**Skills measured in the Microsoft Exam PL300**

**Exam PL-300 Microsoft Power BI Data Analyst**

Microsoft has certification paths for many technical job roles. Each of these certifications consists of passing a series of exams to earn certification. In this professional certificate, you’ll be provided with resources that will help you to prepare for Exam PL-300: Microsoft Power BI Data Analyst.

**Study guide**

The study guide provided in this link [Study guide for Exam PL-300: Microsoft Power BI Data Analyst](https://learn.microsoft.com/en-us/certifications/resources/study-guides/pl-300) will help you understand what to expect in this exam. It includes a summary of the topics the exam covers, along with links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

**Audience profile**

Candidates for this exam deliver actionable insights by working with available data and applying domain expertise. They provide meaningful business value through easy-to-comprehend data visualizations, enable others to perform self-service analytics and deploy and configure solutions for consumption.

The Power BI data analyst works closely with business stakeholders to identify business requirements. They collaborate with enterprise data analysts and data engineers to identify and acquire data. They also transform the data, create data models, visualize data, and share assets by using Power BI.

Candidates for this exam should be proficient at using Power Query and writing expressions using Data Analysis Expressions (DAX). These professionals know how to assess data quality. They also understand data security, including row-level security and data sensitivity.

**Exam skills measured**

In this section, you’ll review a summary of the topics the exam might cover, and an updated list of skills measured. The exams are updated at least periodically, and the information covered in this reading refers to the English version updated on January 31, 2023.

This segment covers the four high-level topics in the skills measured.

* Prepare the data (25–30%)
* Model the data (25–30%)
* Visualize and analyze the data (25–30%)
* Deploy and maintain assets (15–20%)

The higher the percentage, the more questions that specific section of the exam will contain. For example, ‘Prepare the data’ will account for 15-20% of the questions you might encounter on the exam.

**Note:** Most questions cover features that are general availability (GA). The exam may contain questions on preview features if those features are commonly used. Preview features are features that aren't complete but are made available on a "preview" basis so that customers can get early access and provide feedback.

**Assessing the skills**

The following is a list of skills measured. The bullets that follow each of these skills are intended to illustrate how that particular skill is assessed. Related topics may be covered in the exam.

**Prepare the data**

**Get data from data sources**

* Identify and connect to a data source
* Change data source settings, including credentials, privacy levels, and data source locations
* Select a shared dataset, or create a local dataset
* Choose between DirectQuery, Import, and Dual mode
* Change the value in a parameter

**Clean the data**

* Evaluate data, including data statistics and column properties
* Resolve inconsistencies, unexpected or null values, and data quality issues
* Resolve data import errors

**Transform and load the data**

* Select appropriate column data types
* Create and transform columns
* Transform a query
* Design a star schema that contains facts and dimensions
* Identify when to use reference or duplicate queries and the resulting impact
* Merge and append queries
* Identify and create appropriate keys for relationships
* Configure data loading for queries

**Model the data**

**Design and implement a data model**

* Configure table and column properties
* Implement role-playing dimensions
* Define a relationship's cardinality and cross-filter direction
* Create a common date table
* Implement row-level security roles

**Create model calculations by using DAX**

* Create single aggregation measures
* Use CALCULATE to manipulate filters
* Implement time intelligence measures
* Identify implicit measures and replace with explicit measures
* Use basic statistical functions
* Create semi-additive measures
* Create a measure by using quick measures
* Create calculated tables

**Optimize model performance**

* Improve performance by identifying and removing unnecessary rows and columns
* Identify poorly performing measures, relationships, and visuals by using Performance Analyzer
* Improve performance by choosing optimal data types
* Improve performance by summarizing data

**Visualize and analyze the data**

**Create reports**

* Identify and implement appropriate visualizations
* Format and configure visualizations
* Use a custom visual
* Apply and customize a theme
* Configure conditional formatting
* Apply slicing and filtering
* Configure the report page
* Use the Analyze in Excel feature
* Choose when to use a paginated report

**Enhance reports for usability and storytelling**

* Configure bookmarks
* Create custom tooltips
* Edit and configure interactions between visuals
* Configure navigation for a report
* Apply sorting
* Configure sync slicers
* Group and layer visuals by using the Selection pane
* Drill down into data using interactive visuals
* Configure export of report content, and perform an export
* Design reports for mobile devices
* Incorporate the Q&A feature in a report

**Identify patterns and trends**

* Use the Analyze feature in Power BI
* Use grouping, binning, and clustering
* Use AI visuals
* Use reference lines, error bars, and forecasting
* Detect outliers and anomalies
* Create and share scorecards and metrics

**Deploy and maintain assets**

**Create and manage workspaces and assets**

* Create and configure a workspace
* Assign workspace roles
* Configure and update a workspace app
* Publish, import, or update assets in a workspace
* Create dashboards
* Choose a distribution method
* Apply sensitivity labels to workspace content
* Configure subscriptions and data alerts
* Promote or certify Power BI content
* Manage global options for files

**Manage datasets**

* Identify when a gateway is required
* Configure a dataset scheduled refresh
* Configure row-level security group membership
* Provide access to datasets

**Microsoft Power BI Analyst Professional Certificate**

At this point, you may be wondering if you’ll have access to the information that you need to pass the Exam PL-300 Microsoft Power BI Data Analyst successfully.

The answer is yes!

By the end of this professional certificate you will have covered the following topics:

* Prepare the data
* Model the data
* Visualize and analyze the data
* Deploy and maintain assets

Good luck with your preparation!