

KOENIG SOLUTIONS · COURSE OUTLINE

Microsoft Azure Data Factory

Learn to build, secure and monitor data pipelines with Azure Data Factory, from copy activities to mapping data flows and CI/CD.

13

MODULES

35

TOPICS

COURSE OVERVIEW

This course covers Azure Data Factory, beginning with pipeline authoring and source control before moving into copy activities, linked services and connecting to different data sources. It then addresses transformation activities, control flow, CI/CD with DevOps release pipelines, and mapping data flows including debugging and the expression builder. Later modules cover security, monitoring, error handling, trigger-based orchestration, performance optimisation, data governance, integration with other Azure services such as Azure Data Lake Storage and Azure Synapse Analytics, advanced mapping data flow transformations, and hybrid cloud scenarios connecting on-premises sources.

WHO THIS COURSE IS FOR

Data Engineers

ETL Developers

Data Architects

BI Developers

Cloud Solutions Architects

DevOps Engineers

LEARNING OBJECTIVES

- Explain the objectives and scenarios for using Azure Data Factory
- Author ADF pipelines and configure source control
- Implement copy activities and connect to different data sources
- Configure linked services and transformation activities
- Apply control flow logic and CI/CD with DevOps release pipelines
- Build mapping data flows and debug transformations
- Configure security, integration runtimes and pipeline monitoring
- Apply performance optimisation and data governance practices

13 Modules, 35 Topics

01

Introduction to Azure Data Factory (ADF)

TOPICS

Overview of ADF · Objectives and Scenarios for using ADF · Authoring ADF Pipelines · Introduction to Source Control in ADF

02

Copy Activities and Connectors

TOPICS

Copy Activity in ADF · Copy Data Tool in ADF · Connecting to Different Data Sources · Creating Linked Services

03

Transformation and Control Flow

TOPICS

- Identify and explain different transformation activities
- On-Demand vs BYO Compute environments
- Controlling flow of activities in the pipeline

04

Azure Data Factory CI/CD

TOPICS

Connecting ADF to DevOps Release pipelines

05

Mapping Data Flow

TOPICS

Introduction to Mapping Data Flow (MDF) · Debugging in MDF · Introduction to MDF Expression Builder · Scenarios for using Mapping Data Flow

06

Security and Monitoring

TOPICS

- Security in ADF and integration with Azure Security
- Securely storing credentials for ADF
- Using ADF Integration Runtimes
- Monitoring ADF within the ADF and Azure Portals

07

Error Handling and Logging in ADF

TOPICS

- Best practices for error handling in ADF pipelines
- Configuring logging and monitoring for better troubleshooting

08

Advanced Pipeline Orchestration

TOPICS

- Use of triggers for scheduling and automating pipelines
- Pipeline dependency management and execution order

09

Performance Optimization

TOPICS

- Techniques for optimizing data movement and transformation performance
- Monitoring and optimizing data integration pipelines for efficiency

10

Data Governance and Compliance

TOPICS

- Implementing data governance policies in ADF
- Ensuring compliance with data protection regulations

11

Integration with Azure Services

INTEGRATING ADF WITH OTHER AZURE SERVICES

Azure Data Lake Storage · Azure SQL Database · Azure Synapse Analytics

12

Advanced Mapping Data Flow Features

TOPICS

- Advanced usage of Mapping Data Flow transformations
- Handling complex data transformations and scenarios

13

Hybrid Cloud Scenarios

TOPICS

- Implementing ADF in hybrid cloud environments
- Connecting on-premises data sources with ADF pipelines

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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