DP-201T01: Designing an Azure® Data Solution

Duration: 2 Days
Method: Instructor-Led Training (ILT) | Live Online Training

Certification: Microsoft Certified: Azure Data Engineer Associate —
Exam: DP-201: Designing an Azure Data Solution

Course Description

In this course, participants will design various data platform technologies into solutions that are in line with business and technical requirements. This includes on-premises, cloud, and hybrid data scenarios which incorporate relational, NoSQL, or Data Warehouse data. They will also learn how to design process architectures using a range of technologies for both streaming and batch data. The participants will also explore how to design data security, including data access, data policies, and standards. They will also design Azure data solutions, which includes the optimization, availability, and disaster recovery of big data, batch processing, and streaming data solutions.

Target Audience

This course is intended for:

- Data Professionals
- Data Architects
- Business Intelligence (BI) Professionals

- Application Developers who deliver content from the data platform technologies that exist on Microsoft Azure.

Prerequisites

To attend this course, candidates must have:

- Knowledge of cloud computing concepts and professional experience with data solutions.
- Knowledge about Creating cloud resources in Microsoft Azure.
- Knowledge about Identifying use cases for big data.
- Understanding of how cloud compute services can solve for common business needs.

Course Objectives

Upon successful completion of this course, attendees will be able to:

- Design and build secure, scalable and performant solutions in Azure.
- Deal with the movement of data from on-premises systems into a cloud data warehouse and how it can be automated.
- Incorporate security into architecture design and discover the tools that Azure provides to help create a secure environment.
- Scale services to handle load.
- Design an Azure architecture that is operationally efficient and minimizes costs by reducing spending.

Course Topics

Module 1: Data Platform Architecture Considerations
- Core Principles of Creating Architectures
- Design with Security in Mind
- Performance and Scalability
- Design for Availability and Recoverability
- Design for Efficiency and Operations
- Case Study

Module 2: Azure Batch Processing Reference Architectures
- Lambda Architectures from a Batch Mode Perspective
- Design an Enterprise BI solution in Azure
- Automate Enterprise BI Solutions in Azure
- Architect an Enterprise-Grade Conversational Bot in Azure

Module 3: Azure Real-Time Reference Architectures
- Describe Lambda Architectures for a Real-Time Perspective
- Architect a Stream Processing Pipeline with Azure Stream Analytics
- Design a Stream Processing Pipeline with Azure Databricks
- Create an Azure IoT Reference Architecture

Module 4: Data Platform Security Design Considerations
- Defence in Depth Security Approach
- Identity Management
- Infrastructure Protection
- Encryption Usage
- Network Level Protection
- Application Security

Module 5: Designing for Resiliency and Scale
- Adjust Workload Capacity by Scaling
- Optimize Network Performance
- Design for Optimized Storage and Database Performance
- Identify Performance Bottlenecks
- Design a Highly Available Solution
- Incorporate Disaster Recovery into Architectures
- Design Backup and Restore strategies

Module 6: Design for Efficiency and Operations
- Maximizing the Efficiency of Your Cloud Environment
- Use Monitoring and Analytics to Gain Operational Insights
- Use Automation to Reduce Effort and Error

LABS INCLUDED