Module 6

Power BI Service

Module Overview

- Publishing into the Power BI Service
- Using On-premise Data Gateway
- Controlling Data Refresh
- The Power BI Service
- Managing a Power BI solution

Lesson 1: Publishing into the Power BI Service

- Connecting to files
- Importing Excel files
- Publishing to Power BI
- Updating files in Power BI

Connecting to files

- Connect to files from Power BI desktop or service:
  - Compatible file types include Excel, CSV, XML, and JSON
- From the Power BI service:
  - Connect to a local file, OneDrive Business or OneDrive Personal, or SharePoint – Team Sites
  - Maximum file size to upload to the Power BI service is 250 MB
- From Power BI Desktop:
  - On the **External data** menu, click **Get Data** from, and then choose file location from your local computer, or OneDrive
  - Connect to a folder to import multiple files
- Folder locations can contain different file formats

Importing Excel files

- Two approaches to importing an Excel workbook:
  - Connect and use contents as datasets:
    - File size limitations
    - Data must be formatted as a table in Excel
    - Load the data and use Power Query Editor to apply transformations
  - Import an entire workbook, including Power Pivot and Power View, and explore as you would in Excel Online:
    - Import any .xlsx or .xlsm file to explore features
    - Power Pivot models are imported to created datasets
    - Power View content is imported as reports that can immediately be pinned to dashboards
    - Data source connections are imported for scheduled data refresh

Publishing to Power BI from Excel

- Limitations
- Two options for publishing a workbook:
  - Upload your workbook to Power BI:
    - The workbook is displayed as it is in Excel Online
    - It cannot be edited in Power BI, only in Excel
    - Use this option for workbooks containing data and no visuals
  - Export workbook data to Power BI:
    - Use this option for workbooks that use Power View, Get & Transform, and Power Pivot
    - All tables, the data model, and visualizations are exported

Updating files in Power BI

- Update local files that you have uploaded to Power BI to use in reports and dashboards:
  - Includes Excel, CSV, and Power BI Desktop files
  - The name of the file must be the same as the dataset
  - File type must be the same as the previous one
  - Keep the data structure the same
  - Power BI ignores format changes to columns
  - New columns are added to the dataset
  - Whole Excel files on OneDrive for Business or SharePoint – Team Sites are updated automatically
  - Only one dataset can exist with same name as the file

You will see how to:

- Import vs upload an Excel file to Power BI
- Publishing PBIX to Power BI service

- Data Refresh
- Gateway Architecture
- Configuring On-premise Server
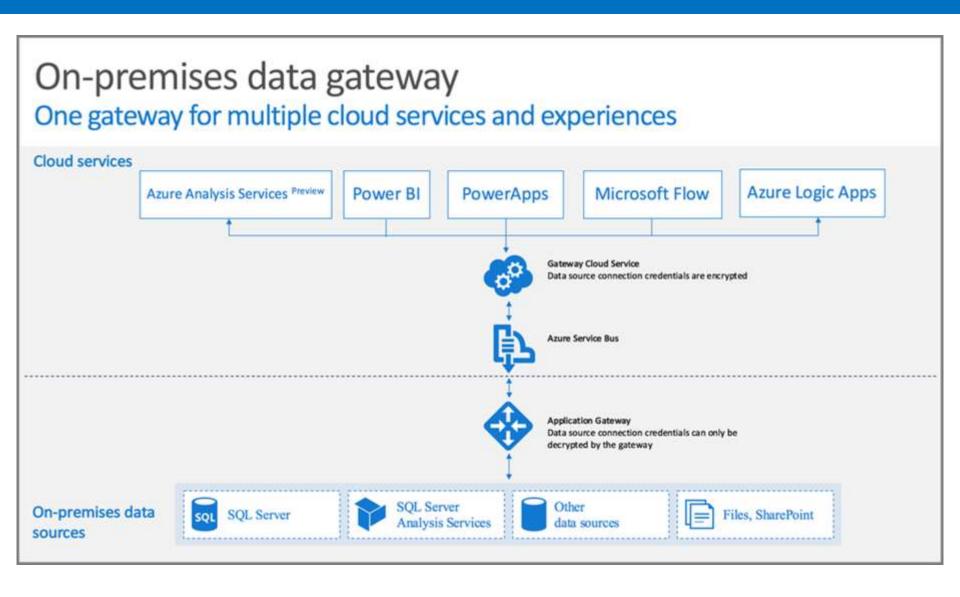- Connecting from Power BI Service

Data refresh

- Data refresh options depend on Power BI account:
  - Power BI (free): datasets can be refreshed daily
  - Power BI Pro: schedule hourly refresh, up to eight times a day
- Data source types have different refresh options:
  - Power BI to SaaS uses live connection
  - Datasets can consist of multiple data sources, such as Excel and SQL Server
- Three data refresh options:
  - Automatic refresh
  - Refresh now and scheduled refresh
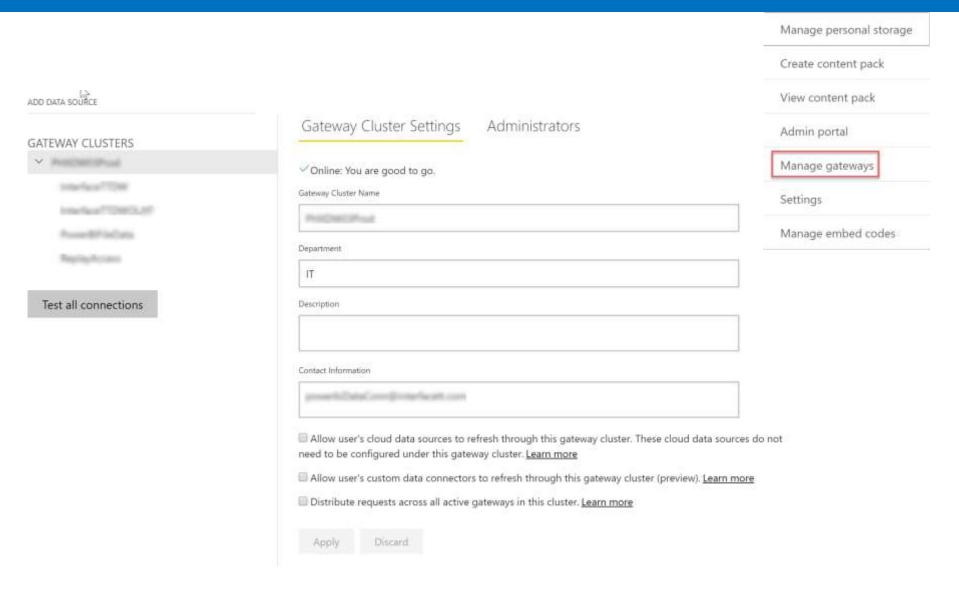 - Live connection with DirectQuery

Using the On-Premises data gateway

- Two types of gateway:
  - On-premises data gateway
  - On-premises data gateway (personal mode)
- Download the gateway from:
  - Link in Power BI service
  - Power BI website
- Using the gateway:
  - Add data sources and users to the gateway
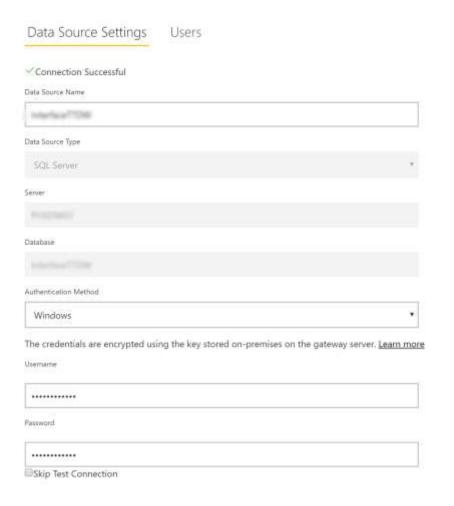 - Connect to SSAS to see the registered Analysis Services models

Gateway Architecture

On-Premise Data Gateway

ADD DATA SOURCE

GATEWAY CLUSTERS

∨ PHEDMOIPool

InterfaceTTDW

InterfaceTTDWCLM

PowerBIFileData

ReplayAccess

Test all connections

Gateway Cluster Settings   Administrators

✓ Online: You are good to go.

Gateway Cluster Name

PHEDMOIPool

Department

IT

Description

Contact Information

powerbiDataConn@interfacett.com

☐ Allow user's cloud data sources to refresh through this gateway cluster. These cloud data sources do not need to be configured under this gateway cluster. Learn more

☐ Allow user's custom data connectors to refresh through this gateway cluster (preview). Learn more

☐ Distribute requests across all active gateways in this cluster. Learn more

Apply   Discard

Manage personal storage

Create content pack

View content pack

Admin portal

Manage gateways

Settings

Manage embed codes

Data Source and User Access Control

Demonstration and Exercise 2 and 3

You will see how to:

- Install a Personal Mode Data Gateway
- Connect a dataset to the Gateway
- Set up Refresh Schedule

Lesson 3: The Power BI Service

- Creating apps
- Defining workspace roles
- Configuring your data for Q&A

- Power BI content packs are packaged reports, dashboards, and datasets:
  - Can be shared with other Power BI users
  - After importing, the contents are merged into the My Workspace lists
  - Packs can be customized for different users
  - Give access to specific groups, or entire organizations
  - Add title, description, and image or company logo
  - Datasets for the selected reports and dashboards cannot be excluded
- Import content packs from SaaS providers such as Bing, MailChimp, Insightly, Marketo, and Twilio

Defining workspace roles

- Grant users access to app workspaces using roles:
  - Viewer
    - View an Item
  - Contributor
    - Publish reports
    - Create, edit, and delete workspace content
  - Member
    - Share items and apps
    - Publish and update apps
    - Add members to workspace
  - Admin
    - Add or remove users
    - Update or delete the workspace

Demonstration and Exercise 4

You will see how to:

- Publish an App

Lesson 3: Managing a Power BI solution

- Power BI admin portal
- Power BI service settings
- Power BI Desktop settings
- Dashboard and report settings

Power BI admin portal

- View and manage administrative settings
- Only available to:
  - Power BI service administrators
  - Office 365 Global Admins
- Includes:
  - Usage metrics: most used reports and dashboards
  - Users: link to Office 365
  - Audit logs: link to Office 365
  - Tenant settings: configure functionality for the tenant
  - Capacity settings: configure and monitor capacities

Power BI service settings

- General
  - Manage privacy, language, close account, enable custom visuals, and ArcGIS maps
- Dashboards
  - Show or hide the Q&A search box, and enable tile flow
- Datasets
  - View refresh history, manage connections, manage credentials, manage parameters, schedule refreshes, and configure Q&A
- Workbooks
  - Rename and delete workbooks
- Alerts
  - Turn off, rename, delete, and configure alerts

Power BI Desktop settings

- **Global**: set the data load cache; configure Power Query Editor options; configure R/Python home directories and IDE; set global privacy; enable sending of usage data to Microsoft; turn on diagnostic tracing, and manage auto recovery options to prevent accidental loss of work

- **Current file**: manage data load options; change regional settings (locale); set privacy and auto recovery options

- **Data source**: change location of file sources; manage credentials and privacy levels: None, Private, Organizational, or Public

Dashboard and report settings

- Customize reports and dashboards using settings:
  - **Filter dashboard**: use Focus mode to open a tile, then apply filters to categories and values
  - **Featured questions**: add custom featured questions, and enable results in Cortana and Q&A
  - **Print dashboard and export questions**: print a hard copy of a report or dashboard; export dashboard data to CSV, or report data to XLSX or CSV
  - **Publish to web**: create URL to send in email or social media; use embed code in webpage or blog post
  - **Custom URL and title**: change the default destination when clicking on a tile to a URL; alter title and subtitle

Configuring your data for Q&A

- Power BI Q&A:
  - The Q&A text box appears at the top of every dashboard
  - Enables users to ask questions of their data by using the natural query language
  - Q&A returns answers based on the dataset in the dashboard, using an appropriate or user-specified visual
- Q&A depends on entity names for searches:
  - Can use structured data and uploaded Excel workbooks
  - Upfront data cleaning, synonyms and semantic optimizations boost Q&A performance
  - Tables, columns, and calculated fields should be named appropriately, by using words you would search on

Demonstration

You will see how to:

- Ask a question by using Q&A
- Pin the answer to a question to an existing dashboard
- Ask a question and specify the visual to represent the data
- Add featured questions to a Power BI dashboard