COURSE OUTLINE

AZ-303T00:
Microsoft Azure Architect Technologies

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
5 Day(s)	Intermediate	Azure	In Class	N/A

Course Overview

This course teaches Solutions Architects how to translate business requirements into secure, scalable, and reliable solutions. Lessons include virtualization, automation, networking, storage, identity, security, data platform, and application infrastructure. This course outlines how decisions in each theses area affects an overall solution.

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.

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.. No bullets or lists.

At Course Completion

After completing this course, students will be able to:

- Secure identities with Azure Active Directory and users and groups.
- Implement identity solutions spanning on-premises and cloud-based capabilities
- Apply monitoring solutions for collecting, combining, and analyzing data from different sources.
- Manage subscriptions, accounts, Azure policies, and Role-Based Access Control.
- Administer Azure using the Resource Manager, Azure portal, Cloud Shell, and CLI.
- Configure intersite connectivity solutions like VNet Peering, and virtual network gateways.
- Administer Azure App Service, Azure Container Instances, and Kubernetes.

Topics

Module 1: Implement VMs for Windows and Linux

In this module, you will learn about Azure virtual machines including planning, creating, availability and extensions. This module includes:

Lessons

- Select Virtual Machine Size
- Configure High Availability
- Implement Azure Dedicated Hosts
- Deploy and Configure Scale Sets
- Configure Azure Disk Encryption

Module 2: Automate Deployment and Configuration of Resources

In this module, you will learn about the tools an Azure Administrator uses to manage their infrastructure. This includes the Azure Portal, Cloud Shell, Azure PowerShell, CLI, and Resource Manager Templates. This module includes:

Lessons

- Azure Resource Manager Templates
- Save a Template for a VM
- Evaluate Location of New Resources
- Configure a Virtual Hard Disk Template
- Deploy from a Template
- Create and Execute an Automation Runbook

Module 3: Implement Virtual Networking

In this module, you will learn about basic virtual networking concepts like virtual networks and subnetting, IP addressing, network security groups, Azure Firewall, and Azure DNS.

Lessons

- Virtual Network Peering
- Implement VNet Peering

Module 4: Implement Load Balancing and Network Security

In this module, you will learn about network traffic strategies including network routing and service endpoints, Azure Load Balancer, Azure Application Gateway, and Traffic Manager.

Lessons

- Implement Azure Load Balancer
- Implement an Application Gateway
- Understand Web Application Firewall
- Implement Azure Firewall
- Implement Azure Front Door
- Implementing Azure Traffice Manager
- Implement Network Security Groups and Application Security Grou
- Implement Azure Bastion

Module 5: Implement Storage Accounts

In this module, you will learn about basic storage features including storage accounts, blob storage, Azure files and File Sync, storage security, and storage tools.

Lessons

- Storage Accounts
- Blob Storage
- Storage Security
- Managing Storage
- Accessing Blobs and Queues using AAD
- Configure Azure Storage Firewalls and Virtual Networks

Module 6: Implement Azure Active Directory

In this module, you will learn how to secure identities with Azure Active Directory, and implement users and groups.

Lessons

- Overview of Azure Active Directory
- Users and Groups
- Domains and Custom Domains
- Azure AD Identity Protection
- Implement Conditional Access
- Configure Fraud Alerts for MFA
- Implement Bypass Options
- Configure Trusted IPs
- Configure Guest Users in Azure AD
- Manage Multiple Directori

Module 7: Implement and Manage Azure Governance

In this module, you will learn about managing your subscriptions and accounts, implementing Azure policies, and using Role-Based Access Control.

Lessons

- Create Management Groups, Subscriptions, and Resource Groups
- Overview of Role-Based Access Control (RBAC)
- Role-Based Access Control (RBAC) Roles
- Azure AD Access Reviews
- Implement and Configure an Azure Policy
- Azure Blueprints

Module 8: Implement and Manage Hybrid Identities

In this module, you will learn how to install and configure Azure AD Connect and implement Azure AD Connect Health.

Lessons

- Install and Configure Azure AD Connect
- Configure Password Sync and Password Writeback
- Configure Azure AD Connect Health

Module 9: Manage Workloads in Azure

In this module, you will learn how to migrate workloads using Azure Migrate, perform VMware agent-based and agent-less migrations, and perform Azure Backup and Azure Site Recovery.

Lessons

- Migrate Workloads using Azure Migrate
- VMware - Agentless Migration
- VMware - Agent-Based Migration
- Implement Azure Backup
- Azure to Azure Site Recovery
- Implement Azure Update Management

Module 10: Implement Cloud Infrastructure Monitoring

In this module, you will learn about Azure Monitor, Azure Workbooks, Azure Alerts, Network Watcher, Azure Service Health, Azure Application Insights.

Lessons

- Azure Infrastructure Security Monitoring
- Azure Monitor

- Azure Workbooks
- Azure Alerts
- Log Analytics
- Network Watcher
- Azure Service Health
- Monitor Azure Costs
- Azure Application Insights
- Unified Monitoring in Azure
- In this module, you will learn how to

Module 11: Manage Security for Applications

In this module, you will learn about Azure Key Vault and implementing authentication using Azure Managed Identities.

Lessons

- Azure Key Vault
- Azure Managed Identity

Module 12: Implement an Application Infrastructure

In this module, you will learn how to create an App Service web App for Containers, create and configure an App Service Plan, and create and manage Deployment Slots.

Lessons

- Create and Configure Azure App Service
- Create an App Service Web App for Containers
- Create and Configure an App Service Plan
- Configure Networking for an App Service
- Create and Manage Deployment Slots
- Implement Logic Apps
- Implement Azure Functions

Module 13: Implement Container-Based Applications

In this module, you will learn how to run Azure Container instances and how to deploy Kubernetes with AKS.

Lessons

- Azure Container Instances
- Configure Azure Kubernetes Service

Module 14: Implement NoSQL Databases

In this module, you will learn about Azure Table Storage and recommend options for CosmsoDB APIs.

Lessons

- Configure Storage Account Tables
- Select Appropriate CosmosDB APIs

Module 15: Implement Azure SQL Databases

In this module, you will create an Azure SQL Database single database, create an Azure SQL Database Managed Instance, and review high-availability and Azure SQL database.

Lessons

- Configure Azure SQL Database Settings
- Implement Azure SQL Database Managed Instances
- High-Availability and Azure SQL Database