Study Guide

Exam PL-300: Microsoft Power BI Data Analyst

Purpose of this document

This study guide should help you understand what to expect on the exam and includes a summary of the topics the exam might cover and links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

Useful links	Description
How to earn the certification	Some certifications only require one exam, while others require more. On the details page, you'll find information about what skills are measured and links to registration. Each exam also has its own details page covering exam specifics.
Certification renewal	Once you earn your certification, don't let it expire. When you have an active certification that's expiring within six months, you should renew it—at no cost—by passing a renewal assessment on Microsoft Learn. Remember to renew your certification annually if you want to retain it.
Your Microsoft Learn profile	Connecting your certification profile to Learn brings all your learning activities together. You'll be able to schedule and renew exams, share and print certificates, badges and transcripts, and review your learning statistics inside your Learn profile.
Passing score	All technical exam scores are reported on a scale of 1 to 1,000. A passing score is 700 or greater. As this is a scaled score, it may not equal 70% of the points. A passing score is based on the knowledge and skills needed to demonstrate competence as well as the difficulty of the questions.
Exam sandbox	Are you new to Microsoft certification exams? You can explore the exam environment by visiting our exam sandbox. We created the sandbox as an opportunity for you to experience an exam before you take it. In the sandbox, you can interact with different question types, such as build list, case studies,

Useful links	Description
	and others that you might encounter in the user interface when you take an exam. Additionally, it includes the introductory screens, instructions, and help topics related to the different types of questions that your exam might include. It also includes the non-disclosure agreement that you must accept before you can launch the exam.
Request accommodations	We're committed to ensuring all learners are set up for success. If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.
Take a practice test	Taking a practice test is a great way to know whether you're ready to take the exam or if you need to study a bit more. Subject-matter experts write the Microsoft Official Practice Tests, which are designed to assess all exam objectives.

Objective domain: skills the exam measures

The English language version of this exam was released on February 28, 2022.

Some exams are localized into other languages, and those are updated approximately eight weeks after the English version is updated. Other available languages are listed in the **Schedule Exam** section of the **Exam Details** webpage. If the exam isn't available in your preferred language, you can request an additional 30 minutes to complete the exam.

> **Note**
> The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in 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.

Skills measured

- Prepare the data (15–20%)
- Model the data (30–35%)
- Visualize and analyze the data (30–35%)
- Deploy and maintain assets (10–15%)

Functional groups

Prepare the data (15–20%)

Get data from different data sources

- Identify and connect to a data source
- Change data source settings
- Select a shared dataset or create a local dataset
- Select a storage mode
- Use Microsoft Dataverse
- Change the value in a parameter
- Connect to a data flow

Clean, transform, and load the data

- Profile the data
- Resolve inconsistencies, unexpected or null values, and data quality issues
- Identify and create appropriate keys for joins
- Evaluate and transform column data types
- Shape and transform tables
- Combine queries
- Apply user-friendly naming conventions to columns and queries
- Configure data loading
- Resolve data import errors

Model the data (30–35%)

Design a data model

- Define the tables
- Configure table and column properties
- Design and implement role-playing dimensions
- Define a relationship's cardinality and cross-filter direction
- Design a data model that uses a star schema
- Create a common date table

Develop a data model

- Create calculated tables
- Create hierarchies
- Create calculated columns
- Implement row-level security roles
- Use the Q&A feature

Create model calculations by using DAX

- Create basic measures by using DAX
- Use CALCULATE to manipulate filters
- Implement Time Intelligence using DAX
- Replace implicit measures with explicit measures
- Use basic statistical functions
- Create semi-additive measures
- Use quick measures

Optimize model performance

- Remove unnecessary rows and columns
- Identify poorly performing measures, relationships, and visuals
- Reduce cardinality levels to improve performance

Visualize and analyze the data (30–35%)

Create reports

- Add visualization items to reports
- Choose an appropriate visualization type
- 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

Create dashboards

- Manage tiles on a dashboard
- Configure mobile view
- Use the Q&A feature
- Add a Quick Insights result to a dashboard
- Apply a dashboard theme
- Pin a live report page to a dashboard

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
- Drilldown into data using interactive visuals
- Export report data
- Design reports for mobile devices

Identify patterns and trends

- Use the Analyze feature in Power BI
- Identify outliers
- Choose between continuous and categorical axes
- Use groupings, binnings, and clustering
- Use AI visuals
- Use the Forecast feature
- Create reference lines by using the Analytics pane

Deploy and maintain assets (10–15%)

Manage files and datasets

- Identify when a gateway is required
- Configure a dataset scheduled refresh
- Configure row-level security group membership
- Provide access to datasets
- Manage global options for files

Manage workspaces

- Create and configure a workspace
- Assign workspace roles
- Configure and update a workspace app
- Publish, import, or update assets in a workspace
- Apply sensitivity labels to workspace content
- Configure subscriptions and data alerts
- Promote or certify Power BI content

Study Resources

We recommend that you train and get hands-on experience before you take the exam. We offer self-study options and classroom training as well as links to documentation, community sites, and videos.

Study resources	Links to learning and documentation
Get trained	Choose from self-paced learning paths and modules or take an instructor led course
Find documentation	Power BI documentation Microsoft Power Apps documentation
Ask a question	Microsoft Q&A | Microsoft Docs
Get community support	Power Apps - Power Platform Community Power Query - Power Platform Community Building Power Apps - Power Platform Community
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community
Find a video	Exam Readiness Zone | Microsoft Learn #LessCodeMorePower | Shows Browse other Microsoft Learn shows