Course PL-300T00-AC:
Microsoft Power BI Data Analyst   (3 Days)

Description

This course covers the various methods and best practices that are in line with business and technical requirements for modeling, visualizing, and analyzing data with Power BI. The course will show how to access and process data from a range of data sources including both relational and non-relational sources. Finally, this course will also discuss how to manage and deploy reports and dashboards for sharing and content distribution.

Prerequisites

Successful Data Analysts start this role with experience of working with data in the cloud.

Specifically:

- Understanding core data concepts.
- Knowledge of working with relational data in the cloud.
- Knowledge of working with non-relational data in the cloud.
- Knowledge of data analysis and visualization concepts.

Course outline

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.

Lesson

- Data Analytics and Microsoft
- Getting Started with Power BI

Module 2: Getting 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 connecting directly to data vs. importing it.

Lesson

- Data Analytics and Microsoft
- Optimize Performance
- Resolve Data Errors

Lab : Preparing Data in Power BI Desktop

- Prepare Data

Module 3: Cleaning, Transforming, and Loading 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.

Lesson

- Shaping the Data
- Profiling the Data
- Enhance the data structure

Lab : Loading Data in Power BI Desktop

- Loading Data

Module 4: Design a Data Model in Power BI

This module teaches 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.

Lesson

- Introduction to data modeling
- Working with tables
- Dimensions and Hierarchies

Lab : Data Modeling in Power BI Desktop

- Create Model Relationships
- Configure Tables and Column Properties
- Create hierarchies

Module 5: Create 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.

Lesson

- Introduction to DAX

- Real-time dashboards
- Advanced DAX

Lab : Introduction to DAX in Power BI Desktop

- Create calculated tables
- Create calculated columns
- Create measures

Lab : Advanced DAX in Power BI Desktop

- Use the CALCULATE() function to manipulate filter context
- Use Time Intelligence functions

Module 6: Optimize Model Performance in Power BI

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

Lesson

- Optimize the data model for performance
- Optimize DirectQuery Models

Module 7: Create Reports in Power BI

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. The important topic of designing for accessibility is also covered.

Lesson

- Design a report
- Enhance the report

Lab : Designing a report in Power BI Desktop

- Design a report
- Configure visual fields and format properties

Lab : Enhancing reports with interaction and formatting in Power BI Desktop

- Create and configure Sync Slicers
- Create a drillthrough page
- Apply conditional formatting
- Create and use Bookmarks

Module 8: Create Dashboards in Power BI

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

Lesson

- Create a Dashboard
- Real-time Dashboards
- Enhance a Dashboard

Lab : Creating a Dashboard in Power BI Service

- Create a Dashboard
- Pin visuals to a Dashboard
- Use Q&A to create a dashboard tile

Module 9: Identify Patterns and Trends in Power BI

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.

Lesson

- Advanced Analytics
- Data Insights through AI visuals

Lab : Data Analysis in Power BI Desktop

- Create animated scatter charts
- Use the visual to forecast values

Module 10: Create and Manage Workspaces in Power BI

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

Lesson

- Creating Workspaces
- Sharing and Managing Assets

Module 11: Manage Files and Datasets in Power BI

This module will introduce you to parameters and datasets. You will also learn how to manage datasets and parameters, build dynamic reports with parameters, and set dataset refresh options.

Lesson

- Parameters

- Datasets

Module 12: Row-level Security in Power BI

This module will introduce you to row-level security, both static and dynamic methods, and how to implement.

Lesson

- Security in Power BI

Lab : Enforce Row-Level Security

- Configure many-to-many relationships
- Enforce row-level security