



Azure Zero to Hero Expert

AZ-900 | AZ-104 | AZ-305 | AZ-204 & AZ-400

Topics Covered as Follows

Describe Core Concepts of Azure

- Introduction of Azure Fundamentals.
- Azure Fundamental Concepts
- Describe Core Azure Architectural Concepts

Describe Core Azure Services

- Explore Azure Compute Service
- Explore Azure Networking Services
- Explore Azure Storage Services
- Explore Azure Database and Analytics Services

Describe and Manage Azure Compute Resources

- Configure Virtual Machines
- Configure Virtual Machine Availability
- Configure Virtual Extensions
- Configure App Services Plans
- Configure Azure App Services
- Configure Azure Container Instances
- Configure Azure Kubernetes Services
- Manage Virtual Machine with Azure CLI
- Create a Windows Virtual Machine in Azure
- Host a Web Application with Azure App Service

-
- Protect your Virtual Machine settings with Azure Automation State Configuration

Implement and Manage Storage in Azure

- Configure Storage Account
- Configure blob Storage
- Configure Storage Security
- Configure Azure Files and Azure File Sync
- Configure Storage with tools
- Create an Azure Storage account
- Control access to Azure Storage with Shared Access Signatures
- Upload, download and manage data with Azure Storage Explorer

Configure and Manage Virtual Network for Azure Administrators

- Configure Virtual Networks
- Configure Network Security Groups
- Configure Azure Firewall
- Configure Azure DNS
- Configure Virtual Network Peering
- Configure VPN Gateway
- Configure Express Route and Virtual WAN
- Configure Network Routing and Endpoints
- Configure Azure Load Balancer
- Configure Azure Application Gateway
- Design an IP Addressing Schema for your Azure Deployment
- Distribute your services across Azure Virtual Networks and integrate them by using Virtual Network Peering
- Host your domain on Azure DNS

-
- Manage and Control traffic flow in your Azure deployment with routes
 - Improve Application scalability and resiliency by using Azure Load Balancer.

Manage Identities and Governance in Azure

- Configure Azure Active Directory
- Configure User and Groups accounts
- Configure Subscriptions
- Configure Azure Policy
- Configure Role-Based Access Control
- Create Azure users and groups in Azure Active Directory
- Secure your Azure Resources with Azure Role-Based Access Control
- Allow users to reset their password with Azure Active Directory Self-Service password reset.

Additional Resources of Azure Administrator

- Configure Azure Resources with tools
- Use Azure Resource Manager
- Configure Resources with ARM Templates
- Automate Azure Tasks using Scripts with Powershell
- Control Azure Services with the CLI
- Deploy Azure Infrastructure by using JSON ARM Templates.

Monitor and Backup Azure Resources

- Configure File and Folder backups
- Configure Virtual Machine backups
- Configure Azure Monitor
- Configure Azure alerts

-
- Configure Log Analytics
 - Configure Network Watcher
 - Improve incident response with alerting on Azure
 - Analyze your Azure infrastructure by using Azure monitor logs
 - Monitor Performance of virtual machines by using Azure monitor VM insights.

Describe Identity, Governance, Privacy and Compliance Features

- Secure access to your applications by using Azure identity services
- Build a cloud governance strategy on Azure
- Examine privacy, compliance and data protection standards on Azure

Describe general Security and Network Security

- Protect against security threats on Azure
- Secure network connectivity on Azure

Describe Core Solutions and Management tools on Azure

- Choose the best Azure IoT service for your applications
- Choose the best AI Service for your needs.
- Choose the best Azure Serverless technology for your business scenario
- Choose the best tools to help organizations build better solutions
- Choose the best tools for managing and configuring your Azure environments
- Choose the best monitoring service for visibility, insight, and outage mitigation.

Implement Infrastructure as a Service Solutions

- Provision virtual machines in Azure
- Create and deploy ARM Templates
- Manage Containers images in Azure Container Registry

Develop Solutions that use Blob Storage

- Explore Azure Blob Storage
- Manage the Azure Blob Storage Lifecycle
- Work with Azure Blob Storage

Create Azure App Service Web App

- Explore Azure App Service
- Configure web app Setting
- Scale apps in Azure App Service
- Explore Azure App Service Deployment slots

Implement Azure Functions

- Explore Azure Functions
- Develop Azure Functions
- Implement Durable Functions

Develop Solutions that use Azure Cosmos DB

- Explore Azure Cosmos DB
- Implement partitioning in Azure Cosmos DB
- Work with Azure Cosmos DB

Integrate caching and content delivery within solutions

- Develop for Azure cache for Redis
- Develop for Storage on Content Delivery Networks

Develop message-based Solutions

- Discover Azure message Queues

Instrument solutions to support monitoring and logging

- Monitor Application performance

Implement API Management

- Explore API management

Implement user Authentication and Authorization

- Explore the Microsoft Identify Platform
- Implement Authentication by using the Microsoft Authentication Library
- Implement shared access signatures
- Explore Microsoft Graph

Implement user secure Cloud Solutions

- Implement Azure key vault
- Implement managed identities
- Implement Azure App Configuration

Get Started on a DevOps transformation journey

- Introduction to DevOps
- Choose the right project
- Describe team structures
- Migrate to DevOps
- Introduce to Source Control
- Describe types of Source Control System
- Work with Azure Repos and Github

Work with Git for enterprise DevOps

- Structure of Git Repo
- Manage Git branches and workflows
- Collaborate with pull requests in Azure Repos
- Explore Git hooks
- Plan foster inner source
- Manage Git Repositories

Implement Continuous Integration with Azure Pipelines and Github Actions

- Explore Azure Pipelines
- Manage Azure Pipelines agents and pools
- Describe Pipelines and Concurrency
- Explore Continuous Integration
- Implement a Pipeline strategy

-
- Integrate with Azure Pipelines
 - Introduction to Github Actions
 - Learn Continuous Integration with Github Actions

Design and Implement a release strategy

- Introduction to continuous delivery
- Explore release strategy recommendations
- Build a high-quality release Pipeline
- Introduction to deployment patterns
- Implement blue-green deployment and feature toggles
- Implement canary releases and dark launching
- Implement A/B testing and progressive exposure deployment

Implement a secure continuous deployment using Azure Pipelines

- Create a release Pipeline
- Configure and Provision environments
- Manage and modularize tasks and templates
- Automate inspection of health
- Introduction to security development process
- Manage application configuration data
- Integrate with identity management systems
- Implement application configuration

Manage Infrastructure as code using Azure Desired State Configuration and Third Party Tools

- Explore infrastructure as code and Configuration Management
- Create Azure Resource using Azure Resource Manager Templates

-
- Create Azure Resources by using Azure CLI
 - Explore Azure Automation with DevOps
 - Implement Desired State Configuration
 - Introduction to Chef and Puppet
 - Implement Ansible
 - Implement Terraform

Design and Implement a dependency management Strategy

- Explore package dependencies
- Understand package management
- Migrate consolidating and secure artifacts
- Implement a versioning strategy

Create and Manage containers using Docker and Kubernetes

- Design a Container build strategy
- Implement Docker multi-stage builds
- Implement Azure Kubernetes Services
- Explore Kubernetes Tooling
- Integrate Azure Kubernetes Services with Pipelines

Implement Continuous Feedback

- Implement tools to track usage and flow
- Implement route for mobile application crash report data
- Develop monitor and status dashboards
- Share knowledge within teams
- Explore SRE and design practices to measure end-user satisfaction

-
- Design processes to capture and analyze user feedback
 - Design processes to automate application analytics
 - Manage alerts, blameless retrospectives and a just culture

Implement security and validate code bases of compliance

- Understand Security in the Pipeline
- Introduction to Azure Security Center
- Implement Open-Source software
- Manage anti-malware and anti-spam policies
- Integrate license and vulnerability scans
- Identify technical debt