Let your data flow
Introducing Power BI dataflows

Wolfgang Strasser
@wstrasser // wolfgang@powerofbi.at
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WHY?
The Evolution of BI

1st wave
Corporate BI

2nd wave
Self-service BI

3rd wave
End user BI

IT to end user

Analyst to end user

Everyone
Business Intelligence needs DATA
Self-Service BI

**Access** to data ... faster ... comprehensive

Data **Models**

**Integration**
Self-Service BI – Current State

BI

ETL

✓

✗

✓
Introducing Power BI dataflows
Power BI dataflows are part of the evolution of BI

Thank you @SQLAllFather for this slide!
Source: https://ssbipolar.com/2019/03/21/my-slides-from-sql-saturday-victoria/
ETL in the Context of Power BI

Power BI Report 1

Dataset

Power Query (M)

Power BI Report 2

Dataset

Power Query (M)

Power BI Report 3

Dataset

Power Query (M)
Power BI Information Hierarchy (before)

Dashboards  Interactive Reports  Paginated Reports

Datasets

Raw Data

Source: Amir Netz: Power BI dataflows Whitepaper (https://go.microsoft.com/fwlink/?linkid=2034388&clcid=0x409)
Power BI dataflows are like Excel

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<th>C</th>
<th>D</th>
<th>E</th>
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=SUM(B4;D4;F4)

= Value A + Value B + Value 3

D4;F4)
So... What is a Power BI dataflow?

It’s a Power Query process...

... running in the cloud

... independently of a Power BI report / dataset

... stores data into a Data Lake

(Azure Data Lake Storage Gen2)

... uses the Common Data Model for entity definition
Good to Know I

App workspaces only (Not available in “My workspace”)

Entities – Tables

Dataflow = data preparation pipeline

Power Query / M
Introducing Power BI dataflows

End-To-End Demo
Architecture Wrap Up

Dataflows

Datasources

Azure Data Lake Storage Gen2

Datasets

Reports

Dashboards

Data is stored as entities in Microsoft Common Data Model compliant folders.

https://docs.microsoft.com/en-us/power-bi/service-dataflows-overview
Power BI dataflows and the Data Lake

Reports & dashboards
Datasets
Dataflows

Azure Data Factory
Azure Databricks
Azure SQL DW
Azure ML

Azure Data Lake Storage Gen2
CDM folder
CDM folder
CDM folder

Business analysts
Low/no code

Data scientists
Data engineers
Low to high code
CDM Folders

More about CDM Folders & Bring-Your-Own-Storage-Account in Matthews Session at 15:30 in Room 1

Who can use PBI dataflows?
Everyone!
<table>
<thead>
<tr>
<th>Dataflow capability</th>
<th>Power BI Pro</th>
<th>Power BI Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled refresh</td>
<td>8 per day</td>
<td>48</td>
</tr>
<tr>
<td>Total Storage</td>
<td>10 GB/user</td>
<td>100 TB/node</td>
</tr>
<tr>
<td>Dataflow Authoring with Power Query Online</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Dataflow Management within Power BI</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Dataflows Data Connector in the Power BI Desktop</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Integration with Azure</td>
<td>+</td>
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<tr>
<td>Computed Entities (in-storage transformations via M)</td>
<td>+</td>
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<tr>
<td>New connectors</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Dataflow incremental refresh</td>
<td>+</td>
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</tr>
<tr>
<td>Running on Power BI Premium capacity / Parallel execution of transforms</td>
<td>+</td>
<td></td>
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<tr>
<td>Dataflow linked entities</td>
<td>+</td>
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<tr>
<td>Standardized Schema / Built-In Support for the Common Data Model</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
dataflows Administration
Demo

Tenant settings, BYOSA, scheduled refresh,...
Resources
Power BI dataflows

• Dataflows Whitepaper (by Amir Netz)
  • https://go.microsoft.com/fwlink/?linkid=2011419&clcid=0x409

• Documentation
  • https://docs.microsoft.com/en-us/power-bi/service-dataflows-overview

• Matthew Roche

• Guy in a Cube
  • https://www.youtube.com/channel/UCFp1vaKzpfoGai0vE5VJ0w

• Rezas Blog
  • http://radacad.com/blog

• My blog (#24DaysPowerPlatform)
  • https://workingondata.wordpress.com/2018/12/22/24-days-of-powerplatform-day-22-what-are-power-bi-dataflows/
Wolfgang Strasser

Working @ CUBIDO

Reach me at

✉️ wolfgang@powerofbi.at

🐦 @wstrasser

Read more at
https://workingondata.wordpress.com