



**Enterprise Computing Solutions - Education Services**

## **TRAINING OFFERING**

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# AZ-304: Microsoft Azure Architect Design

CODE:	LENGTH:	PRICE:
MCS_AZ-304T00	32 Hours (4 days)	kr30,000.00

## Description

This course teaches Solutions Architects how to translate business requirements into secure, scalable, and reliable solutions. Lessons include design considerations related to logging, cost analysis, authentication and authorization, governance, security, storage, high availability, and migration. This role requires decisions in multiple areas that affect an overall design solution.

## Objectives

After completing this course, students will be able to:

- Recommend solutions to minimize costs
- Recommend a solution for Conditional Access, including multi-factor authentication
- Recommend a solution for a hybrid identity including Azure AD Connect and Azure AD Connect
- Recommend a solution for using Azure Policy
- Recommend a solution that includes KeyVault
- Recommend a solution that includes Azure AD Managed Identities
- Recommend a storage access solution
- Design and Azure Site Recovery solution
- Recommend a solution for autoscaling
- Recommend a solution for containers
- Recommend a solution for network security
- Recommend a solution for migrating applications and VMs
- Recommend a solution for migration of databases

## Audience

This course is for IT Professionals with expertise in designing and implementing solutions running on Microsoft Azure. They should have broad knowledge of IT operations, including networking, virtualization, identity, security, business continuity, disaster recovery, data platform, budgeting, and governance. Azure Solution Architects use the Azure Portal and as they become more adept they use the Command Line Interface. Candidates must have expert-level skills in Azure administration and have experience with Azure development processes and DevOps processes.

## Prerequisites

Successful Azure Solution Architects start this role with experience on operating systems, virtualization, cloud infrastructure, storage structures, and networking.

- Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks.
- Understanding of network configuration, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies.
- Understanding of Active Directory concepts, including domains, forests, domain controllers, replication, Kerberos protocol, and Lightweight Directory Access Protocol (LDAP).
- Understanding of resilience and disaster recovery, including backup and restore operations.

## Programme

### Course Outline

**Module 1: Design for Cost Optimization** In this module, you will learn how to optimize costs from recommendations, breakdown costs by Azure Service, and download and review usage details.

**01-View Lessons**

**Recommend Solutions for Cost Management** Recommended Viewpoints for Minimizing Costs

After completing this module, students will be able to:

- Optimize with Azure Cost Management.
- Design with Cost in mind
- Optimize Costs from recommendations

**Module 2: Design a Solution for Logging and Monitoring** In this module, you will learn about Azure Monitor, Azure Application Insights, and Azure Sentinel. You will be able to monitor Azure Resources with Azure Monitor and collect and analyze resource Logs for Azure.

**Lessons**

**Azure Monitoring Services** Azure Monitor

After completing this module, students will be able to:

- Monitor Azure resources with Azure Monitor
- Collect and analyze Resource Logs for Azure resources
- Understand how Azure Sentinel collects data on the devices, users, infrastructure, and applications

**Module 3: Design Authentication**In this module, you will learn to implement Conditional Access and Azure Multi-Factor Authentication and also be able to recommend an Authentication Methodology for Hybrid Identity.Lessons  
Recommend a Solution for Multi-Factor Authentication Recommend a Solution for Single-Sign On (SSO)  
Five Steps for Securing Identity Infrastructure Recommend a Solution for a Hybrid Identity  
Recommend a Solution for B2B Integration After completing this module, students will be able to: Plan for a MFA Deployment  
Understand Azure Active Directory Seamless Single Sign-On (SSO) Recommend an Authentication Methodology for Hybrid Identity  
Integrate with Identity Providers

**Module 4: Design Authorization**In this module, you will learn how to provide Identities to services and understand the hierarchy of Management Groups and Subscriptions.Lessons  
Infrastructure Protection Recommend a Hierarchical Structure for Management Groups, Subscriptions and Resource Groups  
After completing this module, students will be able to: Recommend hierarchy of Management Groups and Subscriptions.  
Configure custom RBAC Role definitions and assignments

**Module 5: Design Governance**In this module, you will learn apply an Azure Policy, Identify non-compliant resources, and manage tag governance with Azure Policy.Lessons  
Recommend a Solution for using Azure Policy Recommend a Solution for using Azure Blueprint  
After completing this module, students will be able to: Organize Policies with Initiatives Manage Tag Governance with Azure Policy  
Provide guidance on Azure Blueprints

**Module 6: Design Security for Applications**In this module, you will understand Azure Key Vault availability and redundancy, managed Identities for Azure resources. Also, learn about system-assigned Managed Identity and Azure VMs.Lessons  
Recommend a Solution using KeyVault Recommend a Solution using Azure AD Managed Identities  
After completing this module, students will be able to: Understand Key Vault authentication and authorization  
Understand Azure Key Vault availability and redundancy  
Understand how Blueprints differ from Resource Manager Templates and Azure Policy

**Module 7: Design a Solution for Databases**In this module, you will be able to recommend the appropriate data store and recommend Azure SQL Database and Azure SQL Managed Instance Service tiers.Lessons  
Select an Appropriate Data Platform Based on Requirements Overview of Azure Data Storage  
Recommend Database Service Tier Sizing Dynamically Scale Azure SQL Database and Azure SQL Managed Instances  
Recommend a Solution for Encrypting Data at Rest, Transmission, and In Use After completing this module, students will be able to:  
Recommend Database Service Tier Sizing Recommend a Solution for Encrypting Data at Rest, Transmission, and In Use  
Understand Azure Data Lake Store and Azure Blob Storage containers

**Module 8: Design Data Integration**In this module, you will learn about data flows using Azure Data Factory and Azure Synapse Analytics architecture.Lessons  
Recommend a Data Flow Recommend a Solution for Data Integration After completing this module, students will be able to:  
Implement Azure Synapse Analytics Describe how data flows using Azure Data Factory  
Demonstrate how to use Azure Data Factory to load data into SQL Data Warehouse

**Module 9: Select an Appropriate Storage Account**In this module, you will learn about recommend a design a strategy for using tiered storage and manage tiered Storage using Azure tools.Lessons  
Understanding Storage Tiers Recommend a Storage Access Solution Recommend Storage Management Tools  
After completing this module, students will be able to: Recommend tools for working with Azure Storage  
Design for Azure Blob Storage access tiers

**Module 10: Design a Solution for Backup and Recovery**In this module, you will learn about solutions for site recovery capacity and site failover and failback. You will be able to recommend solutions for recovery in different regions.Lessons  
Recommend a Recovery Solution for Hybrid and On-Premises Workloads Design and Azure Site Recovery Solution  
Recommend a Solution for Recovery in Different Regions Recommend a Solution for Azure Backup Management  
Design a Solution for Data Archiving and Retention After completing this module, students will be able to:  
Recommend solutions for Azure hybrid and on-premises workloads that meets recovery objectives  
Recommend a solution for site recovery capacity Recommend storage types and methodology for data archiving  
Identify requirements for data archiving

**Module 11: Design for High Availability**In this module, you will learn about solutions for application and workload redundancy, including compute, database, and storage.Lessons  
Recommend a Solution for Application and Workload Redundancy 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 After completing this module, students will be able to:  
Recommend a solutions for autoscaling Identify storage types for high availability  
Recommend a solutions for geo-redundancy of workloads

**Module 12: Design a Compute Solution**In this module, you will learn about the appropriate compute technologies, including virtual machines, App Services, Service Fabric, Azure Functions, Windows Virtual Desktop, and containers. Lessons  
Recommend a Solution for Compute Provisioning Determine Appropriate Compute Technologies  
Recommend a Solution for Containers Recommend a Solution for Automating Compute Management  
After completing this module, students will be able to: Refer solution for automating compute management  
Recommend the appropriate compute technologies, including virtual machines, and App Services  
Recommend the appropriate AKS and ACI and the configurations

**Module 13: Design a Network Solution**In this module, you will learn about solutions for network addressing and name resolution, network provisioning, and network security.Lessons  
Recommend a Solution for Network Addressing and Name Resolution Recommend a Solution for Network Provisioning  
Recommend a Solution for Network Security Recommend a Solution for Internet Connectivity and On-Premises Networks,  
Recommend a Solution for Automating Network Management Recommend a Solution for Load Balancing and Traffic Routing  
After completing this module, students will understand : Solutions for network addressing and name resolution  
Solutions for network security including private endpoints, firewalls, and gateways

Recommendations for network connectivity to the Internet, on-premises networks, and other VNets.

Recommendations for load balancing and traffic routing

Module 14: Design an Application ArchitectureIn this module, you will learn about solution for deployment of applications including ARM templates, Logic Apps, or Azure Functions. You will also learn about microservices architecture including Event Grid, Event Hubs, Service Bus, Storage Queues, Logic Apps, Azure Functions, and webhooks.Lessons

Recommend a Microservices Architecture Recommend an Orchestration Solution for Deployment of Applications

Recommend a Solution for API Integration After completing this module, students will be able to:

Recommend deployment solutions using ARM templates, Logic Apps, or Azure Functions

Recommend a solution for monitoring automation Recommend a hosting structure for API management

Module 15: Design MigrationsIn this module, you will learn about recommend a solution for migrating applications and VMs and a solution for migration of databases. Lessons

Assess and On-Premises Servers and Applications for Migration Recommend a Solution for Migrating Applications and VMs

Recommend a Solution for Migration of Databases After completing this module, students will be able to:

Assess on-premises servers and applications for migration Suggest solutions for migrating applications and VMs

Determine migration scope, including redundant, related, trivial, and outdated data

## Session Dates

På begäran, [kontakta oss](#)

## Ytterligare information

[Denna utbildning finns också som utbildning på plats. Kontakta oss för mer information.](#)