

How to Pass the PL-300 Power BI Certification

Learn Power BI online at www.DataCamp.com

> What is the PL-300 Certification?

PL-300 is a professional certification in Microsoft Power BI for people working as (or wishing to work as) a data analyst or business analyst. The exam tests you in four areas:

- 25% to 30% Preparing data
- 25% to 30% Modeling data
- 25% to 30% Visualizing and analyzing data
- 15% to 20% Deploying and maintaining assets

> How to Use this Cheat Sheet

All the skills you need to pass PL-300 are listed here. If you are just considering taking the exam, read through the skills to see what you'll be working on.

If you are already working toward PL-300, find skills that you want to work on, then look up- the content you need to take to gain those skills.

> Prepare the Data

Preparing data means importing, cleaning, and manipulating data to get it ready for analysis.

Get data from different data sources

Power BI can connect to over 100 data sources from spreadsheets to databases to web pages. You need to know how to get data from the source into Power BI.

- 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

Datasets are seldom clean when you get them. You need to know how to detect and rectify issues with 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

Even when your data is clean, it often needs manipulating into a form suitable for analysis. You may need to create new columns from existing ones (feature engineering) or take a subset of your data, or even combine tables together.

- 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

Data modeling is about defining what goes into each table and how the tables are related. (Not to be confused with statistical modeling, which is about inference and predictions.)

Design and implement a data model

The first step in data modeling is specifying the structure of each table and the permissions to access them.

- 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

The ability to perform useful analytics hinges on the ability to create useful measures from the data. Power BI has an entire programming language to help you: 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

If a dashboard or report runs slowly, then you may need to update the data or the calculations to improve the speed.

- 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

Data visualization and crunching numbers are the heart of data analysis. Once you have answers, the results need to be organized into a dashboard or report for consumption.

Create reports

At a basic level, to create a Power BI report, you simply need to create the text, metrics, and visualizations, then arrange them in a suitable order.

- 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

The effectiveness of a Power BI report is largely about how many useful and interesting thoughts its users have after seeing it. Optimizing the report to be easier to use and telling a story will improve the report's effectiveness.

- 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 the 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

Beyond descriptive statistics, data analysis involves many techniques to answer questions with data, from finding related data points with cluster analysis to making predictions about the future with forecasting.

- 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

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> Deploy and Maintain Assets

Once you have your dashboard or report, you need to make it available to your users (deploy it) and keep it up to date (maintain it).

Create and manage workspaces and assets

Power BI Workspaces let you manage dashboards, reports, and datasets.

- 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

Keeping dashboards and reports up to date means keeping the underlying data up to date, which requires scheduling an update process.

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

> Pass the PL-300 Certification with DataCamp

Track

Data Analyst in Power BI

This career track takes you from zero to certification-ready. It consists of 18 courses covering content related to the skills tested by PL-300. The average completion time is just over 50 hours.

Complete the track to earn a 50% discount code for PL-300!

51 Hours 18 Courses

Start Here

Introduction to Power BI

Master the Power BI basics and learn to use the data visualization software to build impactful reports.

3 Hours 14 Videos 40 Exercises

Data Preparation

Data Preparation in Power BI

In this interactive Power BI course, you'll learn how to use Power Query Editor to transform and shape your data to be ready for analysis.

3 Hours 9 Videos 26 Exercises

Data Transformation in Power BI

You'll learn how to (un)pivot, transpose, append and join tables. Gain power with custom columns, M language, and the Advanced Editor.

3 Hours 9 Videos 28 Exercises

Data Modeling

Data Modeling in Power BI

Learn the key concepts of data modeling on Power BI.

3 Hours 9 Videos 26 Exercises

Intermediate Data Modeling in Power BI

Master data modeling in Power BI.

3 Hours 14 Videos 24 Exercises

DAX Calculations

Introductions to DAX in power BI

Enhance your Power BI knowledge, by learning the fundamentals of Data Analysis Expressions (DAX) such as calculated columns, tables, and measures.

2 Hours 7 Videos 20 Exercises

DAX Functions in Power BI

Data Analysis Expressions (DAX) allow you to take your Power BI skills to the next level by writing custom functions.

3 Hours 9 Videos 26 Exercises

Intermediate DAX in Power BI

Discover a wide range of DAX calculations and learn how to use them in Microsoft Power BI.

3 Hours 9 Videos 25 Exercises

Visualization & reporting

Data Visualization in Power BI

Power BI is a powerful data visualization tool that can be used in reports and dashboards.

3 Hours 9 Videos 27 Exercises

User-Oriented Design in Power BI

Learn how to design Power BI visualizations and reports with users in mind.

3 Hours 9 Videos 26 Exercises

Reports in Power BI

Take your Power BI visualizations up a level with the skills you already have. Learn alternative data storytelling techniques to simply building dashboards.

3 Hours 9 Videos 28 Exercises

Report Design in Power BI

Take your Power BI visualizations up a level with the skills you already have. Learn alternative data storytelling techniques to simply building dashboards.

3 Hours 9 Videos 28 Exercises

Analysis

Exploratory Data Analysis in Power BI

Enhance your reports with Power BI's Exploratory Data Analysis (EDA). Learn what EDA is for Power BI and how it can help you extract insights from your data.

3 Hours 9 Videos 26 Exercises

Trend Analysis in Power BI

Enhance your reports with trend analysis techniques such as time series, decomposition trees, and key influencers.

3 Hours 9 Videos 25 Exercises

Deployment

Data Connections in Power BI

Discover the different ways you can enhance your Power BI data importing skills.

2 Hours 9 Videos 24 Exercises

Deploying and Maintaining Assets in Power BI

Learn how to deploy and maintain assets in Power BI. You'll get to grips with the Power BI Service interface and key elements in it like workspaces.

2 Hours 8 Videos 26 Exercises

> Apply Your Skills With Case Studies

To make sure that you have mastered the Power BI skills needed for the exam, take these case study courses.

- [Analyzing Customer Churn in Power BI](#)
- [Competitor Sales Analysis in Power BI](#)
- [Analyzing Job Market Data in Power BI](#)
- [Inventory Analysis in Power BI](#)
- [HR Analytics in Power BI](#)

> Use Cheat Sheets to Refer Back to What you Learned



Power BI Cheat Sheet

DAX Cheat Sheet

> Schedule Your PL-300 Exam

Once you feel ready, redeem your discount code and schedule your exam via the [Microsoft certification page](#).