

Power BI Tips

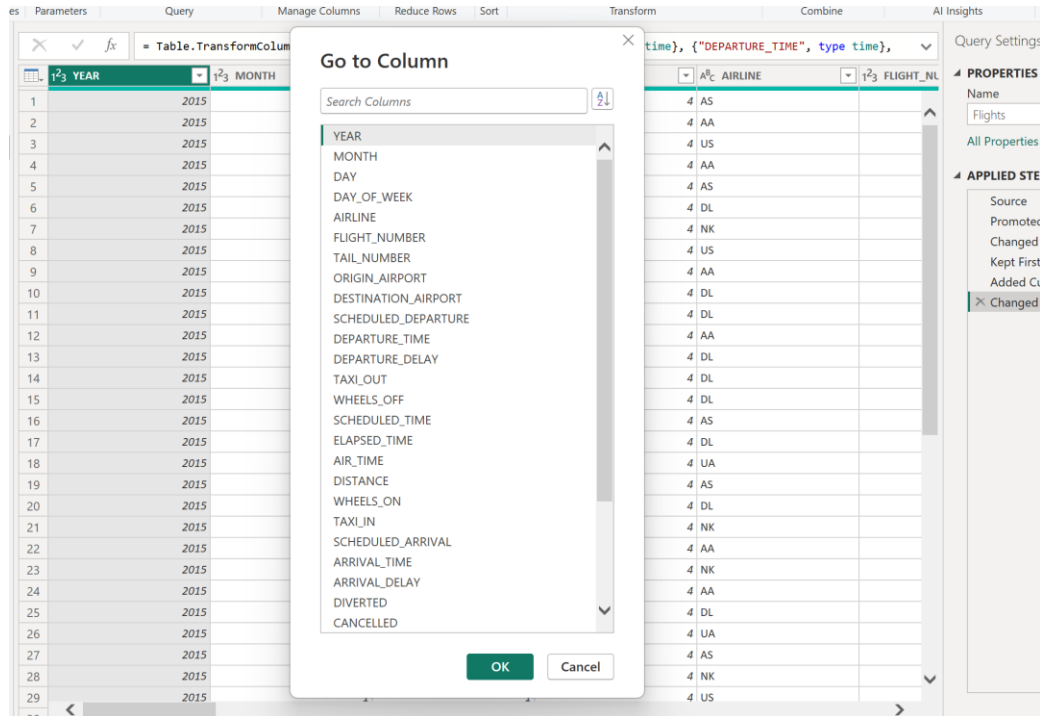
This is a collection of my favourite Power BI tips, tricks and productivity hacks! This document was created as supplementary information for my talk, “20 Power BI Tips in 20 Minutes”.

These tips, as well as the involved screenshots are current as of March 2024.

by Matt Lakin

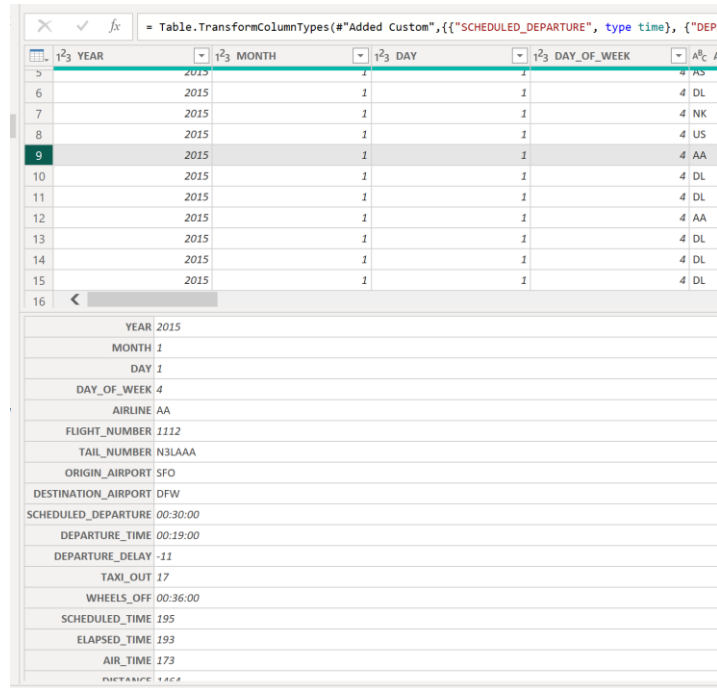
Tip 1: Power Query “Go to Column”

Easily navigate across a table using “Go to Column” UI - shortcut = *Ctrl + G*



Tip 2: Power Query: row of data in a list

View columns in a list by looking at a single row of data – just select the whole row by clicking on the row number on left hand side



The screenshot shows the Power Query interface. At the top, the formula bar displays the query name and columns: `= Table.TransformColumnTypes(#"Added Custom",{{"SCHEDULED_DEPARTURE", type time}, {"DEPA`. Below the formula bar is a table with columns: YEAR, MONTH, DAY, DAY_OF_WEEK, and AIRLINE. Row 9 is selected. Below the table, the data for the selected row is displayed in a detailed view.

Column	Value
YEAR	2015
MONTH	1
DAY	1
DAY_OF_WEEK	4
AIRLINE	AA
FLIGHT_NUMBER	1112
TAIL_NUMBER	N3LAAA
ORIGIN_AIRPORT	SFO
DESTINATION_AIRPORT	DFW
SCHEDULED_DEPARTURE	00:30:00
DEPARTURE_TIME	00:19:00
DEPARTURE_DELAY	-11
TAXI_OUT	17
WHEELS_OFF	00:36:00
SCHEDULED_TIME	195
ELAPSED_TIME	193
AIR_TIME	173
DISTANCE	1464

Tip 3: Power Query: ChooseColumns vs Remove Columns

The M code generated by using Choose Columns, Remove Other Columns or Remove Columns creates different dependencies on your source data.

When you use *Choose Columns* or *Remove Other Columns*, it creates an availability dependency on the columns you **are** using:

fx = Table.SelectColumns("#Changed Type1",{"FLIGHT_NUMBER", "TAIL_NUMBER", "ORIGIN_AIRPORT"})

	FLIGHT_NUMBER	TAIL_NUMBER	ORIGIN_AIRPORT
1	98	N407AS	ANC
2	2336	N3KUAA	LAX
3	840	N171US	SFO

When you use *Remove Columns*, it creates an availability dependency on the columns you are **not** using:

fx = Table.RemoveColumns("#Changed Type1",{"YEAR", "MONTH", "DAY", "DAY_OF_WEEK", "AIRLINE", "DESTINATION_AIRPORT"})

	FLIGHT_NUMBER	TAIL_NUMBER	ORIGIN_AIRPORT
1	98	N407AS	ANC
2	2336	N3KUAA	LAX
3	840	N171US	SFO
4	258	N3HYAA	LAX

Tip 4: Power Query: filter by cell value

You can filter a table using a column filter by right clicking on a specific cell:

	DAY	DAY_OF_WEEK	AIRLINE	FLIGHT_NUMBER	TAIL_NUMBER
1	1	4	AS	98	N407AS
2	1	4	AA	2336	N3KUAA
3	1	4	US	840	N171US
4	1	4	AA	258	N3HYAA
5	1	4	AS	135	N527AS
6	1	4	DL	806	N3730B
7	1	4	NK	612	N635NK
8	1	4	US	2013	N584UW
9	1	4	AA	1112	N3LAAA
10	1	4	DL	1173	N826DN
11	1	4	DL		
12	1	4	AA		
13	1	4	DL		
14	1	4	DL		
15	1	4	DL		
16	1	4	AS		
17	1	4	DL		
18	1	4	UA	1197	N78448

Copy

Text Filters

Replace Values...

Drill Down

Add as New Query

Equals

Does Not Equal

Begins With

Does Not Begin With

Ends With

Does Not End With

Contains

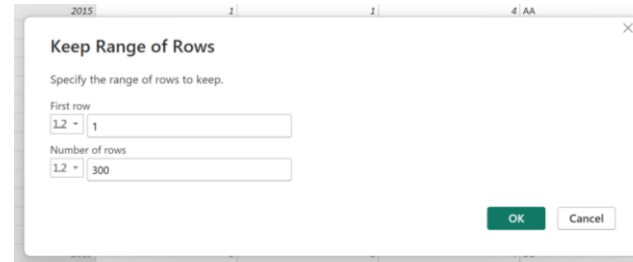
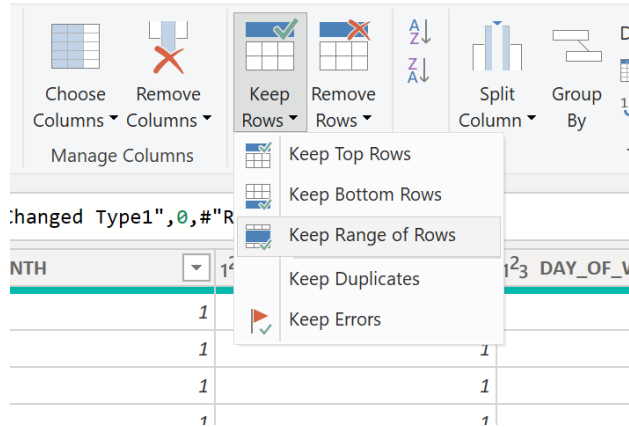
Does Not Contain

Tip 5: Power Query Parameters (1/3)

You can use parameters in Power Query to dynamically filter tables.

A simple use case for this is to reduce your dataset size whilst working in Power BI Desktop.

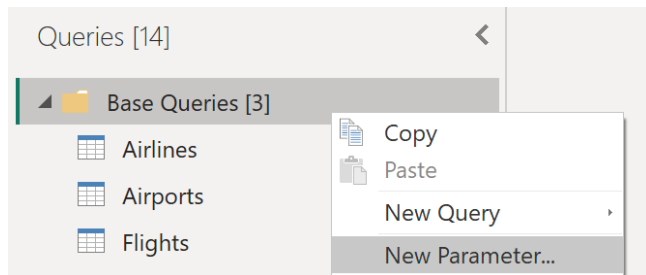
Step 1: Filter a table using “Keep Range of Rows”



Tip 5: Power Query Parameters (2/3)

datalakin.com
@datalakin

Step 2: Create a Parameter



Manage Parameters

1²3 Row Filter

Name
Row Filter

Description
Used to filter tables to the specified number of rows.

☒ Required

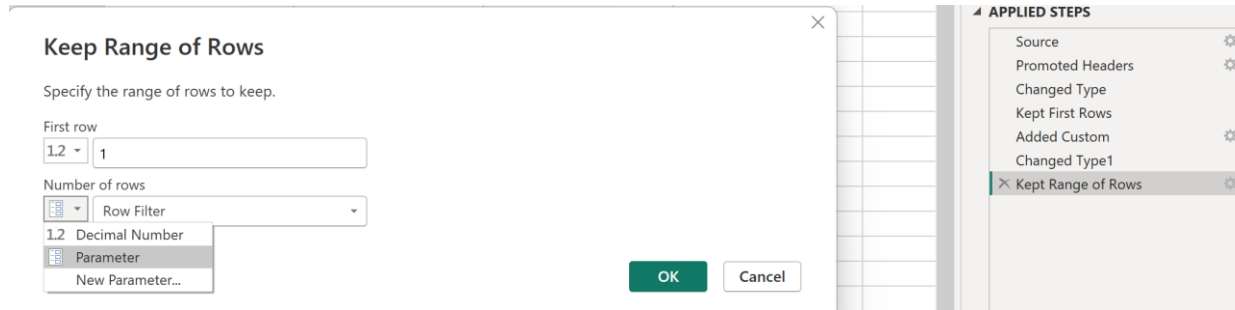
Type
Decimal Number

Suggested Values
Any value

Current Value
300

Tip 5: Power Query Parameters (3/3)

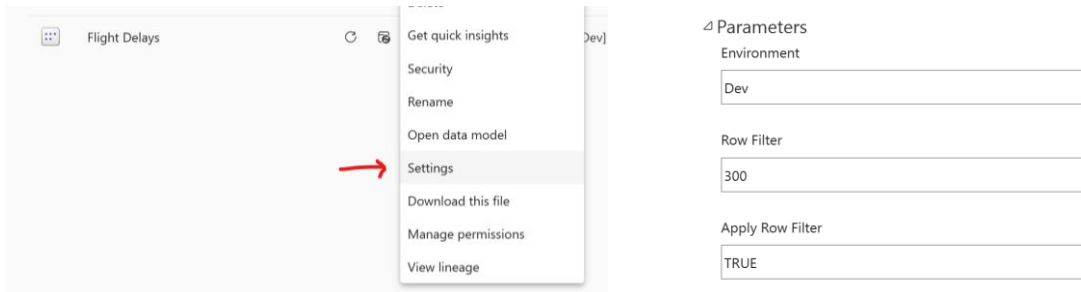
Step 3: Add Parameter into query by editing the “Keep Range of Rows” step, or modifying the code in Advanced Editor



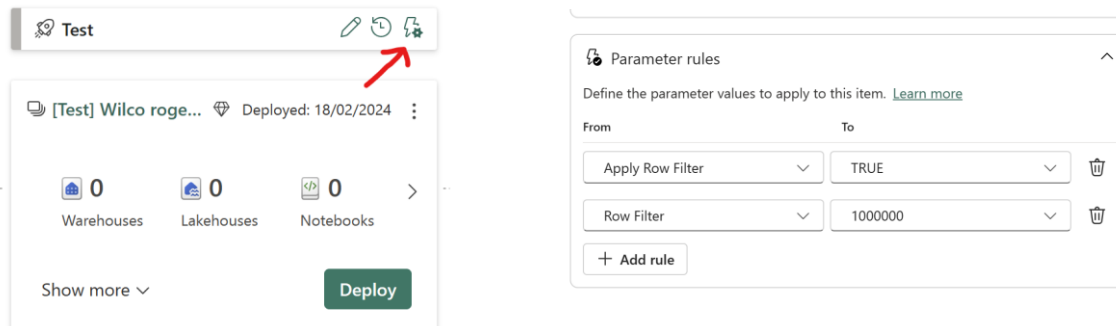
```
= Table.Range(#"Changed Type1",0,#"Row Filter")
```


Tip 6: Parameters in Power BI Service & Deployment Pipelines

You can edit parameters you have created in Power Query within the Power BI Service, by going into the Parameters area of the semantic model:

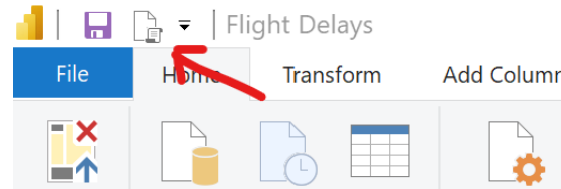
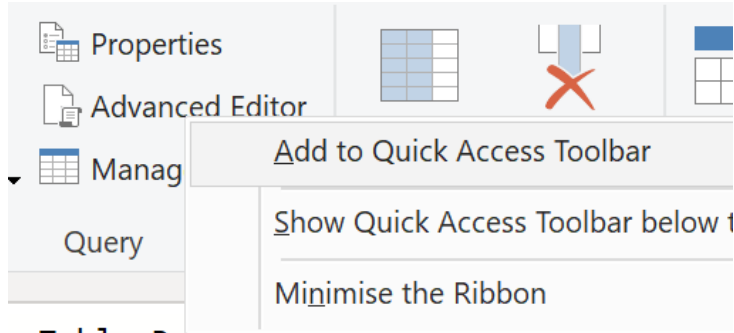


You can also specify parameter values within deployment pipelines, to automatically apply when deploying code across workspaces:



Tip 7: Power Query: Add to Quick Access

You can add commonly used Power Query functionality to the Quick Access toolbar – just right click!



Tip 8: Advanced Editor Shortcut: Zoom

You can add zoom in and out of Advanced Editor code by using *Ctrl + Shift +/-*

Flights

```
1 let
2 Source = Csv.Document(Web.Contents("https://datalakin-my.sharepoint.com/personal/matt_datalakin_com/Documents/
Data/Flight Delays/Dev/Flights.csv"),[Delimiter=","], Columns=31, Encoding=1252, QuoteStyle=QuoteStyle.None
),
3 #"Promoted Headers" = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),
4 #"Changed Type" = Table.TransformColumnTypes(#"Promoted Headers",{{"YEAR", Int64.Type}, {"MONTH", Int64.Type},
{"DAY", Int64.Type}, {"DAY_OF_WEEK", Int64.Type}, {"AIRLINE", type text}, {"FLIGHT_NUMBER", Int64.Type},
{"TAIL_NUMBER", type text}, {"ORIGIN_AIRPORT", type text}, {"DESTINATION_AIRPORT", type text},
{"DEPARTURE_DELAY", Int64.Type}, {"TAXI_OUT", Int64.Type}, {"SCHEDULED_TIME", Int64.Type}, {"ELAPSED_TIME",
Int64.Type}, {"AIR_TIME", Int64.Type}, {"DISTANCE", Int64.Type}, {"TAXI_IN", Int64.Type},
{"ARRIVAL_DELAY", Int64.Type}, {"DIVERTED", Int64.Type}, {"CANCELLED", Int64.Type}, {"CANCELLATION_REASON",
type text}, {"AIR_SYSTEM_DELAY", Int64.Type}, {"SECURITY_DELAY", Int64.Type}, {"AIRLINE_DELAY",
Int64.Type}, {"LATE_AIRCRAFT_DELAY", Int64.Type}, {"WEATHER_DELAY", Int64.Type}}),
5 #"Kept First Rows" = if #Apply Row Filter" = true then Table.FirstN(#"Changed Type",#Row Filter" else
#"Changed Type",
6 #"Added Custom" = Table.AddColumn(#"Kept First Rows", "Date", each #date{[YEAR],[MONTH],[DAY]}),
7 #"Changed Type1" = Table.TransformColumnTypes(#"Added Custom",{{"SCHEDULED_DEPARTURE", type time},
{"DEPARTURE_TIME", type time}, {"WHEELS_OFF", type time}, {"WHEELS_ON", type time}, {"SCHEDULED_ARRIVAL",
type time}, {"ARRIVAL_TIME", type time}, {"Date", type date}}),
8 #"Kept Range of Rows" = Table.Range(#"Changed Type1",0,#"Row Filter")
9 in
```

✓ No syntax errors have been detected.

Done Cancel

Flights

```
1 Source = Csv.Document(Web.Contents("https://datalakin-my.sharepoint.com/personal/matt_datalakin_com/Documents/Dev/Flights.csv"),[Delimiter=","], Columns=31, Encoding=1252, QuoteStyle=QuoteStyle.None),
2 #"Promoted Headers" = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),
3 #"Changed Type" = Table.TransformColumnTypes(#"Promoted Headers",{{"YEAR", Int64.Type}, {"MONTH", Int64.Type}, {"DAY", Int64.Type}, {"DAY_OF_WEEK", Int64.Type}, {"AIRLINE", type text}, {"FLIGHT_NUMBER", Int64.Type}, {"TAIL_NUMBER", type text}, {"ORIGIN_AIRPORT", type text}, {"DESTINATION_AIRPORT", type text}, {"DEPARTURE_DELAY", Int64.Type}, {"TAXI_OUT", Int64.Type}, {"SCHEDULED_TIME", Int64.Type}, {"ELAPSED_TIME", Int64.Type}, {"AIR_TIME", Int64.Type}, {"DISTANCE", Int64.Type}, {"TAXI_IN", Int64.Type}, {"ARRIVAL_DELAY", Int64.Type}, {"DIVERTED", Int64.Type}, {"CANCELLED", Int64.Type}, {"CANCELLATION_REASON", type text}, {"AIR_SYSTEM_DELAY", Int64.Type}, {"SECURITY_DELAY", Int64.Type}, {"AIRLINE_DELAY", Int64.Type}, {"LATE_AIRCRAFT_DELAY", Int64.Type}, {"WEATHER_DELAY", Int64.Type}}),
4 #"Kept First Rows" = if #Apply Row Filter" = true then Table.FirstN(#"Changed Type",#Row Filter" else #"Changed Type",
5 #"Added Custom" = Table.AddColumn(#"Kept First Rows", "Date", each #date{[YEAR],[MONTH],[DAY]}),
6 #"Changed Type1" = Table.TransformColumnTypes(#"Added Custom",{{"SCHEDULED_DEPARTURE", type time}, {"DEPARTURE_TIME", type time}, {"WHEELS_OFF", type time}, {"WHEELS_ON", type time}, {"SCHEDULED_ARRIVAL", type time}, {"ARRIVAL_TIME", type time}, {"Date", type date}}),
7 #"Kept Range of Rows" = Table.Range(#"Changed Type1",0,#"Row Filter")
8 in
```

✓ No syntax errors have been detected.

Done Cancel

Tip 9: Advanced Editor Shortcut: Quotes & Brackets

You can add quotes (**" "**) to the start and end of code by highlighting the selection and pressing *Shift + "*

You can do the same for brackets (**()**) and curly brackets (**{ }**) by swapping the *"* for *(* or *{*

```
{ "ELAPSED_TIME", Int64.Type }, },
```

```
{ "ELAPSED_TIME", Int64.Type },
```

Tip 10: Advanced Editor Shortcut: Comment blocks

You can comment/uncomment a line of code by pressing *Ctrl + /*

```
// #"Added Custom" = Table.AddColumn(#"Kept First Rows", "Date", each
```

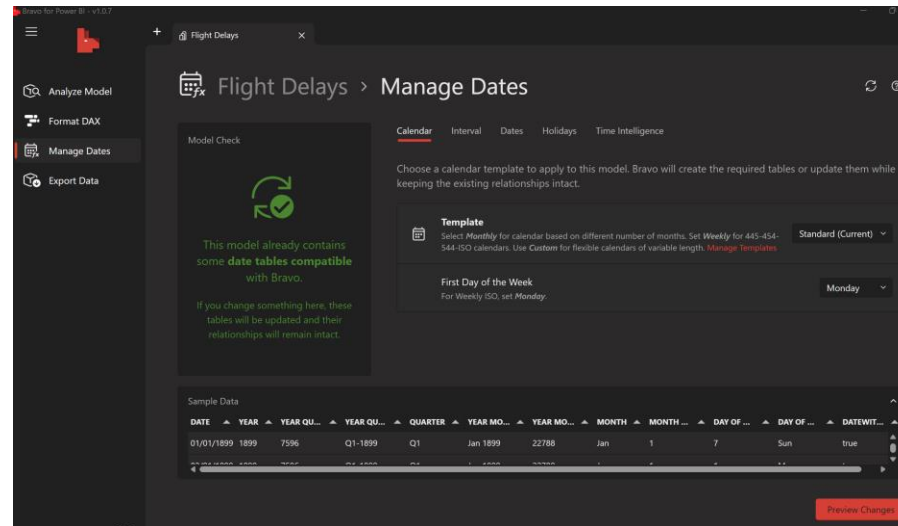
You can comment/uncomment a block of code by highlighting the block and pressing *Alt + Shift + A*

```
6 |         #"Added Custom" = Table.AddColumn(#"Kept First Rows", "Date", each Table.TransformColumnTypes(
7 | /*         #"Changed Type1" = Table.TransformColumnTypes(#"Added Custom",{{"SCHEDULED_ARRIVAL", type time}, {"WHEELS_OFF", type time}, {"WHEELS_ON", type time}, {"SCHEDULED_ARRIVAL", type time}},
8 |         #"Kept Range of Rows" = Table.Range(#"Changed Type1",0,#"Row Filter") */
```

Tip 11: Use Bravo to create date tables & time intelligence

External tool Bravo can help you create a Date table without using any code. You also have the option of adding Time Intelligence functionality, to automatically create Time Intelligence based measures in your model. This is really useful if you know you will need to slice any measures by different time periods such as Month to Date (MTD), Year on Year (YoY) etc.

[Bravo for Power BI by SQLBI](#)



Tip 12: Create your own Data Dictionary (1/2)

You can query the INFO schema against your Power BI semantic model to create your own data dictionary, with metadata such as Tables, Columns and Measures. You can do this easily in two ways:

1. [DAX Query View](#)
 - Open the DAX Query View pane, and run a query
 - Copy the metadata into output file of choice

DAX queries will be saved to your model. They won't be visible when published in the Power BI service. [Learn more](#)

Run

1 `EVALUATE INFO.MEASURES()`

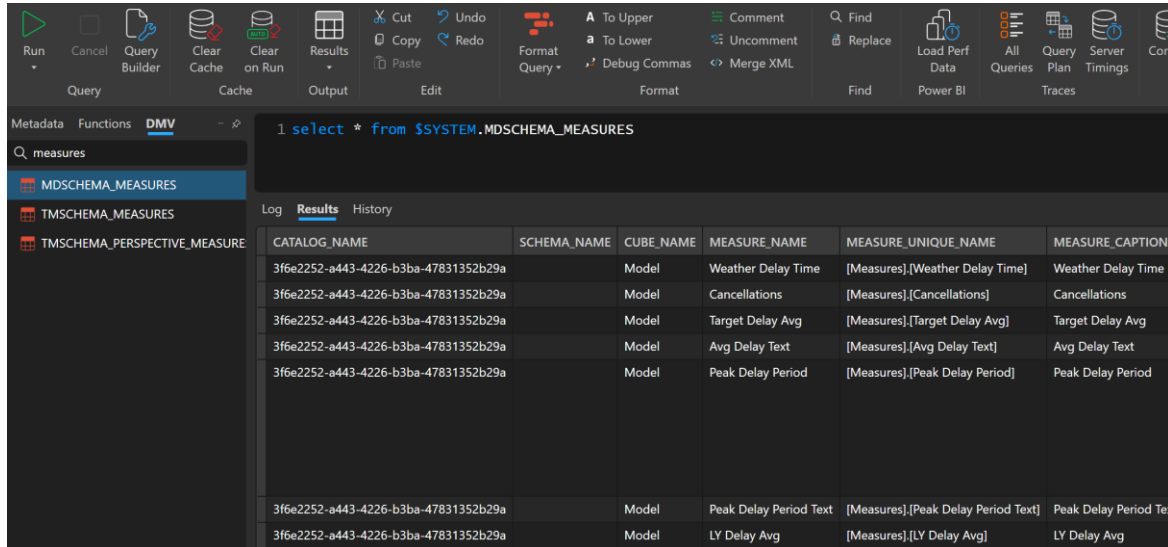
Results | Result 1 of 1 Copy

	[ID]	[TableID]	[Name]	[Description]	[DataType]	[Expression]
1	17410	17381	Weather Delay Time			6 SUM(Flights[WEATHER_...
2	17411	17381	Cancellations			6 CALCULATE(SUM(Flight...
3	17413	17381	Target Delay Avg			8 [Airline Average Delay T...
4	17416	17381	Avg Delay Text			2 "Average Delays were " ...
5	18720	17381	Peak Delay Period			2 MAXX(TOPN(1, ADDC...
6	18723	17381	Peak Delay Period Text			2 "The period with the hia...

Tip 12: Create your own Data Dictionary (2/2)

2. [DAX Studio](#)

- Select a query from the list of DMVs
- Choose your output
- Run



The screenshot shows the DAX Studio interface. The top ribbon includes tabs for Query, Cache, Output, Edit, Format, Find, and Power BI. The main window displays a query: `1 select * from $SYSTEM.MDSchema_Measures`. The left pane shows the 'Metadata' tab with a search for 'measures' and a list of DMVs: MDSchema_Measures, TMSchema_Measures, and TMSchema_Perspective_Measures. The 'Results' tab is active, showing a table with the following data:

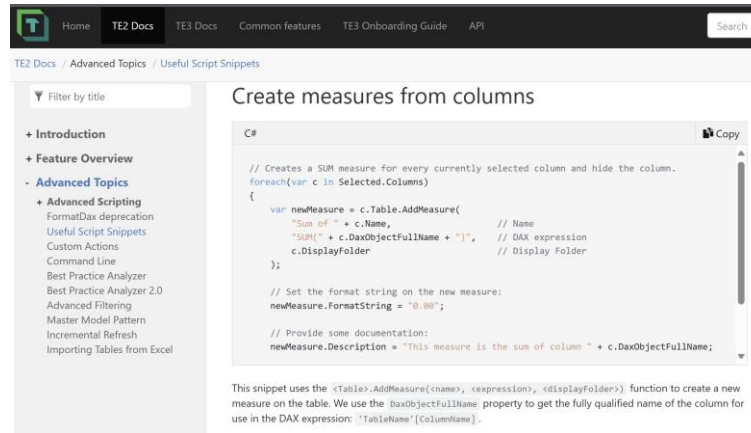
CATALOG_NAME	SCHEMA_NAME	CUBE_NAME	MEASURE_NAME	MEASURE_UNIQUE_NAME	MEASURE_CAPTION
3f6e2252-a443-4226-b3ba-47831352b29a		Model	Weather Delay Time	[Measures].[Weather Delay Time]	Weather Delay Time
3f6e2252-a443-4226-b3ba-47831352b29a		Model	Cancellations	[Measures].[Cancellations]	Cancellations
3f6e2252-a443-4226-b3ba-47831352b29a		Model	Target Delay Avg	[Measures].[Target Delay Avg]	Target Delay Avg
3f6e2252-a443-4226-b3ba-47831352b29a		Model	Avg Delay Text	[Measures].[Avg Delay Text]	Avg Delay Text
3f6e2252-a443-4226-b3ba-47831352b29a		Model	Peak Delay Period	[Measures].[Peak Delay Period]	Peak Delay Period
3f6e2252-a443-4226-b3ba-47831352b29a		Model	Peak Delay Period Text	[Measures].[Peak Delay Period Text]	Peak Delay Period Text
3f6e2252-a443-4226-b3ba-47831352b29a		Model	LY Delay Avg	[Measures].[LY Delay Avg]	LY Delay Avg

Tip 13: Tabular Editor Advanced Scripts (1/3)

Utilise advanced scripting in Tabular Editor to automate manual tasks.

For example, it is best practice to create SUM measures rather than use built in column summization in Power BI visuals. If you wanted to create multiple measures to SUM columns, and then hide columns from view, you can use a script in Tabular Editor to do that.

Step 1: [Copy C# script from Tabular Editor “Useful script snippets”,](#) or create your own



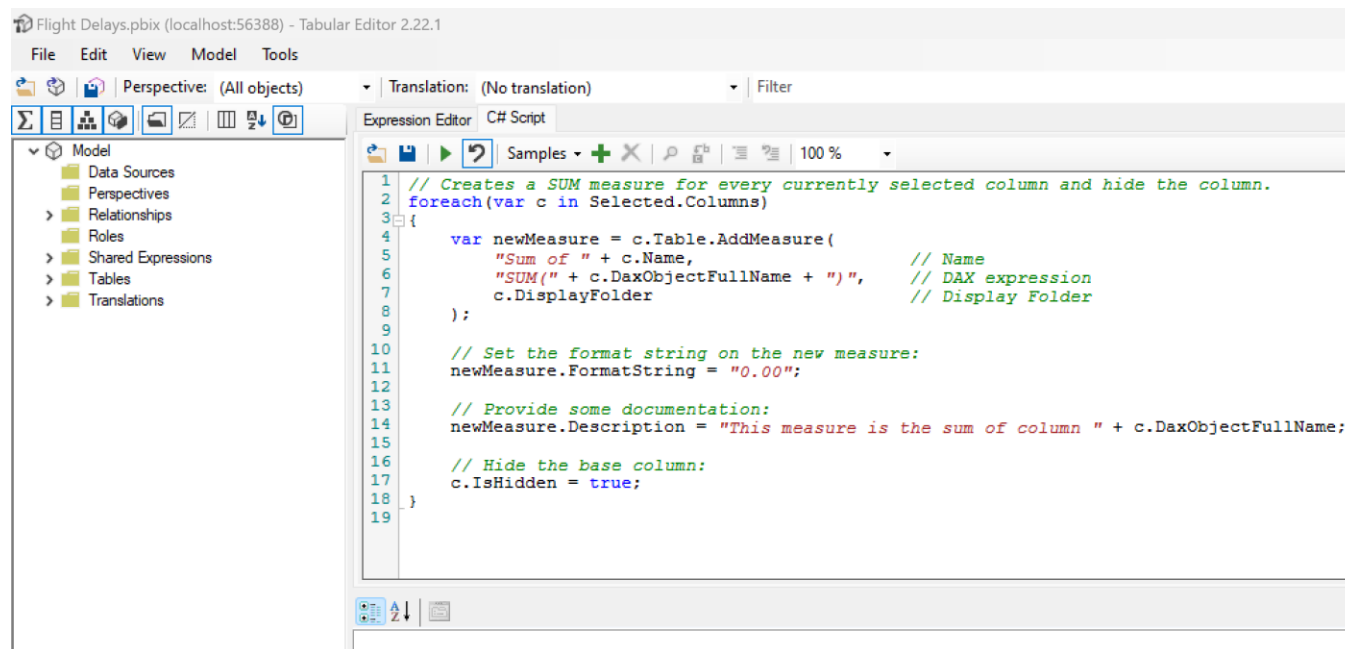
The screenshot shows the Tabular Editor web interface. The top navigation bar includes links for Home, TE2 Docs, TE3 Docs, Common features, TE3 Onboarding Guide, and API. A search bar is located on the right. The main content area is titled "TE2 Docs / Advanced Topics / Useful Script Snippets". On the left, there is a sidebar with a "Filter by title" dropdown and a list of topics: Introduction, Feature Overview, Advanced Topics (selected), and Advanced Scripting. Under Advanced Scripting, there are links for FormatDax deprecation, Useful Script Snippets, Custom Actions, Command Line, Best Practice Analyzer, Best Practice Analyzer 2.0, Advanced Filtering, Master Model Pattern, Incremental Refresh, and Importing Tables from Excel. The main content area displays a C# script titled "Create measures from columns". The script is as follows:

```
C#  
  
// Creates a SUM measure for every currently selected column and hide the column.  
foreach(var c in Selected.Columns)  
{  
    var newMeasure = c.Table.AddMeasure(  
        "Sum of " + c.Name,           // Name  
        "SUM(" + c.DaxObjectFullName + ")", // DAX expression  
        c.DisplayFolder              // Display Folder  
    );  
  
    // Set the format string on the new measure:  
    newMeasure.FormatString = "0.00";  
  
    // Provide some documentation:  
    newMeasure.Description = "This measure is the sum of column " + c.DaxObjectFullName;  
}
```

Below the script, there is a note: "This snippet uses the <Table>.AddMeasure(<name>, <expressions>, <displayFolder>) function to create a new measure on the table. We use the <daxObjectFullName> property to get the fully qualified name of the column for use in the DAX expression: 'TableName'[ColumnName]."

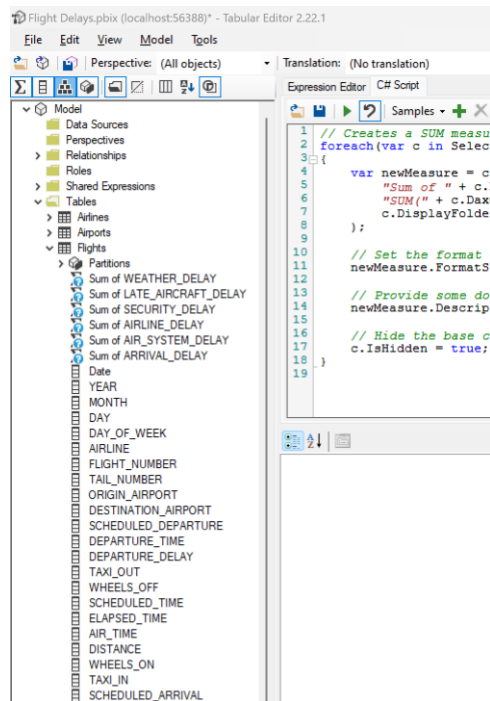
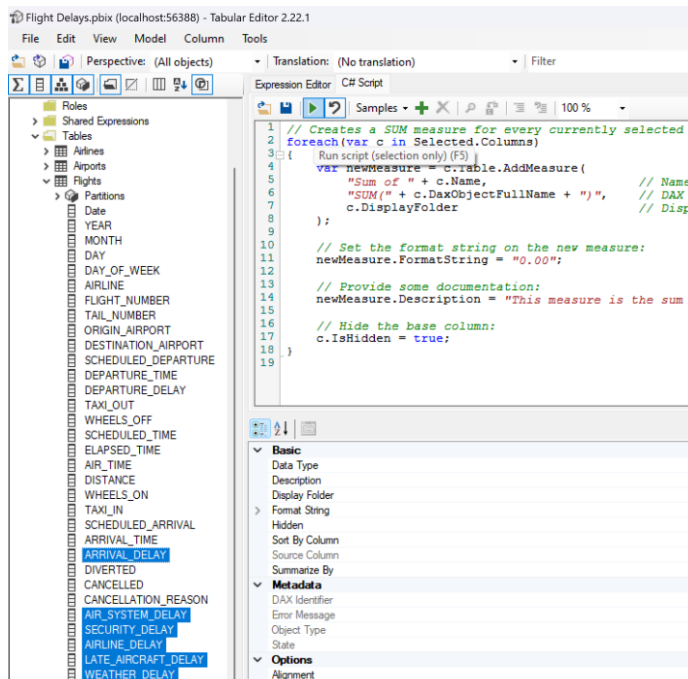
Tip 13: Tabular Editor Advanced Scripts (2/3)

Step 2: Connect to your model in Tabular Editor, and paste the C# code into the Advanced



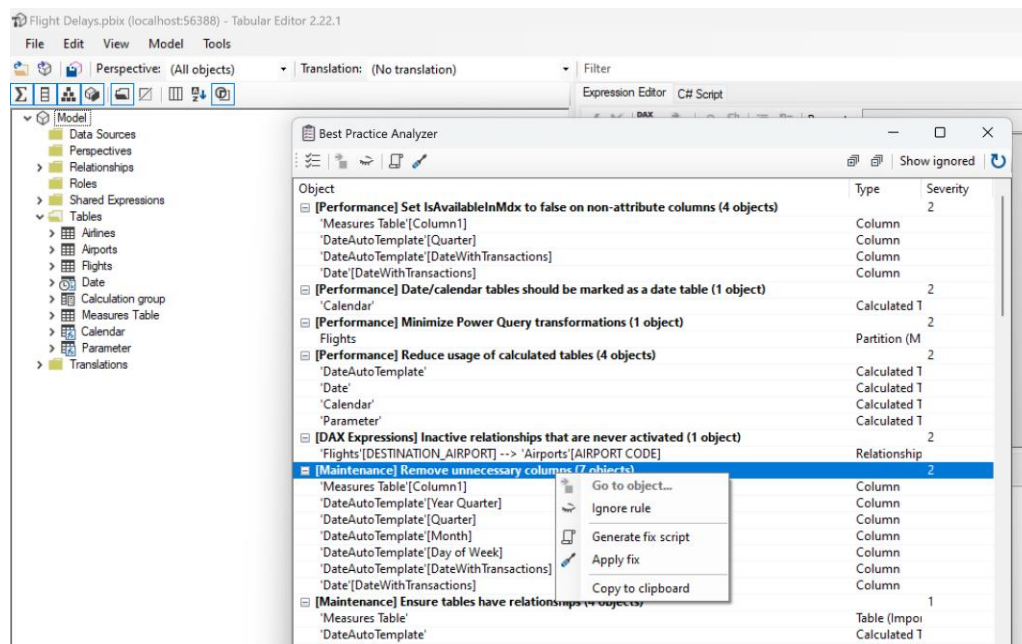
Tip 13: Tabular Editor Advanced Scripts (3/3)

Step 3: Select columns you want to create measures for, and click “Run”



Tip 14: Tabular Editor Best Practice Analyzer

In Tabular Editor you can utilise the [Best Practice Analyzer](#) to audit your semantic model against best practice rules. Once run against your model, you can view each rule violation and decide how to handle.



Tip 15: Table Visual: Global Font Size

In the Table visual formatting settings within Power BI Desktop, you can set a global font size for any text within the grid.

The image displays two side-by-side screenshots of the Power BI Desktop interface, specifically the 'Visualizations' pane for a table visual. The table visual shows a table with columns 'Date', 'Current Year Delays', and 'Last Year Delays'. The 'Visual' tab is selected in the 'Format visual' pane.

Left Screenshot (Global font size: 12):

- The 'Global font size' is set to 12.
- The table data is visible, including a 'Total' row at the bottom.

Right Screenshot (Global font size: 20):

- The 'Global font size' is set to 20.
- The same table data is visible, but the font size for all text within the grid is larger.

Tip 16: Table Visual: Column Width

You can control the width of table visual columns to a pixel accuracy by selecting the column and pressing *Shift + >* or *Shift + <*

Date	Current Year Delays	Last Year Delays
02/04/2015	27	21
02/01/2015	28	36
13/03/2015	28	15
23/04/2015	28	22
12/03/2015	28	15
12/02/2015	28	19
26/02/2015	29	19
27/03/2015	30	16
15/05/2015	30	29
15/01/2015	30	39
07/04/2015	30	23
26/03/2015	30	16
13/02/2015	30	20
03/01/2015	30	39
17/02/2015	31	20
04/01/2015	31	40
19/05/2015	31	30
07/01/2015	31	40
22/05/2015	31	30
22/02/2015	31	20
Total	35	28

Tip 17: UNICHAR (1/2)

You can use icons in your Power BI visuals by utilising the UNICHAR function. There are [thousands of unicodes](#) you can use.

For example, if I wanted to demonstrate whether Current Year Delays were less or more than Last Year Delays using emojis, I could use unicodes 128516 (Happy emoji) and 128545 (Angry emoji):

Step 1. Create measure with conditional formatting logic

```
1 Emoji Conditional Formatting =  
2  
3 VAR Happy = UNICHAR(128516)  
4 VAR Angry = UNICHAR(128545)  
5  
6 RETURN  
7  
8 IF([Airline Average Delay Time] > [LY Delay Avg], Angry,  
9   IF([Airline Average Delay Time] < [LY Delay Avg], Happy  
10  )  
11 )
```

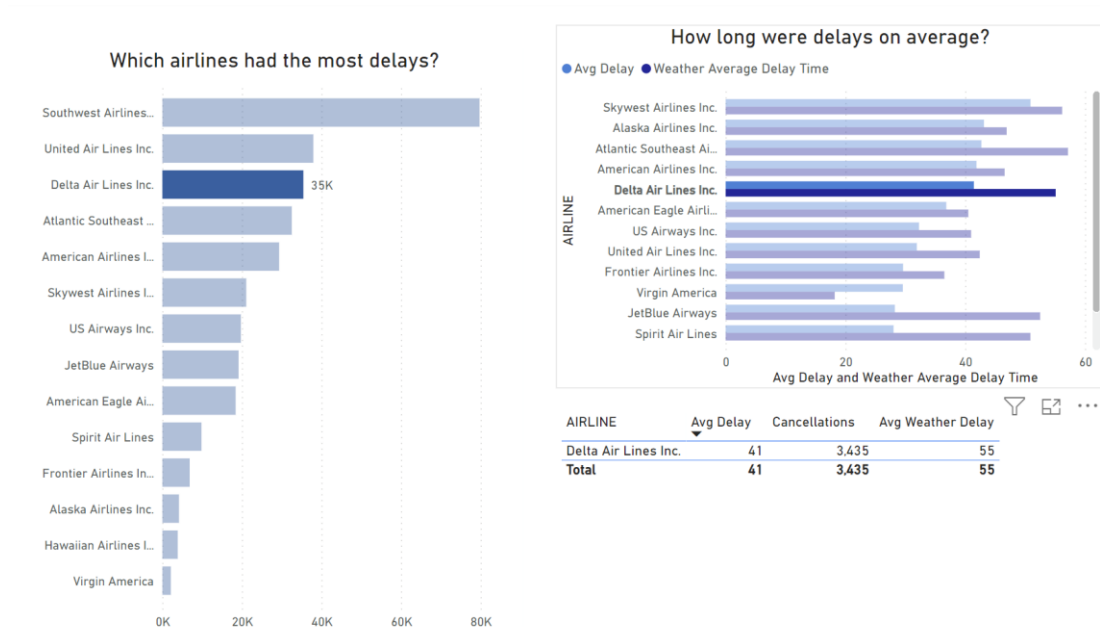
Tip 17: UNICHAR (2/2)

Step 2. Add measure to visual

Date	Current Year Delays	Last Year Delays	
27/01/2015	52	67	😄
04/07/2015	49	69	😄
28/04/2015	49	38	😡
07/02/2015	46	30	😡
02/05/2015	45	43	😡
25/05/2015	44	43	😡
08/06/2015	44	52	😄
06/06/2015	43	51	😄
14/01/2015	42	55	😄
30/05/2015	42	40	😡
31/01/2015	42	54	😄
11/04/2015	42	32	😡
18/04/2015	41	32	😡
18/01/2015	41	54	😄
02/02/2015	41	27	😡
17/06/2015	41	49	😄
01/02/2015	41	27	😡
24/02/2015	41	27	😡
17/01/2015	41	53	😄
28/01/2015	41	53	😄
27/05/2015	41	30	😄

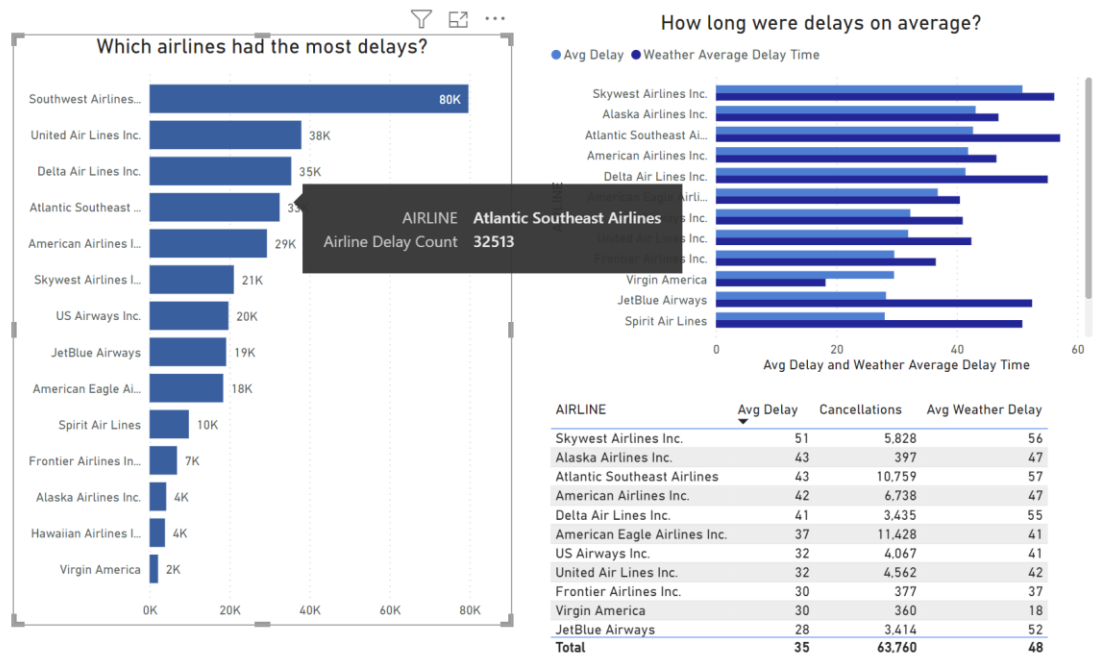
Tip 18: Report view shortcuts: clear selection

You can clear selection on a visual by pressing 'Space' or 'Enter' on your keyboard



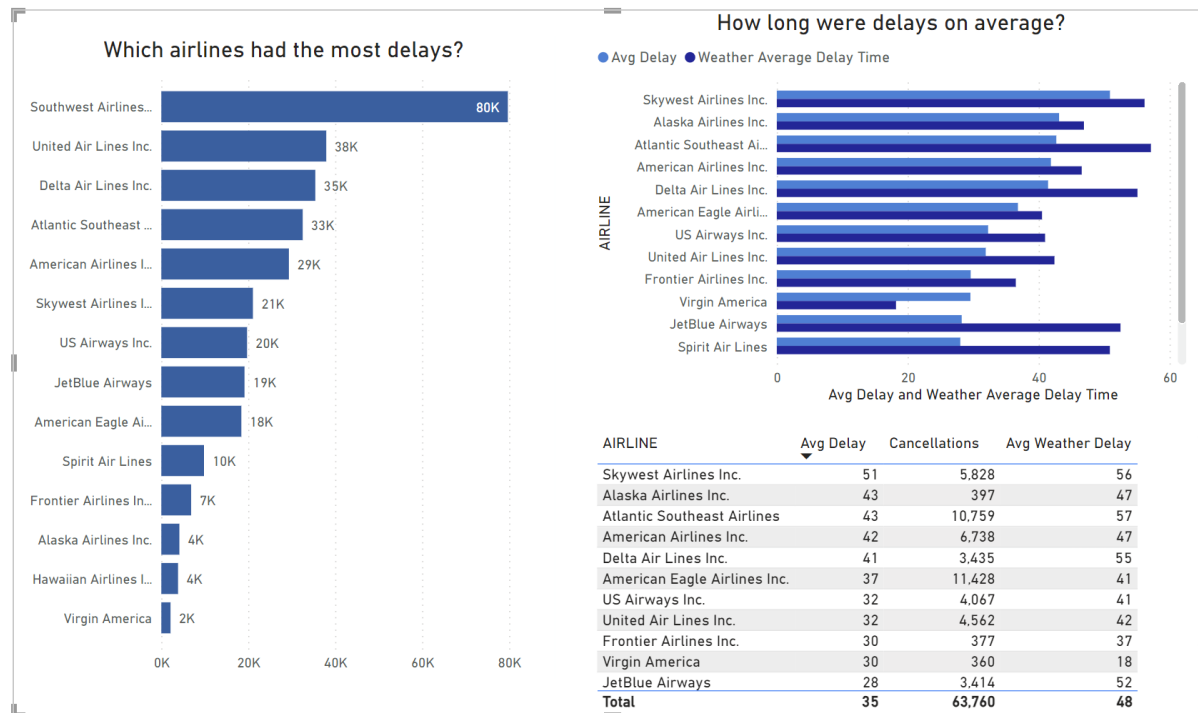
Tip 19: Report view shortcuts: tooltip lock

You can lock a tooltip in place by pressing *Ctrl + Shift + F10* whilst hovering over a data point in a visual



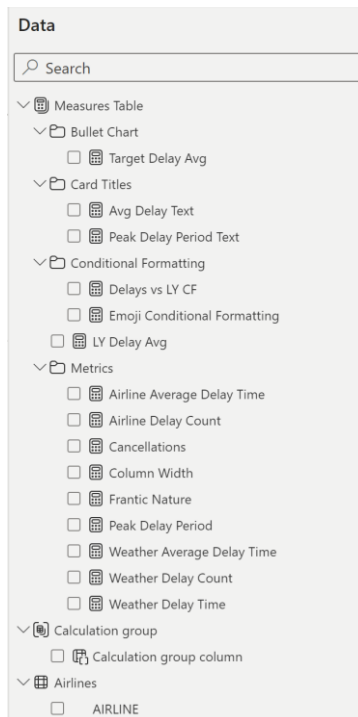
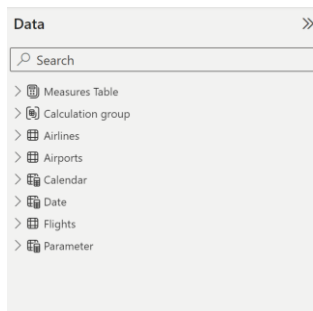
Tip 20: Report view shortcuts: group visuals

You can group visuals together easily by selecting all visuals (using *Ctrl* + *Click*) and then pressing *Ctrl* + *G*



Tip 21: Report view shortcuts: expand/collapse

You can expand and collapse the tables in the data tab quickly by pressing *Alt + Shift + 1* (collapse) or *Alt + Shift + 9* (expand).



Tip 22: Measure shortcuts: replace common words

You can replace all common words within a measure by highlighting a word, pressing *Ctrl + Shift + L*, and typing the word you want to replace with

```
1 LY Delay Average =  
2  
3 SWITCH(MAX('Date'[Month Number]),  
4 1, [Airline Avg Delay Time] * 1.3,  
5 2, [Airline Avg Delay Time] * 0.654,  
6 3, [Airline Avg Delay Time] * 0.54,  
7 4, [Airline Avg Delay Time] * 0.78,  
8 5, [Airline Avg Delay Time] * 0.97,  
9 6, [Airline Avg Delay Time] * 1.2,  
10 7, [Airline Avg Delay Time] * 1.4,  
11 8, [Airline Avg Delay Time] * 0.7,  
12 [Airline Avg Delay Time] * 0.8)  
13
```

```
1 LY Delay Average =  
2  
3 SWITCH(MAX('Date'[Month Number]),  
4 1, [Airline Avg Delay Time] * 1.3,  
5 2, [Airline Avg Delay Time] * 0.654,  
6 3, [Airline Avg Delay Time] * 0.54,  
7 4, [Airline Avg Delay Time] * 0.78,  
8 5, [Airline Avg Delay Time] * 0.97,  
9 6, [Airline Avg Delay Time] * 1.2,  
10 7, [Airline Avg Delay Time] * 1.4,  
11 8, [Airline Avg Delay Time] * 0.7,  
12 [Airline Avg Delay Time] * 0.8)  
13
```

```
1 LY Delay Average =  
2  
3 SWITCH(MAX('Date'[Month Number]),  
4 1, [Airline Average Delay Time] * 1.3,  
5 2, [Airline Average Delay Time] * 0.654,  
6 3, [Airline Average Delay Time] * 0.54,  
7 4, [Airline Average Delay Time] * 0.78,  
8 5, [Airline Average Delay Time] * 0.97,  
9 6, [Airline Average Delay Time] * 1.2,  
10 7, [Airline Average Delay Time] * 1.4,  
11 8, [Airline Average Delay Time] * 0.7,  
12 [Airline Average Delay Time] * 0.8)  
13
```

Tip 23: Measure shortcuts: replace common words

You can replace all common words within a measure by highlighting a word, pressing *Ctrl + Shift + L*, and typing the word you want to replace with

```
1 LY Delay Average =
2
3 SWITCH(MAX('Date'[Month Number]),
4 1, [Airline Avg Delay Time] * 1.3,
5 2, [Airline Avg Delay Time] * 0.654,
6 3, [Airline Avg Delay Time] * 0.54,
7 4, [Airline Avg Delay Time] * 0.78,
8 5, [Airline Avg Delay Time] * 0.97,
9 6, [Airline Avg Delay Time] * 1.2,
10 7, [Airline Avg Delay Time] * 1.4,
11 8, [Airline Avg Delay Time] * 0.7,
12 [Airline Avg Delay Time] * 0.8)
13
```

```
1 LY Delay Average =
2
3 SWITCH(MAX('Date'[Month Number]),
4 1, [Airline Avg Delay Time] * 1.3,
5 2, [Airline Avg Delay Time] * 0.654,
6 3, [Airline Avg Delay Time] * 0.54,
7 4, [Airline Avg Delay Time] * 0.78,
8 5, [Airline Avg Delay Time] * 0.97,
9 6, [Airline Avg Delay Time] * 1.2,
10 7, [Airline Avg Delay Time] * 1.4,
11 8, [Airline Avg Delay Time] * 0.7,
12 [Airline Avg Delay Time] * 0.8)
13
```

```
1 LY Delay Average =
2
3 SWITCH(MAX('Date'[Month Number]),
4 1, [Airline Average Delay Time] * 1.3,
5 2, [Airline Average Delay Time] * 0.654,
6 3, [Airline Average Delay Time] * 0.54,
7 4, [Airline Average Delay Time] * 0.78,
8 5, [Airline Average Delay Time] * 0.97,
9 6, [Airline Average Delay Time] * 1.2,
10 7, [Airline Average Delay Time] * 1.4,
11 8, [Airline Average Delay Time] * 0.7,
12 [Airline Average Delay Time] * 0.8)
13
```

Tip 24: Want more shortcuts? Press ?

Pressing *Shift + ?* brings up most commonly used shortcuts in Power BI Desktop. All available shortcuts are found in the Microsoft [documentation](#).

Keyboard shortcuts

Across the product

Command	Shortcuts
Move focus between sections	Ctrl + F6
Move focus backwards between sections	Ctrl + Shift + F6
Show visuals as tables	Ctrl + Shift + F11
Show keyboard shortcuts	?

Pane navigation

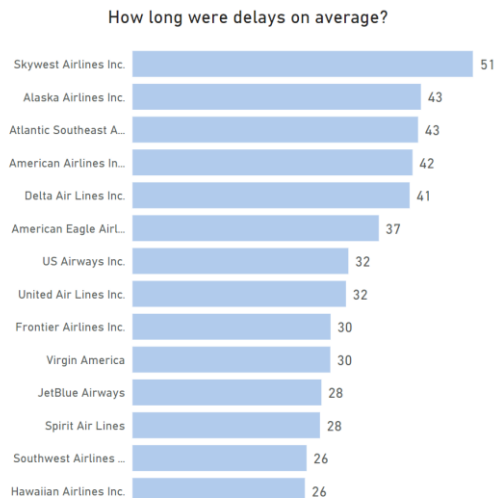
Command	Shortcuts
Collapse a single table	Left arrow
Expand a single table	Right arrow
Collapse all tables	Alt + Shift + 1
Expand all tables	Alt + Shift + 9

[See more keyboard shortcuts and accessibility features](#)

Tip 25: Create a simple bullet chart (1/2)

Bullet charts are great for showing targets or limit of values across multiple categories. There is no out of the box Bullet chart visual, so if you can't or don't want to use a custom visual, this is a good workaround:

Step 1: Create a bar chart



Tip 25: Create a simple bullet chart (2/2)

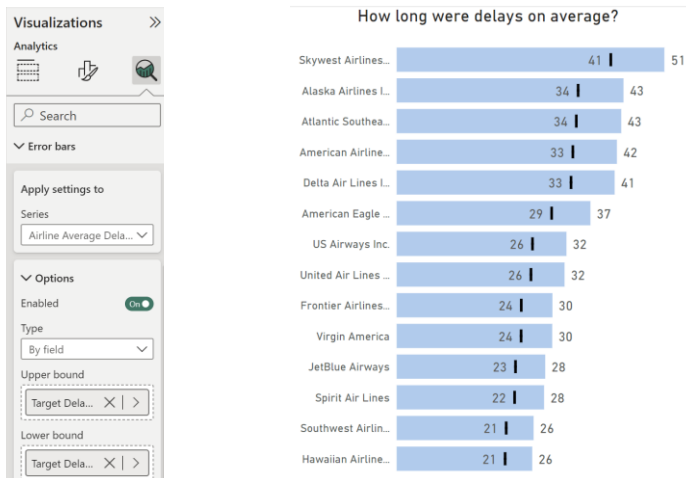
Step 2: Create a “target” measure

(For demo purposes I created a simple measure that is 80% of the visual measure value)

`Target Delay Avg = [Airline Average Delay Time] * 0.8`

Step 3: Add “target” measure to the error bars upper and lower bound

Remember to select “Enabled”



Tip 26: Use dynamic titles to add insight (1/3)

Dynamic titles and subtitles, combined with a trend context, can change a simple card to a much more advanced and insightful card-like visual.

For example, here we can upgrade this simple card visual:

35
Airline Average Delay Time



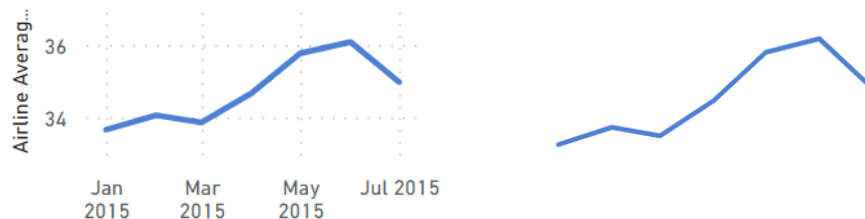
**Average Delays were 35
minutes in 2015**

The period with the highest average
delays was June



Tip 26: Use dynamic titles to add insight (2/3)

Step 1: Change visual to line graph, add Date context and remove unnecessary axis values, titles and gridlines



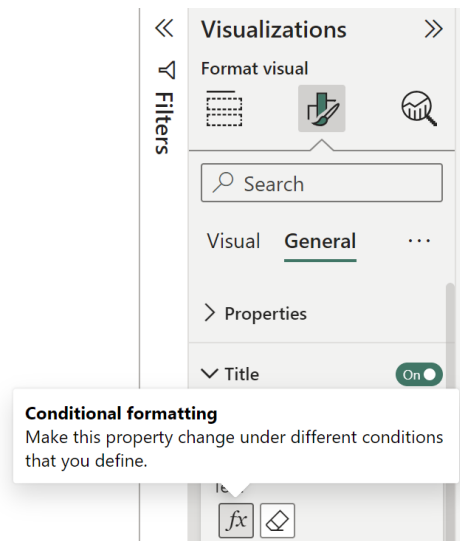
Step 2: Create measures with insightful, narrative-like context:

```
1 Avg Delay Text =  
2  
3 "Average Delays were " & FORMAT([Airline Average Delay Time],"0") & " minutes in " & SELECTEDVALUE('Date'[Year])
```

```
1 Peak Delay Period Text =  
2  
3 "The period with the highest average delays was " & [Peak Delay Period]
```

Tip 26: Use dynamic titles to add insight (3/3)

Step 3: Add measures to the Title and Subtitle format settings:



Average Delays were 35 minutes in 2015

The period with the highest average delays was June

