



Table Editor Best Practice Documentation

Configuration

Webservice URL

represents the domain name of the machine (or app service), where the application has been deployed + slash + *ppwebservice.svc*

Note:

- Be careful not to have an extra slash at the end of the URL.
- You can be ensured if it works properly, by pasting it to a browser.



^ Data Entry

WebService

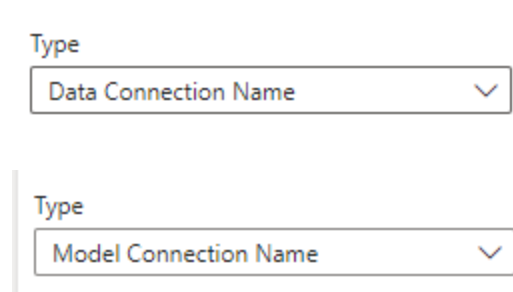
Type

refers to the connection type that the Write-back Service uses

Note:

Recommendation of usage:

- Data Datasource: for direct queries
- Model Datasource: using SSAS Tabular model or Power BI Premium dataset



Type

Type

Configuration

Connection

dedicated connection string is coming from *web.config* file.

Its content changes according to the value of 'Type' property.

The **name** of the connection string has to provide in case of those two types.

^ Data Entry

Connection

PowerOnTraining

```
<connectionStrings>  
  <add name="PowerOnTraining" providerName="Microsoft.SqlServer.Smo.SmoProvider, Microsoft.SqlServer.Smo, Version=11.0.0.0, Culture=neutral, PublicKeyToken=8954671213177e07" />  
  <add name="SQLConnectionPBIRS" providerName="Microsoft.SqlServer.Smo.SmoProvider, Microsoft.SqlServer.Smo, Version=11.0.0.0, Culture=neutral, PublicKeyToken=8954671213177e07" />  
  <add name="SQLConnection" providerName="Microsoft.SqlServer.Smo.SmoProvider, Microsoft.SqlServer.Smo, Version=11.0.0.0, Culture=neutral, PublicKeyToken=8954671213177e07" />  
</connectionStrings>
```

Column type

Set the column type belonging to the primary key (PK), to *ID*.

Note:

- The table you want to edit has to have a PK defined in the underlying SQL database.
 - in case of SSAS data source the PK has to exist in the SSAS model. &
 - it has to be visible.
- The PK has to be added to the Table Editor.

^ Column Properties

column type

ID

Source Table

the target table name, to where the write-back will happen.

Note:

- The property is case sensitive.
- in case of a direct query the schema name has to be added as well: `schema.table_name`.

^ Data Entry

Source Table

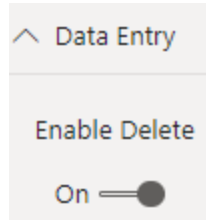
Product

Aggregation setting of the PK column

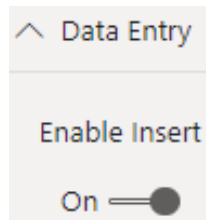
Set **Don't summarize** for the PK column and every numeric type of column, which has no aggregation on top of it originally.

ID	Remove field
Product SKU	Rename for this visual
Version ID	Move
Profit Center ID	
Customer ID	✓ Don't summarize
Time Month	Sum

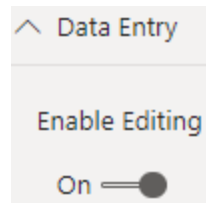
Basic Settings



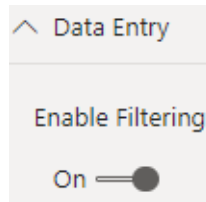
Enable Delete
allows deleting from source table.



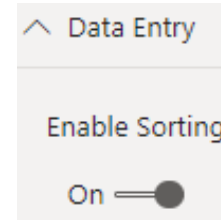
Enable Insert
allows inserting new row(s) to the source table.
Note: If 'Pages Size' is set to 10, 10 new rows can be inserted together.



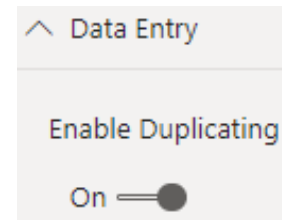
Enable Editing
allows modifying the source table.



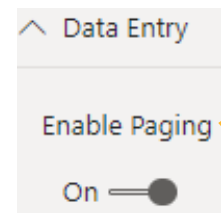
Enable Filtering
allows filtering the columns in a new row, below the header of TE.



Enable Sorting
allows sorting the dataset.
Note: only one column can be set for sorting at a time.



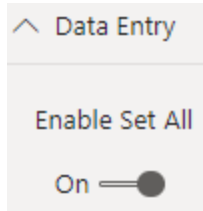
Enable Duplicating
allows copying the selected row.
Note: A copy icon appears at the end of the rows.



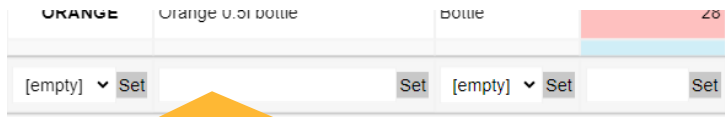
Enable Paging
allows paging the dataset.
Note:
Data limitation: Microsoft enforced for custom visuals having a data limitation (5.000 rows); How many rows the custom visual can display together. With paging and using slicers, filters this limitation can be overcome.



Basic Settings

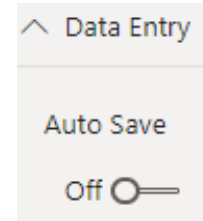
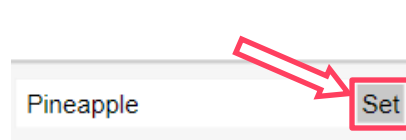
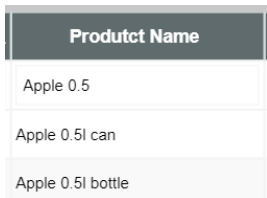
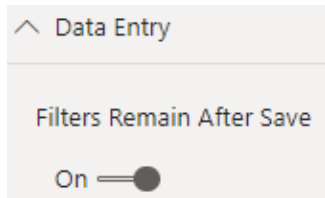


Enable Set All
allows modifying a whole column content. A new row appears at the bottom of TE with a textbox and a [Set] button in every column.
Note: The new value is set **for all records** in the column, considering the 5.000 data limitation.

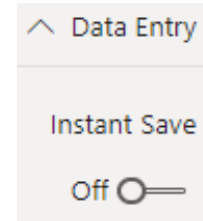


Typical use case

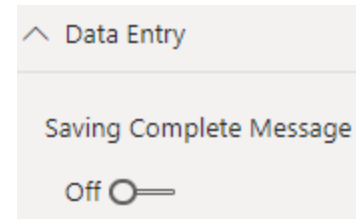
1. Enable **Filters Remain After Save** property
2. Filter the dataset by typing a content (*Apple 0.5*) into a column filter.
3. Typing new content (*Pineapple*) into Set All textbox for modification purposes and click on [Set] button.
4. Only those rows will be modified what you filtered, and after saving the filtered dataset remains on the screen.



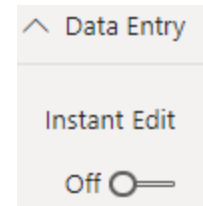
Auto Save
allows saving modifications automatically, after **leaving** the modified **row**.



Instant Save
allows saving modifications automatically, after **leaving** the modified **cell**.



Saving Complete Message
notifies about the successful saving with a green pop-up window in the right bottom corner.



Instant Edit
allows clicking on the field only once for editing purposes.
Note: Pasting content from Excel, you need to disable this property, otherwise everything will be inserted to one cell.

Basic Settings

^ Data Entry

Enable Totals

On

Enable Totals

shows the overall grand total for numeric type of values.

^ Data Entry

Enable Page Totals

Off

Enable Page Totals

shows the total value for the selected page.

^ Data Entry

Enable Section Totals

Off

Enable Section Totals

shows the total value by aggregation groups.

How to set?

1. Enable section totals
 2. Pick a field, based on what you want the aggregation
 3. Enable `[aggregated_field_name]` **section** property
 4. Sort the dataset by `[aggregated_field_name]`
- In the example you can see the totals by *BrandId*.
So, enabling *BrandId* section and sorting by *BrandId*.

Save Changes	Discard Changes	Insert	Clear Filters	Print	SKU	BrandId	Product Name	Packaging	Size	EffectiveDate	ModifiedBy	Sales
					substring fil	All	substring filter	All	from to	from to	substring filter	from to
TONIC						20			72			6 888 363 776
			A00	TONIC	Tonic 1.5l can	Can	27	06/17/2020 07:55:09 AM	joe			
			A34555	TONIC	Tonic 0.5l KEG	KEG	26	06/24/2020 07:55:09 AM	joe			
			abc	TONIC	Tonic 1l bottle	Bottle	18	11/19/2019 05:31:27 PM	joe			
			Z01	TONIC	Tonic 0.5l bottle	Bottle	0.5	08/01/2019 02:28:50 PM	nf@poweronbi.com			2 494 118 904
			Z02	TONIC	Tonic 0.5l can	Can	0.5		nf@poweronbi.com			4 394 244 872
COLA						24			1 022,2			2 850 920 435
			A99	COLA	Cola 3.5l KEG	KEG	1	07/09/2020 11:36:11 AM	st			
			B888	COLA	Cola 1 l	Bottle	6	11/19/2019 09:03:44 PM	joe			
			eded	COLA	Cola 1.75l can	Can	1	06/09/2020 01:50:30 PM	st@poweronbi.com			
			H03	COLA	Cola 3l KEG	KEG	979.2	11/20/2019 12:00:00 AM	joe			1 500 356 258

1 2 3 4 1 of 4

Table Editor Columns types

ID column type:

Table Editor requires to have 1 column as ID.

This column is the primary key from you source table

In the source table, SKU is the primary key.

A screenshot of a table editor interface showing a list of columns for a table named 'Product'. The columns are: BrandId (checked), EffectiveDate (unchecked), ModifiedBy (unchecked), Packaging (checked), Product Name (checked), Size (checked), and SKU (checked). The 'SKU' column is highlighted with a yellow checkmark.

Set the column type of SKU (your primary key) to ID.

A screenshot of the configuration interface for the 'SKU' column. It shows a toggle switch for 'SKU visible' set to 'On'. Below it, the 'SKU column type' is set to 'ID' in a dropdown menu. The 'SKU title' is set to 'SKU' in a text input field.

If the column is not relevant for end users, turn of its visibility to hide it in the Table Editor.

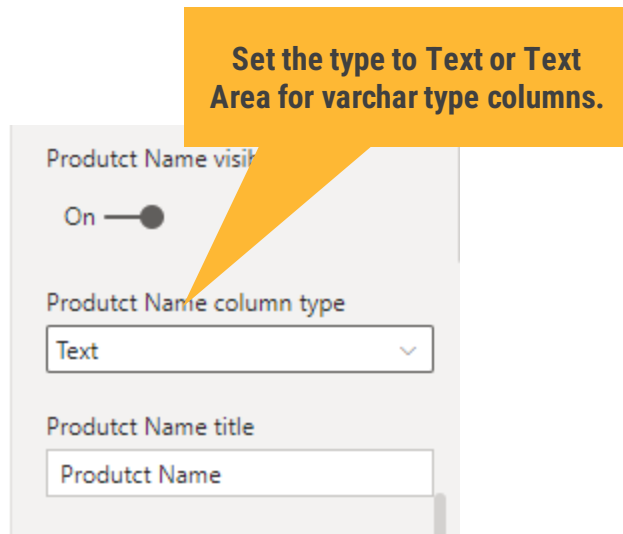
A screenshot of the configuration interface for the 'SKU' column. It shows a toggle switch for 'SKU visible' set to 'Off'. Below it, the 'SKU column type' is set to 'ID' in a dropdown menu. The 'SKU title' is set to 'SKU' in a text input field.

Table Editor Columns types

Text and Text Area

Differences between them:

- Text – one line text
- Text Area – multiple line text + supports rich text



Product Name visible

On

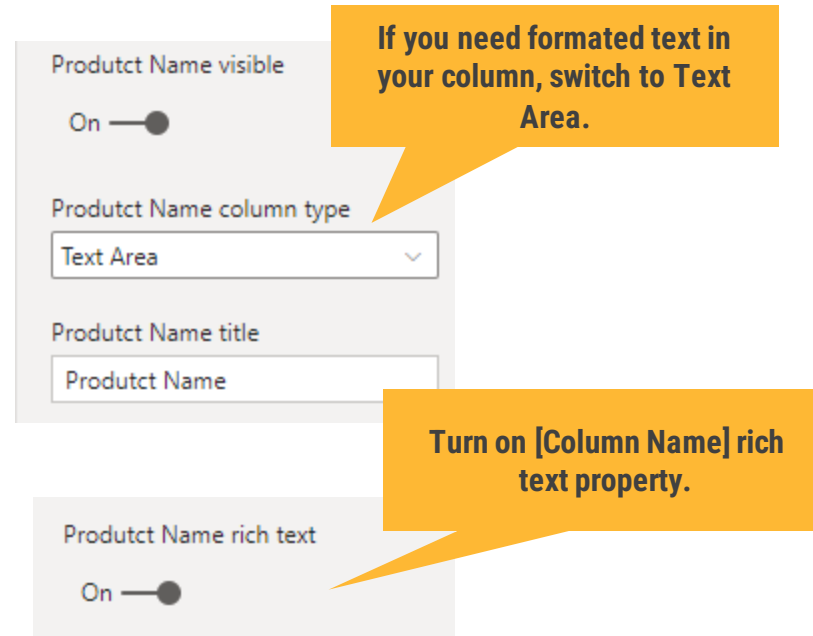
Product Name column type

Text

Product Name title

Product Name

Set the type to Text or Text Area for varchar type columns.



Product Name visible

On

Product Name column type

Text Area

Product Name title

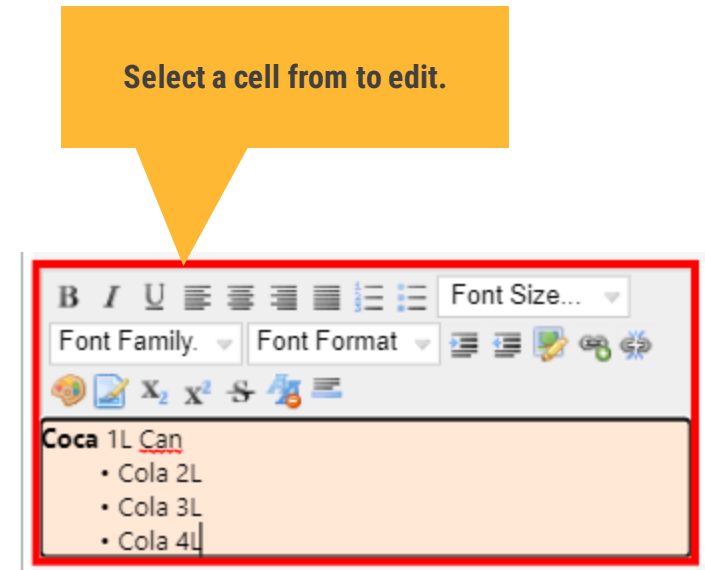
Product Name

Product Name rich text

On

If you need formatted text in your column, switch to Text Area.

Turn on [Column Name] rich text property.



Select a cell from to edit.

B *I* U

-

- 1

Font Size...

Font Family. Font Format

Coca 1L Can

- Cola 2L
- Cola 3L
- Cola 4L

Table Editor Columns types

Number

Size visible
On

Size column type
Number

Size title
Size

Set the type to Number of numeric type columns (float, int, etc.)

15
6
5

Selecting a cell, 2 arrows will appear to increase or decrease the current value by 1.

6 test

After entering text into the cell, it'll be turned red and unable to save.

Custom format strings can be used in [Column Name] format property. It'll be visible only on the front-end side and not part of the save (only the numeric value will be saved during the writeback).

Size format
pcs

Size
29 pcs
22 pcs
15 pcs
6 pcs
5 pcs

Table Editor Columns types

Date and Date Time

Differences between them:

- Date – Month / Day / Year format
- Date Time – Month / Day / Year – Hours : Minutes : Seconds

The image displays two side-by-side screenshots of the 'EffectiveDate' column configuration in a table editor. Both screenshots show a control panel on the left and a date picker on the right.

Left Screenshot (Date type):
- Control panel: 'EffectiveDate visible' is turned 'On'. 'EffectiveDate column type' is set to 'Date'. 'EffectiveDate title' is 'EffectiveDate'.
- Date picker: Shows 'January 2022' with the date '01/20/2022' selected. The date is highlighted with a red box.

Right Screenshot (DateTime type):
- Control panel: 'EffectiveDate visible' is turned 'On'. 'EffectiveDate column type' is set to 'DateTime'. 'EffectiveDate title' is 'EffectiveDate'.
- Date picker: Shows 'January 2022' with the date '01/20/2022' selected. The time '07:35:09 PM' is also selected and highlighted with a red box.

Table Editor Columns types

Selection part I (from dimension table, using FK columns) - Recommended

BrandId visible
On

BrandId column type
Selection

BrandId title
BrandId

Set column type to Selection.

Fields

BrandId	▼	×
BrandName	▼	×

Add a new SmartFilter visual with the used columns from dimension table. In this case the ID of the dimension table and the user firendly display values.

BrandId source table
Brand

BrandId dropdown display column
BrandName

BrandId dropdown value column
BrandId

**Source table is the name of the dimensions table.
Dropdown display value column contains the value which will be shown in the dropdown menu.
Dropdown value column contains FK (or ID) value behind the shown item.**

COLA

APPLE	▼
APPLE	
ORANGE	
COLA	
TONIC	

After the configurations, little dropdown arrow will appear on the right side and clicking on the cell will open the dropdown menu, listing values from the dimension table.

Table Editor Columns types

Selection part II (from source table)

BrandId visible
On

BrandId column type
Selection

BrandId title
BrandId

Set column type to Selection.

BrandId source table
Product

BrandId dropdown display column
BrandId

BrandId dropdown value column
BrandId

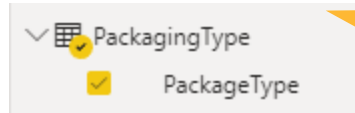
**In this case use the same source table which you're using in the data entry property.
Dropdown display column and Dropdown value columns should be the same column name.**

3
1
2
3
4

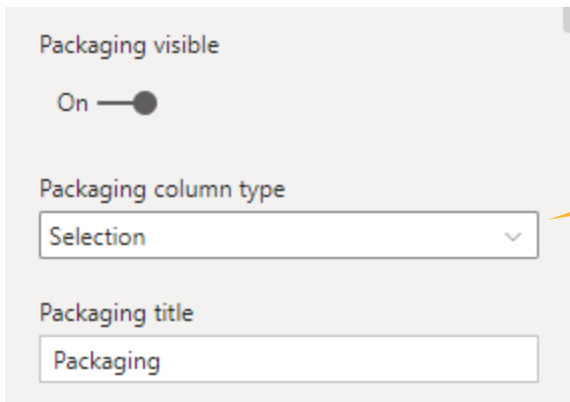
After the configurations, little down arrow will appear on the right side and clicking on the cell will open the dropdown menu, listing values from given column of the source table.

Table Editor Columns types

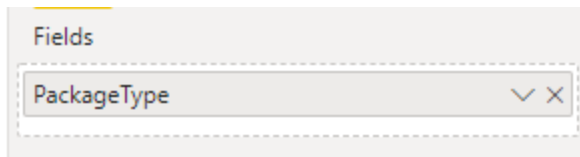
Selection part III (from table located in local data model)



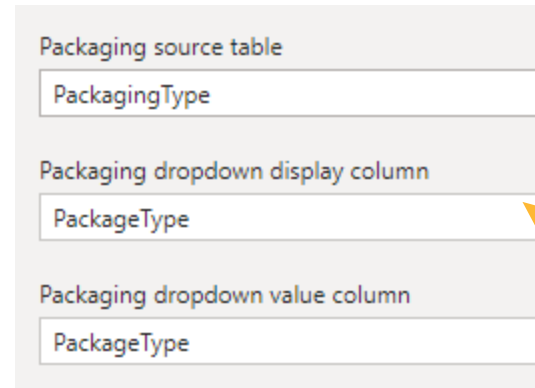
Add a new dimension table to your model. (Manually entered data, excel source, table generated by PQ, etc.)
Note: connection type must be SSAS datasource.



Set column type to Selection.



Add a SmartFilter with the relevant dimension table's column.



Source table is the newly added table's name.
Dropdown display column and Dropdown value column are the same column from the table.
In this case there is no ID field neither in the fact or dimension tables.



Values from the new table will be shown in the dropdown menu.

Table Editor Columns types

Selection part IV (from manual list)

Packaging visible
On

Packaging column type
Selection

Packaging title
Packaging

Set column type to Selection.

Packaging dropdown items list
Can;KEG;Bottle;Box

Fill up the Dropdown items list with the desired elements, separated with ; (semicolon).

Can

Can
KEG
Bottle
Box

After the configuration, the dropdown menu will contain items from the Dropdown items list property.

Packaging dropdown items list
KEG;Bottle;Box

Bottle

KEG

Bottle

KEG

Bottle

KEG

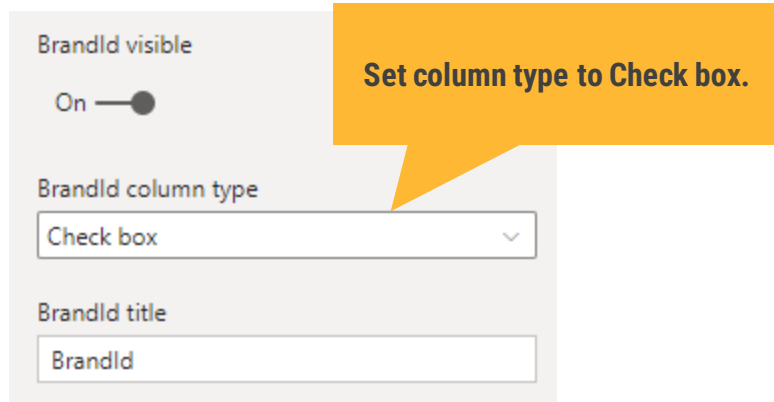
If some items are missing or not fully covering the values in the original column, then the fields will be empty. In this case the Can is missing from the items list so, every cell that would contain Can is empty now. Items list is also case sensitive so, make sure the values are matching.

Table Editor Columns types

Checkbox

It can be used with bool or numeric type columns.

In case of numeric type 0 will be converted to false and any other numbers will be converted to true

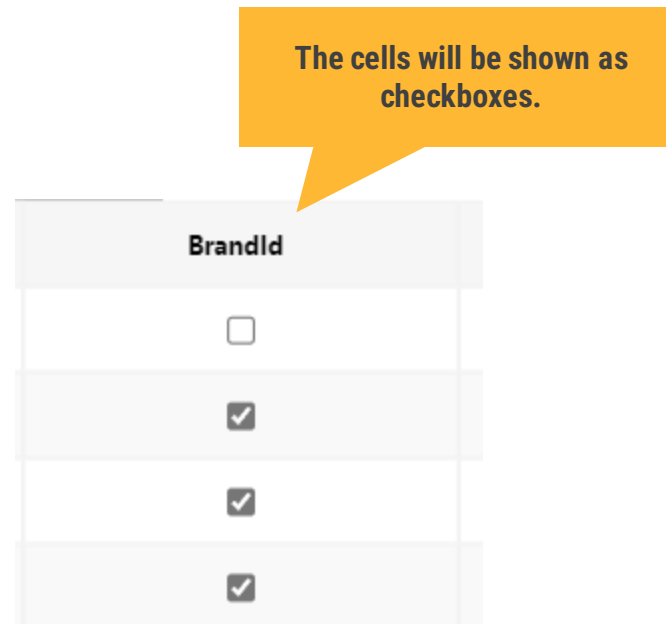


BrandId visible
On

BrandId column type
Check box

BrandId title
BrandId

Set column type to Check box.



BrandId
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

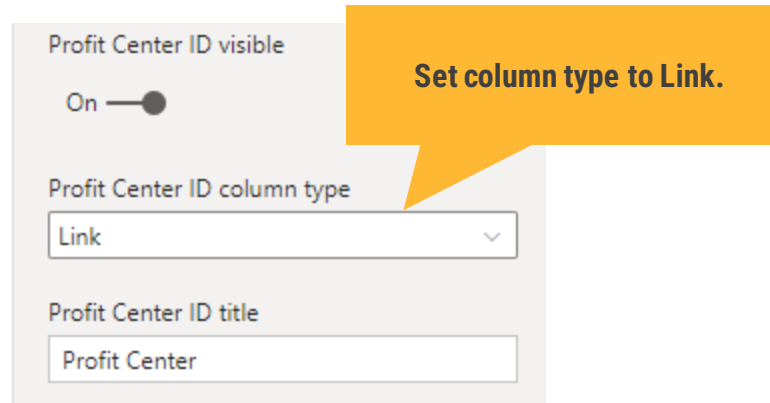
The cells will be shown as checkboxes.

During the writeback process, the values will be saved as bit values (0 or 1) based on their status.

Table Editor Columns types

Link part I (the content is a link)

If your column contains URLs and turning on this property makes them clickable.



Profit Center ID visible
On

Profit Center ID column type
Link

Profit Center ID title
Profit Center

Set column type to Link.

Table Editor Columns types

Link part II (constant link)

Profit Center ID visible
On

Profit Center ID column type
Link

Profit Center ID title
Profit Center

Set column type to Link.

Add a link to the [Column Name] link property. E.g.: onedrive link.

Profit Center ID link
<https://poweronbi.sharepoint.com/sites/...>

Profit Center ID open link in new tab
On

Can be setup to open the link in the current or a new tab.
If turned off small window will pop up in the current tab.
If the linked site requires an additional authorization, it must be opened in new tab.

changes	Insert
Profit Center	Cu
ing fil	substring f
PC2	D
PC2	D
PC2	TL
PC2	TES
PC2	SAI
PC2	SAI
PC2	ALI

After the setup the values in the column will be clickable and everyone of them will navigate to the given URL.

Table Editor Columns types

User

**Legacy type, can be replaced
with default and computed
values.**

Table Editor Columns types

Image (supports to show images from URLs)


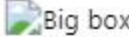


Packaging visible
On

Packaging column type
Image

Packaging title
Packaging

Set column type to Image.

Note: You can use image URLs in Text Area when the rich text is enabled.

andId	Packaging	Size
COLA		24
APPLE		22
APPLE		15
ONIC		6

If a cell contains an URL that points to an image on the web, it will be shown. You can also edit those links or add new ones one insert.

Table Editor Columns types

Search box

BrandId visible
On

BrandId column type
Search box

BrandId title
BrandId

BrandId source table
Brand

BrandId dropdown display column
BrandName

BrandId dropdown value column
BrandId

BrandId row display column
BrandName

Set column type to Search box.

- Config search box related properties:
- Source table is the name of the dimension table.
 - Dropdown display column is user friendly text field of the dimension.
 - Dropdown value column is the ID column of the dimension table (the key for the fact table).
 - Row display column is the same as the dropdown display column, it's required by the search box.

SKU	
Product Name	'Brand'[BrandName]
BrandId	▼ ×
BrandName	▼ ×
Packaging	▼ ×
Size	▼ ×
EffectiveDate	▼ ×

Add the user-friendly text column from the dimension table to the TE.

BrandName visible
Off

BrandName title
BrandName

Turn off the visibility of that column to hide it.

After the configurations, double clicking on a cell will shown a small loading text under the field. It starts search based on its content. (Now it starts searching for ,Cola")

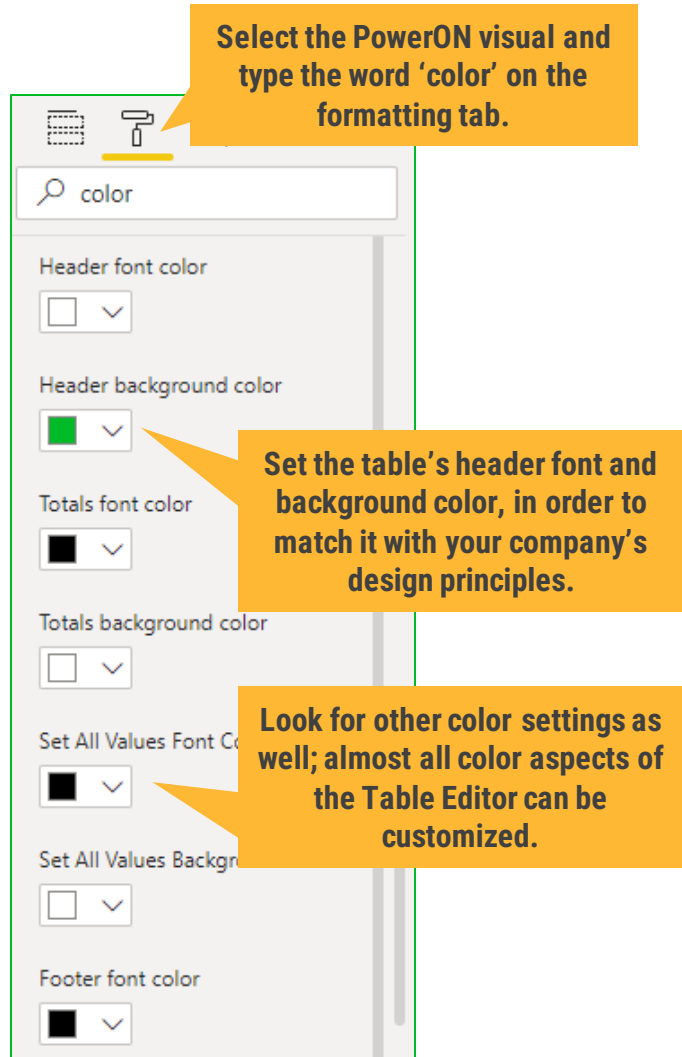
loading...	COLA
	APPLE

Typing in it will automatically start a search looking for matches in the dimension table based on the input substring. e.g.: in this case it starts searching for every string that contains ,A' character. If I type a P after A it will restart the search and list only the Apple. It also can find substrings in middle of text so, if I type „NG” it will list „Orange”.

APPLE	APPLE
COLA	APPLE
ORANGE	APPLE

Design

Colors



Select the PowerON visual and type the word 'color' on the formatting tab.

Header font color

Header background color

Totals font color

Totals background color

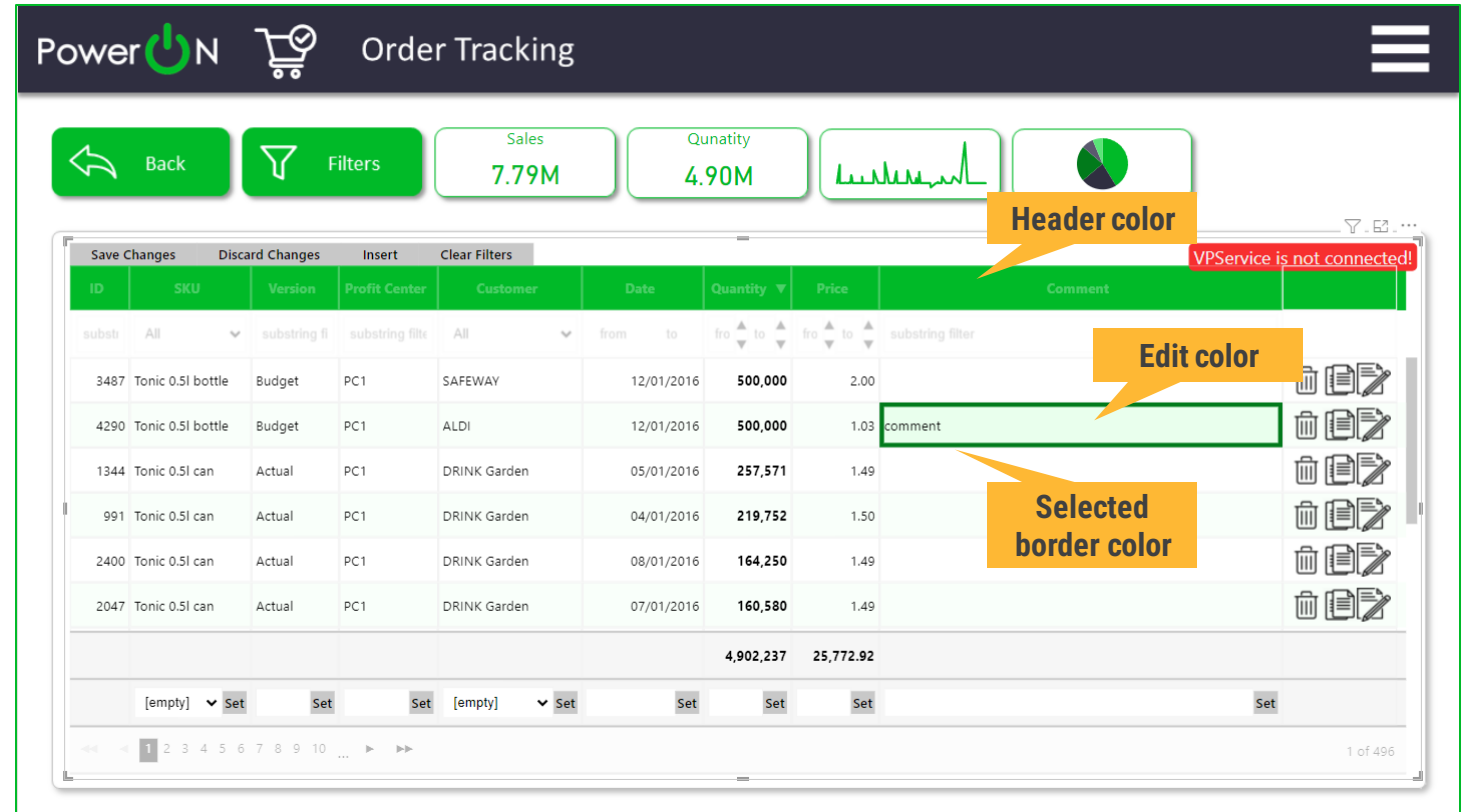
Set All Values Font Co

Set All Values Backgr

Footer font color

Set the table's header font and background color, in order to match it with your company's design principles.

Look for other color settings as well; almost all color aspects of the Table Editor can be customized.



PowerON Order Tracking

Back Filters Sales 7.79M Quantity 4.90M

Header color

Edit color

Selected border color

VPSERVICE is not connected!

ID	SKU	Version	Profit Center	Customer	Date	Quantity	Price	Comment
3487	Tonic 0.5l bottle	Budget	PC1	SAFEWAY	12/01/2016	500,000	2.00	
4290	Tonic 0.5l bottle	Budget	PC1	ALDI	12/01/2016	500,000	1.03	comment
1344	Tonic 0.5l can	Actual	PC1	DRINK Garden	05/01/2016	257,571	1.49	
991	Tonic 0.5l can	Actual	PC1	DRINK Garden	04/01/2016	219,752	1.50	
2400	Tonic 0.5l can	Actual	PC1	DRINK Garden	08/01/2016	164,250	1.49	
2047	Tonic 0.5l can	Actual	PC1	DRINK Garden	07/01/2016	160,580	1.49	
						4,902,237	25,772.92	

Design

Alignment

Select the PowerON visual and type the word 'alignment' on the formatting tab.

Make sure to align text fields to the left and numeric and date fields to the right.

alignment

Column Properties

ID alignment: Right

Product SKU alignment: Left

Version ID alignment: Left

Profit Center ID alignment: Left

Customer ID alignment: Left

Time Month alignment: Right

Quantity alignment: Right

PowerON Order Tracking

Sales: 7.79M, Quantity: 4.90M

VPService is not connected!

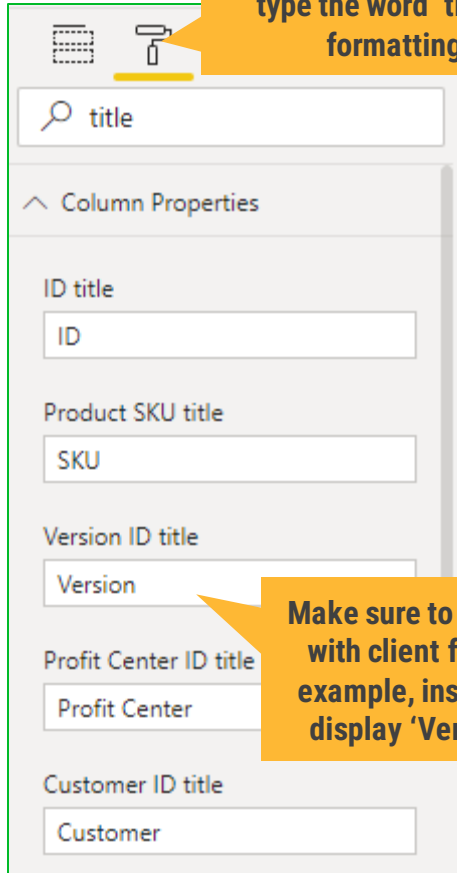
ID	SKU	Version	Profit Center	Customer	Date	Quantity	Comment
3487	Tonic			SAFEWAY	12/01/2016	500,000	2.00
4290	Tonic			ALDI	12/01/2016	500,000	1.03
1344	Tonic 0.5l can	Actual	PC1	DRINK Garden	05/01/2016	257,571	1.49
991	Tonic 0.5l can	Actual	PC1		04/01/2016	219,752	1.50
2400	Tonic 0.5l can	Actual	PC1		08/01/2016	164,250	1.49
2047	Tonic 0.5l can	Actual	PC1	DRINK Garden	07/01/2016	160,580	1.49
						4,902,237	25,772.92

Annotations: Text left aligned, Date right aligned, Number right aligned

Design

Aliasing

Select the PowerON visual and type the word 'title' on the formatting tab.



title

Column Properties

ID title
ID

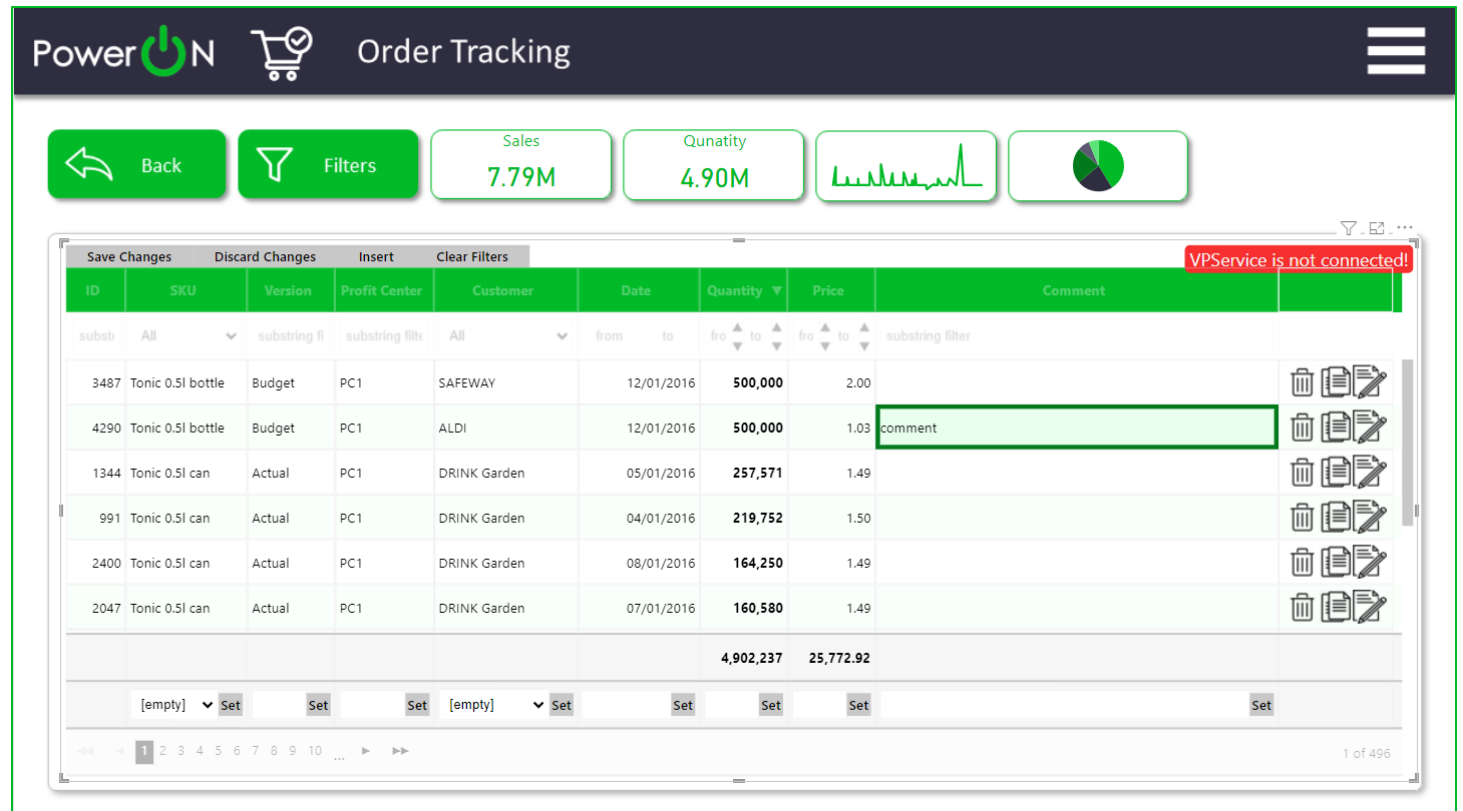
Product SKU title
SKU

Version ID title
Version

Profit Center ID title
Profit Center

Customer ID title
Customer

Make sure to alias technical fields with client friendly aliases. For example, instead for 'Version ID' display 'Version' for the users.



PowerON Order Tracking

Back Filters Sales 7.79M Quantity 4.90M

VPService is not connected!

ID	SKU	Version	Profit Center	Customer	Date	Quantity	Price	Comment
3487	Tonic 0.5l bottle	Budget	PC1	SAFEWAY	12/01/2016	500,000	2.00	
4290	Tonic 0.5l bottle	Budget	PC1	ALDI	12/01/2016	500,000	1.03	comment
1344	Tonic 0.5l can	Actual	PC1	DRINK Garden	05/01/2016	257,571	1.49	
991	Tonic 0.5l can	Actual	PC1	DRINK Garden	04/01/2016	219,752	1.50	
2400	Tonic 0.5l can	Actual	PC1	DRINK Garden	08/01/2016	164,250	1.49	
2047	Tonic 0.5l can	Actual	PC1	DRINK Garden	07/01/2016	160,580	1.49	
						4,902,237	25,772.92	

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Design

Width and Wrap

Select the PowerON visual and type the word 'width' on the formatting tab.

The screenshot shows the 'width' search results in the PowerON interface. Under 'Column Properties', several columns have their widths set to specific values: ID width (45), Product SKU width (100), Version ID width (70), Profit Center ID width (80), and Wrap Header Text (Wrap With Break Word).

You can set the column width to a specific width, in case you wish to avoid automatic column width scaling.

If the header is longer than the content of the field, then you can opt for adding line breaks to the header names.

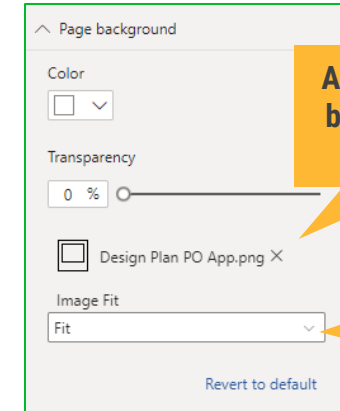
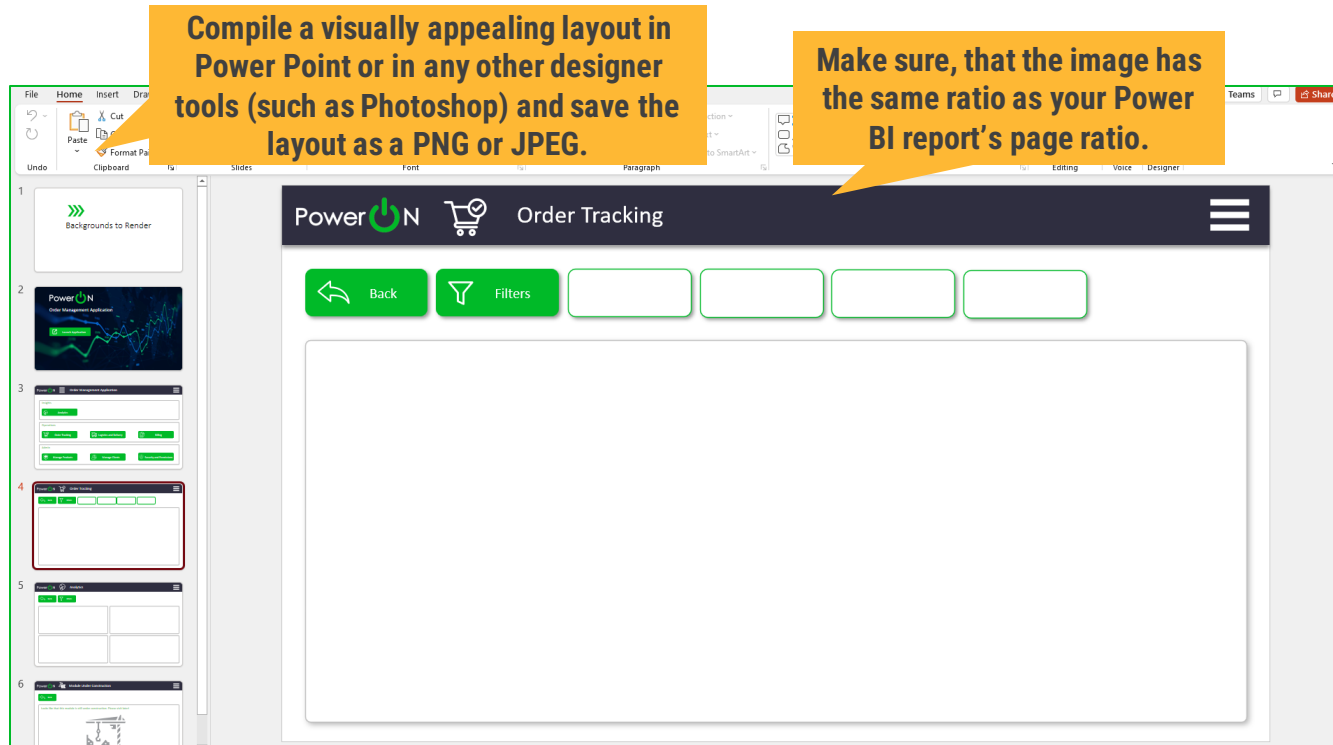
The screenshot shows the PowerON Order Tracking dashboard. At the top, there are navigation buttons for 'Back' and 'Filters', and summary cards for 'Sales 7.79M' and 'Quantity'. A data table is displayed with columns: ID, SKU, Version, Profit Center, Customer, Date, Quantity, Price, and Comment. Annotations highlight: 'Wrap with
 tag' pointing to the 'Customer' column header, and 'Comment field set to wide' pointing to the 'Comment' column header. A red error message 'VPSERVICE is not connected!' is visible in the top right corner.

ID	SKU	Version	Profit Center	Customer	Date	Quantity	Price	Comment
3487	Tonic 0.5l bottle	Budget	PC1	SAFEWAY	12/01/2016	500,000	2.00	
4290	Tonic 0.5l bottle	Budget	PC1	ALDI	12/01/2016	500,000	1.03	
1344	Tonic 0.5l can	Actual	PC1	DRINK Garden	05/01/2016	257,571	1.49	
991	Tonic 0.5l can	Actual	PC1	DRINK Garden	04/01/2016	219,752	1.50	
2400	Tonic 0.5l can	Actual	PC1	DRINK Garden	08/01/2016	164,250	1.49	
2047	Tonic 0.5l can	Actual	PC1	DRINK Garden	07/01/2016	160,580	1.49	
						4,902,237	25,772.92	

Alternatively you can add a
 tag to the column title, in order to manually break the headers.

Design

Background

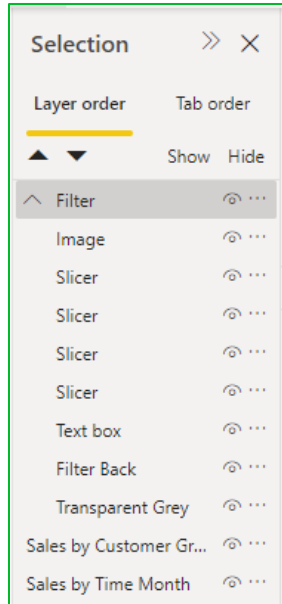


Add the image as a background of the Power BI page.

Make sure to fit the image to the canvas.

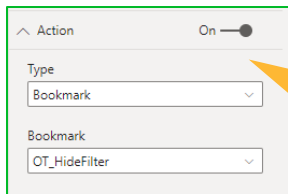
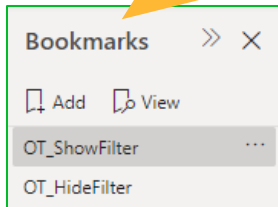
Design

Filters and dynamic content

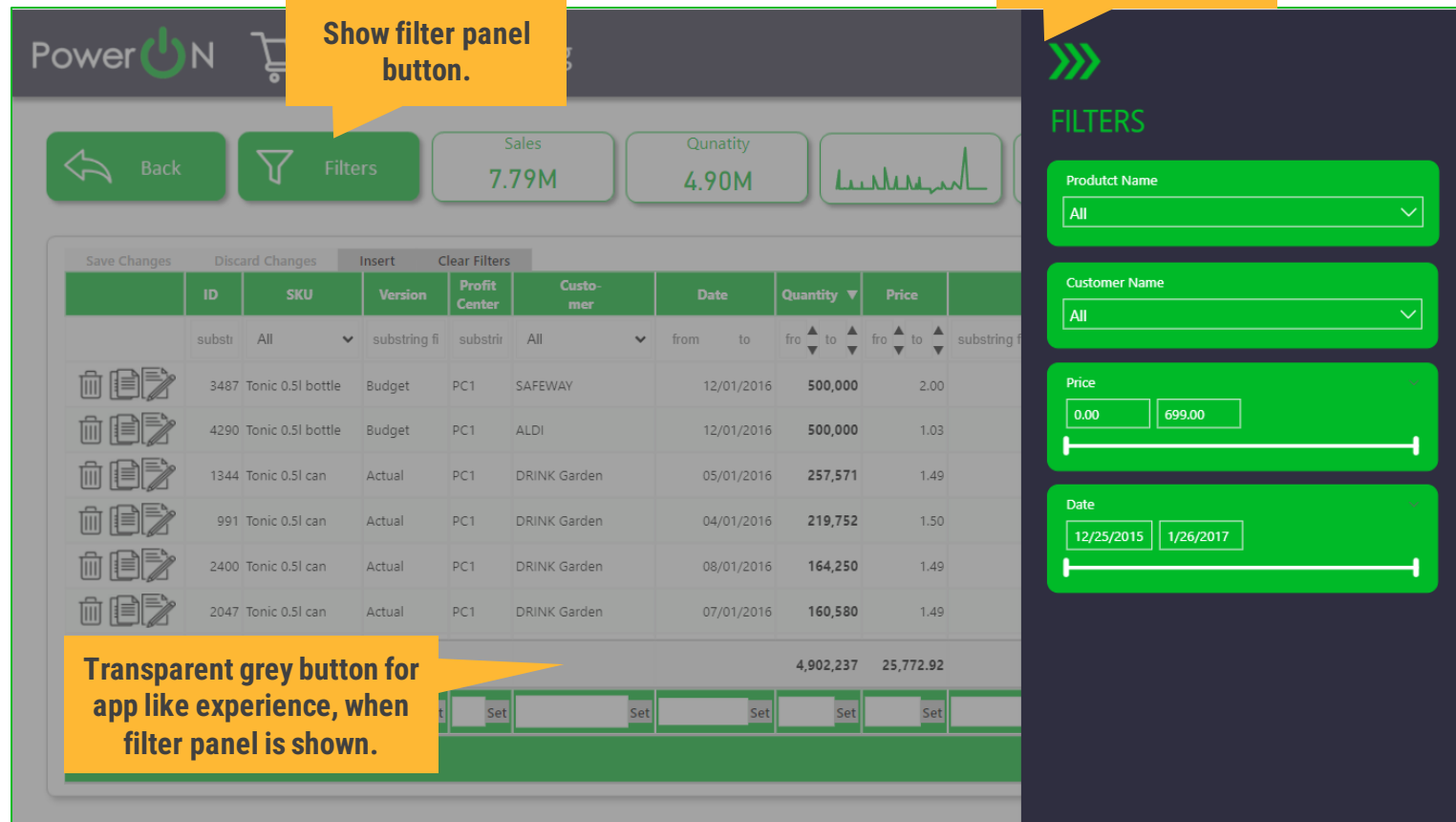


Add slicers and group them.

Set up a bookmark for the visible and not visible state of the filter group.



Add buttons to the report page and assign the show and hide bookmarks to these buttons, in order to show or hide the filter panel.



Show filter panel button.

Hide filter panel button.

Transparent grey button for app like experience, when filter panel is shown.

Computed and Default Value

Hardcoded Values

Time Month computed value

Time Month read only

Off

Time Month default value

DATE()

The computed value will be set upon data entry or edit to the record regardless if the certain field populated with value or not, the computed value will always override that.

The default value will be set upon data entry or edit to the record, in case the certain field is not yet populated.

The following functions can be used in the default and computed value properties:

- DATE() - Current date without time
- NOW() - Current date with time
- USERNAME() - Current Power BI user's username part
- DOMAIN() - Current Power BI user's domain part
- USERPRINCIPALNAME() - Current Power BI user full email address format



The screenshot displays the 'Order Tracking' interface with two data tables. The top table shows a record for '3911 Apple 0.5l Bottle' with a date of '02/09/2022'. A callout points to this date, stating: 'Default value is populated on data entry or for edit, in case the field is blank.' The bottom table shows a record for '3911 Apple 0.5l Bottle' with a date of '02/09/2022' and a price of '10.00'. A callout points to this price, stating: 'Computed value is always populated in case the record is created or modified.'

ID	SKU	Version	Profit Center	Customer	Date	Quantity	Price	Comment
3858	Apple 0.5l Bottle	Budget2	PC1	ALDI	01/01/2016	0	0.00	
3911	Apple 0.5l Bottle	Budget2	PC22	ALDI	02/09/2022	0	0.00	
4547	Apple 0.5l Bottle	Actual	PC1	ALDI	01/01/2016	0	1.01	
4548	Apple 0.5l Bottle				2016	0	1.01	
4965	Apple 0.5l Bottle				2022	1	10.00	
2238	Apple 0.5l Bottle				2016	0	33.85	
						1	2,188.02	

Computed and Default Value

Dynamic Values

Computed values can reference columns added in the table editor and regular mathematical expressions (addition, subtraction, multiplication etc.) can be applied on them, such as to compute the Discount Price as the Price minus the Discount value.

Discount Price computed value

`SalesTest.Price - SalesTest.Discount`

If this notation is used, the referenced columns must be in the table editor (can be hidden if needed) and needed to be referenced as `TableName.ColumnName`.

Power ON Order Tracking

Customer Name: ALDI

Sales: 21.49 Quantity: 1.34

VPService is not connected!

ID	SKU	Version	Profit Center	Customer	Date	Quantity	Price	Discount	Discount Price	Comment
4636	Apple 0.5l Bottle	ALDI	PC1	ALDI	01/01/2016	0	40.00	15	25	
4637	Apple 0.5l Bottle	Budget	PC2	ALDI	01/01/2016	0	37.53	15	22.53	
42	Apple 0.5l Bottle	Budget	PC1	ALDI	02/01/2016	0	37.16	15		
4550	Apple 0.5l Bottle	Budget	PC1	ALDI	01/01/2016	0	37.16	0		
41	Apple 0.5l Bottle	Budget	PC2	ALDI	02/01/2016	0	37.16	15	22.16	
4549	Apple 0.5l Bottle	Budget	PC2	ALDI	01/01/2016	0	37.16	0	37.16	
						1	2,190.49	330	1 860.49	

Discount price is calculated as the price minus the discount .

Computed and Default Value

Capture Value from Slicer

Computed or default values can also reference values which are not in the table editor, for example to pass a slicer selection as a default value of a new record.

In order to populate the Comment field with the selected customer's name, we add the computed value as `TableName.ColumnName`.

Comment computed value
`Customer.Customer Name`

In order the value to propagate, a smart filter is needed to be added with the column, which we are trying to pass as a default or computed value.

Fields
Customer Name

Customer Name
DRINK Center

A single value is selected in the slicer.

Power ON Order Tracking

Customer Name
DRINK Center

Sales 0.25 Quantity 0.27

VPService is not connected!

ID	SKU	Version	Profit Center	Customer	Date	Quantity	Price	Discount	Discount Price	Comment	
3831	Apple 0.5l Bottle	Forecast2	PC1	DRINK Center	01/01/2016	0	1.01	0	1.01	DRINK Center	
4236	Apple 0.5l Bottle	Forecast	PC1	DRINK Center	01/01/2016						
4324	Apple 0.5l Bottle	Forecast3	PC1	DRINK Center	01/01/2016						
4592	Apple 0.5l Bottle	Actual	PC1	DRINK Center	01/01/2016	0	1.01	0	1.01		
3706	Apple 0.5l Bottle	Forecast3	PC2	DRINK Center	01/01/2016	0	1.01	0	1.01		
							0	50.36	0	50.36	

The new comment is then populated with the value selected in the slicer.

In addition to that a single value needs to be selected from a slicer or from a filter, so that a single value can be passed to the default or computed value.

Front End Security

Write-back Security Measure

In order to restrict edit of certain records, a so called 'write-back security measure' can be utilized

Create a DAX measure, which returns either 1 or 0 when placed into the context of your Table Editor. If 1 is returned, then the record will be editable, if 0 (or blank) is returned, then edit will be restricted.

```
1 WS =  
2 var EnableEdit =  
3 sumx(SalesTest,  
4     var SelectedDate = SalesTest[Time Month]  
5     return  
6     if(SelectedDate < date(2016,1,10),  
7         1, //allow edit  
8         0 //restrict edit  
9     )  
10 )  
11 return  
12 EnableEdit
```

Once this measure is created, it needs to be added to the Table Editor and the toggle for write security column turned on

WS write security column

On

Power ON Order Tracking

Back Filters Sales 11.49 Quantity 0.34

ID	SKU	Version	Profit Center	Customer	WS	Date	Quantity	Price
4547	Apple 0.5l Bottle	Actual	PC1	ALDI	1	01/01/2016	0	1.01
4548	Apple 0.5l Bottle	Actual	PC2	ALDI	1	01/01/2016	0	1.01
2238	Apple 0.5l Bottle	Budget	PC1	ALDI	0	08/01/2016	0	33.85
2241	Apple 0.5l Bottle	Actual	PC1	ALDI	0	08/01/2016	0	33.85
2239	Apple 0.5l Bottle	Budget	PC2	ALDI	0	08/01/2016	0	33.85
2240	Apple 0.5l Bottle	Actual	PC2	ALDI	0	08/01/2016	0	33.85
18							0	2,178.02

Records, where this measure evaluates to 1 will be editable

Records where this measure evaluates to 0 will be blocked from edit

Once the measure is added, it's visibility can be turned off, so it is not showing up for users

Front End Security

Write-back Security Measure

In order to allow data entry, the computed value of the write-back security measure can be set to 1.

WS computed value

1

PowerON Order Tracking

Back Filters Sales 21.49 Quantity 1.34

Save Changes Discard Changes Insert Clear Filters

ID	SKU	Version	Profit Center	Customer	WS	Date	Quantity	Price	Amount
subst	All	substring fi	substring filte	All	from to	from to	from to	substring filter	
					1				
3858	Apple 0.5l Bottle	Budget2	PC1	ALDI	1	01/01/2016	0	0.00	
3911	Apple 0.5l Bottle	Budget2	PC2	ALDI	1	01/01/2016	0	0.00	
4547	Apple 0.5l Bottle	Actual	PC1	ALDI	1	01/01/2016	0	1.01	
4548	Apple 0.5l Bottle	Actual	PC2	ALDI	1	01/01/2016	0	1.01	
4965	Apple 0.5l Bottle	Budget2	PC1	ALDI	0	02/17/2022	1	10.00	
					18		1	2,188.02	

[empty] Set Set Set [empty] Set Set Set Set Set

1 of 7

Service is not connected!

Back End Security

Rely on your RDBMS

- Your Relational Database Management System surely have a security related feature which complies with the [ACID principles](#).
- Always try to leverage that.
- That means if you want to take advantage of your database, you must have a basic understanding of it's language, therefore DBA's or Database developers will be required to achieve this task.
- Examples following will utilize Microsoft's SQL Server capabilities.

Back End Security

MS SQL Triggers

- As all data modifications are handled within a transaction, so you have the possibility to commit or revert changes.
- Triggers are the entry point for every change.
- You can hook in your validation or audit logic within that.
- Therefore, you can approve or deny a change.

Back End Security

MS SQL Triggers

- Within a trigger you are able to capture the user name that is committing the change from a context variable.

```
DECLARE @USER VARCHAR(MAX)
```

```
SELECT @USER = COALESCE(CAST(SESSION_CONTEXT(N'user_name') AS VARCHAR(MAX)), SYSTEM_USER)
```

- Then you can create actions against it. Either capture audit changes.
- Or to control data modification request.

Validation

Validation means forcing out business rules (e.g.: a date cannot be in the future; allowing only inserting into TE etc.) towards the end-users.

Achieving this: by building up a back-end logic, using SQL trigger.

Example: Value of **Size** cannot be bigger than 30.

Note: Created the trigger on the source table (*dbo.Product*).

```
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
ALTER TRIGGER [dbo].[Product_ValidationTrigger]
    ON [dbo].[Product]
    AFTER INSERT,UPDATE
AS
BEGIN
    SET NOCOUNT ON;

    IF (SELECT COUNT(*) FROM inserted WHERE Size > 30) > 0
        THROW 50001, N'<SQLError><h1>Size is bigger than 30</h1></SQLError>', 1;
END
```

Runs whenever an update or insert is happening on dbo.Product table.

Counts the rows, where the value of the **Size** is bigger than 30.

Communication between back-end and visual:
If it finds at least one such a row, the write-back engine throws a warning message.

Master-Details

Two Table Editors in one page; master & detail tables.

Usage: Passing the selected master record to the details table.

Example: **Master** = dbo.Brand; **Details** = dbo.Product

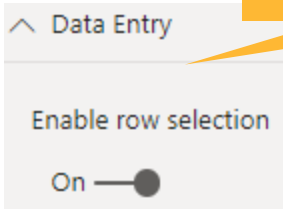
dbo.Product
belong to one brand)

dbo.Brand (dbo.Product is in **many-to-one** relation with dbo.Brand; more products

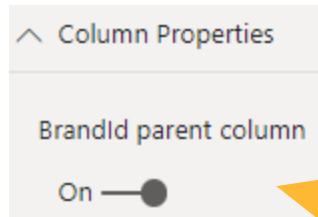


How to configure?

Enable **row selection** in MASTER table.



Additional setting:



Enable the parent column property for the column(s) that should be used as a filter on the details table.

BrandId default value

Brand.BrandId

In the details table, set the proper column's Default value to the Primary key of the Master table.

In case of a new record insertion to the Details table, the visual captures the primary key of Master table and uses that value as default value.

Note:

- You can insert a new row into Master / Details table, if it is allowed.
- You can delete an existing row in Details table, if it is allowed.
- You cannot delete a row from Master table, which has detailed rows in Details table (you get an error message), unless, you have a trigger, which does the deleting.