

DP - 700T00 : Microsoft Fabric Data Engineer

Course Outline

Implement a Data Warehouse with Microsoft Fabric

Get started with data warehouses in Microsoft Fabric

- Describe data warehouses in Fabric
- Understand a data warehouse vs a data Lakehouse
- Work with data warehouses in Fabric
- Create and manage fact tables and dimensions within a data warehouse
- **Lab:** Analyze data in a data warehouse

Load data into a Microsoft Fabric data warehouse

- Learn different strategies to load data into a data warehouse in Microsoft Fabric
- Learn how to build a data pipeline to load a warehouse in Microsoft Fabric
- Learn how to load data in a warehouse using T-SQL
- Learn how to load and transform data with dataflow (Gen 2)
- **Lab:** Load data into a warehouse in Microsoft Fabric

Query a data warehouse in Microsoft Fabric

- Use SQL query editor to query a data warehouse
- Explore how visual query editor works
- Learn how to connect and query a data warehouse using SQL Server Management Studio
- **Lab:** Query a data warehouse in Microsoft Fabric

Monitor a Microsoft Fabric data warehouse

- Monitor capacity unit usage with the Microsoft Fabric Capacity Metrics app
- Monitor current activity in the data warehouse with dynamic management views
- Monitor querying trends with query insights views
- **Lab:** Monitor a data warehouse in Microsoft Fabric

Secure a Microsoft Fabric data warehouse

- Learn the concepts of securing a data warehouse in Microsoft Fabric
- Learn how to implement dynamic data masking to obscure sensitive information
- Learn how to configure row-level security to provide granular control
- Learn how to implement column-level security to protect sensitive data
- Learn how to configure granular permissions using T-SQL
- **Lab:** Secure a warehouse in Microsoft Fabric

Ingest Data with Microsoft Fabric

Ingest Data with Dataflows Gen2 in Microsoft Fabric

- Describe Dataflow capabilities in Microsoft Fabric
- Create Dataflow solutions to ingest and transform data
- Include a Dataflow in a pipeline

- **Lab:** Create and use a Dataflow Gen2 in Microsoft Fabric

Orchestrate processes and data movement with Microsoft Fabric

- Describe pipeline capabilities in Microsoft Fabric
- Use the Copy Data activity in a pipeline
- Create pipelines based on predefined templates
- Run and monitor pipelines
- **Lab:** Ingest data with a pipeline

Get started with Real-Time Intelligence in Microsoft Fabric

- Microsoft Fabric includes Real-Time Intelligence capabilities that you can use to capture, analyze, visualize, and act on real-time streams of event data
- **Lab:** Explore Real-Time Intelligence in Fabric

Use real-time eventstreams in Microsoft Fabric

- Establish source and destinations in Microsoft Fabric Eventstreams
- Capture, transform, and route data using Microsoft Fabric Eventstreams
- **Lab:** Ingest real-time data with Eventstream in Microsoft Fabric

Work with real-time data in a Microsoft Fabric eventhouse

- Create an eventhouse in Microsoft Fabric
- Query real-time data by using Kusto Query Language (KQL)
- Create materialized views and stored functions in a KQL database
- **Lab:** Work with data in a Microsoft Fabric eventhouse

Implement a Lakehouse with Microsoft Fabric

Introduction to end-to-end analytics using Microsoft Fabric

- Describe end-to-end analytics in Microsoft Fabric

Get started with lakehouses in Microsoft Fabric

- Describe core features and capabilities of lakehouses in Microsoft Fabric
- Create a lakehouse
- Ingest data into files and tables in a lakehouse
- Query lakehouse tables with SQL
- **Lab:** Create a Microsoft Fabric lakehouse

Use Apache Spark in Microsoft Fabric

- Configure Spark in a Microsoft Fabric workspace
- Identify suitable scenarios for Spark notebooks and Spark jobs
- Use Spark dataframes to analyze and transform data
- Use Spark SQL to query data in tables and views
- Visualize data in a Spark notebook
- **Lab:** Analyze data with Apache Spark

Work with Delta Lake tables in Microsoft Fabric

- Understand Delta Lake and delta tables in Microsoft Fabric

- Create and manage delta tables using Spark
- Optimize delta tables
- Use Spark to query and transform data in delta tables
- Use delta tables with Spark structured streaming
- **Lab:** Use delta tables in Apache Spark

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Organize a Fabric lakehouse using medallion architecture design

- Describe the principles of using the medallion architecture in data management
- Apply the medallion architecture framework within the Microsoft Fabric environment
- Analyze data stored in the lakehouse using DirectLake in Power BI
- Describe best practices for ensuring the security and governance of data stored in the medallion architecture
- **Lab:** Organize your Fabric lakehouse using a medallion architecture

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Create Real-Time Dashboards with Microsoft Fabric

- Create a real-time dashboard in Microsoft Fabric
- Use advanced feature of real-time dashboards
- Apply best practices for real-time dashboards
- **Lab:** Get started with real-time dashboards

Manage a Microsoft Fabric Environment

Implement continuous integration and continuous delivery (CI/CD) in Microsoft Fabric

- Define CI/CD and describe how it's implemented in Fabric
- Implement version control and Git integration
- Use deployment pipelines to automate the deployment process
- **Lab:** Implement deployment pipelines in Microsoft Fabric using Fabric APIs

Monitor activities in Microsoft Fabric

- Apply monitoring concepts to Microsoft Fabric
- Use Monitoring Hub in Microsoft Fabric
- Trigger actions using Activator in Microsoft Fabric
- **Lab:** Monitor Fabric activity in the Monitor hub

Secure data access in Microsoft Fabric

- Describe the permissions model in Microsoft Fabric
- Configure workspace and item permissions
- Apply granular permissions
- **Lab:** Secure data access in Microsoft Fabric

Administer a Microsoft Fabric environment

- Describe Fabric admin tasks
- Navigate the admin center
- Manage user access
- Govern data in Fabric