

Implementing a Lakehouse with Microsoft Fabric

The Implementing a Lakehouse with Microsoft Fabric training introduces participants to the concept of the Lakehouse – a modern approach to data management and analytics that combines the flexibility of data lakes with the capabilities of a traditional data warehouse.

During the course, participants learn about the capabilities of Microsoft Fabric for acquiring, processing, and organizing data using Apache Spark, Delta Lake, Dataflows Gen2, and Data Factory. The training focuses on practical aspects of data engineering, such as versioning, dataflow orchestration, and building scalable analytical environments.



Training recipients

The training is intended for data professionals who want to explore the capabilities of Microsoft Fabric in data processing and integration within the Lakehouse architecture.

It is particularly dedicated to:

- data engineers,
- data analysts working with large datasets,
- Power BI specialists who want to expand their skills with data engineering capabilities,
- data and analytics architects,
- members of teams designing Lakehouse environments in the Microsoft cloud.



Benefits

- Understanding the Lakehouse concept – you will learn the structure and use cases of the Lakehouse architecture in the Microsoft Fabric environment.
- Using Apache Spark – you will learn how to process, transform, and analyze distributed data using

Spark DataFrames and Spark SQL.

- Working with Delta Lake – you will learn how to create and manage Delta Lake tables, use data versioning, and work with the “time travel” feature.
- Data ingestion and integration – you will master the use of Dataflows Gen2 and Data Factory pipelines for ingesting and processing data.
- Building modern analytical solutions – you will learn how to create integrated, high-performance data environments in Microsoft Fabric, ready for further analysis in Power BI or other tools.



Training program

1.Introduction to data analytics using Microsoft Fabric

2.Get started with a lakehouse in Microsoft Fabric

- A description of the core features and capabilities of the lakehouse in Microsoft Fabric.
- Creating a lakehouse.
- Entering data into files and tables in the lakehouse.
- Queries lakehouse tables with SQL.

3.Using Apache Spark in Microsoft Fabric

- Configure Spark in a Microsoft Fabric workspace.
- Identify appropriate scenarios for Spark notebooks and Spark tasks.
- Use Spark dataframes to analyze and transform data.
- Use Spark SQL to query data in tables and views.
- Visualize data in Spark's notebook.

4.Working with tables in Delta Lake w Microsoft Fabric

- Understand Delta Lake and Delta Tables in Microsoft Fabric.
- Create and manage delta tables with Spark.
- Use Spark to query and transform data in delta tables.
- Using delta tables in Spark streaming.

5.Data entry with Dataflows Gen2 in Microsoft Fabric

- Describe Dataflow capabilities in Microsoft Fabric.
- Build Dataflow solutions for data entry and transformation.
- Enable Dataflow into your processing pipeline.

6.Use Data Factory pipelines in Microsoft Fabric

- Describe pipeline capabilities in Microsoft Fabric.
- Use of data copy activity in the pipeline.
- Create pipelines based on predefined templates.
- Run and monitor pipelines.

7.Creating a medallion architecture in Microsoft Fabric

- Description of medallion architecture.
- Use of medallion architecture.

- Medallion architecture management in MS Fabric.



Expected preparation of the participant

- Knowledge of basic database concepts and services
- Knowledge of the basics of Python and SQL (or at least one of them).
- Completing the DP-900 Learning Path

To increase the comfort of work and training's effectiveness we suggest using an additional monitor. The lack of additional monitor does not exclude participation in the training, however, it significantly influences the comfort of work during classes.

You can find information and requirements of participation in Distance Learning trainings at:

<https://www.altkomakademia.pl/en/how-it-works/about-courses/>



Training Includes

- manual in electronic form available on the platform: <https://learn.microsoft.com/pl-pl/training/>
- access to Altkom Akademia's student portal

Training method:

- Lecture and product presentation (50%)
- Exercise (50%)

Major teaching tools include PowerPoint presentations, test-environment demonstrations, hands-on lab environments, and Microsoft Learn



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Language

- **Training:** English
- **Materials:** English