

DP-3027: Implement a data engineering solution with Azure Databricks

Course ID #: 7000-1070-ZZ-Z

Hours: 7

Delivery Method: Group Internet Based

Course Content

Description:

Learn how to harness the power of Apache Spark and powerful clusters running on the Azure Databricks platform to run large data engineering workloads in the cloud.

Prerequisites:

None

Target Audience:

Data Engineer

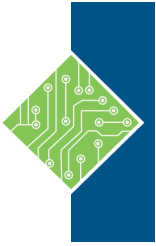
Topics:

Lesson 1: Perform incremental processing with spark structured streaming

- Introduction
- Set up real-time data sources for incremental processing
- Optimize Delta Lake for incremental processing in Azure Databricks
- Handle late data and out-of-order events in incremental processing
- Monitoring and performance tuning strategies for incremental processing in Azure Databricks
- Exercise - Real-time ingestion and processing with Delta Live Tables with Azure Databricks
- Module assessment
- Summary

Lesson 2: Implement streaming architecture patterns with Delta Live Tables

- Introduction
- Event driven architectures with Delta Live tables
- Ingest data with structured streaming
- Maintain data consistency and reliability with structured streaming
- Scale streaming workloads with Delta Live tables
- Exercise - end-to-end streaming pipeline with Delta Live tables
- Module assessment
- Summary



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Lesson 3: Optimize performance with Spark and Delta Live Tables

- Introduction
- Optimize performance with Spark and Delta Live Tables
- Perform cost-based optimization and query tuning
- Use change data capture (CDC)
- Use enhanced autoscaling
- Implement observability and data quality metrics
- Exercise - optimize data pipelines for better performance in Azure Databricks
- Module assessment
- Summary

Lesson 4: Implement CI/CD workflows in Azure Databricks

- Introduction
- Implement version control and Git integration
- Perform unit testing and integration testing
- Manage and configure your environment
- Implement rollback and roll-forward strategies
- Exercise - Implement CI/CD workflows
- Module assessment
- Summary

Lesson 5: Automate workloads with Azure Databricks Jobs

- Introduction
- Implement job scheduling and automation
- Optimize workflows with parameters
- Handle dependency management
- Implement error handling and retry mechanisms
- Explore best practices and guidelines
- Exercise - Automate data ingestion and processing
- Module assessment
- Summary

Lesson 6: Manage data privacy and governance with Azure Databricks

- Introduction
- Implement data encryption techniques in Azure Databricks
- Manage access controls in Azure Databricks
- Implement data masking and anonymization in Azure Databricks
- Use compliance frameworks and secure data sharing in Azure Databricks
- Use data lineage and metadata management
- Implement governance automation in Azure Databricks
- Exercise - Practice the implementation of Unity Catalog
- Module assessment
- Summary

Lesson 7: Use SQL Warehouses in Azure Databricks

- Introduction
- Get started with SQL Warehouses
- Create databases and tables
- Create queries and dashboards
- Exercise - Use a SQL Warehouse in Azure Databricks
- Module assessment
- Summary



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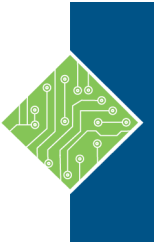
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Lesson 8: Run Azure Databricks Notebooks with Azure Data Factory

- Introduction
- Understand Azure Databricks notebooks and pipelines
- Create a linked service for Azure Databricks
- Use a Notebook activity in a pipeline
- Use parameters in a notebook
- Exercise - Run an Azure Databricks Notebook with Azure Data Factory
- Module assessment
- Summary

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NASBA Information

Attendance Requirement: To be awarded the full credit hours, you must sign in and attend the entire course.

Recommended Field(s) of Study:

Recommended CPEs: 7.80

Policies: Course Registration, Cancellation, Refund, and Complaint Resolution

For more information regarding administrative policies such as complaint and program cancellation policies, please contact our offices at 800-639-3535 or visit us at: www.tcworkshop.com

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