

# **Exam AZ-300: Microsoft Azure Architect Technologies**

## **– Skills Measured**

### **Deploy and configure infrastructure (40-45%)**

#### **Analyze resource utilization and consumption**

- configure diagnostic settings on resources
- create baseline for resources
- create and test alerts
- analyze alerts across subscription
- analyze metrics across subscription
- create action groups
- monitor for unused resources
- monitor spend
- report on spend
- utilize Log Search query functions
- view alerts in Azure Monitor logs
- visualize diagnostics data using Azure Monitor Workbooks

#### **Create and configure storage accounts**

- configure network access to the storage account
- create and configure storage account
- generate shared access signature
- implement Azure AD authentication for storage
- install and use Azure Storage Explorer
- manage access keys
- monitor activity log by using Azure Monitor logs
- implement Azure storage replication
- implement Azure storage account failover

#### **Create and configure a VM for Windows and Linux**

- configure high availability
- configure monitoring
- configure networking
- configure storage
- configure virtual machine size
- implement dedicated hosts

- deploy and configure scale sets

### **Automate deployment of VMs**

- modify Azure Resource Manager template
- configure location of new VMs
- configure VHD template
- deploy from template
- save a deployment as an Azure Resource Manager template
- deploy Windows and Linux VMs

### **Create connectivity between virtual networks**

- create and configure Vnet peering
- create and configure Vnet to Vnet connections
- verify virtual network connectivity
- create virtual network gateway

### **Implement and manage virtual networking**

- configure private IP addressing
- configure public IP addresses
- create and configure network routes
- create and configure network interface
- create and configure subnets
- create and configure virtual network
- create and configure Network Security Groups and Application Security Groups

### **Manage Azure Active Directory**

- add custom domains
- configure Azure AD Identity Protection
- configure Azure AD Join
- configure self-service password reset
- implement conditional access policies
- manage multiple directories
- perform an access review

### **Implement and manage hybrid identities**

- install and configure Azure AD Connect
- configure federation
- configure single sign-on

- manage and troubleshoot Azure AD Connect
- troubleshoot password sync and writeback

### **Implement solutions that use virtual machines (VM)**

- provision VMs
- create Azure Resource Manager templates
- configure Azure Disk Encryption for VMs
- implement Azure Backup for VMs

## **Implement workloads and security (25-30%)**

### **Migrate servers to Azure**

- migrate servers using Azure Migrate

### **Configure serverless computing**

- create and manage objects
- manage a Logic App resource
- manage Azure Function app settings
- manage Event Grid
- manage Service Bus

### **Implement application load balancing**

- configure application gateway
- configure Azure Front Door service
- configure Azure Traffic Manager

### **Integrate on premises network with Azure virtual network**

- create and configure Azure VPN Gateway
- create and configure site to site VPN
- configure ExpressRoute
- configure Virtual WAN
- verify on premises connectivity
- troubleshoot on premises connectivity with Azure

### **Implement multi factor authentication**

- configure user accounts for MFA
- configure fraud alerts
- configure bypass options

- configure trusted IPs
- configure verification methods

### **Manage role-based access control**

- create a custom role
- configure access to Azure resources by assigning roles
- configure management access to Azure
- troubleshoot RBAC
- implement Azure Policies
- assign RBAC Roles

## **Create and deploy apps (5-10%)**

### **Create web apps by using PaaS**

- create an Azure app service Web App
- create documentation for the API
- create an App Service Web App for Containers
- create an App Service background task by using WebJobs
- enable diagnostics logging

### **Design and develop apps that run in containers**

- configure diagnostic settings on resources
- create a container image by using a Dockerfile
- create an Azure Kubernetes Service
- publish an image to the Azure Container Registry
- implement an application that runs on an Azure Container Instance
- manage container settings by using code

## **Implement authentication and secure data (5-10%)**

### **Implement authentication**

- implement authentication by using certificates, forms-based authentication, tokens, or Windows-integrated authentication
- implement multi-factor authentication by using Azure AD
- implement OAuth2 authentication
- implement Managed Identities for Azure resources Service Principal authentication

### **Implement secure data solutions**

- encrypt and decrypt data at rest and in transit

- encrypt data with Always Encrypted
- implement Azure Confidential Compute
- implement SSL/TLS communications
- create, read, update, and delete keys, secrets, and certificates by using the KeyVault API

## **Develop for the cloud and for Azure storage (15-20%)**

### **Configure a message-based integration architecture**

- configure an app or service to send emails
- configure Event Grid
- configure the Azure Relay service
- create and configure a Notification Hub
- create and configure an Event Hub
- create and configure a Service Bus
- configure queries across multiple products

### **Develop for autoscaling**

- implement autoscaling rules and patterns (schedule, operational/system metrics)
- implement code that addresses singleton application instances
- implement code that addresses transient state

### **Develop solutions that use Cosmos DB storage**

- create, read, update, and delete data by using appropriate APIs
- implement partitioning schemes
- set the appropriate consistency level for operations

### **Develop solutions that use a relational database**

- provision and configure relational databases
- configure elastic pools for Azure SQL Database
- implement Azure SQL Database managed instances
- create, read, update, and delete data tables by using code