

MS-DP605T00: PREPARE AND VISUALIZE DATA WITH MICROSOFT POWER BI



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Beginner	Azure Data & AI	Instructor-led	NA

INTRODUCTION

Power BI allows you to easily connect to and present your data in an interactive report, so you can make data-driven decisions. Learn how to connect to data, transform and shape data, and create interactive visuals in a Power BI report.

AUDIENCE PROFILE

This course is designed for individuals who need to transform and load data, define semantic model relationships and calculations, create interactive visuals, and manage reports using Power BI. The main target audience includes:

- Data Analysts who work with Power BI to create reports and dashboards.
- Business Intelligence Professionals looking to enhance their reporting skills.
- IT Specialists responsible for managing and distributing Power BI reports.
- Decision Makers who rely on data-driven insights for business strategies.

PREREQUISITES

Before starting this learning path, you should be familiar with data and analytics concepts.

COURSE OBJECTIVES

After completion of this course, delegates will:

- Get Data in Power BI – Learn to retrieve data from various sources, including Excel, relational databases, and NoSQL data stores.
- Clean, Transform, and Load Data – Use Power Query to clean and prepare data for analysis.
- Design a Semantic Model – Simplify complex data models and improve performance using techniques like star schemas.
- Add Measures and Calculated Columns – Create and manage measures and calculated columns to enhance data analysis.
- Design Power BI Reports – Select appropriate visuals and design interactive reports.
- Configure Report Filters – Apply various filtering techniques to refine report data.
- Create and Manage Workspaces – Manage Power BI workspaces and distribute reports effectively.
- Manage Semantic Models – Optimize and troubleshoot semantic models for better performance.

COURSE CONTENT

Module 1: Get started building with Power BI

Learn about Power BI, the building blocks and flow of Power BI, and how to create compelling, interactive reports.

Lessons

- Introduction
- Use Power BI
- Building blocks of Power BI
- Tour and use the Power BI service
- Knowledge check
- Summary

In this module, you'll learn how to:

- How Power BI services and applications work together.
- Explore how Power BI can make your business more efficient.

- How to create compelling visuals and reports.

Module 2: Get data in Power BI

You'll learn how to retrieve data from a variety of data sources, including Microsoft Excel, relational databases, and NoSQL data stores. You'll also learn how to improve performance while retrieving data.

Lessons

- Introduction.
- Get data from files.
- Get data from relational data sources.
- Create dynamic reports with parameters.
- Get data from a NoSQL database.
- Get data from online services.

- Select a storage mode.
- Get data from Azure Analysis Services.
- Fix performance issues.
- Resolve data import errors.
- Exercise - Prepare data in Power BI Desktop.
- Check your knowledge.

In this module, you'll learn how to:

- Get data from a relational database, like Microsoft SQL Server.
- Get data from a file, like Microsoft Excel.
- Get data from applications.
- Get data from Azure Analysis Services.
- Select a storage mode.
- Fix performance issues.

- Resolve data import errors.

Module 3: Clean, transform, and load data in Power BI

Power Query has an incredible number of features that are dedicated to helping you clean and prepare your data for analysis. You'll learn how to simplify a complicated model, change data types, rename objects, and pivot data. You'll also learn how to profile columns so that you know which columns have the valuable data that you're seeking for deeper analytics.

Lessons

- Introduction.
- Shape the initial data.
- Simplify the data structure.
- Evaluate and change column data types.
- Combine multiple tables into a single table.
- Profile data in Power BI.
- Use Advanced Editor to modify M code.
- Exercise - Load data in Power BI Desktop.
- Check your knowledge.

In this module, you'll learn how to:

- Resolve inconsistencies, unexpected or null values, and data quality issues.
- Apply user-friendly value replacements.
- Profile data so you can learn more about a specific column before using it.
- Evaluate and transform column data types.

- Apply data shape transformations to table structures.
- Combine queries.
- Apply user-friendly naming conventions to columns and queries.
- Edit M code in the Advanced Editor.

Module 4: Design a semantic model in Power BI

The process of creating a complicated semantic model in Power BI is straightforward. If your data is coming in from more than one transactional system, before you know it, you can have dozens of tables that you have to work with. Building a great semantic model is about simplifying the disarray. A star schema is one way to simplify a semantic model, and you learn about the terminology and implementation of them in this module. You will also learn about why choosing the correct data granularity is important for performance and usability of your Power BI reports. Finally, you learn about improving performance with your Power BI semantic models.

Lessons

- Introduction.
- Work with tables.
- Create a date table.
- Work with dimensions.
- Define data granularity.
- Work with relationships and cardinality.
- Resolve modeling challenges.
- Exercise - Model data in Power BI Desktop.

- Check your knowledge.
- In this module, you'll learn how to:
- Create common date tables.
 - Configure many-to-many relationships.
 - Resolve circular relationships.
 - Design star schemas.

Module 5: Design Power BI reports

Because Power BI includes more than 30 core visuals, it can be challenging for a beginner to select the correct visual. This module will guide you through selecting the most appropriate visual type to meet your design and report layout requirements.

Lessons

- Introduction.
- Design the analytical report layout.
- Design visually appealing reports.
- Report objects.
- Select report visuals.
- Select report visuals to suit the report layout.
- Format and configure visualizations.
- Work with key performance indicators.
- Exercise - Design a report in Power BI desktop.
- Check your knowledge.

In this module, you'll learn how to:

- Learn about the structure of a Power BI report.
- Learn about report objects.
- Select the appropriate visual type to use.

ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated Certification or Exam for this course.