Designing and Implementing Cloud Data Platform Solutions

Duration: 3 Days      Course Code: M40441      Version: A

Overview:
The focus of this three-day instructor-led Microsoft Training course is on designing and implementing cloud data platform solutions with the Microsoft Data Platform by using SQL Server on-premises, hybrid and cloud data platform solutions. It describes how to design and implement and optimize workloads in hybrid scenarios with both on-premises and Microsoft Azure cloud-based solutions, and how to implement high availability and disaster recovery solutions.

Target Audience:
The primary audience for this course are database professionals who want to enhance their existing SQL Server skills with hybrid solutions and cloud solution architecture using the Microsoft Data Platform.

Objectives:
- Design and implement security, access and auditing for cloud data platform solutions
- Position Microsoft Cloud Data Platform Solutions
- Design and implement solutions on Azure using SQL Server Data Platform
- Design and implement solutions on Azure using SQL Database
- Design and implement cloud data platform solutions.

Prerequisites:
Content:

Module 1: Microsoft Cloud Data Platform Overview

This module provides an overview of the Microsoft Data Platform Solutions in Hybrid and Cloud based scenarios. The module provides an overview of offerings and capabilities.

Lessons

- Microsoft Cloud Data Platform
- Microsoft SQL Server
- Common Tools
- Cloud Data Offerings
- Data Visualizations
- Cortana Analytics Suite

Module 2: Implement SQL Server on Azure VM

This module with a hands-on-lab describes the core capabilities of running SQL Server in a virtual machine environment (IAAS) on Azure.

Lessons

- Virtual machine components
- Storage Architecture
- Azure deployment models
- Virtual machine tiers
- Virtual machine deployments
- Deployment scenarios
- Move existing workloads
- Connecting to Azure VMs
- Domain joining VMs
- VM best practices
- What is SQL Database
- Data tiers/ Elastic data tiers
- Scalability Options
- Elastic Databases
- Elastic Database Tools
- SQL Database performance
- Service Tier Advisor
- Business Continuity with SQL Database
- SQL Database HA/DR
- SQL Database Backup Solutions
- SQL Database Replication Scenarios
- HA/DR deployment architectures
- AlwaysOn availability groups
- AlwaysOn Failover Clustering
- Database Mirroring
- Log Shipping
- Backup to Azure
- Managed Backups
- SQL Server data files on Azure
- SQL Database Security Approach
- SQL Database Firewall Security
- SQL Database Active Directory Integration
- Encryption
- Row Level Security
- Dynamic Data Masking
- Auditing and Threat Detection
- Azure Automation Capabilities
- SQL Monitoring and Management
- Operational Insights
- Case Study – SQL Server Hybrid Scenario
- Case Study – Lift and Shift

Lab : SQL Database HA/DR

Module 5: Hybrid HA/DR scenarios with SQL Server

This module with a hands-on-lab focuses on management and deployment, monitoring for performance of SQL Database and SQL Server in Azure VMs.
Module 3: Implement SQL Database

This module with a hands-on lab exercise describes the design of high available, scalable data platform solutions on-premises, in the cloud and in hybrid cloud scenarios using SQL Server on premises and with Azure VMs.

Lessons
- Virtual machine components
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- Case Study – Lift and Shift

Lab : SQL Server in Azure VMs

Module 6: Design and Implement Security

This module covers design and architecture scenarios for implementation of database solutions using the Microsoft Cloud Data Platform. This module introduces key scenarios to discuss with classroom attendees in order to build out the right architecture and infrastructure based on architecture and business requirements.

Lessons
- Virtual machine components
- Storage Architecture

Module 8: Design and implement database solutions for SQL Server and SQL Database

This module covers design and architecture scenarios for implementation of database solutions using the Microsoft Cloud Data Platform. This module introduces key scenarios to discuss with classroom attendees in order to build out the right architecture and infrastructure based on architecture and business requirements.

Lessons
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- Storage Architecture
Azure deployment models
Virtual machine tiers
Virtual machine deployments
Deployment scenarios
Move existing workloads
Connecting to Azure VMs
Domain joining VMs
VM best practices
What is SQL Database
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Auditing and Threat Detection
Azure Automation Capabilities
SQL Monitoring and Management
Operational Insights
Case Study – SQL Server Hybrid Scenario
Case Study – Lift and Shift

Further Information:
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