

Data Analytics using Microsoft Fabric

Microsoft Fabric is a unified platform that can meet your organization's data and analytics needs. In this course you will explore the capabilities of Microsoft Fabric.

Duration: 3 days (24 hours)

Target Audience: Data Analyst, Data Engineer

Prerequisites:

- You should be familiar with basic data concepts and terminology.
- You Should be familiar with fundamental data analytics concepts

Module 1: Introduction to Azure Service Fabric

Determine the types of business problems that can be solved using Azure Service Fabric. Describe Service Fabric's features, such as Azure service integration, stateless and stateful service support, and automatic scaling.

- Introduction
- What is Azure Service Fabric?
- How Azure Service Fabric works
- When to use Azure Service Fabric

Module 2: 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.

- Introduction
- Explore end-to-end analytics with Microsoft Fabric
- Data teams and Microsoft Fabric
- Enable and use Microsoft Fabric

Module 3: Get started with lakehouses in Microsoft Fabric

Lakehouses merge data lake storage flexibility with data warehouse analytics. Microsoft Fabric offers a lakehouse solution for comprehensive analytics on a single SaaS platform.

- Introduction
- Explore the Microsoft Fabric Lakehouse
- Work with Microsoft Fabric Lakehouses
- Exercise - Create and ingest data with a Microsoft Fabric Lakehouse

Module 4: Use Apache Spark in Microsoft Fabric

Apache Spark is a core technology for large-scale data analytics. Microsoft Fabric provides support for Spark clusters, enabling you to analyze and process data in a Lakehouse at scale.

- Introduction
- Prepare to use Apache Spark
- Run Spark code

- Work with data in a Spark dataframe
- Work with data using Spark SQL
- Visualize data in a Spark notebook
- Exercise - Analyze data with Apache Spark

Module 5: Work with Delta Lake tables in Microsoft Fabric

Tables in a Microsoft Fabric lakehouse are based on the Delta Lake storage format commonly used in Apache Spark. By using the enhanced capabilities of delta tables, you can create advanced analytics solutions.

- Introduction
- Understand Delta Lake
- Create delta tables
- Work with delta tables in Spark
- Use delta tables with streaming data
- Exercise - Use delta tables in Apache Spark

Module 6: Use Data Factory pipelines in Microsoft Fabric

Microsoft Fabric includes Data Factory capabilities, including the ability to create pipelines that orchestrate data ingestion and transformation tasks.

- Introduction
- Understand pipelines
- Use the Copy Data activity
- Use pipeline templates
- Run and monitor pipelines
- Exercise - Ingest data with a pipeline

Module 7: Ingest Data with Dataflows Gen2 in Microsoft Fabric

Data ingestion is crucial in analytics. Microsoft Fabric's Data Factory offers Dataflows (Gen2) for visually creating multi-step data ingestion and transformation using Power Query Online.

- Introduction
- Understand Dataflows (Gen2) in Microsoft Fabric
- Explore Dataflows (Gen2) in Microsoft Fabric
- Integrate Dataflows (Gen2) and Pipelines in Microsoft Fabric
- Exercise - Create and use a Dataflow (Gen2) in Microsoft Fabric

Module 8: Get started with data warehouses in Microsoft Fabric

Data warehouses are analytical stores built on a relational schema to support SQL queries. Microsoft Fabric enables you to create a relational data warehouse in your workspace and integrate it easily with other elements of your end-to-end analytics solution.

- Introduction
- Understand data warehouse fundamentals
- Understand data warehouses in Fabric
- Query and transform data

- Prepare data for analysis and reporting
- Secure and monitor your data warehouse
- Exercise - Analyze data in a data warehouse

Module 9: Get started with Real-Time Analytics in Microsoft Fabric

Analysis of real-time data streams is a critical capability for any modern data analytics solution. You can use the Real-Time Analytics capabilities of Microsoft Fabric to ingest, query, and process streams of data.

- Introduction
- What is Synapse Real-Time Analytics?
- Understand KQL database and tables
- Write queries with KQL
- Exercise: Explore Synapse Real-Time Analytics in Fabric

Module 10: Get started with data science in Microsoft Fabric

In Microsoft Fabric, data scientists can manage data, notebooks, experiments, and models while easily accessing data from across the organization and collaborating with their fellow data professionals.

- Introduction
- Understand data science
- Explore data science in Microsoft Fabric
- Use MLflow to track your experiments
- Exercise - Train and track a model in Microsoft Fabric

Module 11: Fabric for Power BI users

You learn how to use Dataflows Gen2 and Pipelines to ingest data into a Lakehouse and create a dimensional model. You also learn how to generate a beautiful report automatically to display the latest sales figures from start to finish.

- Prepare and load data into a lakehouse
- Build a dimensional model in a lakehouse
- Automatically create a report with quick create

Module 12: Administer Microsoft Fabric

Microsoft Fabric is a SaaS solution for end-to-end data analytics. As an administrator, you can configure features and manage access to suit your organization's needs.

- Introduction
- Understand the Fabric Architecture
- Understand the Fabric administrator role
- Manage Fabric security
- Govern data in Fabric