

# Study guide for Exam DA-100: Analyzing Data with Power BI

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### **Document purpose**

As an attendee of the Exam Prep session for **Exam DA-100: Analyzing Data with Power BI**, you can use this guide as a summary of the topics covered and to explore important links and additional resources. The information and materials found here can help you focus your studies as you prepare for the exam.

## **About Exam DA-100: Analyzing Data with Microsoft Power BI**

<u>Exam DA-100</u> is required to earn the <u>Data Analyst Associate certification</u>.

The exam measures your ability to accomplish the following technical tasks: prepare the data; model the data; visualize the data; analyze the data; and deploy and maintain deliverables.

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As a candidate for this exam, you need a fundamental understanding of data repositories and data processing in the cloud and in on-premises settings. In addition, you should have knowledge and experience with Power BI.

#### Skills measured

For the full list of the skills that the exam measures, along with the level of experience and expertise that you'll need as an exam candidate, check out the <a href="Exam DA-100 skills outline">Exam DA-100 skills outline</a>.

## **Certification journey**

For an overview of the journey to Microsoft Certification, including prerequisites (if any) and follow-up resources, explore <u>The journey to Microsoft Certified Data Analyst</u> Associate.

#### **Exam overview**

For information on the exam, including the types of questions you may encounter, read About Microsoft Certification exams.

## **Objective domains**

This section itemizes the topics covered in the Exam Prep session and links to Microsoft documentation so you can review the topics in detail.

- Prepare the data (20–25%)
- Model the data (25–30%)
- Visualize the data (20–25%)
- Analyze the data (10–15%)
- Deploy and maintain deliverables (10–15%)



#### Prepare the data (20–25%)

#### Get data from different data sources

- Overview of Power BI
- Extracting data from different data sources
- Analysis services tabular data
- Storage modes
- Optimize performance in Power BI
- Resolve data import errors

#### Profile the data

- Shaping the initial data
- Power Query Editor
- Profile the data

#### Clean, transform, and load the data

- Clean, transform, and load data
- Evaluate and change column data types
- Resolve inconsistencies
- Combine multiple tables into a single table
- Modify M code

#### Model the data (25–30%)

#### Design a data model

- Manage data relationships
- Data granularity
- Relationships, cardinality, and cross-filter direction
- Resolving modeling challenges
- Modeling view

#### Develop a data model

- Data Analysis Expressions (DAX)
- Calculated column
- Quick measures
- Row-level security (RLS) roles

#### Create measures by using DAX

- Understanding context
- CALCULATE() function
- Semi-additive measures
- Time intelligence in DAX

#### Optimize model performance

- Performance optimization
- Many-to-many relationship guidance
- Create and manage aggregations



#### Visualize the data (20-25%)

#### **Create reports**

- Designing a report layout
- Types of visualizations
- Import a custom visual
- Conditional formatting
- Slicing, filtering, and sorting
- <u>Design Power BI reports for accessibility</u>

#### Create dashboards

- Dashboards versus reports
- Set mobile view
- Configuring data alerts
- Use Q&A on a dashboard
- Data classification

#### **Enrich reports for usability**

- Add bookmarks
- Edit interactions
- <u>Drill throughs</u>

#### Analyze the data (10-15%)

#### Enhance reports to expose insights

- Explore statistical summary
- Time series analysis
- Quick insights
- Analytics pane

#### Perform advanced analysis

- Identify outliers
- Group and bin data for analysis
- Al insights
- Q&A feature
- Key influencer visual
- Decomposition tree visual



#### Deploy and maintain deliverables (10–15%)

#### Manage datasets

- Introduction to datasets and parameters
- Dynamic reports with parameters
- What-if parameters
- Power Query—query parameters
- <u>Data set scheduled refresh</u>
- <u>Incremental data refresh settings</u>

#### Create and manage workspaces

- Introduction to workspaces
- <u>Distribute a report or dashboard</u>
- Assign workspace roles
- Monitor usage and performance
- Deployment pipelines



## **Additional study resources**

In addition to the documentation listed in the previous sections, we offer several resources to help you prepare for the exam and to stay up to speed and engaged with the Azure community. These resources range from formal training to blogs and even interviews with Microsoft team members.

Course DA-100T00-A: Analyzing Data with Power BI	Take a four-day instructor-led course that covers how to analyze data and combines lectures with practical, hands-on exercises.
DA-100 online learning paths	Don't miss these free, self-paced online resources to help you gain the skills needed to earn your certification.
Azure documentation	Stay informed on the latest products, tools, and features, and get information on pricing, partners, support, solutions, and more.
Azure Community Support	Ask questions, get answers, and connect with Microsoft engineers and Azure community experts.
Microsoft Learn Community Blog	Get the latest information about certification tests and exam study groups.
<u>Channel 9</u>	Explore this community site for customers. It includes video channels, discussions, podcasts, screencasts, and interviews.
Azure Tuesdays with Corey	Corey Sanders answers your questions about Microsoft Azure.
Azure Fridays	Scott Hanselman, Partner Program Manager, speaks with Azure engineers as they demo capabilities and share insights.
Microsoft Azure Blog	Keep current on what's happening in Azure, including what's in preview and what's generally available, along with Azure news, updates, and much more.