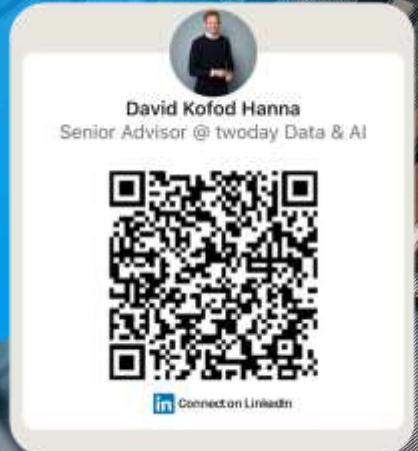


20 Power Query {M}agic Tips Every User Should Know

Power BI Next Step
Sept-2025

Presented by
David Kofod Hanna



twoday

Big thank you to our great sponsors



Raffle prizes from the sponsors



 Power BI
Next Step



You just have a self-service solution...

David Kofod Hanna



Senior Advisor, Data Storytelling @ twoday

+200 courses as Academy Trainer and 10 years as consultant
MCT, Certified Tabular Editor 3 Trainer, DP-600, DP-700, PL-300, CPUX-F



Passionate about guiding self-service Power BI

developers for more enterprise manageable concepts in a consumable and practical way



Born on beautiful “Sunshine island”: Bornholm

Lives in Silkeborg with wife and 3 kids
Love football and running half-marathons



twoday

How many prefer
Excel, Power Query UI & {M}
over
T-SQL, PySpark, Python, R?



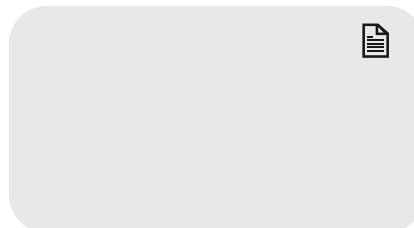
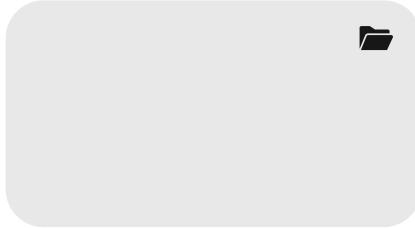
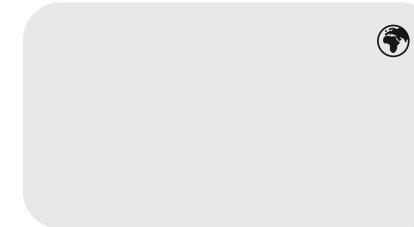
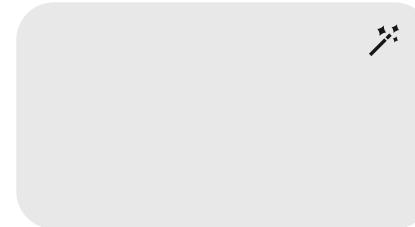
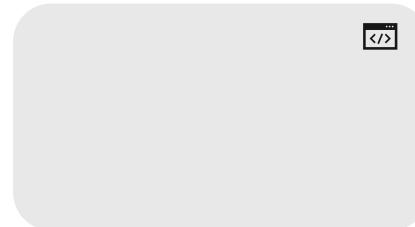
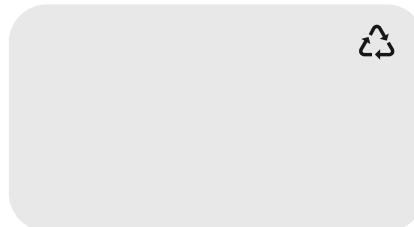
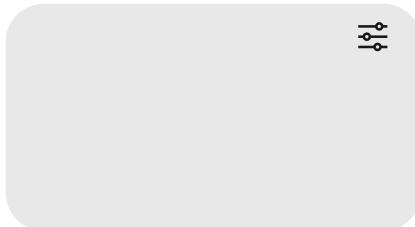
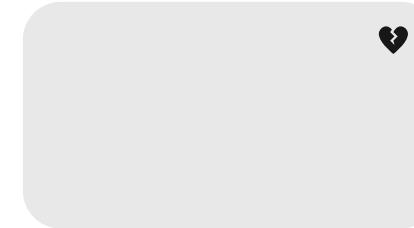
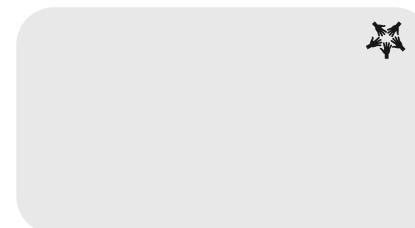
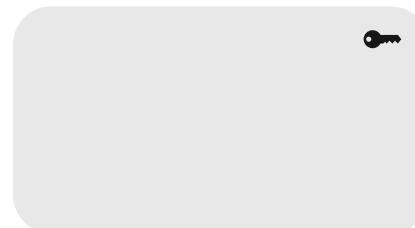
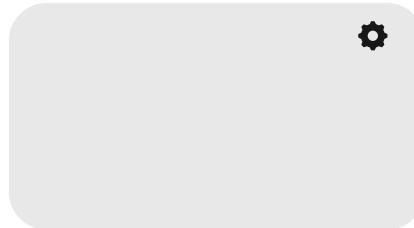
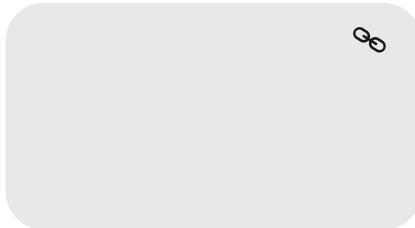
20 Power Query {M}agic Tips & Tricks



20 Power Query {M}agic Tips & Tricks

Power BI Desktop

Fabric only



20 Power Query {M}agic Tips & Tricks

Power BI Desktop

Fabric only

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Reference is preferred –
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that you?

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Get the Gear Icon

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Composite Key Merge
for multiple column join

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Document **table properties**

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From Power Query to
Fabric Dataflows Gen 2 with
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14.



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Query Plan for optimization

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You can now **write SQL-**
Views with Visual Query
Editor

19.



From **Excel** to **SQL Analytics**
Endpoint in Lakehouse

20.



Orchestration Pipelines with
invoke Dataflow gen2 &
Semantic Model refresh

Relax – we have Microsoft to assist us...

Add data to your report

Once loaded, your data will appear in the Data pane.



Use sample data

Two ways to use sample data



Take a tutorial online
Learn how to create a robust report, step-by-step.

Experiment on your own
To start creating visuals on your own, load sample data.

[Launch tutorial](#)

 [Load sample data](#)



Welcome to One Big Table – thank you Microsoft...

#	Business	Country	Product	Discount Basis	Units Sold	Manufacturing Price	Sale Price	Net Sales	Costs	Profit	Date	Month Number	Month Name	Year	
1	Government	Canada	Cartridges	None	2018.5	3	20	22270	0	21770	2018.5	12205	01/01/2014	1 January	2014
2	Government	Germany	Cartridges	None	1322	3	20	28400	0	25420	13210	01/01/2014	1 January	2014	
3	Marketplace	France	Cartridges	None	2198	3	15	16670	0	13970	21980	10890	01/06/2014	6 June	2014
4	Marketplace	Germany	Cartridges	None	668	3	15	13320	0	11990	6680	4410	01/06/2014	6 June	2014
5	Marketplace	Mexico	Cartridges	None	2409	3	15	12060	0	10990	24090	12380	01/06/2014	6 June	2014
6	Government	Germany	Cartridges	None	1513	3	20	12400	0	10560	15130	14630	01/12/2014	12 December	2014
7	Marketplace	Germany	Monitors	None	311	3	15	14820	0	13312	3110	4602	01/01/2014	1 January	2014
8	Channel Partners	Canada	Monitors	None	2258	3	12	30225	0	27218	7524	19664	01/06/2014	6 June	2014
9	Government	France	Monitors	None	1888	3	20	28000	0	25180	18880	18880	01/05/2014	5 May	2014
10	Channel Partners	Germany	Monitors	None	1345	3	12	18800	0	15840	13450	13850	01/06/2014	6 June	2014
11	Marketplace	Mexico	Monitors	None	2407	3	15	12060	0	10990	24070	12330	01/06/2014	6 June	2014
12	Enterprise	Canada	Monitors	None	2803.5	3	12	125	0	25182	12500	125182	01/07/2014	7 July	2014
13	Small Business	Mexico	Monitors	None	1958	3	15	10900	0	87980	19580	68400	01/05/2014	5 May	2014
14	Government	Germany	Monitors	None	2148	3	7	12500	0	11650	21480	10830	01/06/2014	6 June	2014
15	Enterprise	Canada	Monitors	None	945	3	15	12500	0	10250	9450	11855	01/05/2014	5 May	2014
16	Marketplace	United States of America	Monitors	None	631	3	15	12500	0	10250	6310	38790	01/12/2014	12 December	2014
17	Government	Canada	Printers	None	262	3	20	12500	0	10250	2620	2628	01/02/2014	2 February	2014
18	Marketplace	Mexico	Printers	None	374	3	12	12500	0	10250	3740	4870	01/05/2014	5 May	2014
19	Channel Partners	Canada	Printers	None	2518	3	15	12500	0	10250	25180	25154	01/06/2014	6 June	2014
20	Government	Germany	Printers	None	2069	3	15	12500	0	10250	20690	20545	01/06/2014	6 June	2014
21	Channel Partners	Germany	Printers	None	387	3	15	12500	0	10250	3870	19370	01/07/2014	7 July	2014
22	Government	Mexico	Printers	None	883	3	15	12500	0	10250	8830	4412	01/05/2014	5 May	2014
23	Marketplace	France	Printers	None	549	3	15	12500	0	10250	5490	4850	01/06/2014	6 June	2014
24	Small Business	Mexico	Printers	None	798	3	15	12500	0	10250	7980	24980	01/05/2014	5 May	2014
25	Marketplace	Mexico	Printers	None	2472	3	15	12500	0	10250	24720	12480	01/05/2014	5 May	2014
26	Government	United States of America	Printers	None	1243	3	15	12500	0	10250	12430	2446	01/02/2014	2 February	2014
27	Government	Canada	Printers	None	2735	3	15	12500	0	10250	27350	25330	01/11/2014	11 November	2014
28	Channel Partners	United States of America	Printers	None	442	3	15	12500	0	10250	44200	27050	01/11/2014	11 November	2014
29	Marketplace	Canada	Printers	None	2152	3	15	12500	0	10250	21520	10798	01/12/2014	12 December	2014
30	Government	Canada	Printers	None	1837	3	15	12500	0	10250	18370	18170	01/12/2014	12 December	2014
31	Government	Germany	Printers	None	2533	3	15	12500	0	10250	25330	25178	01/12/2014	12 December	2014
32	Government	Mexico	Printers	None	1695	3	15	12500	0	10250	16950	2988	01/01/2014	1 January	2014
33	Enterprise	France	Printers	None	2854	3	15	12500	0	10250	22180	27048	01/02/2014	2 February	2014
34	Channel Partners	Germany	Printers	None	2181	3	15	12500	0	10250	21810	19492	01/05/2014	5 May	2014
35	Government	Germany	Printers	None	2388	3	15	12500	0	10250	23880	20140	01/06/2014	6 June	2014
36	Channel Partners	Germany	Printers	None	2345	3	15	12500	0	10250	23450	18680	01/06/2014	6 June	2014
37	Enterprise	United States of America	Printers	None	3821	3	15	12500	0	10250	38210	338520	01/08/2014	8 August	2014
38	Enterprise	Canada	Printers	None	240	3	15	12500	0	10250	43120	41400	01/10/2013	10 October	2013
39	Small Business	Latvia	VTT	None	2061	3	20	100000	0	80000	20610	200019	01/02/2014	2 February	2014
40	Channel Partners	Germany	VTT	None	2818	3	12	12500	0	10250	34950	8514	01/08/2014	8 August	2014
41	Marketplace	France	VTT	None	2178	3	20	12500	0	10250	21780	21780	01/06/2014	6 June	2014
42	Marketplace	Germany	VTT	None	988	3	15	12500	0	10250	23120	9880	01/06/2014	6 June	2014
43	Government	France	VTT	None	2327	3	20	12500	0	10250	23270	23440	01/07/2014	7 July	2014
44	Small Business	France	VTT	None	2117	3	20	12500	0	10250	443300	37770	01/09/2014	9 September	2014
45	Channel Partners	Germany	VTT	None	2181	3	20	12500	0	10250	37770	37739	01/09/2014	9 September	2014
46	Government	France	VTT	None	1807	3	20	12500	0	10250	44400	38570	01/10/2014	10 October	2014
47	Government	Canada	VTT	None	2760	3	20	12500	0	10250	70400	70400	01/10/2014	10 October	2014
48	Channel Partners	United States of America	America	None	1963	3	12	12500	0	10250	23430	1459	01/04/2014	4 April	2014
49	Enterprise	Germany	America	None	4218.3	3	15	12500	0	10250	52743.3	306340	01/04/2014	4 April	2014
50	Government	France	America	None	1889	3	20	12500	0	10250	37580	18890	01/05/2014	5 May	2014
51	Government	Germany	America	None	2580	3	7	12500	0	10250	21832	8430	01/05/2014	5 May	2014
52	Channel Partners	United States of America	America	None	2145	3	12	12500	0	10250	25037	6421	01/06/2014	6 June	2014
53	Government	United States of America	America	None	2145	3	20	12500	0	10250	513	2399	01/05/2014	5 May	2014
54	Marketplace	United States of America	America	None	825	3	15	12500	0	10250	8250	8279	01/02/2014	2 February	2014
55	Government	France	Poly	Low	989	3	7	12500	0	10250	27918.8	27918.8	01/01/2014	1 January	2014

Let's Star Schema All the things!

{1}

Reference is preferred –
*Medallion Architecture is
that you?*



{2}

Choose Columns wisely –
Get the **Gear Icon**



{3}

Don't create relationships on
attributes – **create surrogate
keys**



{4}

Composite Key Merge



{5}

Red text will break you



Red text will break you

The screenshot shows the Power Query Editor interface. At the top, there are three buttons: a red X, a green checkmark, and a blue fx. Below them is a code snippet: `= Table.SelectColumns(Source, {"Segment", "Product", "Discount Band"})`. A red exclamation mark icon is followed by the error message: `Expression.Error: The column 'Discount Band' of the table wasn't found.`. Under the message, the word `Details:` is followed by the column name `Discount Band`.

Option 1: Manual effort

The screenshot shows the Power Query Editor interface. At the top, there are three buttons: a red X, a green checkmark, and a blue fx. Below them is a code snippet: `= Table.SelectColumns(Source, {"Segment", "Product"})`. Below the code is a table view showing two columns: `Segment` and `Product`. The data rows are: 1. Government, Carretera; 2. Government, Carretera; 3. Midmarket, Carretera; 4. Midmarket, Carretera; and a blank row. The first two rows are highlighted in green, while the last two are in white.

	Segment	Product
1	Government	Carretera
2	Government	Carretera
3	Midmarket	Carretera
4	Midmarket	Carretera
	Midmarket	Carretera

Red text will break you

The screenshot shows the Power Query Editor interface. The formula bar at the top contains the M code: `= Table.SelectColumns(Source, {"Segment", "Product", "Discount Band"})`. Below the formula bar, an error message is displayed: **Expression.Error: The column 'Discount Band' of the table wasn't found.** An exclamation mark icon is next to the error message. A 'Details:' link is present, and under it, the word 'Discount Band' is shown in blue, indicating it is a clickable link.

Option 2: Use MissingField.Ignore

The screenshot shows the Power Query Editor interface with a table preview. The table has two columns: **Segment** and **Product**. The data rows are numbered 1 through 10. Rows 1 through 9 show the following data:

	Segment	Product
1	Government	Carretera
2	Government	Carretera
3	Midmarket	Carretera
4	Midmarket	Carretera
5	Midmarket	Carretera
6	Government	Carretera
7	Midmarket	Montana
8	Channel Partners	Montana
9	Government	Montana

Red text will break you

The screenshot shows the Power Query Editor interface. The formula bar at the top contains the expression: `= Table.SelectColumns(Source, {"Segment", "Product", "Discount Band"})`. Below the formula bar, a red warning icon (an exclamation mark inside a triangle) is displayed next to the error message: `Expression.Error: The column 'Discount Band' of the table wasn't found.`. Under the error message, the word `Details:` is followed by the column name `Discount Band`.

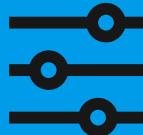
Option 3: Use MissingField.UseNull

The screenshot shows the Power Query Editor interface. The formula bar at the top contains the expression: `= Table.SelectColumns(Source, {"Segment", "Product", "Discount Band"}, MissingField.UseNull)`. Below the formula bar, a table is displayed with three columns: `Segment`, `Product`, and `Discount Band`. The table has 11 rows, indexed from 1 to 11. The `Segment` column contains values like `Government`, `Midmarket`, and `Channel Partners`. The `Product` column contains values like `Carretera` and `Montana`. The `Discount Band` column contains all `null` values.

	Segment	Product	Discount Band
1	Government	Carretera	null
2	Government	Carretera	null
3	Midmarket	Carretera	null
4	Midmarket	Carretera	null
5	Midmarket	Carretera	null
6	Government	Carretera	null
7	Midmarket	Montana	null
8	Channel Partners	Montana	null
9	Government	Montana	null
10	Channel Partners	Montana	null
11	Midmarket	Montana	null

{6}

Change settings with
autodetect column types
for **unstructured** sources



Change settings with autodetect column types for **unstructured** sources

Settings in Power BI Desktop

GLOBAL

- Data Load
- Power Query Editor
- DirectQuery
- R scripting
- Python scripting
- Security
- Privacy
- Regional Settings
- Updates
- Usage Data
- Diagnostics
- Preview features
- Auto recovery
- Report settings
- Copilot (preview)

CURRENT FILE

- Data Load
- Regional Settings
- Privacy
- Auto recovery
- Published semantic model settings
- Query reduction
- Report settings

Type Detection

- Always detect column types and headers for unstructured sources
- Detect column types and headers for unstructured sources according to each file's setting
- Never detect column types and headers for unstructured sources

Background Data

- Always allow data previews to download in the background
- Allow data previews to download in the background according to each file's setting
- Never allow data previews to download in the background

Time intelligence

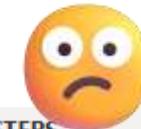
- Auto date/time for new files (i) [Learn more](#)

Type Detection

- Detect column types and headers for unstructured sources

Time intelligence

- Auto date/time (i) [Learn more](#)



APPLIED STEPS

- Source
- Navigation
- Promoted Headers
- Changed Type**
- Added Conditional Column
- Changed Type1**
- Added Conditional Column1
- Added Conditional Column2
- Added Conditional Column3
- Changed Type2**
- Inserted Sum
- Renamed Columns
- Merged Queries
- Expanded Accuracy Master
- Added Conditional Column4
- Changed Type3**
- Filtered Rows

{7}

TMDL Script for Date table



{8}

**Don't use the Excel
Connector** when connecting
to Excel – use Web



{9}

Unpivot – It feels like magic



{10}

Stop Find and Replace
for regional formats by
Using **Locale**...

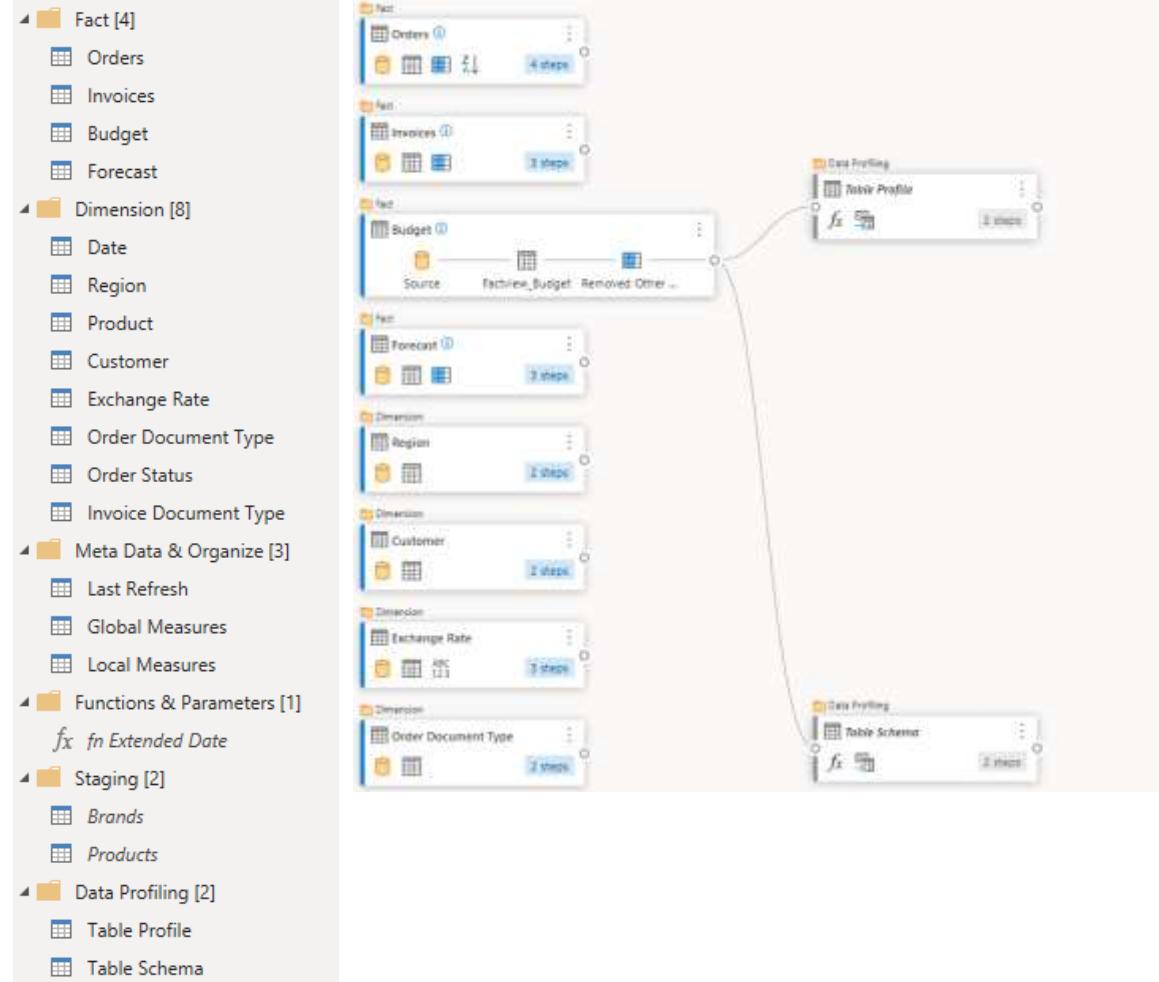
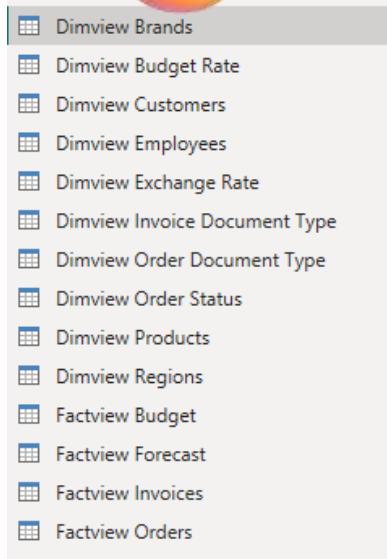


{11}

Structure your **queries** in
folders



Query folders by type – and Diagram View in Dataflow Gen2



{12}

Document **table** **properties**



Table properties – add it once and see it everywhere

A screenshot of the Power BI 'Queries [22]' pane. The 'Customer' dimension is selected. A context menu is open, listing options: Copy, Paste, Delete, Rename, Enable load (checked), Include in report refresh (checked), Duplicate, Reference, Move To Group, Move Up, Move Down, Create Function..., Convert To Parameter, Advanced Editor, and Properties... At the bottom of the pane, there are two checked checkboxes: 'Enable load to report' and 'Include in report refresh'. The 'OK' button is visible at the bottom right.

In Power Query Editor

- Queries [22]
- Dimension [8]
 - Product
 - Customer
 - Ex: From CRM, ERP and ServiceNow - combined and validated by Data Governance team
 - Order document type

In Power BI Desktop

Name	Customer	> Units
Storage mode	Import	> User Configuration
Data refreshed	5/16/2025, 8:06:53 PM	> Customer
Description	From CRM, ERP and ServiceNow - combined and validated by Data Governance team	> Date
		...

In Dataflows in the service

From CRM, ERP and ServiceNow - combined and validated by Data Governance team

In TMDL

↑ Apply Preview

```
1 createOrReplace
2
3
4 //From CRM, ERP and Serviceshop - combined and validated by Data Governance team
5
6 Table Customer
7   lineageFlag: T2ba2014-acd7-45de-8d9f-e22513f4e401
8
9   column "Customer Key"
10    dataType: string
11    isHidden: true
12    isAvailableInMox: false
13    displayFolder: key
```

In INFO.VIEW DAX Functions

Model Documentation		Other by Name		Others	Measure	Probability	Table
Location	Name	Type	Description				
Source	None	None	None				
Customer	None	None	None				
Cost	None	None	None				
Exchange Rate	None	None	None				
Global Parameters	None	None	None				
Global Variable Types	None	None	None				
Local Variables	None	None	None				
Local Parameters	None	None	None				
Local Variable Types	None	None	None				
Object Names	None	None	None				

In OneLake catalog

Semantic model			
Power BI Docs - System			
Open			
Owner	Language	Monitor	Permissions
Location	Published	Owner	
Power BI & Fabric Showcases	19/01/25, 13:35:28	David Kothar Hansa	
Tables			
Name	Type	Description	
> Customer	Table	From CRM, ERP and Service fabric - combined and validated by ...	
> Date	Table	Derived from Melissa de Korre Extended Date Function	
> Exchange Rate	Table	From purchased source from web	
> Global Measures	Table	Store Global measures from Semantic Model Developer	

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Fabric only

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From **Excel** to **SQL Analytics**
Endpoint in Lakehouse

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Orchestration Pipelines with
invoke Dataflow gen2 &
Semantic Model refresh

{13}

From Power Query to
to Fabric Dataflows Gen 2
with copy-paste



{14}

Dynamically Reference Your Tables for Table.Profile



There should be one {M}

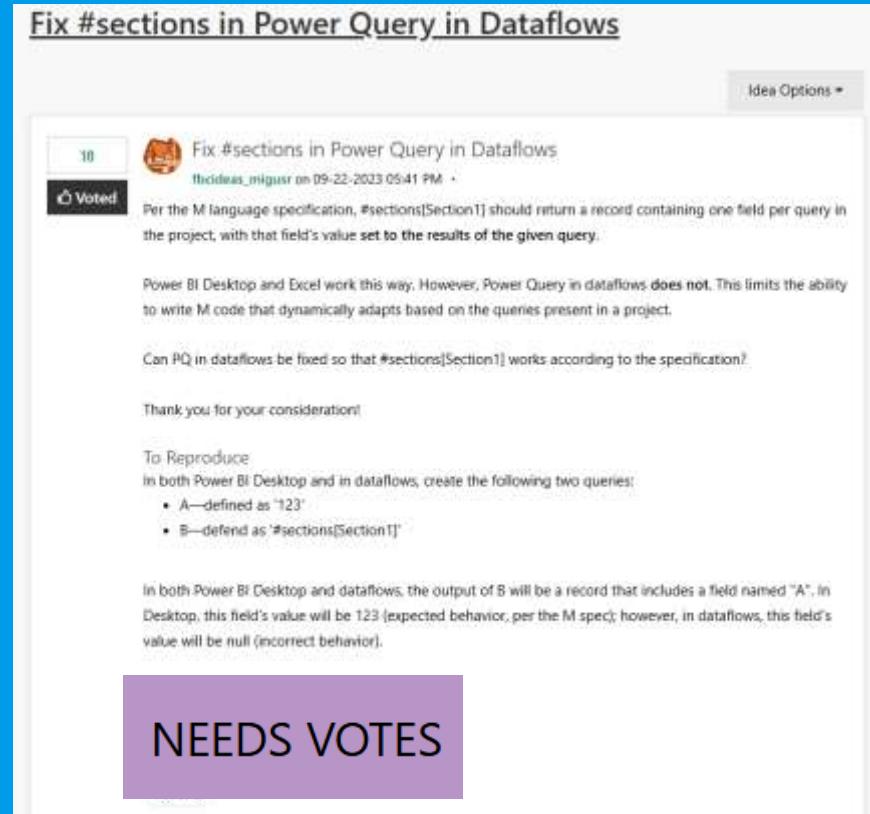


Marco Russo 
@marcorus

Voted!
There should be one “M”
We need more votes!
#powerbi #dataflow
Oversæt post

Ben Gribaudo @bgribaudo · 22. sep. 2023
Asking for #sections to be fixed in Power BI's #dataflows - #PowerQuery
#Fabric #PowerBI

ideas.fabric.microsoft.com/ideas/idea/?id...



Fix #sections in Power Query in Dataflows

Idea Options ▾

10  Fix #sections in Power Query in Dataflows
thideas_migusr on 09-22-2023 05:41 PM +
I Voted

Per the M language specification, `#sections[Section1]` should return a record containing one field per query in the project, with that field's value set to the results of the given query.

Power BI Desktop and Excel work this way. However, Power Query in dataflows does not. This limits the ability to write M code that dynamically adapts based on the queries present in a project.

Can PQ in dataflows be fixed so that `#sections[Section1]` works according to the specification?

Thank you for your consideration!

To Reproduce
In both Power BI Desktop and in dataflows, create the following two queries:

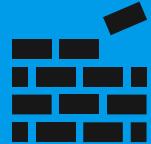
- A—defined as "123"
- B—defined as `#sections[Section1]`

In both Power BI Desktop and dataflows, the output of B will be a record that includes a field named "A". In Desktop, this field's value will be 123 (expected behavior, per the M spec); however, in dataflows, this field's value will be null (incorrect behavior).

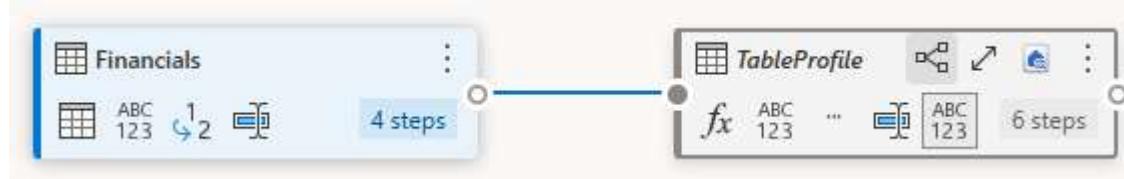
NEEDS VOTES

{15}

Snapshots with Append to Lakehouse



Data Destination & Snapshots with Append



```
1 let
2     Source = Table.Profile(Financials),
3     #"Changed column type" = Table.TransformColumnTypes(Source, {{"Count", type number}, {"NullCount", type text}, {"DistinctCount", type text}, {"Average", type text}, {"Max", type text}, {"Min", type text}}),
4     #"Added custom" = Table.AddColumn(#"Changed column type", "Table", each Financials),
5     #"Added custom 1" = Table.AddColumn(#"Added custom", "Custom", each DateTime.LocalNow()),
6     #"Renamed columns" = Table.RenameColumns(#"Added custom 1", {"Custom", "DateTime"}),
7     #"Changed column type 1" = Table.TransformColumnTypes(#"Renamed columns", {"DateTime", type datetime}, {"Table", type text}))
8 in
9     #"Changed column type 1"
```

Tab moves focus.

	Column	Min	Max	Average	1.2 StandardDeviation	1.2 Count	NullCount	DistinctCount	Table	DateTime
1	COGS	\$1.900,00	\$90.740,00	null	null	35	0	35	Financials	21/08/2025, 12:32:49
2	Country	Canada	United States of America	null	null	35	0	5	Financials	21/08/2025, 12:32:49
3	Date	01/01/2015	01/01/2015	01/01/2015	null	35	0	1	Financials	21/08/2025, 12:32:49
4	Discount Band	High	None	null	null	35	0	4	Financials	21/08/2025, 12:32:49
5	Discounts	\$-	\$822,15	null	null	35	0	34	Financials	21/08/2025, 12:32:49
6	Gross Sales	\$118.375,00	\$96.600,00	null	null	35	0	35	Financials	21/08/2025, 12:32:49
7	Manufacturing Price	\$10,00	\$5,00	null	null	35	0	6	Financials	21/08/2025, 12:32:49
8	Month Name	January	January	null	null	35	0	1	Financials	21/08/2025, 12:32:49
9	Month Number	1	1	1	0	35	0	1	Financials	21/08/2025, 12:32:49
10	Product	Amarilla	Velo	null	null	35	0	6	Financials	21/08/2025, 12:32:49
11	Profit	\$(12.787,50)	\$7.718,40	null	null	35	0	35	Financials	21/08/2025, 12:32:49
12	Sale Price	\$12,00	\$7,00	null	null	35	0	7	Financials	21/08/2025, 12:32:49
13	Sales	\$10.733,40	\$87.906,00	null	null	35	0	31	Financials	21/08/2025, 12:32:49
14	Segment	Channel Partners	Small Business	null	null	35	0	5	Financials	21/08/2025, 12:32:49
15	Units Sold	322	2931	1445.74285714285...	859.5886274	35	0	35	Financials	21/08/2025, 12:32:49
16	Year	2015	2015	2015	0	35	0	1	Financials	21/08/2025, 12:32:49

Data Destination & Snapshots with Append

The screenshot shows the Power Query interface with the following sections:

- Default destination:** No default destination available.
- New destination:**
 - Lakehouse
 - Warehouse
 - SQL database
 - Azure SQL database
 - Azure Data Explorer (Kusto)
 - SharePoint
 - More...
- Current destination:** Lakehouse
- Update method:** Append
- Column mapping:** Manual mapping with fixed schema
- Data destination:** Choose destination target (Existing table)
 - Display options
 - Search
 - TableProfile
 - Lakehouse
 - 20 Power Query {M}Tips
 - DataflowsStagingLakehou...
 - DataProfile
 - ErrorHandling
 - TableProfile
 - Lakehouse
 - Digital Skill Enhancer
 - Fabric Analyst in A Day
 - Fabric Toolbox
 - Mastering Composite Mod...
 - Microsoft Fabric Capacity ...
 - My workspace
 - Power BI & Fabric Showcase
 - Power BI Advanced Visualis...
 - Semantic Link Labs
 - Tabular Editor - Sandbox
- TableProfile:** A preview of the destination table with the following columns and data:

Column	Min	Max	Average	StandardDeviation	Count	NullCount	DISTINCTCOUNT	ModifiedDate	Table
CDGS	918	950623	740045.0187	206790.5737	24364	0	543	06/02/2025, 11:56:27	Finance Transactions
Country Key	1	5	2.997373174	141980.1675	24364	0	5	06/02/2025, 11:56:27	Finance Transactions
Date	01/08/2013	01/12/2014	41758	null	24364	0	76	06/02/2025, 11:56:27	Finance Transactions
Discounts	0	149677.5	132871.9205	24609.25724	24364	0	513	06/02/2025, 11:56:27	Finance Transactions
Gross Sales	1798	1207530	183348.1538	263913.0709	24364	0	330	06/02/2025, 11:56:27	Finance Transactions
Manufacturing Price	3	260	79.22976523	102477364	24364	0	6	06/02/2025, 11:56:27	Finance Transactions
Profit	-40617.5	262200	30021.78144	49749.49729	24364	0	557	06/02/2025, 11:56:27	Finance Transactions
Sale Price	7	350	118.8773708	146.2206913	24364	0	7	06/02/2025, 11:56:27	Finance Transactions
Sales	1665.06	1159000	170065.8002	251374.5791	24364	0	559	06/02/2025, 11:56:27	Finance Transactions
Segment Key	1	700	356.0349581	200.5843883	24364	0	700	06/02/2025, 11:56:27	Finance Transactions
Units Sold	200	4492.5	1800.473208	868.7644393	24364	0	970	06/02/2025, 11:56:27	Finance Transactions
Budget	1123	893963	436635.9444	257073.9417	144	0	144	06/02/2025, 11:56:22	Budget
Date	01/01/2013	01/12/2014	41624	null	144	0	34	06/02/2025, 11:56:22	Budget
Product	Amarillo	Velo	null	null	144	0	6	06/02/2025, 11:56:22	Budget
Budget	1123	893963	436635.9444	257073.9417	144	0	144	06/02/2025, 11:58:42	Budget
Date	01/01/2013	01/12/2014	41624	null	144	0	24	06/02/2025, 11:58:42	Budget
Product	Amarillo	Velo	null	null	144	0	6	06/02/2025, 11:58:42	Budget
CDGS	918	950623	740045.0187	206790.5737	24364	0	543	06/02/2025, 11:58:43	Finance Transactions
Country Key	1	5	2.997373174	141980.1675	24364	0	5	06/02/2025, 11:58:43	Finance Transactions
Date	01/08/2013	01/12/2014	41758	null	24364	0	76	06/02/2025, 11:58:43	Finance Transactions
Discounts	0	149677.5	132871.9205	24609.25724	24364	0	513	06/02/2025, 11:58:43	Finance Transactions
Gross Sales	1798	1207530	183348.1538	263913.0709	24364	0	330	06/02/2025, 11:58:43	Finance Transactions
Manufacturing Price	3	260	79.22976523	102477364	24364	0	6	06/02/2025, 11:58:43	Finance Transactions
Budget	1123	893963	436635.9444	257073.9417	144	0	447	06/02/2025, 11:58:49	Finance Transactions

Have multiple tables/files
Make use of the function
Table.FromPartitions()

<https://powerquery.how/table-frompartitions/>

Data Destination & Snapshots with Append

Data destination
Choose destination settings

Use automatic settings

Update method

Existing data → Append (highlighted with a red arrow)

Replace

Schema options on publish

Existing schema → Dynamic schema (highlighted with a green circle)

Fixed schema

Column mapping

⚠ Schema changed since you last set the output settings. Column mappings have been updated to match the source schema.

Source	Source type	Destination	Destination type
Customer Key	Whole number	Customer Key	Whole number
Name	Text	Name	Text
HasError	Any	HasError	Any
Reason	Any	Reason	Any
Message	Any	Message	Any
Detail	Any	Detail	Any
Message.Format	Any	Message.Format	Any
Message.Parameters	Any	Message.Parameters	Any
ErrorCode	Any	ErrorCode	Any

Data Destination & Snapshots with Append

A screenshot of the Power BI Data Profiler interface. The top navigation bar includes 'DataProfile' (selected), 'Home', 'Get data', 'New semantic model', 'Open notebook', and 'Manage OneLake data access (preview)'. Below the navigation is a message: 'A SQL analytics endpoint for SQL querying and a default Power BI semantic model for reporting were created with this item.' The main area is titled 'TableProfile' and shows a table with 28 columns and 24364 rows. The columns are: Column, Min, Max, Average, StandardDeviation, Count, NullCount, DistinctCount, ModifiedDate, and Table. The 'ModifiedDate' column is highlighted with an orange border. The table contains various numerical and categorical data points, such as CDGS values ranging from 1 to 918, and Date values from 01/09/2013 to 01/12/2014.

Column	Min	Max	Average	StandardDeviation	Count	NullCount	DistinctCount	ModifiedDate	Table
CDGS	918	930625	140045.018716139	208790.575671681	24364	0	545	2/6/2025 11:56:27 AM	Finance Transactions
Country Key	1	5	2.997373117353472	1.419801675203098	24364	0	5	2/6/2025 11:56:27 AM	Finance Transactions
Date	01/09/2013	01/12/2014	41758		24364	0	16	2/6/2025 11:56:27 AM	Finance Transactions
Discounts	0	149677.5	15281.3926537105	24609.2572389132	24364	0	515	2/6/2025 11:56:27 AM	Finance Transactions
Gross Sales	1799	1207500	182348.192804858	269915.070870866	24364	0	550	2/6/2025 11:56:27 AM	Finance Transactions
Manufacturing Price	3	260	79.2597652273847	102.477364023807	24364	0	6	2/6/2025 11:56:27 AM	Finance Transactions
Profit	-40617.5	262200	30021.7814351092	49149.457932004	24364	0	557	2/6/2025 11:56:27 AM	Finance Transactions
Sale Price	7	350	116.677310788406	146.22069149658	24364	0	7	2/6/2025 11:56:27 AM	Finance Transactions
Sales	1655.08	1158200	170086.8001513245	251374.59127228	24364	0	559	2/6/2025 11:56:27 AM	Finance Transactions
Segment Key	1	700	356.054956134853	209.584385266284	24364	0	700	2/6/2025 11:56:27 AM	Finance Transactions
Units Sold	200	4492.5	1608.42320637005	868.794459334978	24364	0	510	2/6/2025 11:56:27 AM	Finance Transactions
Budget	1123	893965	436698.944444444	257073.9417406999	144	0	144	2/6/2025 11:58:42 AM	Budget
Date	01/01/2013	01/12/2014	41624		144	0	24	2/6/2025 11:58:42 AM	Budget
Product	Amarillo	Velo			144	0	6	2/6/2025 11:58:42 AM	Budget
Budget	1123	893965	436698.944444444	257073.9417406999	144	0	144	2/6/2025 11:58:22 AM	Budget
Date	01/01/2013	01/12/2014	41624		144	0	34	2/6/2025 11:58:22 AM	Budget
Product	Amarillo	Velo			144	0	6	2/6/2025 11:58:22 AM	Budget
CDGS	918	930625	140045.018716139	208790.575671681	24364	0	545	2/6/2025 11:58:43 AM	Finance Transactions
Country Key	1	5	2.997373117353472	1.419801675203098	24364	0	5	2/6/2025 11:58:43 AM	Finance Transactions
Date	01/09/2013	01/12/2014	41758		24364	0	16	2/6/2025 11:58:43 AM	Finance Transactions
Discounts	0	149677.5	15281.3926537105	24609.2572389131	24364	0	515	2/6/2025 11:58:43 AM	Finance Transactions
Gross Sales	1799	1207500	182348.192804858	269915.070870867	24364	0	550	2/6/2025 11:58:43 AM	Finance Transactions
Manufacturing Price	3	260	79.2597652273847	102.477364023807	24364	0	6	2/6/2025 11:58:43 AM	Finance Transactions
Profit	-40617.5	262200	30021.7814351091	49149.457932007	24364	0	557	2/6/2025 11:58:43 AM	Finance Transactions
Sale Price	7	350	116.677310788406	146.22069149658	24364	0	7	2/6/2025 11:58:43 AM	Finance Transactions
Sales	1655.08	1158200	170086.8001513245	251374.59127223	24364	0	559	2/6/2025 11:58:43 AM	Finance Transactions
Segment Key	1	700	356.054956134853	209.584385266283	24364	0	700	2/6/2025 11:58:43 AM	Finance Transactions
Units Sold	200	4492.5	1608.42320637005	868.794459334981	24364	0	510	2/6/2025 11:58:43 AM	Finance Transactions

💡 Only need new rows?
Make use of the function
Table.RemoveMatchingRows()

<https://powerquery.how/table-removematchingrows/>

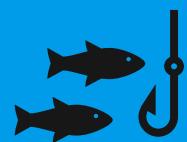
{16}

**Don't Break the Fold –
but if you use Excel and
.csv you are!**



{17}

Look for the **stream**



{18}

You can now **write SQL-Views**
with Visual Query Editor



{19}

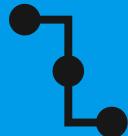
From Excel to **SQL Analytics** **Endpoint in Lakehouse**



{20}

Orchestration Pipelines

with invoke Dataflow Gen2
& Semantic Model refresh



20 Power Query {M}agic Tips & Tricks

Power BI Desktop

Fabric only

1.



Reference is preferred –
Medallion Architecture is
that you?

2.



Choose Columns wisely –
Get the Gear Icon

3.



Don't create relationships
on attributes – create
surrogate keys

4.



Composite Key Merge
for multiple column join

5.



Red text will break you –
MissingField.Ignore or
UseNull

6.



Change settings with
autodetect column types for
unstructured sources

7.



TMDL Script for **Date** table

8.



Don't use the Excel
Connector when connecting
to Excel – use **Web**

9.



Unpivot – It feels like magic

10.



Stop Find and Replace for
regional formats by **Using**
Locale...

11.



Structure your **queries** in
folders

12.



Document **table properties**

13.



From Power Query to
Fabric Dataflows Gen 2 with
copy-paste

14.



Dynamically Reference Your
Tables for Table.Profile

15.



Snapshots with Append to
Lakehouse

16.



Don't Break the Fold – but if
you use Excel and .csv you
are!

17.



Look for the **stream** in View
Query Plan for optimization

18.



You can now **write SQL-**
Views with Visual Query
Editor

19.



From **Excel** to **SQL Analytics**
Endpoint in Lakehouse

20.



Orchestration Pipelines with
invoke Dataflow gen2 &
Semantic Model refresh



You just have a self-service solution...

Really?

Star schema

Query Folding

Surrogate Key,
Primary Key
and Foreign
Key

Orchestration
pipeline

Split model
and report

Write SQL
Views

Snapshot

“Medallion
Architecture”

Error handling

Delta Tables
Lakehouse

Composite Key
Merge

Documentation

What about **user adoption** and **solving business problems**?

Documentation

Query Folding

Orchestration pipeline

Error handling

Snapshot

Split model and report

Composite Key Merge

Surrogate Key, Primary Key and Foreign Key

Star schema

Write SQL Views

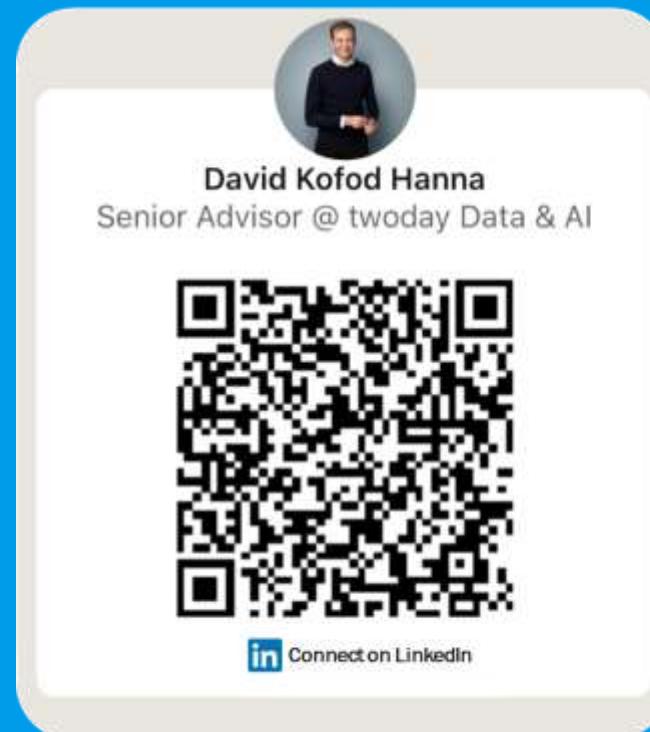
“Medallion Architecture”

Delta Tables Lakehouse

It's not about the **tech**
and new features

It's about **people** and
solving needs for the
business and **customers**

Thank you and {M}joy



Any **feedback** is highly appreciated

