



Designing and Implementing Enterprise-Scale Analytics Solutions Using Microsoft Azure and Microsoft Power BI

Exam Ref DP-500

Daniil Maslyuk
Justin Frébault

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Chapter 1 Implement and manage a data analytics environment

- Skill 1.1: Govern and administer a data analytics environment

 - Manage Power BI assets by using Azure Purview

 - Identify data sources in Azure by using Azure Purview

 - Recommend settings in the Power BI admin portal

 - Recommend a monitoring and auditing solution for a data analytics environment, including Power BI REST API and PowerShell cmdlets

- Skill 1.2: Integrate an analytics platform into an existing IT

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infrastructure

Identify requirements for a solution, including features, performance, and licensing strategy

Configure and manage Power BI Capacity

Recommend and configure an on-premises gateway in Power BI

Recommend and Configure a power BI tenant or workspace to integrate with Azure Data Lake Storage Gen2

Integrate an existing Power BI workspace into Azure Synapse Analytics

Skill 1.3: Manage the analytics development lifecycle

Commit code and artifacts to a source control repository in Azure Synapse Analytics

Recommend a deployment strategy for Power BI assets

Recommend a source control strategy for Power BI assets

Implement and manage deployment pipelines in Power BI

Perform impact analysis of downstream dependencies from dataflows and datasets

Recommend automation solutions for the analytics developmentlifecycle, including Power BI REST API and PowerShell cmdlets

Deploy and manage datasets by using the XMLA endpoint

Create reusable assets, including Power BI templates, Power BI data source (PBIDS) files, and shared datasets

Chapter summary

Thought experiment

Thought experiment answers

Chapter 2 Query and transform data

Skill 2.1: Query data by using Azure Synapse Analytics

Identify an appropriate Azure Synapse pool when analyzing data

Recommend appropriate file type for querying serverless SQL pools

Query relational data sources in dedicated or serverless SQL pools, including querying partitioned data sources

Use a machine learning PREDICT function in a query

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Skill 2.2: Ingest and transform data by using Power BI

- Identify data loading performance bottlenecks in Power Query or data sources
- Implement performance improvements in Power Query and data sources
- Create and manage scalable Power BI dataflows
- Identify and manage privacy settings on data sources
- Create queries, functions, and parameters by using the Power Query Advanced Editor
- Query advanced data sources, including JSON, Parquet, APIs, and Azure Machine Learning models

Chapter summary

Thought experiment

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Chapter 3 Implement and manage data models

Skill 3.1: Design and build tabular models

- Choose when to use DirectQuery for Power BI datasets
- Choose when to use external tools, including DAX Studio and Tabular Editor 2
- Create calculation groups
- Write calculations that use DAX variables and functions, for example, handling blanks or errors, creating virtual relationships, and working with iterators
- Design and build a large format dataset
- Design and build composite models, including aggregations
- Design and implement enterprise-scale row-level security and object-level security

Skill 3.2: Optimize enterprise-scale data models

- Identify and implement performance improvements in queries and report visuals
- Troubleshoot DAX performance by using DAX Studio
- Optimize a data model by using Tabular Editor 2
- Analyze data model efficiency by using VertiPaq Analyzer
- Implement incremental refresh (including the use of query folding)

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Optimize a data model by using denormalization

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Chapter 4 Explore and visualize data

Skill 4.1: Explore data by using Azure Synapse Analytics

Explore data by using native visuals in Spark notebooks

Explore and visualize data by using the Azure Synapse SQL results pane

Skill 4.2: Visualize data by using Power BI

Create and import a custom report theme

Create R or Python visuals in Power BI

Connect to and query datasets by using the XMLA endpoint

Design and configure Power BI reports for accessibility

Enable personalized visuals in a report

Configure automatic page refresh

Create and distribute paginated reports in Power BI Report Builder

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