



MICROSOFT AZURE - DATA ENGINEER ASSOCIATE CERTIFICATION

**Microsoft Azure Data skills and take your
career to the next level!**

Data Engineer Associate CERTIFICATION

This certification course has been designed by industry experts to help you prepare for the Data Engineer Associate certification. Through this training, you will gain knowledge in integrating, transforming, and consolidating data from various structured, unstructured, and streaming data systems into a suitable schema for building analytics solutions.

JOB

1.3 Million Job Postings

There is a global estimate of 1.3 million job postings for Microsoft Azure data expert by 2025-26

Growth

Growing Microsoft Azure Industry

30% CAGR in the global Microsoft Azure industry

Demand

High Demand

As organizations increasingly rely on data to drive business decisions, there is a high demand for professionals who are skilled in designing and implementing data management solutions. According to Microsoft, demand for Azure Data Engineers has increased by over 100% in the past year

About Program

As an Azure data engineer, you help stakeholders understand the data through exploration, and build and maintain secure and compliant data processing pipelines by using different tools and techniques. You use various Azure data services and frameworks to store and produce cleansed and enhanced datasets for analysis. This data store can be designed with different architecture patterns based on business requirements. That include Morden Data warehouse, Big Data and Data lakehouse.

Key Highlights

- ✓ 50 Hrs Instructor-led virtual Training
- ✓ Recording would be provided of all sessions
- ✓ Project / Lab based Training
- ✓ Certification Assistance will be provided
- ✓ Microsoft Certified Trainer will conduct the training
- ✓ Trainer has 20+ years of industry experience

Program Curriculum

Module 1

Get started with data engineering on Azure

- Introduction to data engineering on Azure
- Introduction to Azure Data Lake Storage Gen2
- Introduction to Azure Synapse Analytics

Module 2

Build data analytics solutions using Azure Synapse Analytics serverless SQL pools

- Use a serverless SQL pool to query files in a data lake
- Use a serverless SQL pool to transform data
- Create a lake database

Module 3

Perform data engineering with Azure Synapse Apache Spark Pools

- Analyze data with Apache Spark in Azure Synapse Analytics
- Transform data with Apache Spark in Azure Synapse Analytics
- Use Delta Lake in Azure Synapse Analytics

Module 4

Work with data warehouses using Azure Synapse Analytics

- Analyze data in a relational data warehouse
- Load data into a relational data warehouse

Module 5

Transfer and transform data with Azure Synapse Analytics Pipelines

- Build a data pipeline in Azure Synapse Analytics
- Use Spark Notebooks in an Azure Synapse Pipeline

Module 6

Work with hybrid transactional and analytical processing (HTAP) Solutions using Azure Synapse Analytics

- Plan hybrid transactional and analytical processing
- Implement Azure Synapse Link with Azure Cosmos DB
- Implement Azure Synapse Link for SQL

Program Curriculum

Module 7

Implement a data streaming solution with Azure Stream Analytics

- Get started with Azure Stream Analytics
- Ingest streaming data using Azure Stream Analytics and Azure Synapse Analytics
- Visualize real-time data with Azure Stream Analytics and Power BI

Module 8

Govern data across an enterprise

- Introduction to Microsoft Purview
- Integrate Microsoft Purview and Azure Synapse Analytics

Module 9

Data engineering with Azure Databricks

- Explore Azure Databricks
- Use Apache Spark in Azure Databricks
- Run Azure Databricks notebooks in Azure Data Factory

Course Projects

Projects cover the following industries:



Retail



Social Media



Banking



Healthcare



E-Commerce



Insurance



Supply Chain

Data Transform files using a serverless SQL pool

Data analysts often use SQL to query data for analysis and reporting. Data engineers can also make use of SQL to manipulate and transform data; often as part of a data ingestion pipeline or extract, transform, and load (ETL) process.

Analyze data in a lake database

Azure Synapse Analytics enables you to combine the flexibility of file storage in a data lake with the structured schema and SQL querying capabilities of a relational database through the ability to create a lake database. A lake database is a relational database schema defined on a data lake file store that enables data storage to be separated from the compute used to query it. Lake databases combine the benefits of a structured schema that includes support for data types, relationships, and other features typically only found in relational database systems, with the flexibility of storing data in files that can be used independently of a relational database store. Essentially, the lake database “overlays” a relational schema onto files in folders in the data lake.

Ingest realtime data with Azure Stream Analytics and Azure Synapse Analytics

In this project, you'll use Azure Stream Analytics to process a stream of sales order data, such as might be generated from an online retail application. The order data will be sent to Azure Event Hubs, from where your Azure Stream Analytics jobs will read the data and ingest it into Azure Synapse Analytics.

Use Delta Lake in Azure Databricks

Delta Lake is an open source project to build a transactional data storage layer for Spark on top of a data lake. Delta Lake adds support for relational semantics for both batch and streaming data operations, and enables the creation of a Lakehouse architecture in which Apache Spark can be used to process and query data in tables that are based on underlying files in the data lake.

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Use Spark in Azure Databricks

Azure Databricks is a Microsoft Azure-based version of the popular open-source Databricks platform. Azure Databricks is built on Apache Spark, and offers a highly scalable solution for data engineering and analysis tasks that involve working with data in files. One of the benefits of Spark is support for a wide range of programming languages, including Java, Scala, Python, and SQL; making Spark a very flexible solution for data processing workloads including data cleansing and manipulation, statistical analysis and machine learning, and data analytics and visualization.

Automate an Azure Databricks Notebook with Azure Data Factory

You can use notebooks in Azure Databricks to perform data engineering tasks, such as processing data files and loading data into tables. When you need to orchestrate these tasks as part of a data engineering pipeline, you can use Azure Data Factory.

Contact Us:

Pune, India

Flat # A-702, Ashtvinayak City, Phursungi Village Road, Phursungi, Pune, Maharashtra Phone No: +91-844-6677-218

Ranchi, India

Falt # C-1D, Sail City, New Pundag, Ranchi, Jharkhand

Email: sales@piyushacademy.com