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Microsoft Fabric Analytics Engineer Associate (DP-600) Certification Training

4 days (28 hours)

Overview

The Microsoft Fabric Analytics Engineer Associate certification validates your ability to prepare, model, secure, and optimize data analytics solutions with Microsoft Fabric.

This training prepares you for the skills assessed by the DP-600 exam and the responsibilities of a Fabric Analytics Engineer.

You'll learn how to build analytics solutions around OneLake, Lakehouse, and Warehouse, and then prepare, transform, and enrich data using Microsoft Fabric tools.

In particular, you'll use SQL, KQL, notebooks, and Dataflows to produce reliable data that can be leveraged by various analytical workloads.

The course will also enable you to design semantic models tailored to business needs, develop advanced calculations with DAX, and leverage Direct Lake to address performance and scalability challenges.

Finally, you'll explore security, governance, the lifecycle, and the optimization of analytical resources.

Upon completion of the course, you will be able to build and maintain a high-performing, governed Fabric solution, while preparing to take the Microsoft Certified: Fabric Analytics Engineer Associate exam.

Like all our training courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Design and administer an analytics solution with Microsoft Fabric
- Prepare, transform, and enrich data for analytical workloads
- Utilize OneLake, Lakehouse, and Warehouse according to the solution's needs
- Design and optimize semantic models with DAX and Direct Lake
- Apply principles of security, governance, and performance optimization
- Prepare for the Microsoft Fabric Analytics Engineer Associate (DP-600) certification exam

Target Audience

- Analytics Engineer
- BI Engineer
- Experienced Data Analyst
- BI Developer
- Data Engineer looking to specialize in Analytics with Microsoft Fabric
- Data and Business Intelligence Consultant

Requirements

- Have hands-on experience in data analysis or business intelligence
- Proficiency in the fundamentals of SQL for querying and transforming data
- Familiarity with the principles of dimensional modeling and semantic models
- Have some experience with Power BI and DAX
- Some experience with Microsoft Fabric is recommended but not required

Technical Requirements

- Computer running Windows 10 or 11, macOS, or Linux, with at least 8 GB of RAM
- A Microsoft work account that allows access to the services required for the training
- A Microsoft Fabric environment configured to complete the data preparation, modeling, and analysis exercises
- Tools and resources required for the hands-on exercises are provided in the training

Curriculum for our Microsoft Fabric Analytics Engineer Associate certification training

[Day 1 - Morning]

Design and administer an analytics solution with Microsoft Fabric

- Position Microsoft Fabric and OneLake within an enterprise analytics architecture
- Choose between Lakehouse, Warehouse, and semantic models based on analytical needs
- Create and organize workspaces, items, and resources in a Fabric solution

- Configure the settings and capabilities required for various analytical workloads
- Manage the content lifecycle and deployment across environments
- Identify the domains and skills assessed by the DP-600 certification

[Day 1 - Afternoon]

Secure and govern Fabric analytics assets

- Configure roles and permissions for Microsoft Fabric workspaces
- Implement security at the data, object, and semantic model levels
- Manage access to Lakehouses, Warehouses, and SQL endpoints
- Apply principles of governance, traceability, and protection for analytical data
- Organize the secure sharing and reuse of assets across teams
- Hands-on workshop: Build the Fabric architecture for the overarching project and configure access to analytical resources

[Day 2 - Morning]

Prepare and transform analytical data

- Select appropriate preparation methods for structured and semi-structured data
- Clean, normalize, deduplicate, and enrich data before using it for analytics
- Build transformations using Dataflows Gen2 and Power Query
- Use notebooks to prepare and transform data in Fabric
- Handle errors, missing values, and data quality issues
- Structure data to facilitate its use by analytical workloads

[Day 2 - Afternoon]

Query, enrich, and prepare data for analytics and AI

- Using SQL to query and transform data from a data warehouse or lakehouse
- Leverage KQL in analytical scenarios tailored to event-driven data
- Combine different transformation approaches based on the engine and workload type
- Prepare reliable, documented, and reusable data for analytics consumers
- Structuring AI-ready data to facilitate its use with new AI features in Microsoft Fabric
- Hands-on workshop: Transform and enrich project data, then produce a dataset ready for analysis

[Day 3 - Morning]

Designing semantic models at scale

- Design a dimensional model tailored to analytical use cases and business needs
- Define the model's fact tables, dimensions, relationships, and hierarchies
- Configure the properties of semantic models and optimize their organization
- Choose storage modes and understand how Direct Lake works
- Implement composite models and manage scenarios combining multiple sources
- Configure model security using appropriate access control mechanisms

[Day 3 - Afternoon]

Develop and optimize calculations with DAX

- Build advanced measures with DAX and master filter and evaluation contexts
- Create calculation groups to streamline reusable calculations
- Implement dynamic format strings and field parameters
- Configure refresh mechanisms tailored to the model's volume and usage
- Analyze and optimize queries and measures that affect the semantic model's performance
- Hands-on workshop: Build the project's semantic model and optimize its DAX measures

[Day 4 - Morning]

Leverage Direct Lake and optimize analytical solutions

- Configure and use Direct Lake for Microsoft Fabric semantic models
- Understand the mechanisms for loading, refreshing, and fallback
- Analyze the performance of models, queries, and analytical workloads
- Identify bottlenecks and optimize Fabric capacity utilization
- Monitor the resources, processing, and performance of the analytics solution
- Apply best practices for maintaining a Fabric architecture at scale

[Day 4 - Afternoon]

Scale out the solution and prepare for the DP-600 certification

- Organize the content lifecycle and deployment strategies for Fabric solutions
- Verify security, governance, quality, and performance before going live
- Diagnose issues related to data, semantic models, and analytical performance
- Review the DP-600 exam's subject areas and weightings
- Analyze design, data preparation, and modeling scenarios representative of the exam
- Final workshop: audit and optimize the project's Fabric solution, then solve a typical DP-600 scenario

Target Audience

This training is intended for both individuals and companies—large or small—that wish to train their teams in a new advanced IT technology or to

acquire specific industry knowledge or modern methodologies.

Assessment upon enrollment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency level across various types of technologies, as well as their expectations and personal goals for the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose problems for the monitoring and smooth running of the training session.

Teaching Methods

Hands-On Training: 60% Practical, 40% Theoretical. Training materials distributed in digital format to all participants.

Organization

The course alternates between theoretical input from the instructor—supported by examples and reflection sessions—and group work.

Assessment

At the end of the session, a multiple-choice quiz is administered to verify that participants have successfully acquired the skills.

Certification

A certificate will be issued to each trainee who has completed the entire training program.