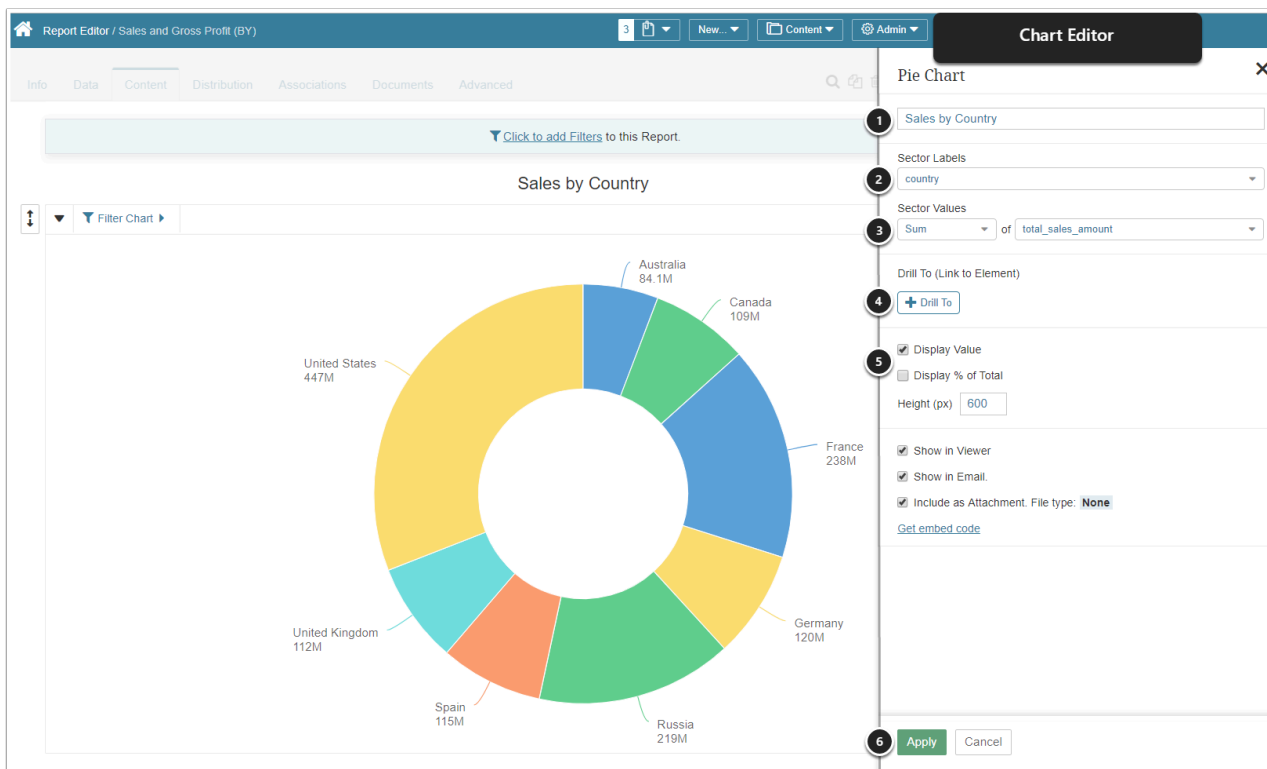
1. Specify the **Name** of your Chart
2. Define which measurement values will be displayed on the **X-axis**
3. **Measure**: choose the type of Chart (Bar) by clicking the respective tile; from the dropdown, select the type of aggregation and the column whose values will be aggregated
4. **[+Drill To]**: optionally, click the button to link your chart to another Metric Insights' element
 - The link to the element will instantly be displayed in the Chart Editor
5. **Series**: select "Single" to make your Chart display a single Measure, and "Multiple" to show several Measures
 - By opting to have several Measures represented in your Chart, specify the additional Measure (in our case, **One series of bars per** Product Category) that will be shown on the Chart's X-Axis
6. If required, change **Orientation** and **Stacking** defaults
7. [new in 6.2.0] To set a **Chart Range** for the Y-axis, click **[Provide custom chart range..]** to open the Minimum and Max value fields for input
8. Configure other settings as desired and click **[Apply]** to save your inputs

1.4. Re-order the series in a Multi-series Line/Bar/Area chart



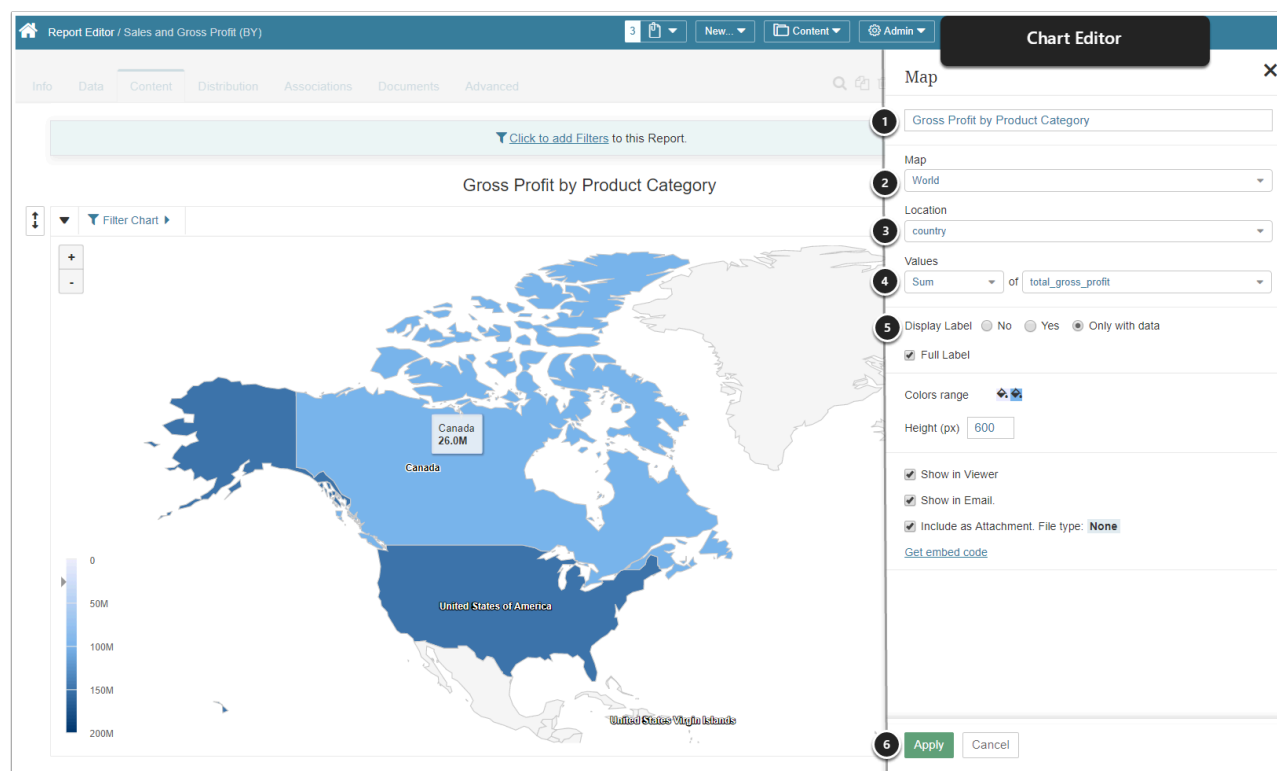
1. [new in 6.2.2] Using vertical arrows, drag the formatting components up or down
2. Apply

2. Pie charts



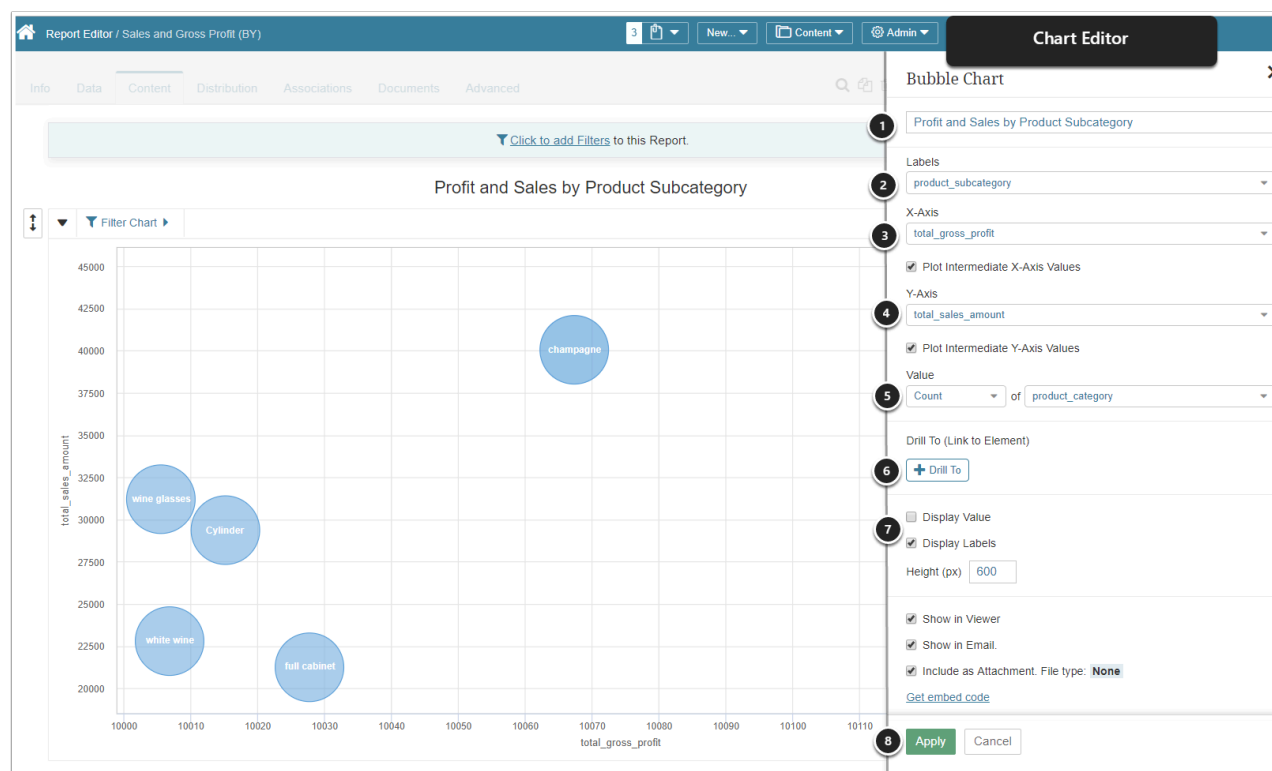
1. Specify the **Name** of your Pie Chart
2. **Sector Labels:** define which measurement values will be displayed by the Pie Chart sectors
3. **Sector Values:** from the dropdown, select the type of aggregation and the column whose values will be aggregated
4. **[+Drill To]:** optionally, click the button to link your chart to another Metric Insights' element
 - The link to the element will instantly be displayed in the Chart Editor
5. Optionally, select the Chart to show **Display Values** and/or **Display % of Total**
6. Configure other settings as desired and click **[Apply]** to save your inputs

3. Map charts



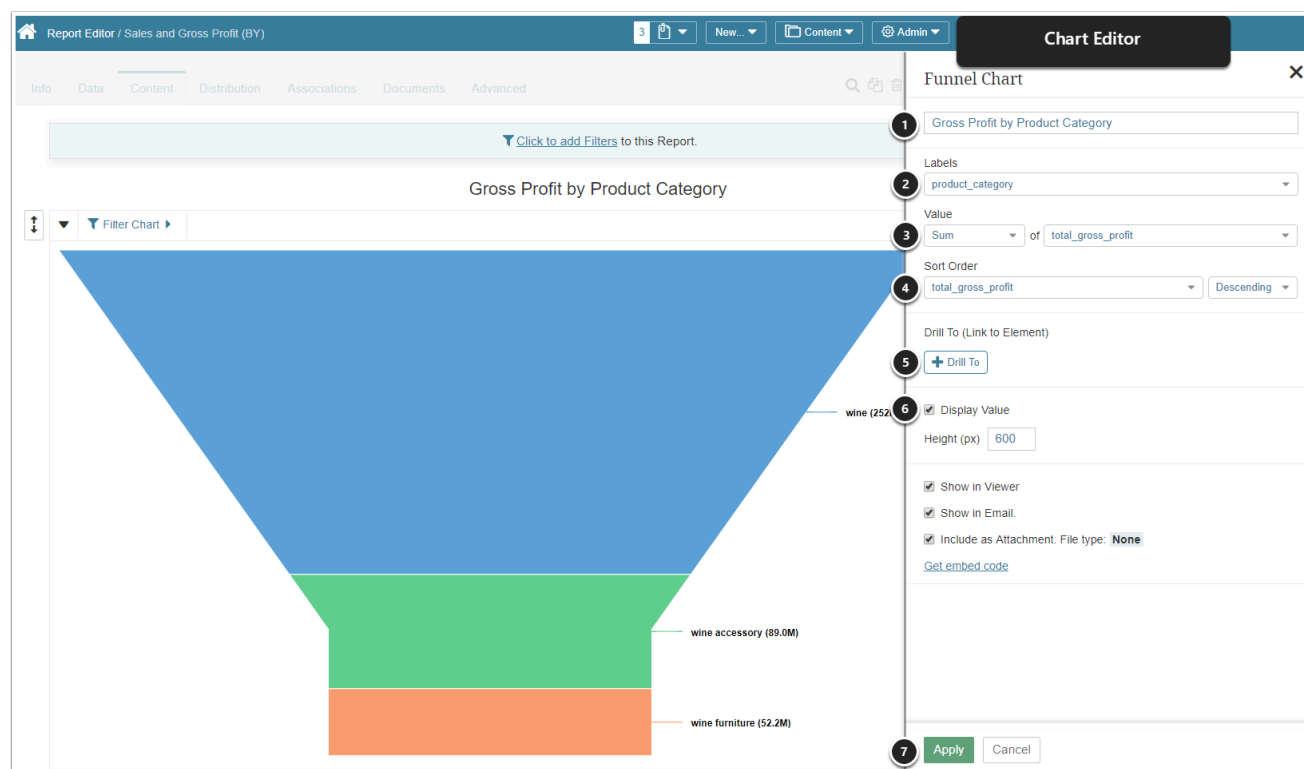
1. Specify the **Name** of your Map Chart
2. **Map:** from the dropdown, choose the type of map that will displayed (World Map, World Region or Country)
3. **Location:** from the dropdown, select the data column containing relevant country names or world region names
4. **Values:** from the dropdown, select the type of aggregation and the column whose values will be aggregated
5. **Display Label:** determine if and how you want your map to be labeled
6. Configure other settings as desired and click **[Apply]** to save your inputs

4. Bubble charts



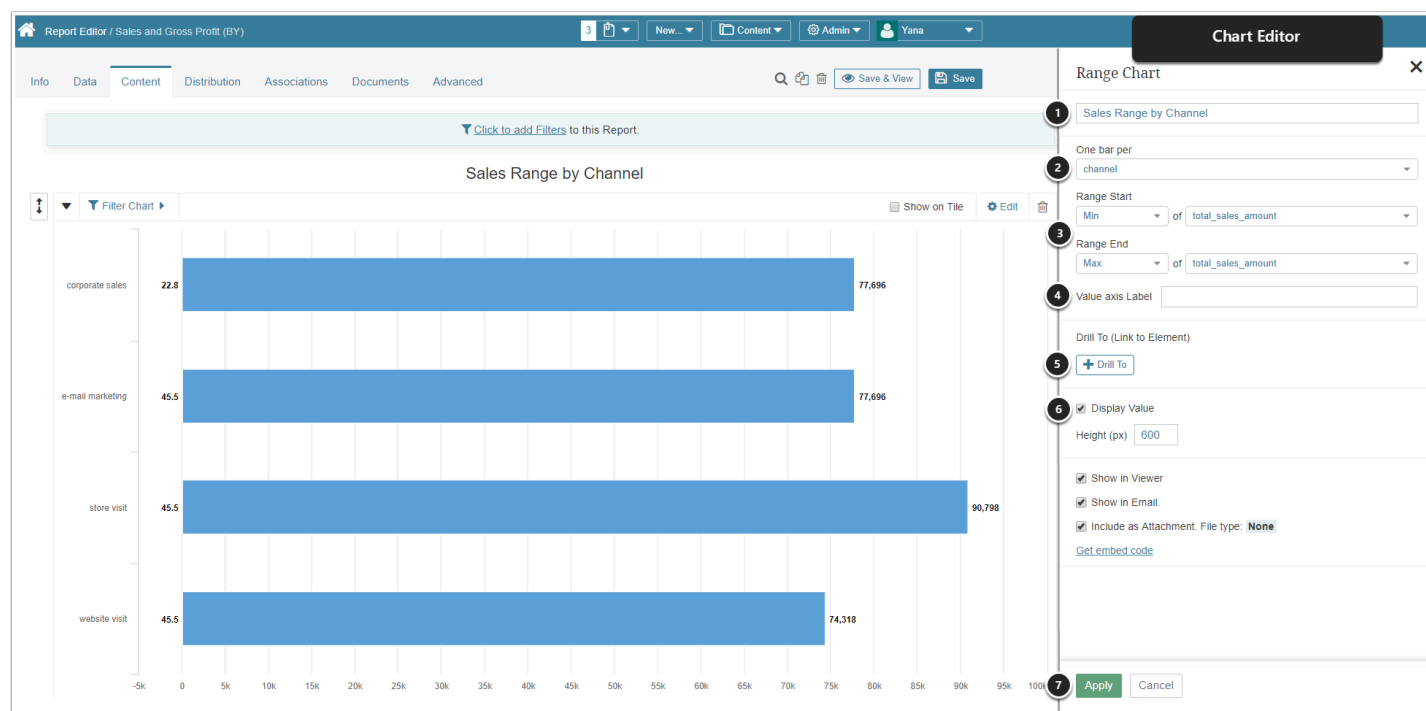
1. Specify the **Name** of your Bubble Chart
2. **Labels:** from the dropdown, select which Column Values will be displayed as Labels on the Chart Bubbles
3. **X-Axis:** define the Measure whose values will be displayed on the **X-axis**
4. **Y-Axis:** define the Measure whose values will be displayed on the **Y-axis**
5. **Value:** from the dropdown, select the type of aggregation and the column whose values will be aggregated
6. **[+Drill To]:** optionally, click the button to link your chart to another Metric Insights' element
 - The link to the element will instantly be displayed in the Chart Editor
7. **Display Value/Display Labels:** determine if and how you want your Bubble Chart to show Values and/or Labels
8. Configure other settings as desired and click **[Apply]** to save your inputs

5. Funnel charts



1. Specify the **Name** of your Funnel Chart
2. **Labels:** from the dropdown, select which Column Values will be displayed as Labels on the Funnel Chart
3. **Value:** from the dropdown, select the type of aggregation and the column whose values will be aggregated
4. **Sort Order:** specify the Measure whose values will be sorted and determine the sorting order (Ascending or Descending)
5. **[+Drill To]:** optionally, click the button to link your chart to another Metric Insights' element
 - The link to the element will instantly be displayed in the Chart Editor
6. **Display Value:** uncheck the box if you do not want measurement values to appear on the Chart
7. Configure other settings as desired and click **[Apply]** to save your inputs

6. Range charts



1. Specify the **Name** of your Range Chart
2. Define which Measure each **Chart bar** will represent
3. Determine the **Start** and **End** Values for your Range Chart
4. **Value Axis Label:** if needed, label the Axis that displays Measure Values
5. **[+Drill To]:** optionally, click the button to link your chart to another Metric Insights' element
 - The link to the element will instantly be displayed in the Chart Editor
6. **Display Value:** uncheck the box if you do not want measurement values to appear on the Chart
7. Configure other settings as desired and click **[Apply]** to save your inputs

4.9 Adding Custom Charts to Dataset Reports

Dataset Reporting in Version 5.5 allows for custom configuration of Charts available to content builders. Metric Insights Admins can now extend the existing list of the default charts available, beyond Line/Bar/Area charts, Pie charts, Map charts, Bubble charts, Funnel charts and Range charts.

This article details how to add a Custom Chart to Metric Insights and make it available for use in Dataset Reporting for all content builders.

- For more information, refer to [Creating Charts in Dataset Reporting](#)

❗ If you are working with older Reports, please reference this older article - [Add Custom JavaScript Charts to Legacy Reports](#)

1. 1.Access via Admin > System > Charting Options

JavaScript Chart Templates

Search 14 Docs + New... Content Admin

1 Templates Engines Layouts Intervals Formats Masks

Modify existing JavaScript code or add new CSS for styling as well as add or define variables

Chart Templates			● Disabled Chart Template
Name ▲	Charting Engine	Enabled for Dataset Reports	
Highstock with filters	Highstock with filters	N	🗑️
Line/Bar/Area Combination Javascript Chart	Highcharts	N	🗑️
nvd3 Scatter/Bubble	nvd3	N	🗑️
World Map	Highmaps	N	🗑️

Page 2 of 2 | Displaying records 21 - 24 of 24

2 + New Chart Template

1. Activate Template section
2. [+New Chart Template]

2. Add a new Chart Template

The screenshot shows the 'Add JavaScript Chart Template' dialog box. It has a title bar with a close button (X). The dialog contains the following fields and controls:

- 1** Template is: ☒ enabled | ☐ disabled
- 2** Name:
- 3** Charting Engine:
- 4** Width:
Height:
- 5** Send as HTML in emails: ☐ yes | ☒ no
- 6** or

On the left side of the dialog, there is a sidebar with a 'Chart Templates' section. It lists several templates: 'Highstock with filters', 'Line/Bar/Area Comb...', 'nvd3 Scatter/Bubble', and 'World Map'. At the bottom of the sidebar, there is a 'Page' indicator showing '2' and a '+ New Chart Template' button.

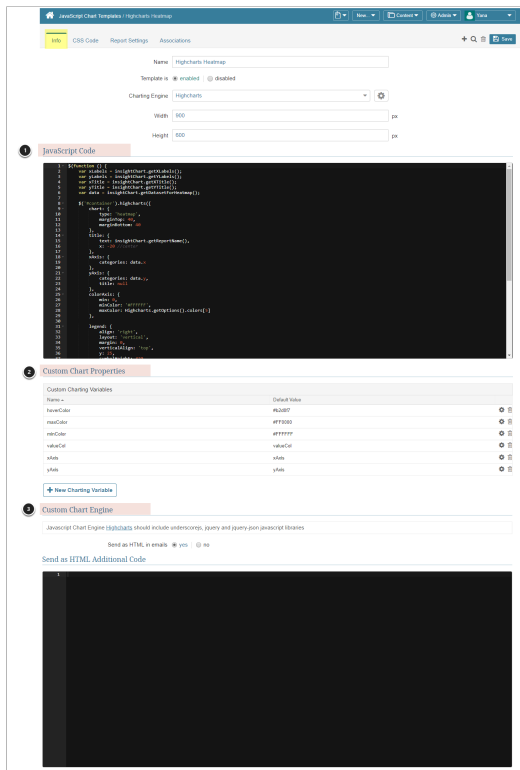
On the "Add JavaScript Chart Template":

1. Switch the Template to **"enabled"**
2. Define the **Name**
3. From the dropdown, select the required **Charting Engine**
4. Specify the **Width** and **Height**
 - Defaults are 900x600, modify if required
5. **Send as HTML:** switch to "yes" to be able to control how your Chart is displayed in an email by your email program (**NOTE:** this requires writing an additional piece of HTML code)
6. **Save** to proceed to Editor

3. Chart Template Editor > Info tab



Design your Chart by providing the code and adding custom properties in the corresponding sections.



On the **Info tab**, configure the following:

- 1. JavaScript Code**
 - JavaScript Code is the only required code for the Chart Template
- 2. Custom Chart Properties**
 - Depending on your needs, add your own Charting Variables
 - Click [+New Charting Variable] to customize your Chart with labels, colors or custom actions
- 3. Custom Chart Engine [optional]**
 - Send as HTML in emails: set to "yes" to see additional options
 - Enter the HTML additional code to configure how your Chart will be displayed by your email program
- 4. CSS code [optional]**
 - For further control of the Chart formatting, input the CSS code in the corresponding tab

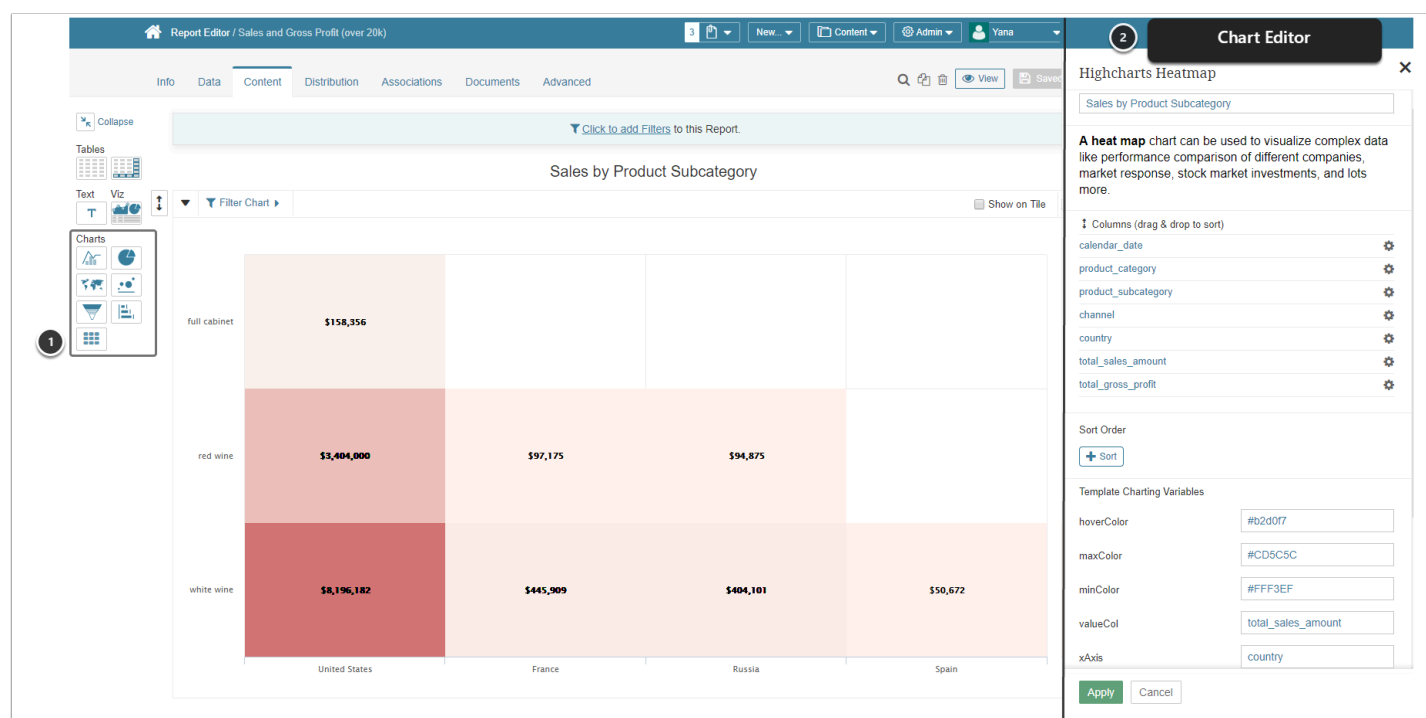
4. Chart Template Editor > Report Settings tab



To make your Chart accessible for Dataset Reporting, go to the Report Settings tab.

1. **Enable for Dataset Reports:** must be switched to "yes" if you plan to use this Chart Template when building Dataset Reports
2. **Use Legacy Data Format:** defaults to "yes", switch to "no" if necessary
 - *Legacy Data Format* requires less space and allows faster data transfer (**NOTE:** *this format has to be additionally converted for use by applying a special function*)
 - When Legacy Data Format is turned off, you will be using the *new Data Format* that does not need to be converted and is ready for use (**NOTE:** *data in this format requires more storage space and is transferred more slowly*)
3. Click **[Select Icon]** to open a pop-up with options
4. **Description:** Add a description of how this chart should be used. This is helpful for content builders who are not familiar with the chart type and might need some guidance.
5. **Save** your inputs

5. Your Chart Template is ready for use



1. After a Custom Chart has been added, it will appear as a new option in the Charts section
2. Use the Chart Editor to configure your Chart
 - For details, click [Creating Charts in Dataset Reporting](#)

5. Creating Derived Fields in Datasets

5.1 Understanding Derived Fields

The general purpose of Datasets functionality, as well as the ability to include **Derived fields**, is to allow users to manage data from any **Data Source** in a simple intuitive manner, with no need to master the specifics of syntax commonly used in various databases or Business Intelligence services.

Derived fields include values that do not exist in a Data Source itself but are calculated from one or more existing numeric fields via basic arithmetic expressions and non-aggregate numeric functions.

This article covers:

- Sample Use Case
- Video Tutorial
- Derived Fields Overview
- How to add Derived Fields to a Dataset
- Rules of Aggregation for Derived Fields
- How to use Derived Fields for creating Elements and Metrics

SAMPLE USE CASE

1. **Challenge:** Calculate % of decrease of Units Sold and show it in Results
2. **Solution:** Add a derived field with arithmetic formula
3. **Result:** % Decrease of units sold is shown as an additional field in the Dataset Results

Click to see each step in details

Challenge: Calculate % of decrease of Units Sold and show it in Results

Decreased Sales

Single Instance Thursday 04/13/2017 Last Two Instances Current: Thursday 04/13/2017 Prior: Wednesday 04/12/2017

Select Fields Track Changes

Show rows that are:

- ☒ Changed
- ☐ New

Define filters for **changes**

AND OR

units is less than Prior units by any amount

Apply Changes

For each sales include: all changes.

Results

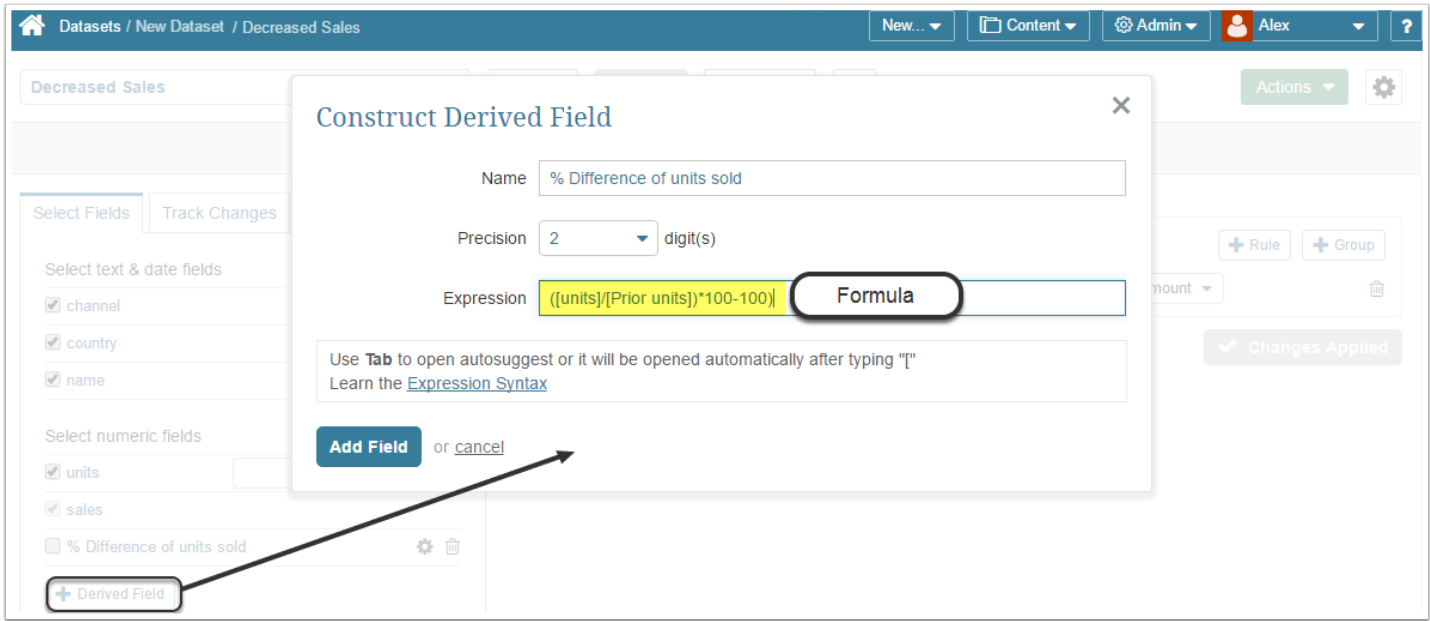
country	channel	name	Prior units	units	sales
Australia	e-mail marketing	101-Bottle Wrought Iron Win...	6.00	5.00	1499.70
Australia	e-mail marketing	112-Bottle Pine Mega Storag...	58.00	55.00	8845.00
Australia	e-mail marketing	2 Up Shiraz 2007	73.00	20.00	2628.00
Australia	e-mail marketing	Chateau Mouton-Rothschild	5.00	4.00	11500.00

Challenge:

The Dataset View shown in the picture above is set up in a way to compare values in Current and Prior instances in order to track potential data changes. It is called "Decreased Sales" and helps to elicit those items, where the number of units sold decreased from the Prior period.

What is the percentage of decrease of Units Sold?

Solution: Add a derived field with arithmetic formula



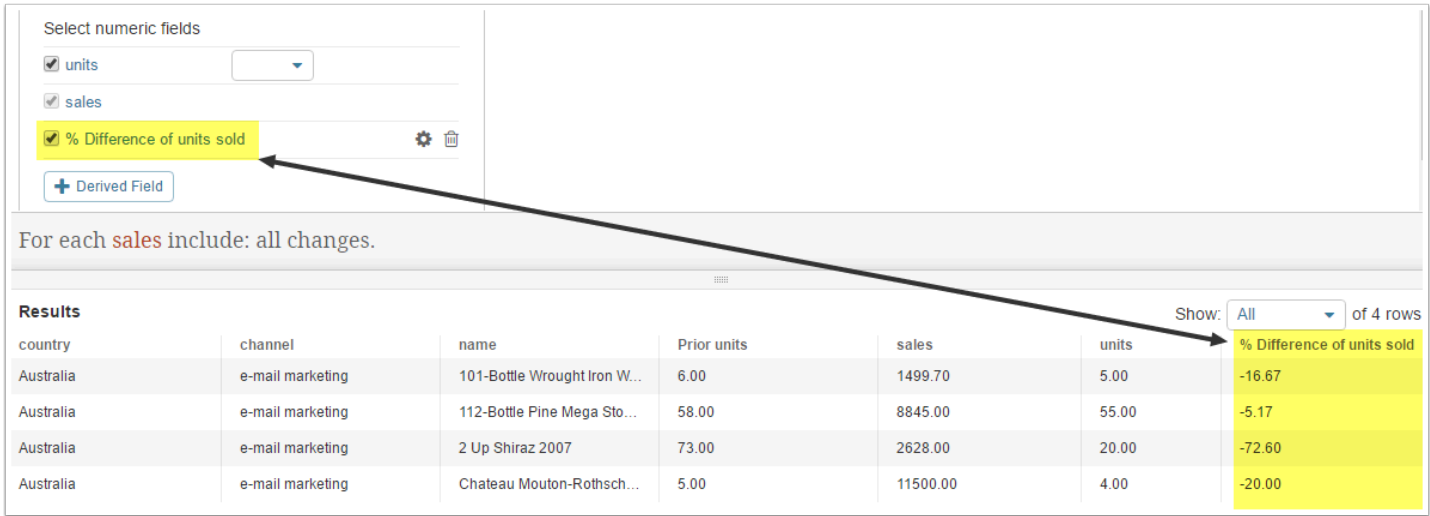
Solution:

Add a **Derived Field** with a formula that calculates the percentage of decrease.

```
([units]/[prior units])*100-100
```

NOTE: Since this formula calculates the difference for Last Two Instances (current and prior), it is not applicable for a Single Instance.

Result: % Decrease of units sold is shown as an additional field in the Dataset Results



Result:

The percentage per each row is included as a new field in a **Results** set.

Video Tutorial

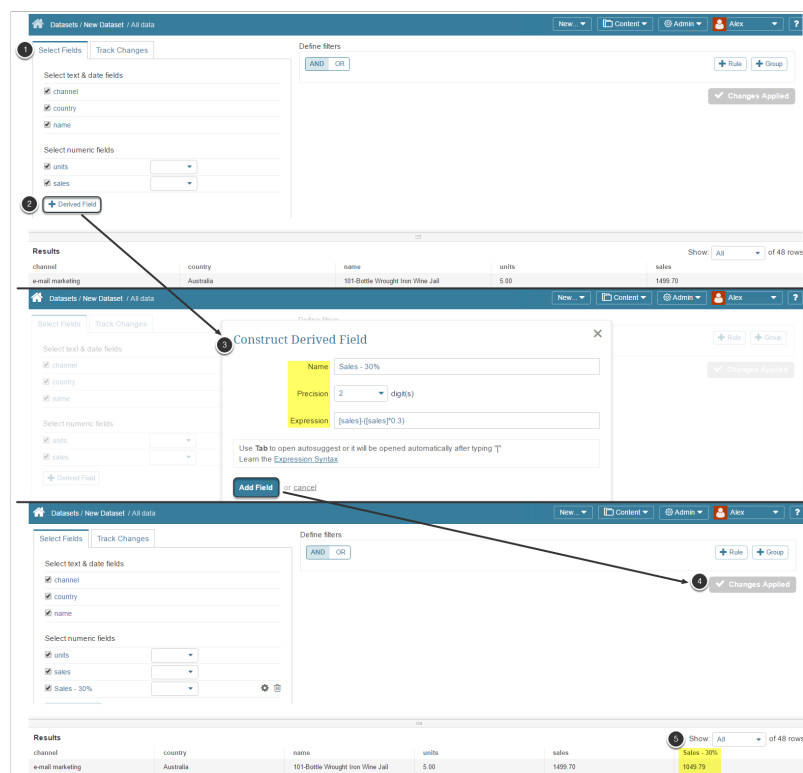
Derived Fields Overview

The screenshot shows a 'Select Fields' interface with two tabs: 'Select Fields' (active) and 'Track Changes'. Under 'Select text & date fields', there are three checked items: 'channel', 'country', and 'name'. Under 'Select numeric fields', there are three items: 'units', a formula field '[sales]-([sales]*0.3)' (highlighted with a yellow background and an information icon), and 'Sales - 30%' (with a gear icon and a trash icon). At the bottom, there is a '+ Derived Field' button.

Derived Fields support basic arithmetic processing as well as standard MySQL functions that can be applied in-line.

- **Formulas:** Preview the formula used for a **Derived Field** by hovering over the respective field in the **Select Fields** check list. To see the list of available mathematical expressions, see: [Expression Syntax for Derived Fields Formulas](#)
- **Dataset Views:** Derived fields are created and assigned to a specific Dataset View but can be duplicated together with a View
- **Filter Criteria:** **Derived Fields** are supported in filter criteria the same way as regular dataset source fields
- **Comparing Instances:** **Derived Fields** are applicable both for single instances and in case of comparing instances of snapshot Datasets: in this case the system provides the ability to include **current** and **prior** variables in a mathematical formula (as shown in the **Sample Use Case** above). For more details refer to: [Using Derived Fields when comparing Instances](#)

How to add Derived Fields to a Dataset



To add a Derived Field to a Dataset:

1. Access *Dataset Viewer* > find the **Select Fields** check list
2. Below the existing fields click **[+ Derived Field]**
3. The *Construct Derived Field* pop-up opens. Specify the following:
 - **Name:** provide a unique descriptive Name for the new column
 - **Precision:** Specify the number of decimals to be displayed in the field in the Results set
 - **Expression:** define the formula for calculating new required values. For more details refer to: [Expression Syntax for Derived Fields Formulas](#)
 - **NOTE:** Only NON-Derived fields are available for constructing formulas for derived fields.
4. Click **Add Field**. The pop-up closes, click **Apply Changes**
 1. *If not applied, the Results set is not updated with the new column*
5. A new column with calculated values is added to the **Results** set

Rules for Aggregation of Derived Fields

Datasets / New Dataset / All data

Single Instance

Select Fields | Track Changes

Select text & date fields

- ☒ channel
- ☒ country
- ☒ name

Select numeric fields

- ☒ units
- ☒ sales
- ☒ Sales - 30%

+ Derived Field

Sum
Avg
Min
Max
Count

Aggregation can be applied to **Derived Fields (Sum, Avg, Min, Max, Count)**. Consider that:

- Aggregation cannot be applied to a Derived Field if it is already applied to one of the columns used in a formula
- *Last Two Instances case*. Aggregation cannot be applied to a Derived Field if Current and Prior Values are used in a formula

Derived Fields for creating new Elements

The screenshot illustrates the process of creating a new metric in the Metric Insights interface. The top part shows the 'All data' view with a 'Build Metric' button highlighted in the 'Actions' menu. The bottom part shows the 'Metrics / Sales - 30% Metric' configuration page with the following fields:

- Data Source:** Datasets
- Data Collection Trigger:** 1_5-day-refresh
- Dataset & View:** New Dataset - Sales - 30%
- Date column:** Snapshot date
- Value column:** Sales - 30% (numeric) (highlighted in yellow)
- Aggregate using:** Sum

At the bottom, there is a section for 'Calculate Metric Values for' with radio buttons for 'Only new data' and 'All data'.

Derived Fields can be used as Value fields both for Metrics and Reports. To create a Metric with a Derived Field used as a value field:

1. Access *Actions* > *Build Metric*. For detailed instructions, refer to: [Create one or multiple Metrics from a Dataset View \(Version 5.1 and beyond\)](#)
2. **Value Column:** Select a Derived field from the drop-down list
3. **Aggregate using:** Refer to rules of Aggregation described above

5.2 Expression Syntax for Derived Fields Formulas

- For general information on Derived fields, refer to: [Understanding Derived Fields](#)

Supported SQL Mathematical Functions

Supported Expression	Description	Example
abs	The absolute value or modulus is used to turn a negative number into positive.	abs([sales]) ; abs([sales]-[Prior sales])
ceiling (ceil)	Returns the smallest integer value which is greater than, or equal to the specified number.	ceiling([sales]) ; ceil([sales]-[Prior sales])
div	Division.	[sales]/2
floor	Returns the largest integer value which is greater than, or equal to the specified number.	floor ([sales]) ; floor([sales]-[Prior sales])
exp	Used to get the value of the base of natural logarithm number e, raised to the power of a number specified as argument.	
if	Takes 3 expressions and if the first expression is true, not zero and not NULL, it returns the second expression. Otherwise, it returns the third expression.	if([sales]>1000,1,0) ; if([sales]-[Prior sales]>1000,1,0)
ifnull	Takes 2 expressions and if the first expression is not NULL, it returns the first expression. Otherwise, it returns the second expression	ifnull([sales],[sales]) ; ifnull([sales],[Prior sales])
log (ln)	The inverse of the exp() function.	log([sales]) ; log([sales]-[Prior sales])
mod	Returns the remainder of a number divided by another number.	
pi	Returns the value of π (pi)	pi()*[sales] ; pi()*([sales]-[Prior sales])

Supported Expression	Description	Example
power (pow)	Returns the value of a number raised to another.	pow([sales],2) ; pow([sales]-[Prior sales],2)
radians	Converts the value of a number from degrees to radians.	radians([sales]) ; radians([sales]-[Prior sales])
rand	Returns a random floating-point value between the range 0 to 1. When a fixed integer value is passed as an argument, the value is treated as a seed value and as a result, a repeatable sequence of column values will be returned.	
round	Rounds a number to a specified amount of decimal places specified as an argument up to a number specified as another argument.	round([sales],2) ; round([sales]-[Prior sales],2)
sign	Returns the sign of the argument.	sign([sales]) ; sign([sales]-[Prior sales])
sin	Returns the sine of the argument.	sin([sales]) ; sin([sales]-[Prior sales])
sqrt	Return the square root of the argument.	sqrt([sales]) ; pow([sales]-[Prior sales])

6. Apply Access to Datasets via User Maps

6.1 Create a User Map

The Dataset creator can grant access to the specific slices of data (rather than the entire Dataset). This is accomplished via a User Map. The User Map restrictions will also apply to any Reports created from this Dataset.

💡 To understand the Privileges and Permissions Users must have to work with Datasets , see Security section for [Datasets](#)

Video Tutorial

What is a User Map?

In the image below:

- **All Data / Dataset:** Contains the all the data available to create content from a Dataset. In this example, there are 3 columns of data (country, channel, total order volume)
- **User Map:** Allows you to grant Users access to limited amount of rows. It must contain a column with usernames and specific values in the Dataset columns to filter data to a relevant subset. A User Map dimensions the result set with ALL information and makes different mappings available to the designated users.

In this example, User access is restricted to specific **Countries**. If the User Map is applied to a Dataset, all included users will not see the Dataset with ALL available values but will view the Dataset differently according to the User Map restrictions. The same rules apply to elements created from this Dataset.

All Data / Dataset			User Map	
country	channel	Total order Volume (US\$)	user	country
Australia	corporate sales	1,905,595	alex	Australia
Australia	e-mail marketing	2,105,670	alex	Canada
Australia	store visit	2,107,399	alex	France
Australia	website visit	2,188,952	alex	Germany
Canada	corporate sales	5,498,112	barbara	Canada
Canada	e-mail marketing	5,754,181	barbara	Germany
Canada	store visit	5,416,011	bernard	Australia
Canada	website visit	5,210,045	bernard	France
France	corporate sales	6,088,441	bob	Australia
France	e-mail marketing	5,983,273	bob	Canada
France	store visit	6,335,549	bob	France
France	website visit	5,923,806	bob	Germany
Germany	corporate sales	3,118,898	dan	Germany
Germany	e-mail marketing	2,725,568	dan	Germany

In the example below, both Country AND Channel is mapped to the Dataset in order to further restrict the results that are available to each user.

All Data / Dataset			User Map		
country	channel	Total order Volume (US\$)	user	country	channel
Australia	corporate sales	1,905,595	alex	Australia	corporate sales
Australia	e-mail marketing	2,105,670	alex	Australia	e-mail marketing
Australia	store visit	2,107,399	alex	France	corporate sales
Australia	website visit	2,188,952	alex	France	e-mail marketing
Canada	corporate sales	5,498,112	barbara	Australia	corporate sales
Canada	e-mail marketing	5,754,181	barbara	Australia	website visit
Canada	store visit	5,416,011	bernard	Canada	store visit
Canada	website visit	5,210,045	bob	France	e-mail marketing
France	corporate sales	6,088,441	bob	France	store visit
France	e-mail marketing	5,983,273	bob	France	website visit

1. Access Admin > Datasets > User Maps tab

User Maps

New... Content Admin Julia

Views Datasets User Maps

Data Source All Created by All Cha

Name	Data Source	Last Modified	Instance Date	Last Collected
Channel / Country	manual	2017-01-31 05:04:46	2017-01-30	2017-01-31 04:0...
Sales (country/channel)	manual	2017-02-08 03:25:22	2017-02-07	2017-02-08 03:2...

+ New User Map Selected User Maps

At the bottom of the page click [+ New User Map].

2. [Info tab] Define the basics

User Maps / Channel / Country Access Map

New... Content Admin Julia

Info Data Advanced Collection History Datasets

Measured Daily

Collecting is ☒ enabled ☐ disabled

1 Name Channel / Country

Description A User Map defining the slice if data available for certain users

Category Uncategorized

2 Save Update Data

1. Create a unique and descriptive **Name** for your User Map
2. **Save** and proceed to the *Data* tab to define user access

3. [Data tab] Fetching / Uploading data: CSV file example

The screenshot shows the Metric Insights interface for a 'New User Map (3)'. The 'Data' tab is active, and the 'Data Source' is set to 'CSV or Excel File'. A 'Load data' button is visible. A 'Load From File' pop-up is open, showing a file path 'C:\...\Channel_Country_user_ma' and a 'Browse' button. A 'Load' button is also visible. A 'Channel_Coun...' window is open, showing a CSV file with columns 'user, country, channel' and rows of user data.

1. **Data Source:** Select the method of collecting the data for User Map. In this example, data is uploaded via 'CSV or Excel file'. When this method is selected, click **Load data** below this field and define a date for which you are adding data to the Dataset.
2. The *Load From File* pop-up opens.
3. Confirm that the **Delimiter** character is the same as in your CSV file
4. Click **Browse** and select the CSV file containing data for the User Map. This file must contain a column with usernames and a column (or several ones) with values to which respective users may have access.
5. Click **Load**

3.1. Successful upload

Column Name	Reference Name	Type
user	user	text
country	country	text
channel	channel	text

Validation Rows Preview		
John	Russia	e-main marketing
John	Spain	e-main marketing
Arlen	Canada	website visit
Arlen	Germany	website visit
Arlen	United Kingdom	website visit

If the file data is successfully processed:

1. A **Dataset Columns** table with respective values is displayed below
2. **Validation Rows Preview** section displaying the values uploaded pops up at the bottom of the screen
3. **Dataset User Name Field**: select the name of the column which lists usernames in this field

4. [5.6+] User Map as a source of Filter defaults

 This functionality is supported for External Reports only.

In addition to access constraints, a User Map can work as a source of Filter presets for External Report data. This means that viewing defaults can be configured for multiple Users with a single User Map.

For more information on pre-filtering, refer to:

- [Pre-filtering BI tools \(External Reports\)](#)

1 External Reports / Sales Summary

1 1 New... Content Admin Yana

Info Configuration Associations Advanced Documents Collection History View Save

Plugin Connection Profile Qlik Sense - New Qlik Sense Data Source (BY) +

Object Sales Management / Sales Analysis / Sales Analysis (S) 2 Manage Filters

Same for everyone Apply based on User Map

3 User Map Sales User Map (BY) 4

Filter country = Country User Map Column

product_category = Product Category

+ Add Mapping

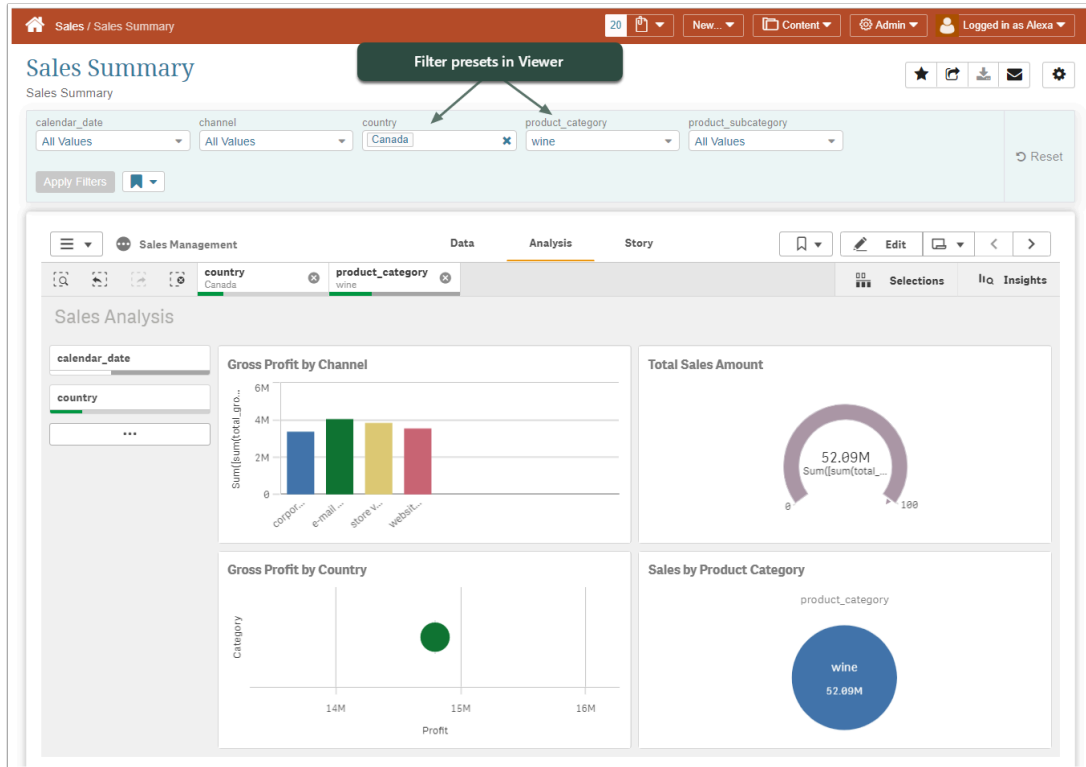
Sort Filters to change the order of Filters for this External Report.

In order to set User Map as a source of Filter defaults:

1. Go to **External Report Editor > Configuration tab**
2. **Manage Filters** section > select **Apply based on User Map**
3. Choose a **User Map** with presets to specific **Filters/Filter Values**
4. Map **Filters** to available **User Map Columns**

4.1. External Report Viewer with an applied User Map

Coming into the Report Viewer, each User included in the User Map will see correct Filter defaults.



What would you like to do next?

[Apply a User Map to a Dataset](#)


[Create New Burst](#) - and apply the User Map

[Apply User Map to a Dimension \(new in Release 5.2\)](#)


6.2 Apply a User Map to a Dataset

User Maps allow defining the slices of data that specific users are allowed to see in the **Dataset Viewer** and the **Report Viewer** for any Reports created from that Dataset.

It functions as a stencil applied to a Viewers for Data and Reports, showing only allowed data and hiding the rest of it, but this 'stencil' may be different for different users in accordance with access settings defined in the User Map.

 Prior to Version 5.5, Admin Users had unlimited access to all elements in Metric Insights. New in Version 5.5, when User maps are applied to Datasets the User map will control **view** access for All Users **including Admin Users!**

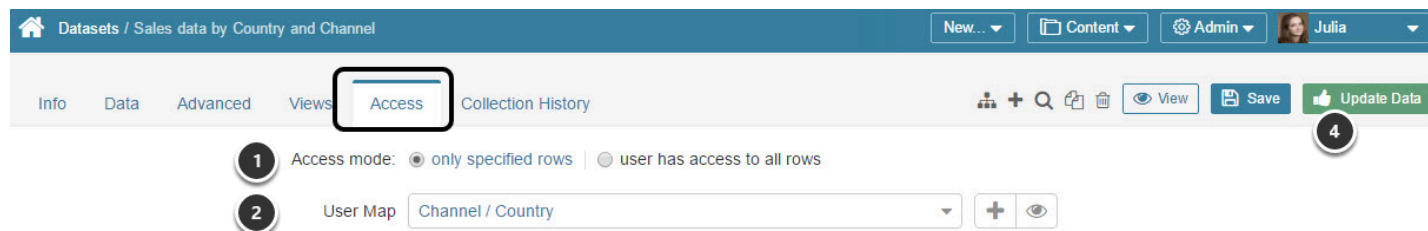
New Settings on the Dataset **Viewer** and Dataset Report **Editor** allow the User Map data filter to be applied OFF by Users with Edit Access. Toggling the **Apply User Map** off will not prevent the User Map from being applied in the **Report Viewer** or any **Notifications** (such as Digests and Burst) sent to Users.

 A User Map limits the data visible but it does NOT affect overall access. Report and Dataset access continues to be governed by the Metric Insights Security Model for [Datasets](#) or [Elements](#) for Power and Regular Users.

PREREQUISITES:

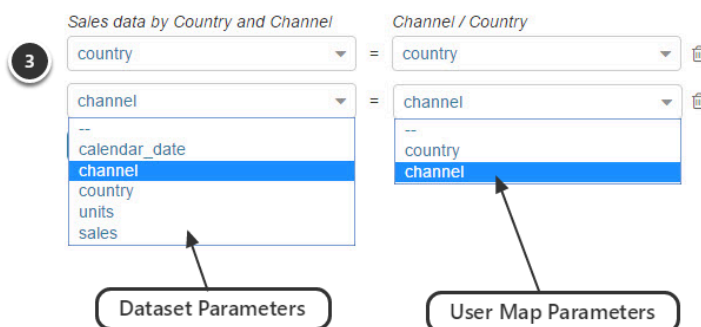
Dataset and a **User Map** corresponding to the elements in the Dataset.

1. Applying a User Map to the Dataset (access Content> Dataset)



Column Mapping

Map the columns in **Sales data by Country and Channel** to "Channel / Country" to specify how access should be restricted for each user.



On the Access tab of Dataset Editor:

1. **Access Mode:** set to 'only specified rows'
2. **User Map:** select the previously created User Map from the drop-down list. User Map must contain Usernames in the first column and another column(s) that specify columns in the Dataset
3. **Column Mapping:** define the parameters map the elements in the Dataset to those in the User Map
4. At the upper right corner of the screen click **Update Data**.

User Map example

Datasets / Channel / Country Access Map / All data

All data Save as View

Dataset collected: Monday 12/12/2016

Select text & date fields

☒ user

☒ country

☒ channel

Define filters

AND OR

Results

user	country	channel
John	Russia	e-mail marketing
John	Spain	e-mail marketing
Arlen	Canada	website visit
Arlen	Germany	website visit
Arlen	United Kingdom	website visit
George	France	store visit
George	Canada	website visit
Phoebe	France	store visit

How a User from the User Map sees this Dataset

Datasets / Sales data by Country and Channel / All data

All data Save as View Actions

Dataset collected: Monday 12/12/2016

Select text & date fields

☒ calendar_date

☒ channel

☒ country

Select numeric fields

☒ units

☒ sales

Define filters

AND OR

+ Rule + Group

Changes Applied

Results

Show: All of 11882 rows

calendar_date	channel	country	units	sales
2006-01-03 00:00:00	website visit	Germany	248	16310.65
2006-01-03 00:00:00	website visit	United Kingdom	359	18409.76
2006-01-04 00:00:00	website visit	Canada	962	50579.42
2006-01-04 00:00:00	website visit	Germany	341	24775.98

According to the User Map 'Arlen' has access to data for **Countries** of Canada, Germany and United Kingdom, but only for the **Channel** = 'website visit'.

6.3 Wildcard Entries in User Maps

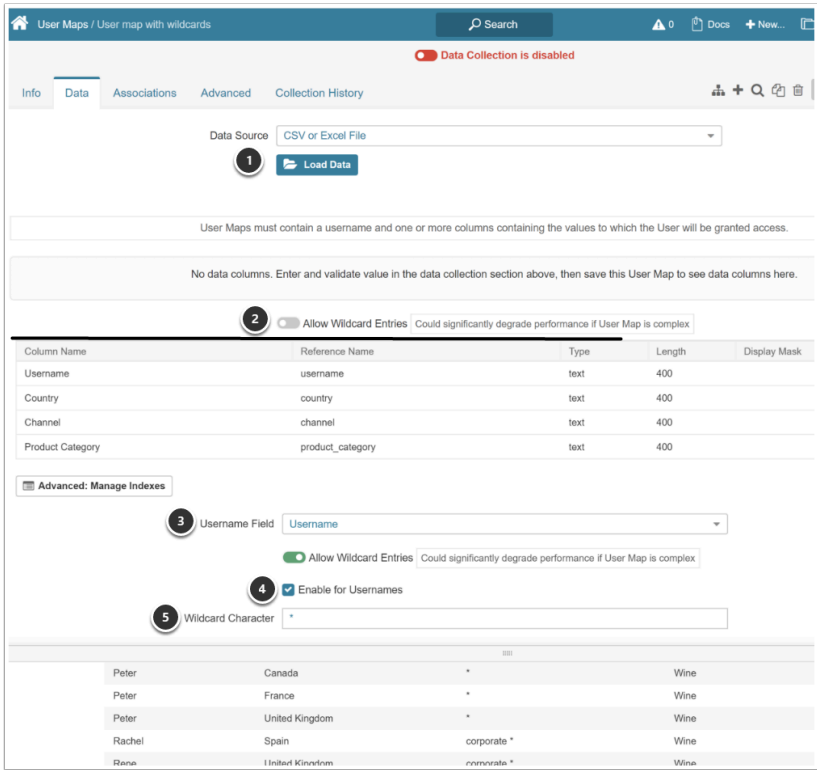
Version 6.2.0 introduces the option for Wildcard Entries in User Maps. This feature helps to simplify the process of building User Maps and determining values that can be accessed by different users.

This article describes:

- [Setup a User Map with wildcards](#)
- [Example of applying to a Dataset](#)
- [Scenarios](#)

! Wildcard Entries may slow processing significantly. Metric Insights does not recommend using this function for complex User Maps.

1. How to set User Maps to allow Wildcards



Edit User Map > Data tab

1. Load the User Map file

2. Select "Allow Wildcard Entries" to allow wildcard use in all value fields and to open the additional fields as seen in second screen
3. Check "Enable for Usernames" to apply the wildcard Username field also (as in example #2 in Step 1)
4. Enter a Wildcard character
 1. Default value is set as a system variable "USER_MAP_WILDCARD_CHARACTER_DEFAULT" (access Admin > System Variables)
 2. Enter any other symbol valid for just this User Map

Save and Enable the User Map

1.1. Example of a User Map utilizing Wildcards

i Examples in this article are created using CSV/Excel file, although the system allows User Maps to be built with other Data Sources.

[Create a User Map](#)

1	1	Username	Country	Channel	Product Category
	2	Ryan	*	*	*
2	3	Fred	France	*	*
	4	*	United States	*	*
3	5	Maryann	Spain	website visit	*
	6	Anna	Canada	store visit	wine
	7	Anna	Spain	store visit	Wine
4	8	Patrick	Canada	e-mail marketing	*
	9	Patrick	France	e-mail marketing	*
	10	Patrick	Spain	e-mail marketing	*
	11	Peter	Canada	*	Wine
	12	Peter	France	*	Wine
	13	Peter	Germany	*	Wine
	14				

The above example show the various ways wildcards can be used - note that wildcard is defined as an "*"

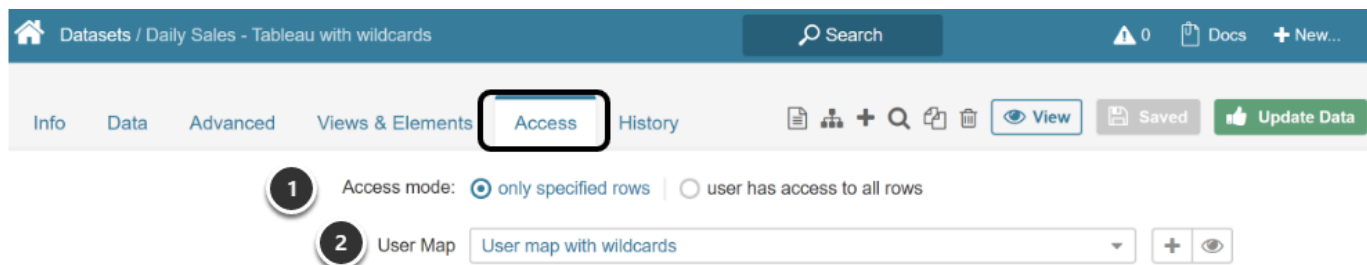
1. Ryan is granted access to all Country, Channel, and Product Category values
2. Everyone (wildcard) has access to "United States" for all Channel and Product Category values. This also applies to any User not included in the User Map.
3. Anna only has access to Wine, bought from a store visit, for two Countries (Canada and Spain)

4. Patrick is granted access to only one Channel (email marketing) and one Product (wine) in three Countries (Canada, France, and Spain)
5. Peter has access to all Channels in three Countries (Canada, France, and Germany), but only for Wine sales

2. Apply User Map to Datasets (and other objects)

i User Maps that utilize wildcards can also be applied to both External Reports and Bursts as described in:

- [External Report Overview](#) or see "Create External Report" for your specific BI Tool
- [Create New Burst](#)



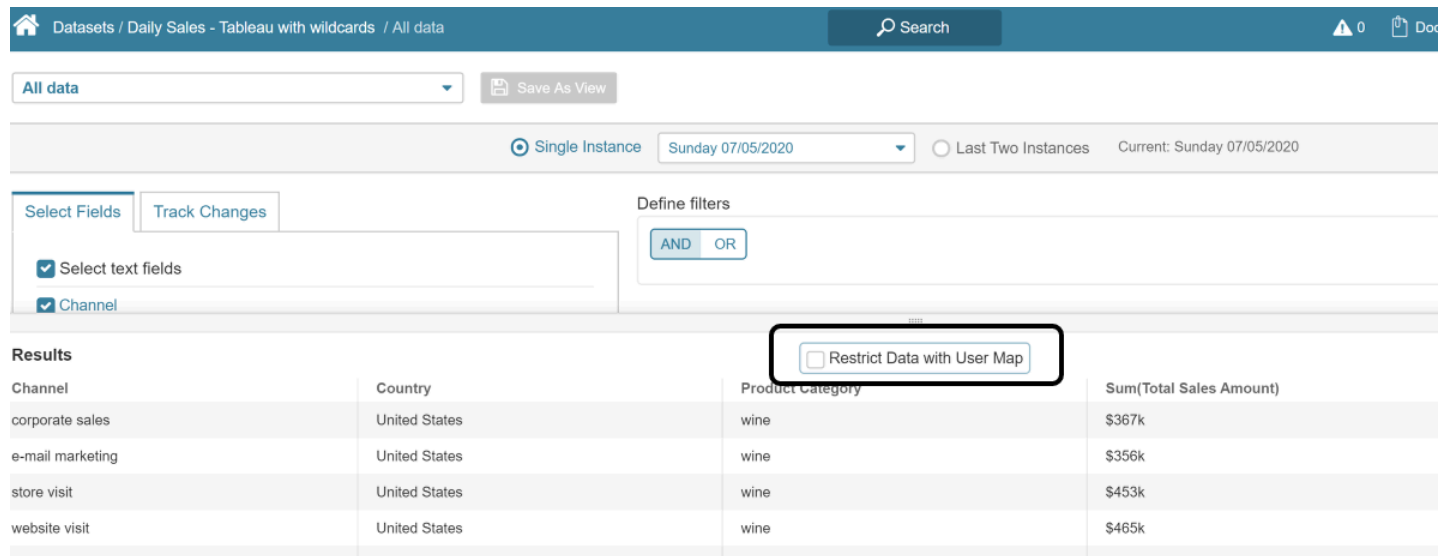
Column Mapping

- 3 Map the columns in **Daily Sales - Tableau with wildcards** to "User map with wildcards" to specify how access should be restricted for each user.

Daily Sales - Tableau with wildcards		User map with wildcards
Channel	=	Channel
Country	=	Country
Product Category	=	Product Category
+ Add		

1. Set Access mode to "only specified rows"
2. Select User Map from drop-down
3. Map the values from the Dataset to the values in the User Map

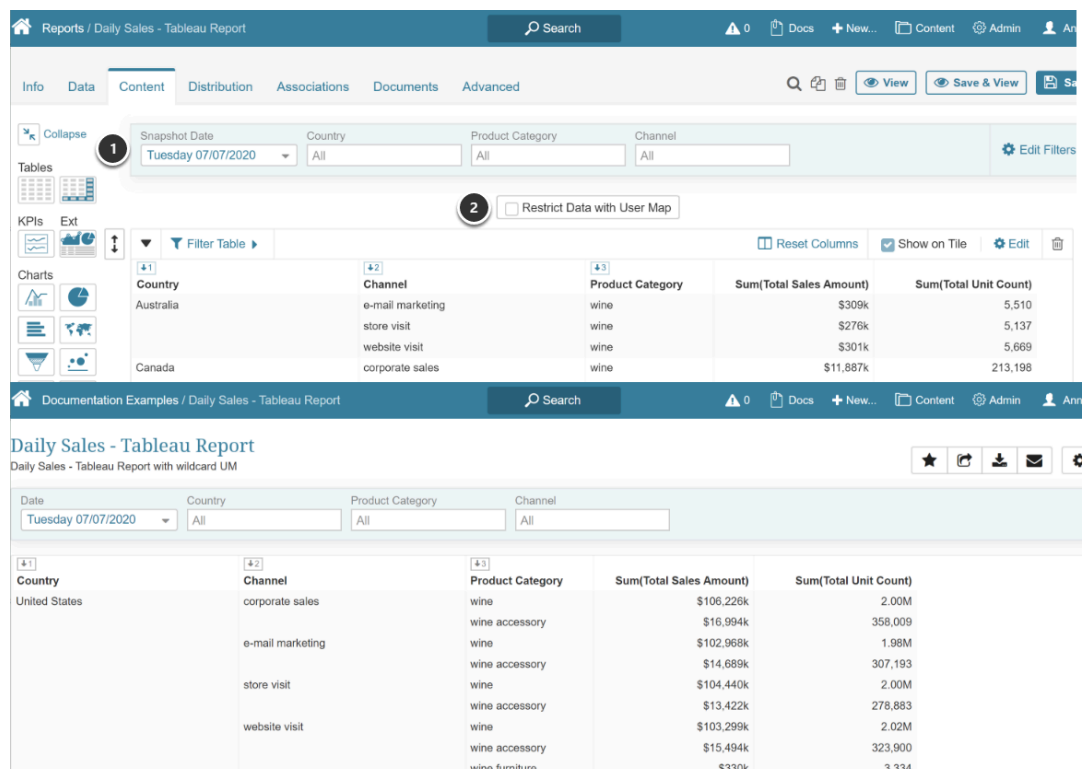
2.1. Option to restrict access will be applied to all Dataset Views



The screenshot shows the 'Daily Sales - Tableau with wildcards' dataset view. The 'Restrict Data with User Map' checkbox is highlighted with a red box. The 'Results' table is displayed below.

Channel	Country	Product Category	Sum(Total Sales Amount)
corporate sales	United States	wine	\$367k
e-mail marketing	United States	wine	\$356k
store visit	United States	wine	\$453k
website visit	United States	wine	\$465k

2.2. Create a Dataset Report and its User Map is automatically applied



The screenshot shows the 'Daily Sales - Tableau Report' interface. The 'Restrict Data with User Map' checkbox is selected. The 'Tables' section shows the following data:

Country	Channel	Product Category	Sum(Total Sales Amount)	Sum(Total Unit Count)
Australia	e-mail marketing	wine	\$309k	5,510
	store visit	wine	\$276k	5,137
	website visit	wine	\$301k	5,669
Canada	corporate sales	wine	\$11,887k	213,198

To easily check access restrictions, apply some filters:

1. Our example is applying Filters and Grouping to simplify viewing
2. Select "Restrict Data with User Map" in Editor (optional)

3. Dataset Report will automatically apply restrictions in Viewer

3. Report Viewer results for the various scenarios

3.1. Scenario 1 - Ryan

Documentation Examples / Daily Sales - Tableau Report

Search 2 Docs (5) + New... Content Admin Ryan

Daily Sales - Tableau Report

Daily Sales - Tableau Report

Date
Wednesday 07/08/2020

Country	Channel	Product Category	Sum(Total Sales Amount)	Sum(Total Unit Count)
Australia	e-mail marketing	wine	\$309k	5,510
	store visit	wine	\$276k	5,137
	website visit	wine	\$301k	5,669
Canada	corporate sales	wine	\$11,887k	213,198
	e-mail marketing	wine	\$14,187k	253,423
	store visit	wine	\$13,546k	243,750
	website visit	wine	\$12,467k	225,820
France	corporate sales	wine	\$20,353k	365,985
	e-mail marketing	wine	\$17,548k	315,984
	store visit	wine	\$20,622k	371,868
	website visit	wine	\$17,062k	303,540
Spain	e-mail marketing	wine	\$562k	9,894
	store visit	wine	\$1,147k	20,538
	website visit	wine	\$878k	16,315
United States	corporate sales	wine	\$106,226k	2.00M
		wine accessory	\$16,994k	358,009
	e-mail marketing	wine	\$102,968k	1.98M
		wine accessory	\$14,689k	307,193
	store visit	wine	\$104,440k	2.00M
		wine accessory	\$13,422k	278,883

Ryan is determined by:

1. Wildcards in all value fields related to his Username
2. (Wildcard in Username is not relevant)

3.2. Scenario 2 - User is not in User Map

Documentation Examples / Daily Sales - Tableau Report

Search 0 Docs (5) + New... Content Admin Abby

Daily Sales - Tableau Report

Daily Sales - Tableau Report

Date: Wednesday 07/08/2020

Country	Channel	Product Category	Sum(Total Sales Amount)	Sum(Total Unit Count)
United States	corporate sales	wine	\$106,226k	2.00M
		wine accessory	\$16,994k	358,009
	e-mail marketing	wine	\$102,968k	1.98M
		wine accessory	\$14,689k	307,193
	store visit	wine	\$104,440k	2.00M
		wine accessory	\$13,422k	278,883
	website visit	wine	\$103,299k	2.02M
		wine accessory	\$15,494k	323,900
		wine furniture	\$330k	3,334

Abby's access is determined by:

1. Wildcard in User Name applies to all Users, including those with View or Edit Access but not in User Map

3.3. Scenario 3 - Anna

Documentation Examples / Daily Sales - Tableau Report

Search 0 Docs + New... Content Admin Anna

Daily Sales - Tableau Report

Daily Sales - Tableau Report

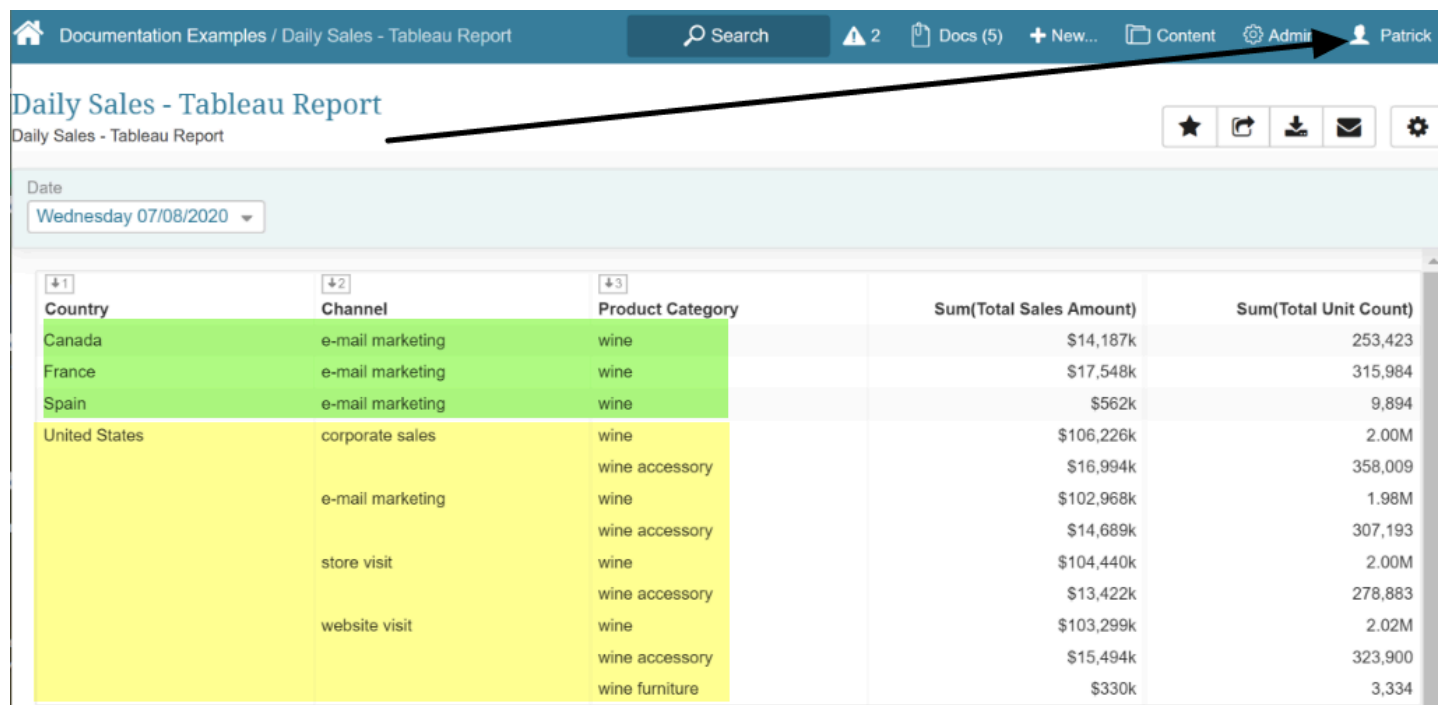
Date: Wednesday 07/08/2020

Country	Channel	Product Category	Sum(Total Sales Amount)	Sum(Total Unit Count)
Canada	store visit	wine	\$13,546k	243,750
Spain	store visit	wine	\$1,147k	20,538
United States	corporate sales	wine	\$106,226k	2.00M
		wine accessory	\$16,994k	358,009
	e-mail marketing	wine	\$102,968k	1.98M
		wine accessory	\$14,689k	307,193
	store visit	wine	\$104,440k	2.00M
		wine accessory	\$13,422k	278,883
	website visit	wine	\$103,299k	2.02M
		wine accessory	\$15,494k	323,900
		wine furniture	\$330k	3,334

Anna's access is determined by:

1. Two sets of rules applied specifically to her
2. Wildcard in Username applies to all Users

3.4. Scenario 4 - Patrick



Country	Channel	Product Category	Sum(Total Sales Amount)	Sum(Total Unit Count)
Canada	e-mail marketing	wine	\$14,187k	253,423
France	e-mail marketing	wine	\$17,548k	315,984
Spain	e-mail marketing	wine	\$562k	9,894
United States	corporate sales	wine	\$106,226k	2.00M
		wine accessory	\$16,994k	358,009
		wine	\$102,968k	1.98M
		wine accessory	\$14,689k	307,193
		wine	\$104,440k	2.00M
		wine accessory	\$13,422k	278,883
		wine	\$103,299k	2.02M
	website visit	wine	\$15,494k	323,900
		wine accessory	\$330k	3,334

Patrick's access is determined by:

1. Three sets of rules applied specifically to him
2. Wildcard in Username applies to all Users