

Course Details**Course Code:** AZ-104T00**Duration:** 4 days**Notes:**

- This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.
- Course content, prices, and availability are subject to change without notice.
- Terms and Conditions apply

Elements of this syllabus are subject to change.

About this course

This course teaches IT Professionals how to manage their Azure subscriptions, secure identities, administer the infrastructure, configure virtual networking, connect Azure and on-premises sites, manage network traffic, implement storage solutions, create and scale virtual machines, implement web apps and containers, back up and share data, and monitor your solution.

Audience Profile

This course is for Azure Administrators. The Azure Administrator implements, manages, and monitors identity, governance, storage, compute, and virtual networks in a cloud environment. The Azure Administrator will provision, size, monitor, and adjust resources as appropriate. Successful Azure Administrators start this role with experience in virtualization, networking, identity, and storage.

- Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks.
- Understanding of network configurations, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies.
- Understanding of Active Directory concepts, including users, groups, and role-based access control.
- Understanding of resilience and disaster recovery, including backup and restore operations.

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Configure Microsoft Entra ID

AI assisted content. This module was partially created with the help of artificial intelligence.
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Learn how to configure Microsoft Entra ID, including features like Microsoft Entra join and self-service password reset.

Learning objectives

In this module, you learn how to:

- Define Microsoft Entra concepts, including identities, accounts, and tenants.
- Describe Microsoft Entra features to support different configurations.
- Understand differences between Microsoft Entra ID and Active Directory Domain Services (AD DS).
- Choose between supported editions of Microsoft Entra ID.
- Use the Microsoft Entra self-service password reset feature.

Configure user and group accounts

Learn how to configure user and group accounts.

Learning objectives

In this module, you learn how to:

- Configure users accounts and user account properties.
- Create new user accounts.
- Import bulk user accounts with a template.
- Configure group accounts and assignment types.

Configure subscriptions

Learn how to configure Azure subscriptions, including how to obtain a subscription, implement cost management, and apply Azure resource tags.

Learning objectives

In this module, you learn how to:

- Determine the correct region to locate Azure services.
- Review features and use cases for Azure subscriptions.
- Obtain an Azure subscription.

- Understand billing and features for different Azure subscriptions.
- Use Microsoft Cost Management for cost analysis.
- Discover when to use Azure resource tagging.
- Identify ways to reduce costs.

Configure Azure Policy

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Learn how to configure Azure Policy to implement compliance requirements.

Learning objectives

In this module, you learn how to:

- Create management groups to target policies and spending budgets.
- Implement Azure Policy with policy and initiative definitions.
- Scope Azure policies and determine compliance.

Configure role-based access control

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Learn how to use role-based access control (RBAC) to ensure resources are protected, but users can still access the resources they need.

Learning objectives

In this module, you learn how to:

- Identify features and use cases for role-based access control.
- List and create role definitions.
- Create role assignments.
- Identify differences between Azure RBAC and Microsoft Entra roles.
- Manage access to subscriptions with RBAC.
- Review built-in Azure RBAC roles.

Configure Azure resources with tools

You will learn how to select a tooling option such as Azure portal, Azure PowerShell, Azure CLI, or Azure Cloud Shell

Learning objectives

After completing this module, you will be able to:

- Manage resources with the Azure portal.
- Manage resources with Azure Cloud Shell.
- Manage resources with Azure PowerShell.
- Manage resources with Azure CLI.

Use Azure Resource Manager

You'll learn how to use resource groups to organize your Azure resources.

Learning objectives

After completing this module, you'll be able to:

- Identify the features and usage cases for Azure Resource Manager.
- Describe each Azure Resource Manager component and its usage.
- Organize your Azure resources with resource groups.
- Apply Azure Resource Manager locks.
- Move Azure resources between groups, subscriptions, and regions.
- Remove resources and resource groups.
- Apply and track resource limits.

Configure resources with Azure Resource Manager templates

You'll learn how to use Azure Resource Manager templates to consistently deploy assets.

Learning objectives

- List the advantages of Azure templates.
- Identify the Azure template schema components.
- Specify Azure template parameters.
- Locate and use Azure QuickStart Templates.

Configure virtual networks

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Learn to configure virtual networks and subnets, including IP addressing.

Learning objectives

In this module, you learn how to:

- Describe Azure virtual network features and components.
- Identify features and usage cases for subnets and subnetting.
- Identify usage cases for private and public IP addresses.
- Create a virtual network and assign IP address.

Configure network security groups

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Learn how to implement network security groups, and ensure network security group rules are correctly applied.

Learning objectives

In this module, you learn how to:

- Determine when to use network security groups.
- Create network security groups.
- Implement and evaluate network security group rules.
- Describe the function of application security groups.

Configure Azure DNS

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Learn how to configure Azure DNS including custom domain names and record sets.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for domains, custom domains, and private zones.
- Verify custom domain names by using DNS records.
- Implement DNS zones, DNS delegation, and DNS record sets.

Configure Azure Virtual Network peering

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Learn to configure an Azure Virtual Network peering connection and address transit and connectivity concerns.

Learning objectives

In this module, you learn how to:

- Identify usage cases and product features of Azure Virtual Network peering.
- Configure your network to implement Azure VPN Gateway for transit connectivity.
- Extend peering by using a hub and spoke network with user-defined routes and service chaining.

Configure network routing and endpoints

Learn how to configure network routes, including endpoints and private links.

Learning objectives

In this module, you learn how to:

- Implement system routes and user-defined routes.
- Configure a custom route.
- Implement service endpoints.
- Identify features and usage cases for Azure Private Link and endpoint services.

Configure Azure Load Balancer

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Learn how to configure an internal or public load balancer.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for Azure Load Balancer.
- Implement public and internal Azure load balancers.
- Compare features of load balancer SKUs and configuration differences.
- Configure back-end pools, load-balancing rules, session persistence, and health probes.

Configure Azure Application Gateway

Learn how to configure Azure Application Gateway.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for Azure Application Gateway.
- Implement an Azure application gateway, including selecting a routing method.
- Configure gateway components, such as listeners, health probes, and routing rules.

Configure storage accounts

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Learn how to configure storage accounts, including replication and endpoints.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for Azure storage accounts.
- Select between different types of Azure Storage and create storage accounts.
- Select a storage replication strategy.
- Configure secure network access to storage endpoints.

Configure Azure Blob Storage

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Learn how to configure Azure Blob Storage, including tiers and object replication.

Learning objectives

In this module, you learn how to:

- Understand the purpose and benefits of Azure Blob Storage.
- Create and configure Azure Blob Storage accounts.
- Manage containers and blobs within Azure Blob Storage.
- Optimize blob storage performance and scalability.

- Implement lifecycle management policies to automate data movement and deletion.
- Determine the best pricing plans for your Azure Blob Storage.

Configure Azure Storage security

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Learn how to configure common Azure Storage security features like storage access signatures.

Learning objectives

In this module, you learn how to:

- Configure a shared access signature (SAS), including the uniform resource identifier (URI) and SAS parameters.
- Configure Azure Storage encryption.
- Implement customer-managed keys.
- Recommend opportunities to improve Azure Storage security.

Configure Azure Files and Azure File Sync

Learn how to configure Azure Files and Azure File Sync.

Learning objectives

In this module, you learn how to:

- Identify storage for file shares and blob data.
- Configure Azure file shares and file share snapshots.
- Identify features and use cases of Azure File Sync.
- Identify Azure File Sync components and configuration steps.

Configure Azure Storage with tools

Learn how to configure Azure Storage with tools like Azure Storage Explorer and AZCopy.

Learning objectives

In this module, you learn how to:

- Configure and use Azure Storage Explorer.
- Configure the Azure Import/Export service.
- Use the WAImportExport tool with the Azure Import/Export service.

- Configure and use AZCopy.

Configure virtual machines

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Learn how to configure virtual machines including sizing, storage, and connections.

Learning objectives

In this module, you learn how to:

- Determine the responsibilities of cloud service providers and customers in a cloud computing environment.
- Identify the key considerations and factors involved in planning for virtual machines. Considerations include workload requirements, resource allocation, and secure access.
- Configure virtual machine storage and virtual machine sizing.
- Create a virtual machine in the Azure portal.
- Practice deploying an Azure virtual machine and verify the configuration.

Configure virtual machine availability

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Learn how to configure virtual machine availability including vertical and horizontal scaling.

Note

This content was partially created with the help of AI. An author reviewed and revised the content as needed. Read more.

Learning objectives

In this module, you learn how to:

- Implement availability sets and availability zones.
- Implement update and fault domains.
- Implement Azure Virtual Machine Scale Sets.
- Autoscale virtual machines.

Configure Azure App Service plans

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Learn how to configure an Azure App Service plan, including pricing and scaling.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for Azure App Service.
- Select an appropriate Azure App Service plan pricing tier.
- Scale an Azure App Service plan.

Configure Azure App Service

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Learn how to configure and monitor Azure App Service instances, including deployment slots.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for Azure App Service.
- Create an app with Azure App Service.
- Configure deployment settings, specifically deployment slots.
- Secure your Azure App Service app.
- Configure custom domain names.
- Backup and restore your Azure App Service app.
- Configure Azure Application Insights.

Configure Azure Container Instances

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Learn how to configure Azure Container Instances including container groups.

Learning objectives

In this module, you learn how to:

- Identify when to use containers versus virtual machines.
- Identify the features and usage cases of Azure Container Instances.

- Implement Azure container groups.

Configure file and folder backups

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Learn how to configure backup and restore policies that meet your company's regulatory needs.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for Azure Backup.
- Configure Azure Recovery Services vault backup options.
- Configure the Microsoft Azure Recovery Services (MARS) agent for Azure Backup.
- Implement on-premises file and folder backups.

Configure virtual machine backups

Learn how to configure virtual machine backups including restore operations.

Learning objectives

In this module, you learn how to:

- Identify features and usage cases for different Azure backup methods.
- Configure virtual machine snapshots and backup options.
- Implement virtual machine backup and restore, including soft delete.
- Perform site-to-site recovery by using Azure Site Recovery.
- Compare the Azure Backup agent to the Microsoft Azure Backup Server.

Configure Azure Monitor

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Learn how to configure Azure Monitor, including querying the Azure Monitor activity log.

Learning objectives

In this module, you learn how to:

- Identify the features and usage cases for Azure Monitor.

- Configure and interpret metrics and logs.
- Identify the Azure Monitor components and data types.
- Configure the Azure Monitor activity log.

Improve incident response with alerting on Azure

Respond to incidents and activities in your infrastructure through alerting capabilities in Azure Monitor.

Learning objectives

In this module, you'll:

- Configure alerts on events in your Azure resources based on metrics, log events, and activity log events.
- Learn how to use action groups in response to an alert, and how to use alert processing rules to override action groups when necessary.

Configure Log Analytics

You will learn how to configure Log Analytics including structuring queries.

Learning objectives

After completing this module, you will be able to:

- Identify the features and usage cases for Log Analytics.
- Create a Log Analytics workspace.
- Structure a Log Analytics query and review results.

Configure Network Watcher

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You learn how to configure Network Watcher and troubleshoot common networking problems.

Learning objectives

After completing this module, you'll be able to:

- Identify the features and usage cases for Azure Network Watcher.
- Configure diagnostic capabilities like IP Flow Verify, Next Hop, and Network Topology.