



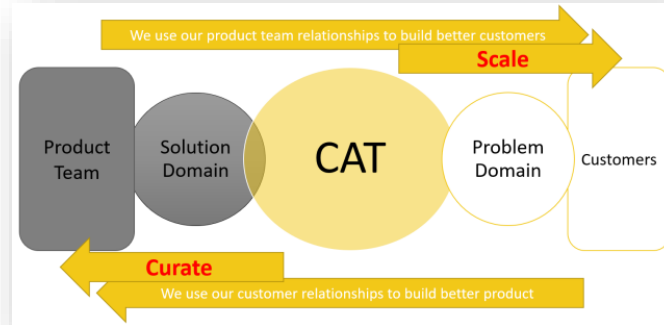
Power BI Development on Steroids

2022-01



Rui Romano

Power BI CAT
Microsoft



 @RuiRomano

 <https://www.linkedin.com/in/ruiromano/>

 <https://ruiromanoblog.wordpress.com>



Lives in Porto, Portugal

+15 years working on Microsoft
Data Stack

 Power BI & Data



Slides here:

<https://github.com/RuiRomano/sessionslides>

Power BI Dev on Steroids

- Tools
- {Dev} Techniques
- Fast Paced 😊

Focus on the possibilities not details...

Tools

My personal take on:

- DAX Studio
- Tabular Editor
- ALM Toolkit




DAX Studio

<https://daxstudio.org/> by Darren Gosbell

Main Use Cases:

- DAX Query Editor / Builder / Formatter
- [DAX Performance Tuning & Debugging](#)
- **Quick Inspect Model w/ “View Metrics”**
- Export Data: Folder / SQL Server 💚


Learn more: [Tool Intro](#)





DAX Studio

The ultimate tool for working with DAX queries

Download the latest release of DAX Studio here:

 **DAX Studio v2.16.2**
(installer)

 Size: 8.16Mb |  12 Jul 2021 | downloads: **3,212**

The details of the new features and fixes included in this release are available in the [changelog](#)

Tabular Editor

<https://tabulareditor.com/> by Daniel Otykier

Massive productivity boost!

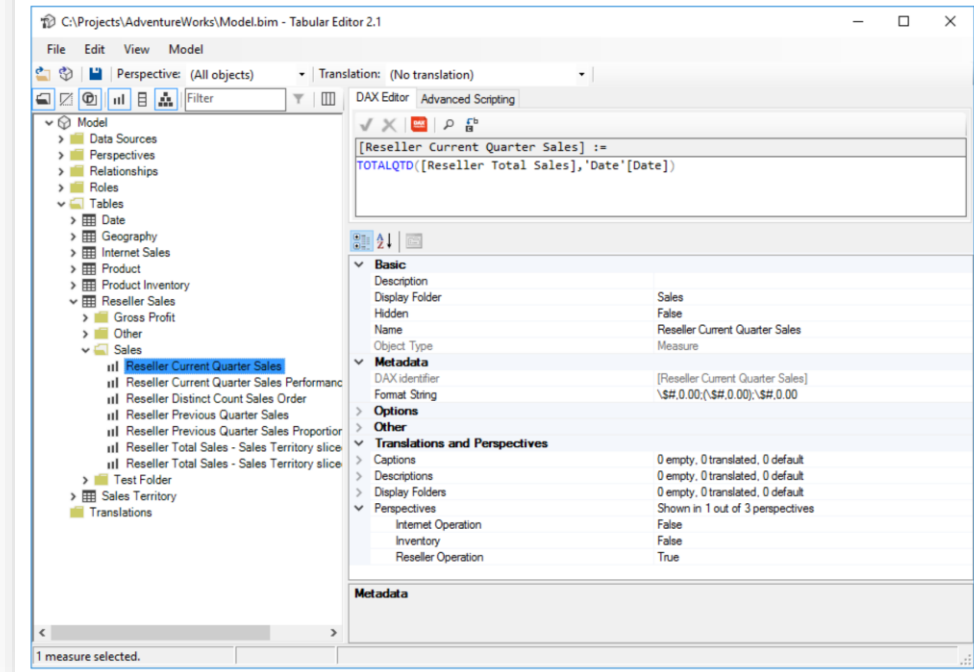
Main use cases:

- Model Development – Efficiently & Faster
- **Deployment with options** (ex: only schema) 💎
- Automation with Scripting
- Copy items between PBIX files
- **Best Practices Analyzer**
- Restore a PBIX from powerbi.com 💎

Learn more: [Tool Intro](#)

Tabular Editor

Tabular Editor is a tool that lets you easily manipulate and manage measures, calculated columns, display folders, perspectives and translations in Analysis Services Tabular and Power BI XMLA Models (from Compatibility Level 1200 and onwards). The tool is written entirely in .NET WinForms (C#).



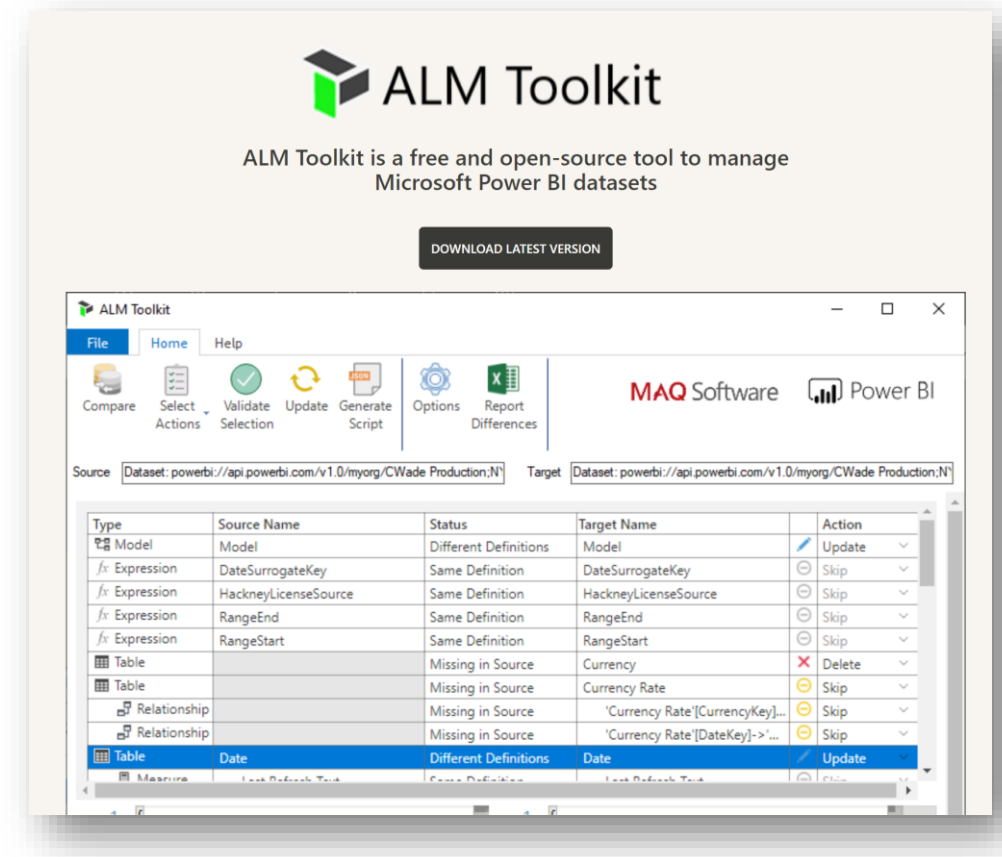
ALM Toolkit

<http://alm-toolkit.com/> by Christian Wade

Schema diff tool for Tabular Datasets

Main Use Cases:

- Compare between PBIX Files
- Compare local to published 💎
- Merge models => Multiple Developers!



Learn more: [Tool Intro](#)

Development Techniques

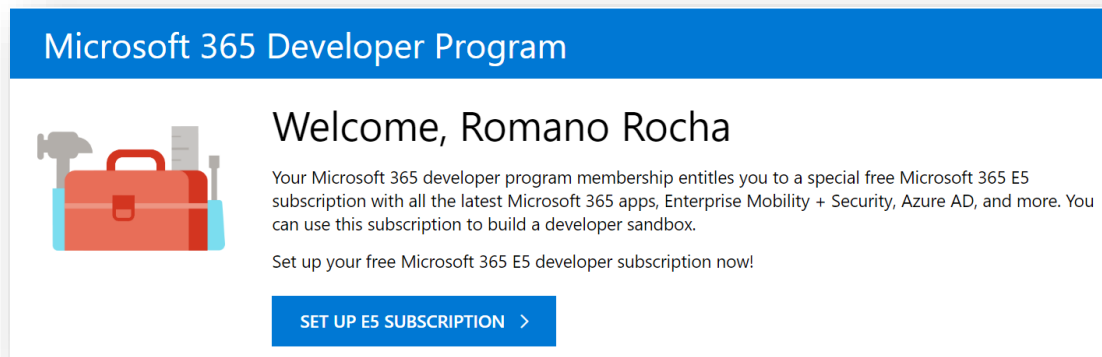
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mirror_mod = modifier_ob.  
Set mirror object to mirror  
mirror_mod.mirror_object =  
operation == "MIRROR_X":  
mirror_mod.use_x = True  
mirror_mod.use_y = False  
mirror_mod.use_z = False  
operation == "MIRROR_Y":  
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True  
  
selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
("Selected" + str(modifier_ob.  
mirror_ob.select = 0  
= bpy.context.selected_object  
data.objects[one.name].select  
print("please select exactly  
  
-- OPERATOR CLASSES --  
  
types.Operator):  
X mirror to the selected  
object.mirror_mirror_x"  
mirror X"  
  
context):  
context.active_object is not
```


Create your own Power BI Playground

Very useful to try admin features 😊

Create a **365 Developer subscription**

- 90 days (renew automatically, if used for DEV)
- 25 Licenses of O365 E5 👤 (PowerBI, PowerApps, PowerAutomate)
- Full Tenant Control



Your Microsoft 365 developer subscriptions

Important: You must assign yourself a license before you can access all functional [licenses to users](#).

To learn more about how to work with your subscription, see [Build Microsoft 365 solutions](#).

rr365playground.onmicrosoft.com

Renewable E5 subscription

Expires on Jan 8, 2021

Administrator

ruiromano@rr365playground.onmicrosoft.com

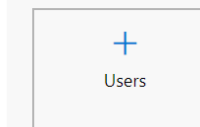
Users

25 user licenses

92/92
days left

[Go to subscription](#)

Sample data packs



Mail & Events

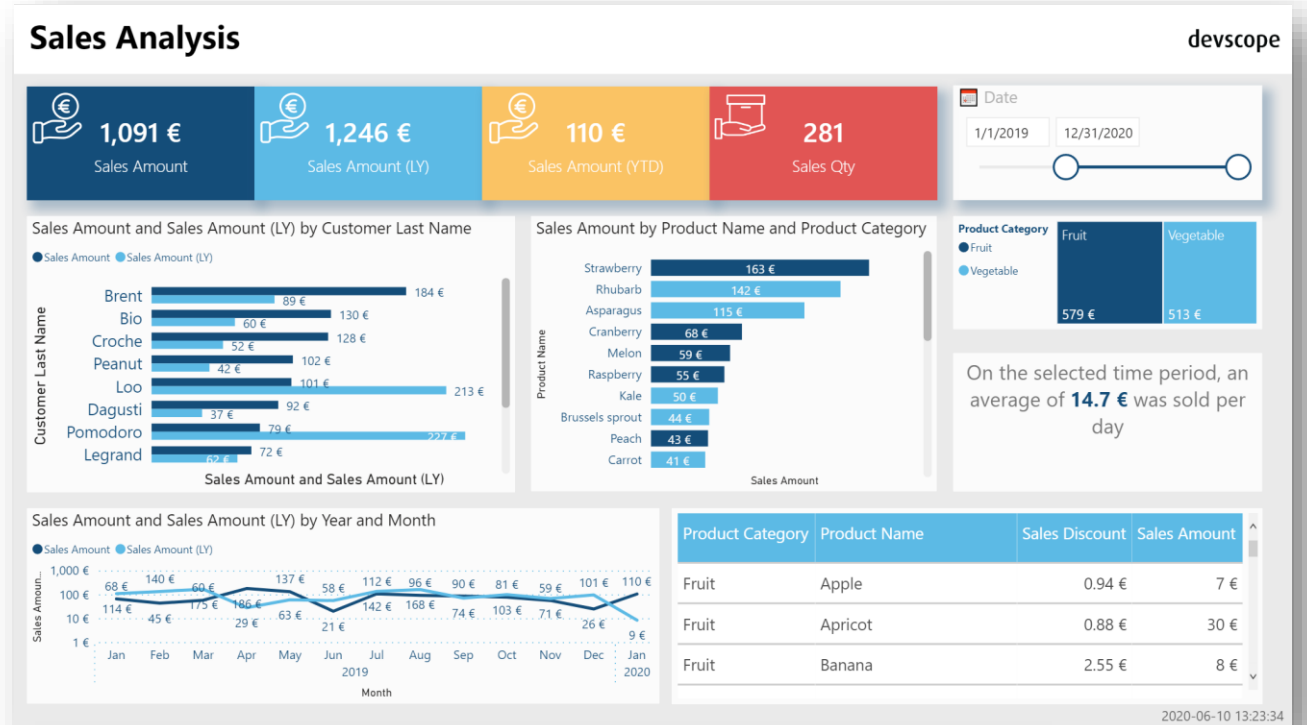
SharePoint

Install the **Users** sample data pack first.

Use Templates!

- FastTrack to new Developments
- Theme files
Much more than just colors
- Built in common tables
Calendar & Time
Calculation Groups
About
- ...

[Sample PBIT Download](#)



```
C: > @Repos > Github > pbihacksworkshop > Demos > Report - Template > CompanyTemplate.json > ...
1 {
2   "name": "Theme",
3   "dataColors": ["#144D79", "#5cbae5", "#fac364", "#e15554", "#3bb273", "#7768ae", "#1b7eac"],
4   "foreground": "#144D79",
5   "foregroundNeutralSecondary": "#144D79",
6   "foregroundNeutralTertiary": "#144D79",
7   "background": "#FAFAFA",
8   "backgroundLight": "#5cbae5",
9   "backgroundNeutral": "#5cbae5",
10  "tableAccent": "#252525",
11  "visualStyles":
12  {
13    "*": { "textClasses": {
```

Learn more: <https://docs.microsoft.com/en-us/power-bi/desktop-report-themes>

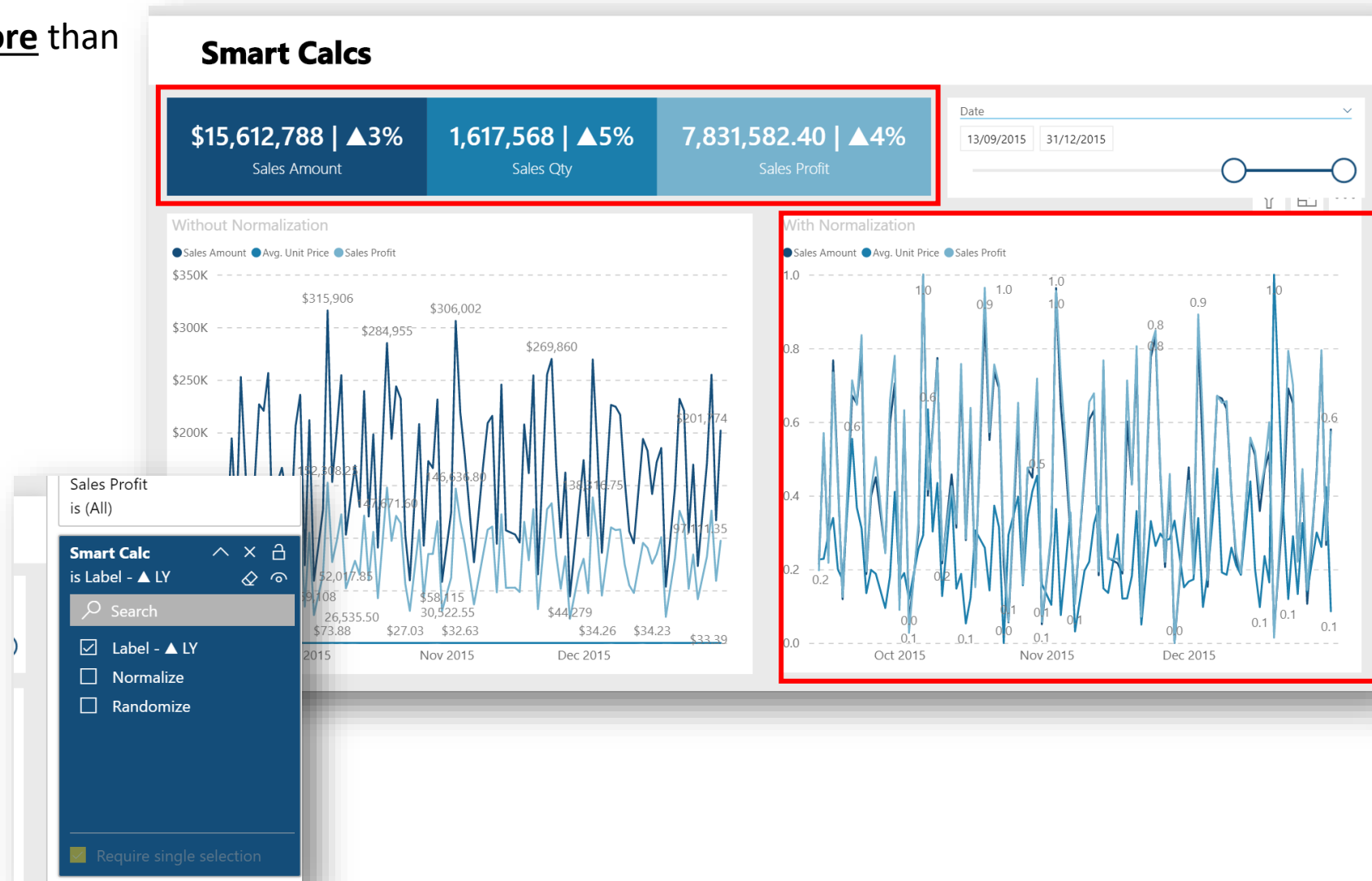


“Smart” Calculation Groups

Calculation Groups can do **much more** than just Time Aggregations / Variations

Other very useful use cases:

- Auto Time Variation on Cards
- Normalization
- Randomize



REST API – Power BI DevOps

Avoid multiple development files

Declare your deployment strategy

Automate the deployment using REST API's

You can make mistakes, the computer don't 😊

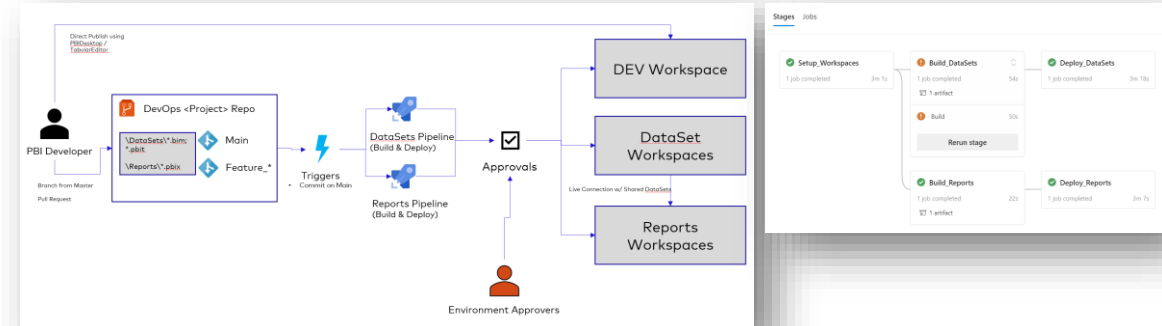
If you have Premium

Deployment Pipelines

Must Watch: [Daniel Otykier Session](#)

- Azure DevOps
- Tabular Editor / bim file vs pbix
- REST API's

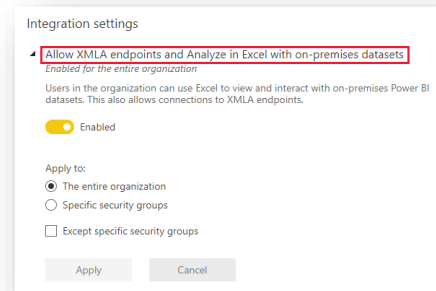
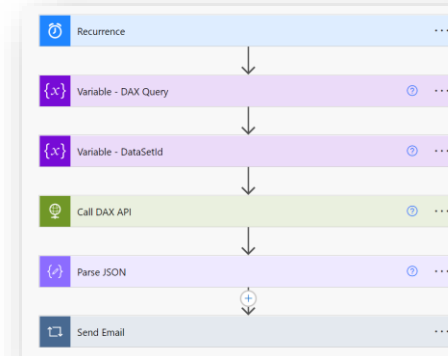
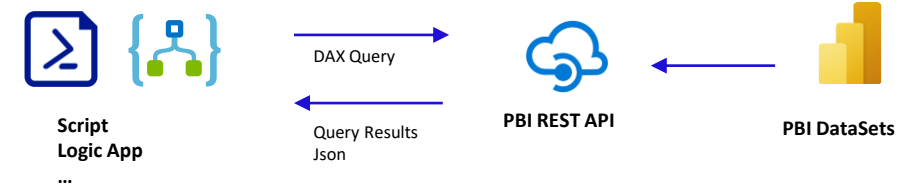
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27 Connect-PowerBIServiceAccount
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29 if ($workspaces)
30 {
31     Publish-PBIWorkspaces -configPath $configPath
32 }
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34 if ($datasets)
35 {
36     Publish-PBIDataSets -configPath $configPath -path "$path\DataSets"
37 }
38
39 if ($reports)
40 {
41     # README - The live connected PBIX reports need to be binded to an existent Datas
42     Publish-PBIReports -configPath $configPath -path "$path\Reports"
43 }
44
45 if ($paginatedReports)
46 {
47     Publish-PBIReports -configPath $configPath -path "$path\PaginatedReports"
48 }
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```



REST API - Dataset Execute Queries

- The coolest API! 😊
- Useful Scenarios:
 - Data Integration (*limited)
 - Data Testing - [blog post](#)
 - Alerting System using Power BI Data
 - App/Website integrations
- Works on Premium & Shared (PRO)
- Requirements
 - “Build” permission on the dataset
 - “Allow XMLA Endpoints and Analyze in Excel”
- Main Limitations
 - Result sets capped to 100k rows
 - No parallel queries

Script: [execute dax in PS](#)



Underperforming Employees - 2021-11-08T17:48:29.2908586Z

This message was sent with Low importance

Rui Romano
Mon 08/11/2021 17:48
To: Rui Romano

Employees.csv
555 bytes

Underperforming Employees:

Employee[Employee]	[Sales Amount]	[Sales Qty]	[Sales Profit]	[Sales Amount vs LY]
Amy Trefl	13452	504	6438.5	-0.40562167368842
Anthony Grosse	9257.1	625	4794.6	-0.244139428926031
Hudson Hollinworth	8183.5	608	3677	-0.756427866664087
Sophia Hinton	13960.5	525	7087.25	-0.254320486490384
Archer Lambie	9893.4	523	4950.4	-0.5799034407205

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Dataset-REST API DAX Query.ps1 > ...
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Thanks!

 @RuiRomano

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