DP-201T01 - Designing an Azure Data Solution

Overview
In this course, students will design various data platform technologies into solutions that are in line with business and technical requirements. This can include on-premises, cloud, and hybrid data scenarios which incorporate relational, No-SQL or Data Warehouse data. Students will also learn how to design process architectures using a range of technologies for both streaming and batch data. Students 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.

Prerequisite Comments
In addition to their professional experience, students who take this training should have technical knowledge equivalent to the following courses:
Azure fundamentals
DP-200: Implementing an Azure Data Solution

Target Audience
The audience for this course is data professionals, data architects, and business intelligence professionals who want to learn about the data platform technologies that exist on Microsoft Azure.
The secondary audience for this course is individuals who develop applications that deliver content from the data platform technologies that exist on Microsoft Azure.

Course Objectives
Please refer to Overview.

Course Outline
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
Lab: Case Study
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
Lab : Architect an Enterprise-grade Conversational Bot in Azure

3 - Azure Real-Time Reference Architectures
Lambda architectures for a Real-Time Perspective
Lambda architectures for a Real-Time Perspective
Design a stream processing pipeline with Azure Databricks
Create an Azure IoT reference architecture
Lab : Azure Real-Time Reference Architectures

4 - Data Platform Security Design Considerations
Defense in Depth Security Approach
Network Level Protection
Identity Protection
Encryption Usage
Advanced Threat Protection
Lab : Data Platform Security Design Considerations

5 - Designing for Resiliency and Scale
Design Backup and Restore strategies
Optimize Network Performance
Design for Optimized Storage and Database Performance
Incorporate Disaster Recovery into Architectures
Design Backup and Restore strategies
Lab : Designing for Resiliency and Scale

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
Lab : Design for Efficiency and Operations