Microsoft Azure Architect Design (AZ - 304)

Curriculum 3 Days

Day - 1

- **Manage Azure identities and governance**

Design Monitoring

- Design for cost optimization
- recommend a solution for cost management and cost reporting
- recommend solutions to minimize costs

Design a solution for logging and monitoring

- determine levels and storage locations for logs
- plan for integration with monitoring tools including Azure Monitor and Azure Sentinel recommend appropriate monitoring tool(s) for a solution
- choose a mechanism for event routing and escalation
- recommend a logging solution for compliance requirements

Day - 2

- **Design Identity and Security**

Design authentication

- recommend a solution for single-sign on
- recommend a solution for authentication
- recommend a solution for Conditional Access, including multi-factor authentication
- recommend a solution for network access authentication
- recommend a solution for a hybrid identity including Azure AD Connect and Azure AD

Connect Health

- recommend a solution for user self-service
- recommend and implement a solution for B2B integration
- NOT: federation with ADFS or PingFederate

Design authorization

- choose an authorization approach
- recommend a hierarchical structure that includes management groups, subscriptions and
- resource groups
- recommend an access management solution including RBAC policies, access reviews,
- role assignments, Privileged Identity Management (PIM), Azure AD Identity Protection,
- Just In Time (JIT) access

Design security for applications

- recommend a solution that includes Key Vault
- recommend a solution that includes Managed Identities
- recommend a solution for integrating applications into Azure AD

Design governance

- recommend a strategy for tagging
- recommend a solution for using Azure Policy
- recommend a solution for using Azure Blueprint
- recommend a solution that leverages Azure Resource Graph

- **Design Data Storage**

Design a solution for databases

- select an appropriate data platform based on requirements
- recommend database service tier sizing
- recommend a solution for database scalability
- recommend a solution for encrypting data at rest, data in transmission, and data in use

Design data integration

- recommend a data flow to meet business requirements
- recommend a solution for data integration, including Azure Data Factory, Azure Data
- Bricks, Azure Data Lake, Azure Synapse Analytics

Select an appropriate storage account

- choose between storage tiers
- recommend a storage access solution
- recommend storage management tools

Day - 3

- **Design Business Continuity**

Design a solution for backup and recovery

- recommend a recovery solution for Azure hybrid and on-premises workloads that meets
- recovery objectives (RTO, RLO, RPO)
- design and Azure Site Recovery solution
- recommend a solution for recovery in different regions
- recommend a solution for geo-redundancy of workloads
- recommend a solution for Azure Backup management
- design a solution for data archiving and retention zones

Design for high availability

- recommend a solution for application and workload redundancy, including compute,
- database, and storage
- recommend a solution for autoscaling
- identify resources that require high availability
- identify storage types for high availability

- **Design Infrastructure**

Design a compute solution

- recommend a solution for compute provisioning
- determine appropriate compute technologies, including virtual machines, App Services,
- Service Fabric, Azure Functions, Windows Virtual Desktop, Batch, HPC and containers recommend a solution for containers
- recommend a solution for automating compute management

Design a network solution

- recommend a network architecture (hub and spoke, Virtual WAN)
- recommend a solution for network addressing and name resolution
- recommend a solution for network provisioning
- recommend a solution for network security including Private Link, firewalls, gateways,
- network segmentation (perimeter networks/DMZs/NVAs)
- recommend a solution for network connectivity to the Internet, on-premises networks,
- and other Azure virtual networks
- recommend a solution for automating network management
- recommend a solution for load balancing and traffic routing

Design an application architecture

- recommend a microservices architecture including Event Grid, Event Hubs, Service Bus,
- Storage Queues, Logic Apps, Azure Functions, Service Fabric, AKS, Azure App
- Configuration and webhooks
- recommend an orchestration solution for deployment and maintenance of applications
- including ARM templates, Azure Automation, Azure Pipelines, Logic Apps, or Azure
- Functions
- recommend a solution for API integration

Design migrations

- assess and interpret on-premises servers, data, and applications for migration
- recommend a solution for migrating applications and VMs
- recommend a solution for migration of databases
- determine migration scope, including redundant, related, trivial, and outdated data
- recommend a solution for migrating data (Storage Migration Service, Azure Data Box,
- Azure File Sync-based migration to hybrid file server)