AZ-305T00: Designing Microsoft Azure Infrastructure Solutions

Course Duration: 32 Hours (4 Days)

Course Overview

The AZ-305T00: Designing Microsoft Azure Infrastructure Solutions course is designed to provide learners with comprehensive knowledge and hands-on experience in end-to-end analytics using Microsoft Fabric. The course covers a wide range of topics, from an introduction to analytics to administering Microsoft Fabric, data ingestion, and data management. Learners will gain practical skills in using Dataflows Gen2, Spark, Data Factory pipelines, and managing Lakehouse's within Microsoft Fabric. Throughout the modules, participants will learn about organizing data using the Medallion architecture design, working with Apache Spark, Delta Lake tables, and securing their data environments. The course also delves into data warehousing, teaching how to load, query, monitor, optimize, and model data warehouses. Moreover, it addresses scalability in Power BI, creating model relationships, performance optimization tools, and enforcing model security. This extensive training is crucial for those looking to excel in managing and analyzing data with Microsoft's analytics tools.

Audience profile

The AZ-305T00 course is designed for professionals seeking to master Azure infrastructure solutions design, encompassing governance, data storage, and more.

- Solution Architects
- Cloud Engineers
- Azure Infrastructure Specialists
- IT Professionals with experience in Azure
- DevOps Engineers working with Azure
- Technical Decision Makers considering cloud infrastructure
- Systems Administrators looking to specialize in Azure
- Enterprise Architects
- Technology Managers overseeing cloud transitions
- Developers seeking to understand infrastructure design for Azure applications
- Data Engineers with a focus on the Azure platform
- Security Professionals responsible for Azure governance and compliance
- Professionals preparing for the Microsoft Certified: Azure Solutions Architect Expert certification

Course Syllabus

Design Identity, Governance, and Monitoring Solutions (25–30%)

Design Solutions for Logging and Monitoring

- Recommend a logging solution
- Recommend a solution for routing logs

- Recommend a monitoring solution

Design Authentication and Authorization Solutions

- Recommend an authentication solution
- Recommend an identity management solution
- Recommend a solution for authorizing access to Azure resources
- Recommend a solution to manage secrets, certificates, and keys

Design Governance

- Recommend a structure for management groups, subscriptions, and resource groups, and a strategy for resource tagging
- Recommend a solution for managing compliance
- Recommend a solution for identity governance

Design Data Storage Solutions (20–25%)

Design Data Storage Solutions for Relational Data

- Recommend a solution for storing relational data
- Recommend a database service tier and compute tier
- Recommend a solution for database scalability
- Recommend a solution for data protection

Design Data Storage Solutions for Semi-Structured and Unstructured Data

- Recommend a solution for storing semi-structured data
- Recommend a solution for storing unstructured data
- Recommend a data storage solution to balance features, performance, and costs
- Recommend a data solution for protection and durability

Design Data Integration

- Recommend a solution for data integration
- Recommend a solution for data analysis

Design Business Continuity Solutions (15–20%)

Design Solutions for Backup and Disaster Recovery

- Recommend a recovery solution for Azure and hybrid workloads that meets recovery objectives
- Recommend a backup and recovery solution for compute
- Recommend a backup and recovery solution for databases
- Recommend a backup and recovery solution for unstructured data

Design for High Availability

- Recommend a high availability solution for compute
- Recommend a high availability solution for relational data
- Recommend a high availability solution for semi-structured and unstructured data

Design Infrastructure Solutions (30–35%)

Design Compute Solutions

- Specify components of a compute solution based on workload requirements
- Recommend a virtual machine-based solution
- Recommend a container-based solution
- Recommend a serverless-based solution
- Recommend a compute solution for batch processing

Design an Application Architecture

- Recommend a messaging architecture
- Recommend an event-driven architecture
- Recommend a solution for API integration
- Recommend a caching solution for applications
- Recommend an application configuration management solution
- Recommend an automated deployment solution for applications

Design Migrations

- Evaluate a migration solution that leverages the Microsoft Cloud Adoption Framework for Azure
- Evaluate on-premises servers, data, and applications for migration
- Recommend a solution for migrating workloads to Infrastructure as a Service (IaaS) and Platform as a Service (PaaS)
- Recommend a solution for migrating databases
- Recommend a solution for migrating unstructured data

Design Network Solutions

- Recommend a connectivity solution that connects Azure resources to the internet
- Recommend a connectivity solution that connects Azure resources to on-premises networks
- Recommend a solution to optimize network performance
- Recommend a solution to optimize network security
- Recommend a load-balancing and routing solution