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Azure Solution Architect Design
(AZ-304)

Azure - Microsoft Azure Architect Design (AZ-304)

➕ Course Overview:

This learning path is designed to help you prepare for the AZ-304 Microsoft Azure Architect Design exam. If you pass both of the AZ-303 and AZ-304 exams, then you will earn the Microsoft Azure Solutions Architect Expert certification.

The AZ-303 and AZ-304 exams replace the older AZ-300 and AZ-301 exams, which will retire on September 30, 2020. These two exams are part of Microsoft's role-based certification program. Candidates who pass both exams will earn the Microsoft Certified: Azure Solutions Architect Expert certification.

The AZ-304 exam tests your knowledge of five subject areas. Here's how we'll cover them in this learning path. We'll start with designing Azure monitoring. Next, we'll show you how to design for identity and security using Azure Active Directory. After that, you'll learn how to design a data storage solution. Then, you'll find out how to design a business continuity strategy using services such as Azure Site Recovery. Finally, we'll cover how to design infrastructure.

➕ Course Outline:

Design Monitoring

1. Design for cost optimization

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

2. 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

Design Identity and Security

1. 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

2. 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, physical access, Privileged Identity Management (PIM), Azure AD Identity Protection, Just In Time (JIT) access

3. Design governance

- ➢ recommend a strategy for tagging
- ➢ recommend a solution for using Azure Policy
- ➢ recommend a solution for using Azure Blueprint

4. Design security for applications

- ➢ recommend a solution that includes KeyVault
  - o What can be stored in KeyVault
  - o KeyVault operations
  - o KeyVault regions
- ➢ recommend a solution that includes Azure AD Managed Identities
- ➢ recommend a solution for integrating applications into Azure AD

Design Data Storage

1. 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

2. 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

3. Select an appropriate storage account

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

Design Business Continuity

1. 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 site recovery replication policy
  - recommend a solution for site recovery capacity
  - recommend a solution for site failover and failback (planned/unplanned)
  - recommend a solution for the site recovery network
- recommend a solution for recovery in different regions
- recommend a solution for Azure Backup management
- design a solution for data archiving and retention
  - recommend storage types and methodology for data archiving
  - identify business compliance requirements for data archiving
  - identify requirements for data archiving
  - identify SLA(s) for data archiving
  - recommend a data retention policy

2. 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

  - recommend a solution for geo-redundancy of workloads

Design Infrastructure

1. 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, and containers
- recommend a solution for containers
  - AKS versus ACI and the configuration of each one
- recommend a solution for automating compute management

2. Design a network solution

- recommend a solution for network addressing and name resolution
- recommend a solution for network provisioning
- recommend a solution for network security
  - private endpoints
  - Firewalls
  - Gateways
- 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

3. Design an application architecture

- recommend a microservices architecture including Event Grid, Event Hubs, Service Bus, Storage Queues, Logic Apps, Azure Functions, and webhooks
- recommend an orchestration solution for deployment of applications including ARM templates, Logic Apps, or Azure Functions
  - select an automation method
  - choose which resources or lifecycle steps will be automated
  - design integration with other sources such as an ITSM solution
  - recommend a solution for monitoring automation
- recommend a solution for API integration
  - design an API gateway strategy
  - determine policies for internal and external consumption of APIs
  - recommend a hosting structure for API management
  - recommend when and how to use API Keys

4. 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

🔸 Prerequisites:
- ➢ General knowledge of IT architecture
- ➢ Azure Administration Associate

🔸 Who Should Attend:

A candidate for this exam should have advanced experience and knowledge of IT operations, including networking, virtualization, identity, security, business continuity, disaster recovery, data platform, budgeting, and governance–this role should manage how decisions in each area affect an overall solution. In addition, this role should have expert-level skills in Azure administration and have experience with Azure development and DevOps processes.

🔸 Number of Hours: 40hrs

🔸 Certification: AZ-304

🔸 Key Features:
- ➢ One to One Training
- ➢ Online Training
- ➢ Fastrack & Normal Track
- ➢ Resume Modification
- ➢ Mock Interviews
- ➢ Video Tutorials
- ➢ Materials
- ➢ Real Time Projects
- ➢ Virtual Live Experience
- ➢ Preparing for Certification