TechyEdz Solutions

Training | Consulting | Developement | Outsourcing

Azure Admin + Azure Solution Architect

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Azure Administrator + Azure Solution Architect Combo Course

Course Overview:

Aspiring to build your career as a cloud solutions architect? As one of the highly-demanded jobs in the cloud computing landscape, cloud solutions architect roles are highly competitive. Dasvm combines the Azure Administrator and Azure Solutions Architect certifications into a unified combo course. This course focuses on actual job task for implementing, monitoring and maintaining Microsoft Azure solutions including major services related to compute, storage, network and security. Additionally students learn how to advise stakeholders and translate business requirements into secure, scalable, and reliable solutions.

Course Outline:

Azure Administrator

Manage Azure identities and governance

1. Manage Azure AD objects

- create users and groups
- manage user and group properties
- manage device settings
- perform bulk user updates
- manage guest accounts
- configure Azure AD Join
- configure self-service password reset
- NOT: Azure AD Connect; PIM

2. Manage role-based access control (RBAC)

- create a custom role
- provide access to Azure resources by assigning roles
  - subscriptions
  - resource groups
  - resources (VM, disk, etc.)
- interpret access assignments
- manage multiple directories

3. Manage subscriptions and governance

- configure Azure policies
- configure resource locks
- apply tags
- create and manage resource groups
    - move resources
    - remove RGs
- manage subscriptions
- configure Cost Management
- configure management groups

Implement and manage storage

1. Manage storage accounts

- configure network access to storage accounts
- create and configure storage accounts
- generate shared access signature
- manage access keys
- implement Azure storage replication
- configure Azure AD Authentication for a storage account

2. Manage data in Azure Storage

- export from Azure job
- import into Azure job
- install and use Azure Storage Explorer
- copy data by using AZCopy

3. Configure Azure files and Azure blob storage

- create an Azure file share
- create and configure Azure File Sync service
- configure Azure blob storage
- configure storage tiers for Azure blobs

Deploy and manage Azure compute resources

1. Configure VMs for high availability and scalability

- configure high availability
- deploy and configure scale sets

2. Automate deployment and configuration of VMs

- modify Azure Resource Manager (ARM) template
- configure VHD template
- deploy from template
- save a deployment as an ARM template
- automate configuration management by using custom script extensions

3. Create and configure VMs

- configure Azure Disk Encryption
- move VMs from one resource group to another
- manage VM sizes
- add data discs
- configure networking
- redeploy VMs

4. Create and configure containers

- create and configure Azure Kubernetes Service (AKS)
- create and configure Azure Container Instances (ACI)
- NOT: selecting an container solution architecture or product; container registry settings

5. Create and configure Web Apps

- create and configure App Service
- create and configure App Service Plans
- NOT: Azure Functions; Logic Apps; Event Grid

Configure and manage virtual networking

1. Implement and manage virtual networking

- create and configure VNET peering

- configure private and public IP addresses, network routes, network interface, subnets, and virtual network

2. Configure name resolution

- configure Azure DNS
- configure custom DNS settings
- configure a private or public DNS zone

3. Secure access to virtual networks

- create security rules
- associate an NSG to a subnet or network interface
- evaluate effective security rules
- deploy and configure Azure Firewall
- deploy and configure Azure Bastion Service
- NOT: Implement Application Security Groups; DDoS

4. Configure load balancing

- configure Application Gateway
- configure an internal load balancer
- configure load balancing rules
- configure a public load balancer
- troubleshoot load balancing
- NOT: Traffic Manager and FrontDoor and PrivateLink

5. Monitor and troubleshoot virtual networking

- monitor on-premises connectivity
- use Network Performance Monitor
- use Network Watcher
- troubleshoot external networking
- troubleshoot virtual network connectivity

6. Integrate an on-premises network with an Azure virtual network

- create and configure Azure VPN Gateway
- create and configure VPNs
- configure ExpressRoute
- configure Azure Virtual WAN

Monitor and back up Azure resources

1. Monitor resources by using Azure Monitor

- configure and interpret metrics
  - analyze metrics across subscriptions
- configure Log Analytics
  - implement a Log Analytics workspace
  - configure diagnostic settings
- query and analyze logs
  - create a query
  - save a query to the dashboard
  - interpret graphs
- set up alerts and actions
  - create and test alerts
  - create action groups
  - view alerts in Azure Monitor
  - analyze alerts across subscriptions
- configure Application Insights
- NOT: Network monitoring

2. Implement backup and recovery

- configure and review backup reports
- perform backup and restore operations by using Azure Backup Service
- create a Recovery Services Vault
  - use soft delete to recover Azure VMs
- create and configure backup policy
- perform site-to-site recovery by using Azure Site Recovery
- NOT: SQL or HANA

Azure - Microsoft Azure Architect Technologies

Course Outline:

Implement and Monitor an Azure Infrastructure

1. 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

2. 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

3. 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

4. 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

5. Implement virtual networking

- implement VNet to VNet connections
- implement VNet peering

6. 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

7. 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

1. 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

2. 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

3. 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

4. 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

1. 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

2. 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

1. Implement NoSQL databases

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

2. 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

Prerequisites:

- The Azure Administrator certification course requires professionals to be proficient in using PowerShell and the Command Line Interface.
- Should also have prior experience with Azure Portal, ARM templates, operating systems, virtualization, cloud infrastructure, storage structures, and networking.

Who Should Attend:

- Those who want to pursue the Azure Administrator certification
- Those who want to pass the Microsoft exam AZ-303 & 304
- The course is best suited for Azure administrators and engineers, system administrators looking to expand into Azure, and IT professionals.

Number of Hours: 80hrs

- **Certification: AZ-104, AZ-303 & 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