Exam AZ-303: Microsoft Azure Architect Technologies – Skills Measured

Audience Profile

Candidates for this exam should have subject matter expertise in designing and implementing solutions that run on Microsoft Azure, including aspects like compute, network, storage, and security.

Responsibilities for an Azure Solution Architect include advising stakeholders and translating business requirements into secure, scalable, and reliable cloud solutions.

An Azure Solution Architect partners with cloud administrators, cloud DBAs, and clients to implement solutions.

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.

Skills Measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

Implement and Monitor an Azure Infrastructure (50-55%)

Implement cloud infrastructure monitoring

- monitor security
- monitor performance
    - configure diagnostic settings on resources
    - create a performance baseline for resources
    - monitor for unused resources
    - monitor performance capacity
    - visualize diagnostics data using Azure Monitor
- monitor health and availability
    - monitor networking
    - monitor service health

- monitor cost
  - monitor spend
  - report on spend
- configure advanced logging
  - implement and configure Azure Monitor insights, including App Insights, Networks, Containers
  - configure a Log Analytics workspace
- configure logging for workloads
  - initiate automated responses by using Action Groups
- configure and manage advanced alerts
  - collect alerts and metrics across multiple subscriptions
  - view Alerts in Azure Monitor logs

Implement storage accounts

- select storage account options based on a use case
- configure Azure Files and blob storage
- configure network access to the storage account
- implement Shared Access Signatures and access policies
- implement Azure AD authentication for storage
- manage access keys
- implement Azure storage replication
- implement Azure storage account failover

Implement VMs for Windows and Linux

- configure High Availability
- configure storage for VMs
- select virtual machine size
- implement Azure Dedicated Hosts
- deploy and configure scale sets
- configure Azure Disk Encryption

Automate deployment and configuration of resources

- save a deployment as an Azure Resource Manager template
- modify Azure Resource Manager template
- evaluate location of new resources
- configure a virtual disk template
- deploy from a template
- manage a template library
- create and execute an automation runbook

Implement virtual networking

- implement VNet to VNet connections
- implement VNet peering

Implement Azure Active Directory

- add custom domains
- configure Azure AD Identity Protection
- implement self-service password reset
- implement Conditional Access including MFA
- configure user accounts for MFA
- configure fraud alerts
- configure bypass options
- configure Trusted IPs
- configure verification methods
- implement and manage guest accounts
- manage multiple directories

Implement and manage hybrid identities

- install and configure Azure AD Connect
- identity synchronization options
- configure and manage password sync and password writeback
- configure single sign-on
- use Azure AD Connect Health

Implement Management and Security Solutions (25-30%)

Manage workloads in Azure

- migrate workloads using Azure Migrate
  - assess infrastructure
  - select a migration method
  - prepare the on-premises for migration
  - recommend target infrastructure
- implement Azure Backup for VMs
- implement disaster recovery
- implement Azure Update Management

Implement load balancing and network security

- implement Azure Load Balancer
- implement an application gateway

- implement a Web Application Firewall
- implement Azure Firewall
- implement the Azure Front Door Service
- implement Azure Traffic Manager
- implement Network Security Groups and Application Security Groups
- implement Bastion

Implement and manage Azure governance solutions

- create and manage hierarchical structure that contains management groups, subscriptions and resource groups
- assign RBAC roles
- create a custom RBAC role
- configure access to Azure resources by assigning roles
- configure management access to Azure
- interpret effective permissions
- set up and perform an access review
- implement and configure an Azure Policy
- implement and configure an Azure Blueprint

Manage security for applications

- implement and configure KeyVault
- implement and configure Azure AD Managed Identities
- register and manage applications in Azure AD

Implement Solutions for Apps (10-15%)

Implement an application infrastructure

- create and configure Azure App Service
- create an App Service Web App for Containers
- create and configure an App Service plan
- configure an App Service
- configure networking for an App Service
- create and manage deployment slots
- implement Logic Apps
- implement Azure Functions

Implement container-based applications

- create a container image
- configure Azure Kubernetes Service

- publish and automate image deployment to the Azure Container Registry
- publish a solution on an Azure Container Instance

Implement and Manage Data Platforms (10-15%)

Implement NoSQL databases

- configure storage account tables
- select appropriate CosmosDB APIs
- set up replicas in CosmosDB

Implement Azure SQL databases

- configure Azure SQL database settings
- implement Azure SQL Database managed instances
- configure HA for an Azure SQL database
- publish an Azure SQL database