

## AZ-030T00-A: Microsoft Azure technologies for AWS architects

### **Course outline**

#### **Module 1: Introduction to Azure**

In this module, you'll learn about how Azure organizes subscriptions and accounts, and you can set up resource groups and templates to standardize creation and life-cycle management of your resources.

##### **Lessons**

- Subscriptions and accounts
- Resource groups and templates in Azure Resource Manager

After completing this module you will be able to:

- Determine the type of account and subscription best suited to your solution.
- Create resource groups and templates to standardize and manage solutions.

#### **Module 2: Azure global infrastructure**

In this module, you'll see the worldwide architecture of Microsoft Azure and how that architecture affects the availability and reliability of your applications and sites.

##### **Lessons**

- Azure regions
- Azure Availability Zones
- Comparison with AWS

After completing this module you will be able to:

- Implement an architecture that provides the availability and reliability required by your solution.

## Module 3: Implement Azure Active Directory

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

### Lessons

- Introduction to Azure Active Directory
- Domains and custom domains
- Safety features
- Guest users in Azure Active Directory
- Manage multiple directories
- Comparison with AWS

After completing this module you will be able to:

- Secure identities with Azure Active Directory.
- Implement users and groups.

## Module 4: Implement and manage hybrid identities

In this module, you will learn how to extend your on-premise Active Directory accounts to the cloud, and how to sync the accounts.

### Lessons

- Introduction to Azure AD Connect
- Comparison with AWS

After completing this module you will be able to:

- Use your on-premise Active Directory account to authenticate to your cloud solution.
- Sync accounts between on-premise and the cloud.

## Module 5: Implement virtual networking

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

### **Lessons**

- Azure Virtual Network and VNet peering
- VPN and ExpressRoute connections
- Comparison with AWS

After completing this module you will be able to:

- Design virtual networks with security in mind.

## **Module 6: Implement VMs for Windows and Linux**

In this module, you will learn how to configure VMs for high availability and how to deploy and configure scale sets.

### **Lessons**

- Configure high availability
- Comparison with AWS

After completing this module you will be able to:

- Implement VMs to create high availability solutions.
- Deploy and configure scale sets.

## **Module 7: Implement load balancing and network security**

In this module, you will learn how to implement Azure Load Balancer, and how to set up security groups.

### **Lessons**

- Implement Azure Load Balancer
- Implement an Azure Application Gateway
- Implement Azure Firewall
- Implement network security groups and application security groups
- Comparison with AWS

After completing this module you will be able to:

- Implement the components of load balancing.

- Set up network and application security groups.

## **Module 8: Implement container-based applications**

In this module, you will learn how to configure the Azure Kubernetes Service and how to publish a solution on an Azure container.

### **Lessons**

- Configure Azure Kubernetes Service
- Publish a solution on an Azure Container Instance
- Comparison with AWS

After completing this module you will be able to:

- Configure Azure Kubernetes Service for your solution.
- Publish your solution on an Azure Container Instance.

## **Module 9: Implement an application infrastructure**

In this module, you'll learn the basics of selecting an App Service plan, configuring your plan, and setting up Logic Apps and Azure Functions.

### **Lessons**

- Create an App Service plan
- Create and configure Azure App Service
- Configure networking for an App Service
- Introduction to Logic Apps and Azure Functions
- Comparison with AWS

After completing this module you will be able to:

- Select an App Service plan suitable for your solution.
- Configure the App Service.
- Incorporate Logic Apps and Azure Functions into your solution.

## **Module 10: Implement storage accounts**

In this module, you'll be introduced to Azure Storage and how to configure network access, replication, authentication, access, and failover.

### Lessons

- Azure Storage core concepts
- Managing the Azure Blob storage lifecycle
- Working with Azure Blob storage
- Comparison with AWS

After completing this module you will be able to:

- Select an appropriate Azure Storage account for your solution.
- Configure your storage account.

## Module 11: Implement NoSQL databases

In this module, you will learn about Azure Cosmos DB and how to configure it.

### Lessons

- Introduction to Azure Cosmos DB
- Consistency
- Select appropriate CosmosDB APIs
- Set up replicas in CosmosDB
- Comparison with AWS DynamoDB

After completing this module you will be able to:

- Configure a NoSQL database solution by using Azure Cosmos DB.

## Module 12: Implement Azure SQL databases

In this module, you will learn how to implement managed instances of Azure SQL database and how to configure it for high availability.

### Lessons

- Configure Azure SQL database settings
- Implement Azure SQL Database managed instances

- Configure high availability for an Azure SQL database
- Comparison with AWS

After completing this module you will be able to:

- Implement managed instances of Azure SQL database.
- Configure your database for high availability.

## **Module 13: Implement cloud infrastructure monitoring**

In this module, you will learn how to use Azure Monitor to set alerts and how to log and manage costs.

### **Lessons**

- Monitor security
- Monitor cost
- Configure a Log Analytics workspace
- Comparison with AWS

After completing this module you will be able to:

- Set up security monitoring for your solution.
- Monitor costs by analyzing logs.

## **Module 14: Implement and manage Azure governance solutions**

In this module, you will learn how to configure role-based access control and how to configure Azure Policy to force compliance with governance requirements.

### **Lessons**

- Assign RBAC roles
- Configure management access to Azure
- Implement and configure an Azure Policy
- Comparison with AWS

After completing this module you will be able to:

- Configure RBAC roles for governance access.

- Configure an Azure Policy to enforce compliance with governance requirements.

## **Module 15: Manage security for applications**

In this module, you will learn how to implement and configure KeyVault, how to register and manage application in Azure Active Directory, and how to configure Azure Active Directory Managed Identities.

### **Lessons**

- Implement Azure Key Vault
- Implement and configure Azure AD Managed Identities
- Register and manage applications in Azure AD
- Comparison with AWS

After completing this module you will be able to:

- Register your app in Azure Active Directory.
- Configure Azure Active Directory for managed identities used by your app to access data.

## **Module 16: Migration, backup, and disaster recovery management**

In this module, you will learn how to migrate workloads, and how to manage backup, disaster recovery, and updates.

### **Lessons**

- Migrate workloads
- Implement Azure Backup for VMs
- Implement disaster recovery
- Comparison with AWS

After completing this module you will be able to:

- Migrate workloads to the cloud and across VMs.
- Implement cloud backups.
- Implement disaster recovery options.
- Implement update strategies that avoid negative impacts to availability and performance.

