

Implement analytics solutions using Microsoft Fabric

Courses Code: DP-600T00

Duration: 4 Days

Delivery Mode: Instructor-led Training (ILT) | Virtual Instructor led Training (VILT)

Overview

This course covers how to prepare, enrich, and serve data for analysis by consumers such as data analysts, report developers, and AI agents. The course focuses on designing dimensional models and transforming data by using dataflows, notebooks, and T-SQL across lakehouses, warehouses, and eventhouses in Microsoft Fabric. The course also covers building and optimizing semantic models, managing the analytics development lifecycle, and enforcing security and governance across data assets.

Skills Covered

Implement a data warehouse with Microsoft Fabric

Who Should Attend

This course is intended for data professionals with experience in data modeling, transformation, and analytics. Learners should have prior experience translating business requirements into analytical measures by using Structured Query Language (SQL) or Data Analysis Expressions (DAX). Experience building semantic models and reports in Power BI is recommended. Familiarity with Kusto Query Language (KQL) and Python is also helpful but not required.

Prerequisites

- Experience with data analytics and data modeling concepts.
- Familiarity with Power BI or similar analytics tools is beneficial.
- Basic understanding of SQL and data transformation workflows recommended.

Course Modules

Module 1: Introduction to end-to-end analytics using Microsoft Fabric

Discover how Microsoft Fabric can meet your enterprise's analytics needs in one platform. Learn about Microsoft Fabric, how it works, and identify how you can use it for your analytics needs.

Module 2: Discover and connect to data in OneLake

Browse and connect to data using Microsoft OneLake's unified storage. Discover data across workspaces with the OneLake catalog, create shortcuts to reference existing data, and explore streaming sources in Real-Time hub.



Module 3: Get started with lakehouses in Microsoft Fabric

Lakehouses in Microsoft Fabric combine data lake storage flexibility with data warehouse analytical capabilities. Learn how to create a lakehouse, ingest and transform data, and query data with SQL and Spark.

Module 4: Get started with data warehouses in Microsoft Fabric

Understand what a Fabric data warehouse is, why it provides full T-SQL transactional capabilities, and how to create, query, and transform data for analytics.

Module 5: Get started with Real-Time Intelligence in Microsoft Fabric

Real-Time Intelligence in Microsoft Fabric helps you ingest, process, store, visualize, and act on data in motion to get insights from events as they happen.

Module 6: Choose data stores in Microsoft Fabric

Evaluate lakehouse, warehouse, and eventhouse options to select the appropriate analytical data store for business scenarios in Microsoft Fabric.

Module 7: Design dimensional models for analytics in Microsoft Fabric

Learn dimensional schema types, fact and dimension table design, and slowly changing dimension patterns for analytics workloads in Microsoft Fabric.

Module 8: Transform data using Dataflows Gen2 in Microsoft Fabric

Apply low-code transformations using Power Query in Dataflows Gen2 to prepare analytical data for downstream consumption.

Module 9: Transform data using notebooks in Microsoft Fabric

Use Fabric notebooks to transform data with Spark SQL and PySpark, connecting to lakehouses, warehouses, and other data stores.

Module 10: Transform data using T-SQL in Microsoft Fabric

Use T-SQL in Microsoft Fabric warehouses to transform and query data, create reusable views and stored procedures, and build dimensional tables.

Module 11: Create DAX calculations in semantic models

Adding DAX calculations to Power BI semantic models allows you to define custom logic within your data model, to enable deeper analysis and data-driven business decisions.

Module 12: Design semantic models for scale in Microsoft Fabric

Design semantic models for scale in Microsoft Fabric. Choose the right storage mode, design star



schema relationships for clarity and performance, create scalable calculation patterns, and configure settings that support large datasets and concurrent consumption.

Module 13: Optimize semantic model performance

Diagnose and fix semantic model and report performance issues. Use Performance analyzer to identify bottlenecks, optimize DAX calculations, reduce cardinality, and implement aggregations to improve query speed.

Module 14: Enforce semantic model security

Implement row-level security (RLS), object-level security (OLS), and dynamic security patterns to protect sensitive data in semantic models while enabling appropriate access for different user groups.

Module 15: Manage the semantic model development lifecycle

Manage semantic models through their full development lifecycle. Create reusable assets, version-control with Git, inspect and validate with the XMLA endpoint and SemPy, deploy through pipelines, and maintain with monitoring and impact analysis.

Module 16: Prepare the semantic layer for AI in Microsoft Fabric

Design gold layers, semantic models, and documentation that enable Copilot, data agents, and enterprise ontologies to deliver accurate, business-relevant insights.

Module 17: Understand Microsoft Fabric IQ fundamentals

Microsoft Fabric IQ provides a way to define business vocabulary in an ontology and bind the ontology to data sources. Learn about ontology items, data agents, Graph in Microsoft Fabric, and Power BI semantic models. Discover how ontology modeling differs from traditional analytical modeling by starting with business concepts rather than specific use cases.

Module 18: Create an ontology with Fabric IQ

Ontologies in Fabric IQ transform your data into a business vocabulary that everyone can understand. In this module, you'll learn two ways to create ontologies - building manually to understand the core components, or generating automatically from Power BI semantic models to accelerate development. You'll practice both approaches and learn how to connect your ontology to data sources in OneLake, including lakehouse tables and eventhouse streams.

Module 19: Secure data access in Microsoft Fabric

Microsoft Fabric uses a multi-layer security model with access controls at different levels.

Module 20: Secure a Microsoft Fabric data warehouse

Data warehouse in Microsoft Fabric is a comprehensive platform for data and analytics, featuring



advanced query processing and full transactional T-SQL capabilities for easy data management and analysis.

Module 21: Govern data in Microsoft Fabric with Purview

Learn how Microsoft Purview enables the comprehensive data governance for your Microsoft Fabric data lakes. Ensure that data is both tightly controlled and highly available for compliant analysis.

Module 22: Govern analytics data in Microsoft Fabric

Implement Fabric-native governance practices including data classification, sensitivity labels, endorsement, and documentation. Ensure data assets are trustworthy and governed for both human and AI consumption.

Ref: <https://trainocate.com/courses/microsoft/dp-600t00-microsoft-fabric-analytics-engineer-training>

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