7 ways to refresh data in Power BI
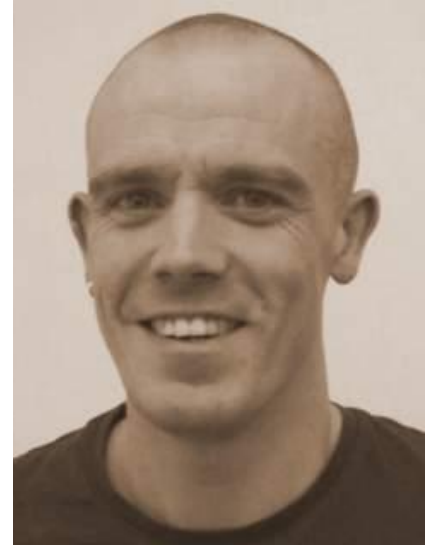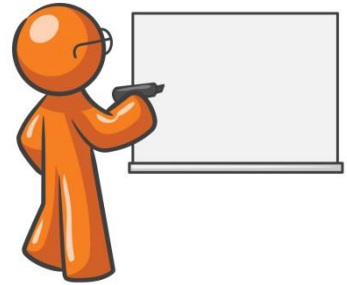
Just Thorning Blindbæk

▸ Konsulent i justB
▸ Underviser hos Orange Man
▸ Initiativtager til MsBIP
▸ Arbejdet med Microsoft BI i 9 år
▸ Stærkt fokus på front-end
  ◦ Analysis Services
  ◦ Reporting Services
  ◦ PerformancePoint Services
  ◦ Excel og PowerPivot
  ◦ Power BI
▸ just@blindbaek.dk / blog.justB.dk / @justblindbaek

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SSAS MAESTRO by Microsoft

Microsoft CERTIFIED IT Professional

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Agenda

- Introduction

- Upload
- Automatic refresh
- Scheduled refresh from Cloud Sources
- Scheduled refresh from On-prem Sources
- Live Query
- Direct Query
- Real-time

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Introduction

‣ Data source
  ◦ Where the data you explore in your reports and dashboards really comes from
  ◦ Online Service like Google Analytics or QuickBooks
  ◦ Database in the cloud like Azure SQL Database
  ◦ Database or file on a local computer or server in your own organization
‣ Data set
  ◦ Automatically created in Power BI when you use Get Data
  ◦ A dataset can get data from one or more data sources
  ◦ Appears in the My Workspace pane
‣ Data refresh
  ◦ Updating data in the **dataset** with new and updated data from **data sources**

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Introduction

- ▸ Where is the data?
  - ◦ Cloud
  - ◦ On-premises
- ▸ How do you want to refresh?
  - ◦ Import (pull)
  - ◦ Stream (push)
  - ◦ Live connection
- ▸ Whats your subscription type?

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Upload

- Manuel
- Simple and easy
- Get Data or Publish
- Sources
  - Power BI Desktop file (.pbix)
  - Excel
  - CSV

↗ **Get Data**

Local File

OneDrive – Business

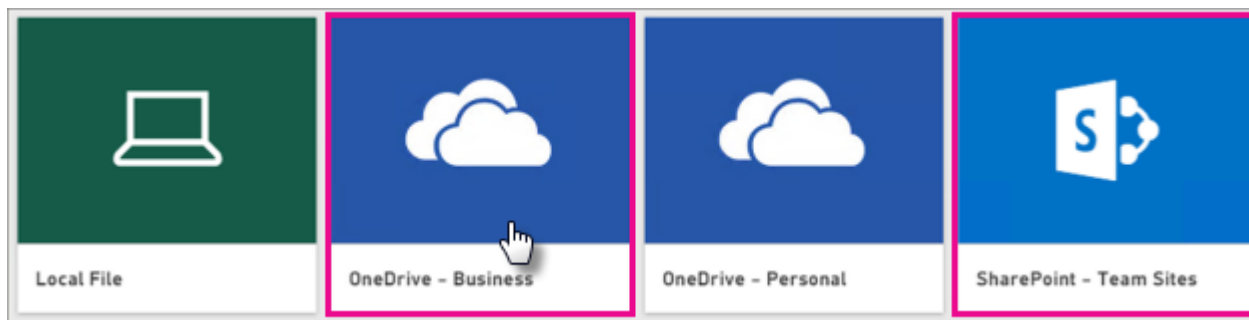OneDrive – Personal

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Automatic Refresh

- ▸ OnDrive / SharePoint -Team Sites
  - ◦ Comma separated files (.csv)
  - ◦ Data models
  - ◦ Save = refreshes usualy within one hour
  - ◦ OneDrive for Business is recommended
- ▸ Online service providers (content packs)
  - ◦ Refresh usually occurs once-a-day

▲ OneDrive Refresh

By default, OneDrive updates files hourly. Do
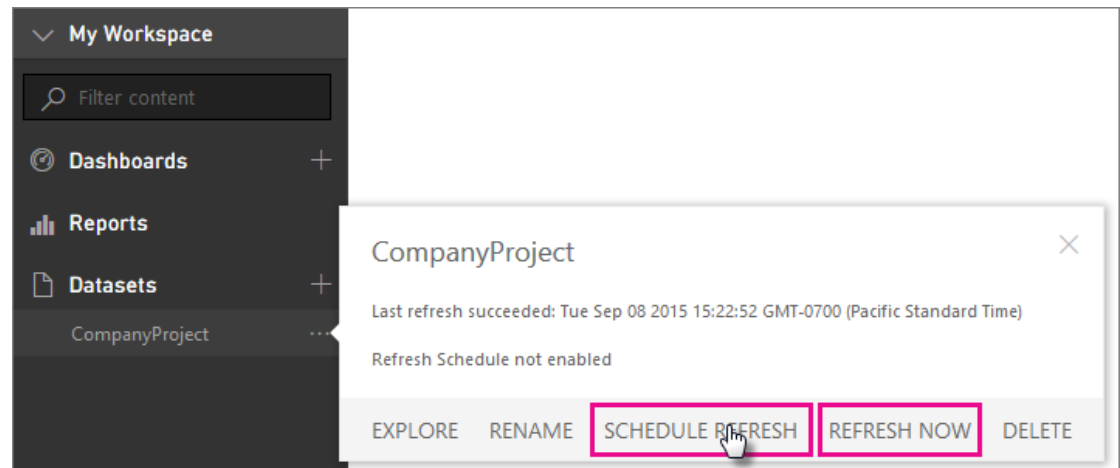you want your files to be kept up to date?

Yes

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Scheduled refresh from the Cloud

▸ Sources
- ◦ SaaS
- ◦ Azure – SQL, DW, Blob, Table, HDInsight, Marketplace
- ◦ SharePoint
- ◦ Websources
- ◦ Odata feeds

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Scheduled refresh from On-prem

- Personal Gateway
  - Self-service refresh
  - Install on local machine
  - Administrator permissions = runs as a service
- Sources
  - SQL Server
  - Oracle, Teradata, IBM DB2, PostgreSQL, Sybase, MySQL
  - SharePoint lists
  - File (CSV, XML, Text, Excel, Access)
  - SQL Server Analysis Services Tabular

◢ Gateway status

The Personal gateway on X1 is online.

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Live Power BI reports & dashboards

Cloud

On-premises

Install locally

Scheduled refresh

Personal Gateway

Data Source

Data Source

Data Source

Live Query

▸ Analysis Services Connector
▸ Enterprise Gateway
  ▸ Preview
  ▸ Planned – additional sources, schedule refresh

▸ SQL Server Analysis Services
  ▸ Tabular models
  ▸ Multidimensional models (DAX over MDX)
  ▸ EffectiveUserName property

Live Power BI reports & dashboards

Cloud
On-premises

Manage & Monitor
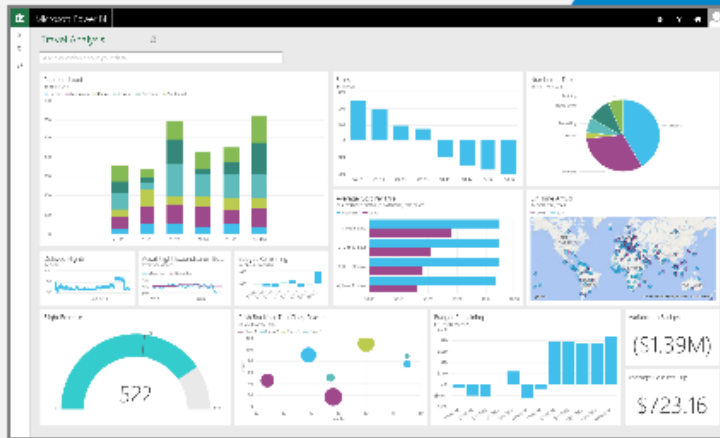
Direct query
Enterprise gateway

SSAS

Data Source

Data Source

Direct Query

▸ Cloud sources
- SQL Azure Database
- SQL Azure Data Warehouse
- Spark on HDInsight

▸ On-prem sources
- SQL Server
- SAP HANA

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Live Power BI reports & dashboards

Live query   Direct query   Scheduled refresh

Cloud

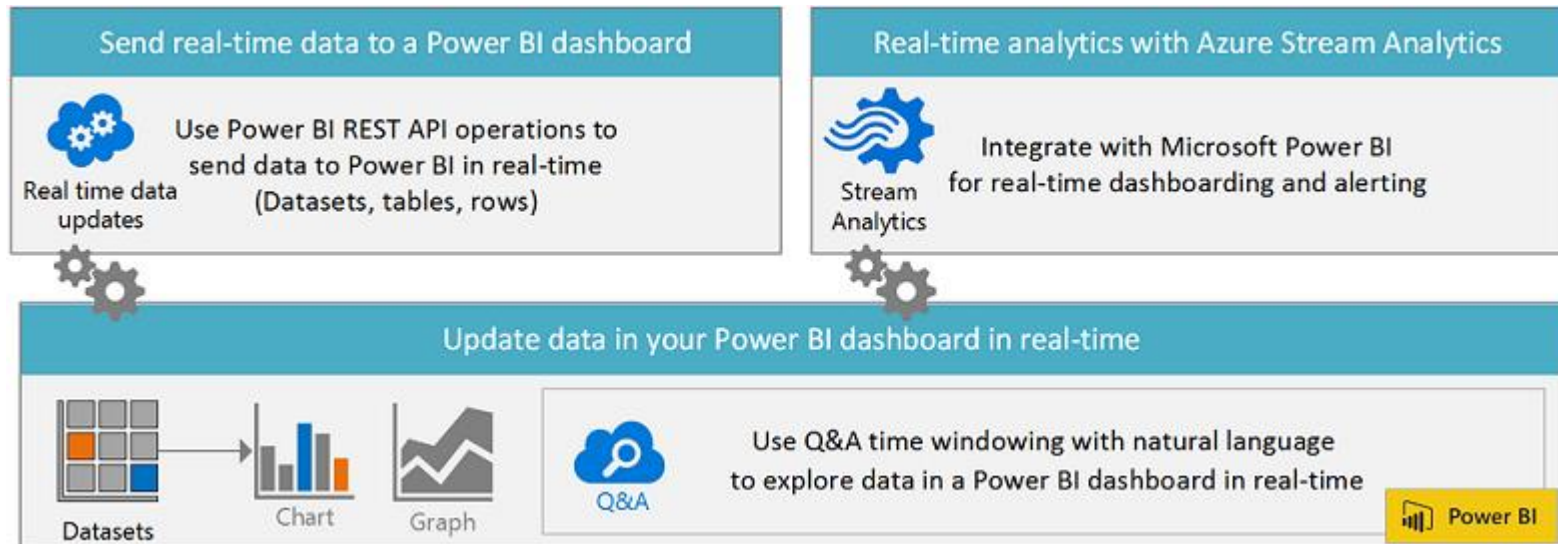On-premises
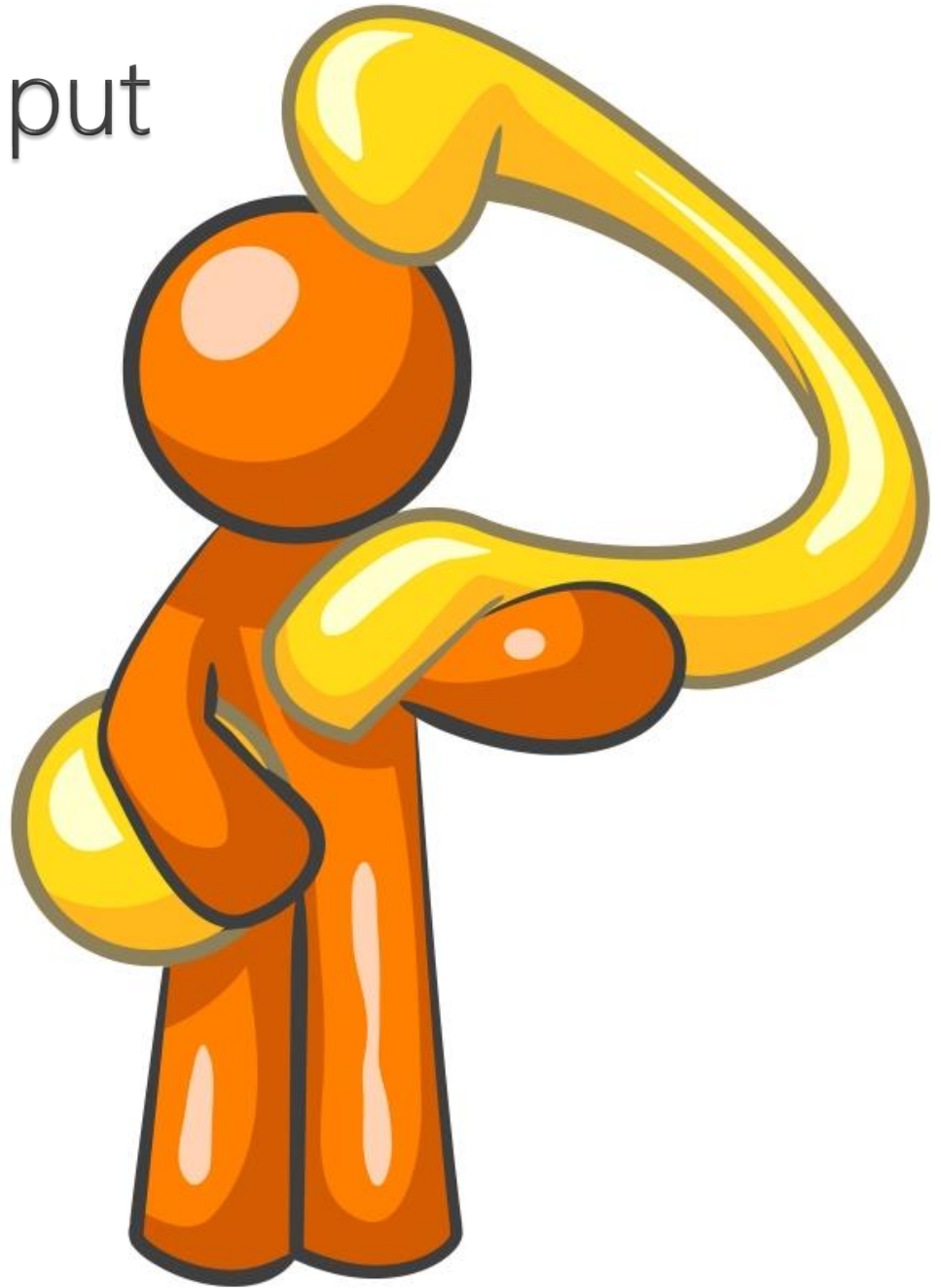
SQL Server Analysis Services   Data Source   Data Source

Real-time

▸ Stream (push) data to dataset
▸ Rest API / Azure Stream Analytics integration
▸ Limitations
  ◦ 10.000 max rows per single POST rows request
  ◦ 1.000.000 rows added per hour per dataset

Questions and input

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