

AUTOMATE, OPTIMIZE, VALIDATE POWERSHELL FOR POWER BI & SSAS SUCCESS

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- NORTH TEXAS SQL SERVER UG BOARD
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CONTACT INFO

- [HTTPS://GITHUB.COM/RLOSKI-PUBLIC/SSASCOMPARE](https://github.com/rloski-public/ssasCompare)
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SQL



Microsoft
Fabric



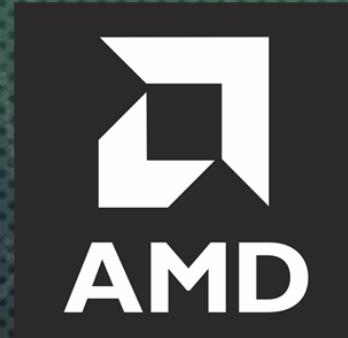
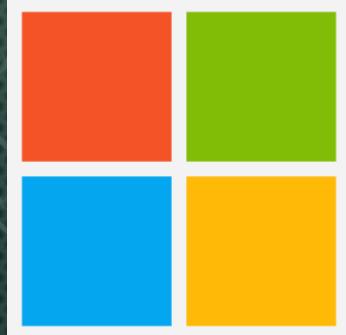
NOVEMBER 8, 2025

sqlsaturday.com/2025-11-08-sqlsaturday1120/

**SQL SATURDAY HOUSTON
HASSUG**



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Thank you!



OUR BOARD MEMBERS



Paresh Motiwala



Anuja Nair



Mohit Agrawal



Olga Nesterova



Huyen Vu



Qin Xu

AGENDA

- THE PROBLEM
- APPROACH
- SETUP
- COMPARING FILES
- EXPORTING DATA

THE PROBLEM

CHANGE CAUSES UNEXPECTED CHANGES

- HOW DO YOU PROVE THAT A CHANGE DOESN'T CAUSE SOMETHING TO BREAK?
- CHANGES
 - CHANGE TO THE DATA BEING LOADED
 - CHANGE TO THE MEASURES
 - CHANGE TO THE RELATIONSHIPS

HOW TO FIND CHANGES?

APPROACH

APPROACH

- RUN DAX QUERIES USING POWERSHELL
- GET DATATABLES FROM TWO MODELS
- COMPARE THE DATATABLES
 - Rows
 - COLUMNS
 - VALUES
- JOIN ON KEY COLUMNS

GETTING SET UP

PREPARE ENVIRONMENT

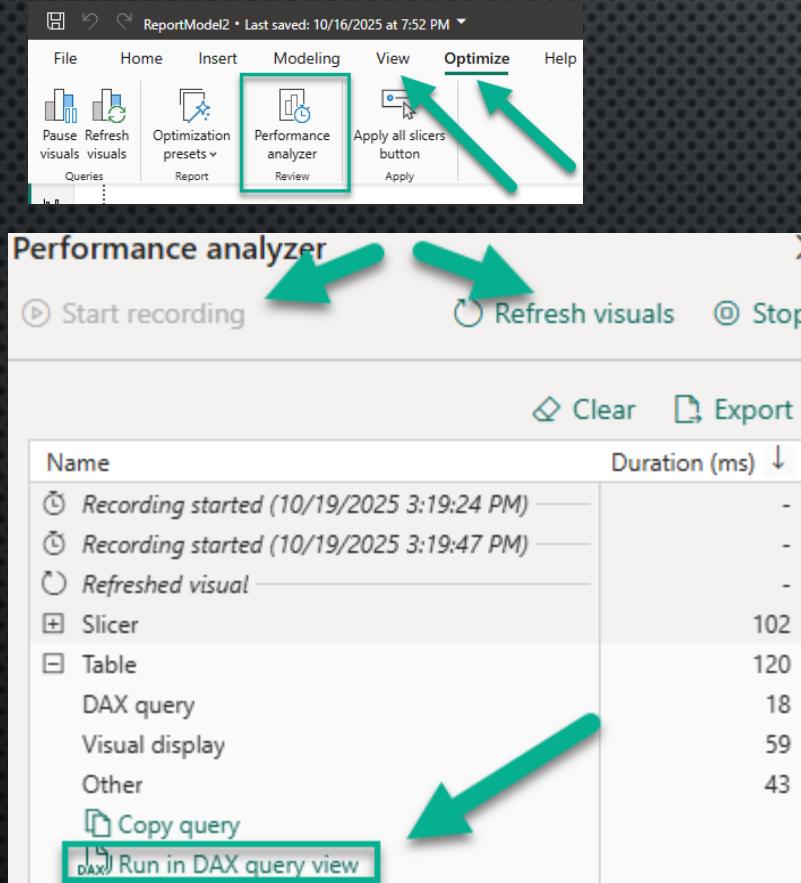
- INSTALL DATA COMPONENT
 - [HTTPS://LEARN.MICROSOFT.COM/EN-US/ANALYSIS-SERVICES/CLIENT-LIBRARIES](https://learn.microsoft.com/en-us/analysis-services/client-libraries)
 - INSTALL THE MSOLAP PROVIDER
- NOTE THE SQLBI RECOMMENDATION
 - [HTTPS://WWW.SQLBI.COM/ARTICLES/EXECUTE-DAX-QUERIES-THROUGH-OLE-DB-AND-ADOMD-NET/](https://www.sqlbi.com/articles/execute-dax-queries-through-ole-db-and-adomd-net/)

COPY POWERSHELL SCRIPTS

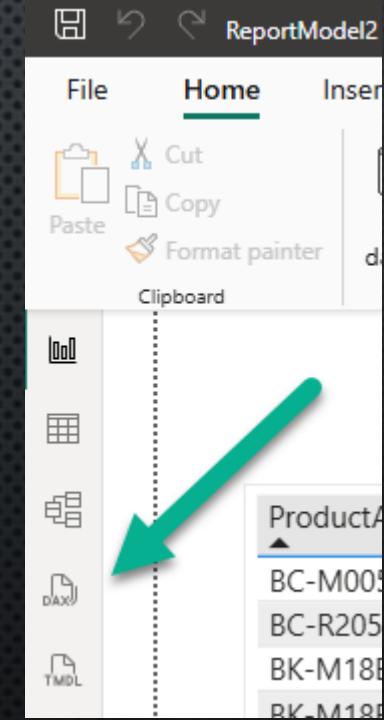
- DOWNLOAD SCRIPTS
 - [HTTPS://GITHUB.COM/RLOSKI-PUBLIC/SSASCOMPARE](https://github.com/rloski-public/SSASCompare)
- MAIN FOLDER:
 - SCRIPTS FOR TESTING
- DAXCOMPARISON
 - THE MODULE SCRIPTS

PREPARE THE DAX QUERIES

- USE THE DAX QUERY VIEW



```
1 DEFINE
2     VAR __DS0Core =
3         SUMMARIZECOLUMNS(
4             SUMX(CALCULATETABLE(
5                 SUMMARIZE(
6                     SUMX(
7                         TOPN(
8                             502,
9                             __DS0Core,
10                            [IsGrandTotalRowTotal],
11                            0,
12                            'DimProduct'[ProductAlternateKey]
13                            1,
14                            'DimProduct'[EnglishProductName]
15                            1
16                        )
17                    ),
18                    __DS0PrimaryWindowed
19                ),
20                EVALUATE
21                __DS0PrimaryWindowed
22            )
23            ORDER BY
24                [IsGrandTotalRowTotal] DESC,
25                'DimProduct'[ProductAlternateKey],
26                'DimProduct'[EnglishProductName]
27            )
28        )
```



SET UP THE POWERSHELL FUNCTIONS

- IMPORT-MODULE `
- .\ DAXCOMPARISON\DAXCOMPARISON.PSM1

FIND THE CONNECTION INFORMATION

- POWER BI DESKTOP MODEL IS IN A WINDOWS SERVICE
- SCRIPT GETPBIPORT.PS1 GETS THE PORT NUMBER
- VARIABLES
 - SET THE PATH WHERE YOU PUT THE SCRIPTS
 - SET THE SERVER (LOCALHOST:<PORTNUMBER>)
 - TRY TO DETERMINE WHICH PORT GOES TO WHICH SERVER
 - I ADDED A TABLE WITH VERSION INFORMATION

IDENTIFY THE KEYS AND FILTERS

- RESULTS HAVE DIFFERENT KEYS BASED ON FILTERS
 - IsGRANDTOTALRowTOTAL IS TRUE: NO KEYS
 - IsDM1TOTAL: ONE COLUMN KEY, ETC.
- TESTGETMETADATA.PS1
 - MAKES FIRST GUESS AT KEYS AND FILTERS
 - WRITES TO A SECOND FILE
- EDIT TO IDENTIFY DIFFERENT COMBINATIONS

RUN A TEST COMPARISON ON ONE FILE

COMPARING FILES

READING RESULTS

- NUMBER OF ROWS/COLUMNS IN EACH SET
- COLUMNS WITH MISMATCHES
- MISSING ROWS

EXPORTING DATA

CLOSING

REFERENCES

- [HTTPS://LEARN.MICROSOFT.COM/EN-US/ANALYSIS-SERVICES/CLIENT-LIBRARIES?VIEW=SQL-ANALYSIS-SERVICES-2025&VIEWFALLBACKFROM=SQL-SERVER-2017](https://learn.microsoft.com/en-us/analysis-services/client-libraries?view=sql-analysis-services-2025&viewFallbackFrom=sql-server-2017)
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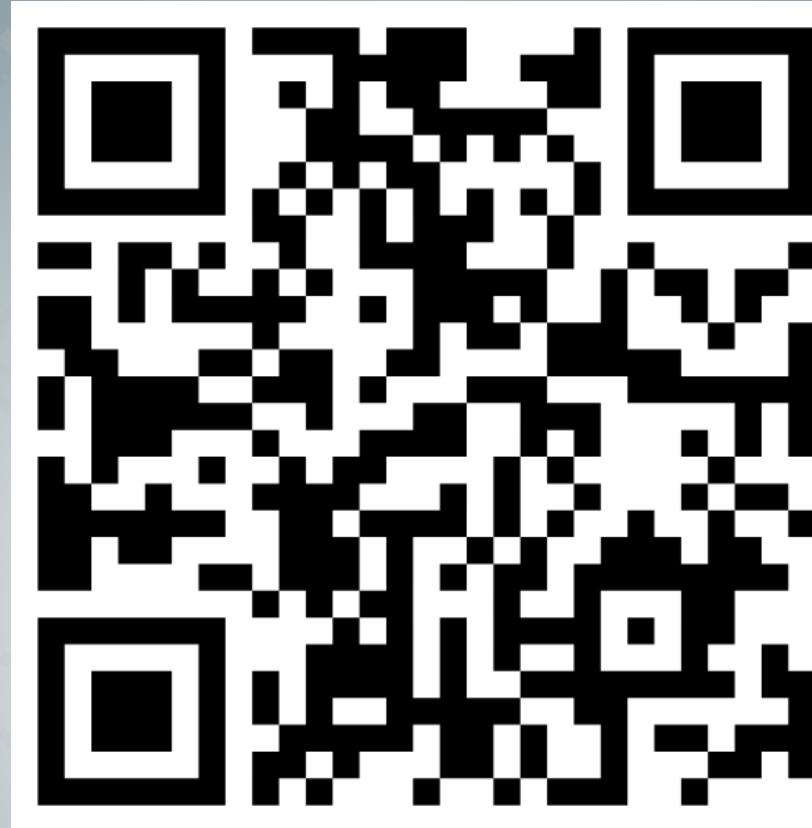
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EVENT EVALUATIO N



SESSION EVALUATION



SQL
Saturday

A dark blue rectangular graphic featuring the "SQL Saturday" logo in large, light blue, sans-serif font. The logo is surrounded by various white icons related to data and databases, such as a bar chart, a database cylinder, a magnifying glass over a network graph, and a binary code sequence (101011). A stylized globe with a circuit board pattern is visible on the right side.