Microsoft

PL-300T00

Microsoft Power BI Data Analyst

Disclaimer

Information in this document, including URL and other Internet Web site references, is subject to change without notice. Unless otherwise noted, the example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted herein are fictitious, and no association with any real company, organization, product, domain name, e-mail address, logo, person, place or event is intended or should be inferred. Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Microsoft Corporation.

Microsoft may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Microsoft, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

The names of manufacturers, products, or URLs are provided for informational purposes only and Microsoft makes no representations and warranties, either expressed, implied, or statutory, regarding these manufacturers or the use of the products with any Microsoft technologies. The inclusion of a manufacturer or product does not imply endorsement of Microsoft of the manufacturer or product. Links may be provided to third party sites. Such sites are not under the control of Microsoft and Microsoft is not responsible for the contents of any linked site or any link contained in a linked site, or any changes or updates to such sites. Microsoft is not responsible for webcasting or any other form of transmission received from any linked site. Microsoft is providing these links to you only as a convenience, and the inclusion of any link does not imply endorsement of Microsoft of the site or the products contained therein.

Microsoft and the trademarks listed at **http://www.microsoft.com/trademarks** are trademarks of the Microsoft group of companies. All other trademarks are property of their respective owners.

Introduction

This course has been created by the Microsoft World Wide Learning team to support exam PL-300: Microsoft Power BI Data Analyst.

Learning Objectives

In this module you will learn:

- About this course
- About the audience
- Course pre-requisites
- Understand the PL-300 certification

Course Introduction

This module provides an overview of the following:

- About this course
- Course agenda
- Course audience
- Course pre-requisites
- PL-300: Microsoft Power BI Data Analyst

About this course

In this course, you will learn about, and apply, the various methods and best practices that are in line with business and technical requirements for ingesting, modeling, visualizing, and analyzing data.

You will also learn about the management aspects of Power BI, including workspaces and datasets, and then learn how to share, distribute, and appropriately secure Power BI assets.

Course Agenda

At the end of this course, the student will learn:

Module 1: Get Started with Microsoft Data Analytics

This module explores the different roles in the data space, outlines the important roles and responsibilities of a Data Analysts, and then explores the landscape of the Power BI portfolio.

Module Objectives:

At the end of this module, the students will be able to:

- Identify the different roles in the data space
- Identify the tasks that are performed by a Data Analyst
- Describe the Power BI landscape of products and services
- Tour the Power BI Service

Module 2: Prepare Data in Power BI

This module explores identifying and retrieving data from various data sources. You will also learn the options for connectivity and data storage, and understand the difference and performance implications of importing or connecting directly to data.

Module Objectives:

At the end of this module, the students will be able to:

- Identify and retrieve data from different data sources
- Understand the different connection methods and their performance implications
- Optimize query performance
- Resolve data import errors

Module 3: Clean, Transform, and Load Data in Power BI

This module teaches you the process of profiling and understanding the condition of the data. They will learn how to identify anomalies, look at the size and shape of their data, and perform the proper data cleaning and transforming steps to prepare the data for loading into the model.

Module Objectives:

At the end of this module, the students will be able to:

- Apply data shape transformations
- Enhance the data structure
- Profile and examine the data

Module 4: Design a Data Model in Power BI

This module teaches you the fundamental concepts of designing and developing a data model for proper performance and scalability. This module will also help you understand and tackle many of the common data modeling issues, including relationships, security, and performance.

Module Objectives:

At the end of this module, the students will be able to:

- Understand the basics of data modeling
- Define relationships and their cardinality
- Implement Dimensions and hierarchies
- Create histograms and rankings

Module 5: Creating Model Calculations using DAX in Power BI

This module introduces you to the world of DAX and its true power for enhancing a model. You will learn about aggregations and the concepts of Measures, calculated columns and tables, and Time Intelligence functions to solve calculation and data analysis problems.

Module Objectives:

At the end of this module, the students will be able to:

- Understand DAX
- Use DAX for simple formulas and expressions.
- Create calculated tables and columns
- Build simple measures
- Work with Time Intelligence and Key Performance Indicators

Module 6: Optimizing Model Performance

In this module you are introduced to the steps, processes, concepts, and data modeling best practices necessary to optimize a data model for enterprise-level performance.

Module Objectives:

At the end of this module, the students will be able to:

- Understand the importance of variables
- Enhance the data model
- Optimize storage

Module 7: Creating Reports

This module introduces you to the fundamental concepts and principles of designing and building a report, including selecting the correct visuals, designing a page layout, and applying basic but critical functionality This important topic of designing for accessibility is also covered.

Module Objectives:

At the end of this module, the students will be able to:

- Design a page layout
- Select and add appropriate visualization type
- Add basic report functionality
- Add basic report navigation and interactions
- Improve report performance

Module 8: Creating Dashboards

In this module you will learn about dashboards, and how to tell a compelling story through the use of dashboards. You will be introduced to features and functionality and how to enhance dashboards for usability and insights.

Module Objectives:

At the end of this module, the students will be able to:

- Create a dashboard
- Understand real-time dashboards
- Enhance the dashboard usability

Module 9: Identify Patterns and Trends

This module helps you apply additional features to enhance the report for analytical insights in the data, equipping you with the steps to use the report for actual data analysis. You will also perform advanced analytics using AI visuals on the report for even deeper and meaningful data insights.

Module Objectives:

At the end of this module, the students will be able to:

- Explore statistical summary
- Use the Analyze feature
- Identify outliers in the data
- Use the AI visuals
- Use the Advanced Analytics custom visual

Module 10: Create and Manage Workspaces

This module will introduce you to Workspaces, including how to create and them. You will also learn how to share content, including reports and dashboards, and then learn how to distribute an App.

Module Objectives:

At the end of this module, the students will be able to:

- Create and manage a workspace
- Understand workspace collaboration
- Monitor usage and performance
- Distribute an App

Module 11: Manage Files and Datasets in Power BI

In this module you will learn the concepts of managing Power BI assets, including datasets and workspaces. You will also publish datasets to the Power BI service, then refresh and secure them.

Module Objectives:

At the end of this module, the students will be able to:

- Configure dataset refresh
- Create and work with parameters
- Manage datasets
- Troubleshoot gateway connectivity

Module 12: Row-level Security

This module teaches you the steps for implementing and configuring security in Power BI to secure Power BI assets.

Module Objectives:

At the end of this module, the students will be able to:

- Understand aspects of Power BI security
- Configure static and dynamic row-level

Course Audience

Primary Audience

The audience for this course are data professionals and business intelligence professionals who want to learn how to accurately perform data analysis using Power BI.

Secondary Audience

The secondary audience for this course are individuals who develop reports that visualize data from the data platform technologies that exist on both in the cloud and on-premises.

Microsoft Certification

Data Analyst Associate

Data Analysts enable businesses to maximize the value of their data assets using Power BI by providing meaningful business value and analysis through easy-to-understand visualizations. To gain this certification, you must bass the following exam:

- PL-300: Microsoft Power BI Data Analyst

This course is used to prepare for exam PL-300.