

## AZ-104: Microsoft Azure Administrator

Microsoft - Azure Apps & Infrastructure

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Live Training (também disponível em presencial)

• Localidade: Imprimir Curso

• Data: 08 Apr 2024

• Preço: 1200 € (Os valores apresentados não incluem IVA. Oferta de IVA a particulares e estudantes.)

• Horário: Tarde das 14h00-17h30

Nível: IntermédioDuração: 28h

## Sobre o curso

O presente curso ensina Profissionais de TI a gerir as suas subscrições do Azure, a proteger identidades, a administrar a infraestrutura, a configurar o funcionamento em rede virtual, a ligar sites Azure a sites on-premises, a gerir o tráfego de rede, a implementar soluções de armazenamento, a criar e a escalar máquinas virtuais, a implementar aplicações web e contentores, a fazer cópias de segurança e a partilhar dados, e a monitorizar soluções.

# Destinatários

- Este curso destina-se a Administradores do Azure.
- As tarefas destes correspondem à implementação, à gestão e à monitorização de aspetos como a identidade, a governação, o armazenamento, a computação e as redes virtuais num ambiente cloud.
- A frequência deste curso possibilitará aos Administradores do Azure que providenciem, dimensionem, monitorizem e ajustem os recursos conforme seja apropriado.

# **Objetivos**

- Prepare for Exam AZ-104: Microsoft Azure Administrator
- Manage Azure Active Directory objects, role-based access control (RBAC), subscriptions, and governance in Azure
- Manage storage accounts, data in Azure Storage, and Azure File and Blob storage
- Deploy and configure virtual machines, containers, and Web Apps in Azure
- Configure and manage Azure network capabilities like connectivity services, application protection, application delivery, and network monitoring services
- Monitor resources by using Azure Monitor and implement backup and recover in Azure

# Pré-requisitos

- Administradores do Azure bem-sucedidos com experiência em virtualização, funcionamento em rede, identidade e armazenamento.
- Compreensão das tecnologias de virtualização on-premises, incluindo máquinas virtuais, funcionamento em rede virtual e discos rígidos virtuais.
- Compreensão das configurações de rede, incluindo TCP/IP, Domain Name System (DNS), redes privadas virtuais (VPNs), firewalls e tecnologias de encriptação.
- Compreensão dos conceitos do Active Directory, como utilizadores, grupos e controlo de acesso baseado em funções.
- Compreensão das abordagens de resiliência e de recuperação após desastre, incluindo cópias de segurança e operações de restauro.

# Programa

- Configure Microsoft Entra ID
- Configure user and group accounts
- Configure subscriptions
- Configure Azure Policy
- Configure role-based access control
- Configure Azure resources with tools
- Use Azure Resource Manager
- Configure resources with Azure Resource Manager templates
- Configure virtual networks
- · Configure network security groups
- Configure Azure DNS
- Configure Azure Virtual Network peering

- · Configure network routing and endpoints
- Configure Azure Load Balancer
- Configure Azure Application Gateway
- · Configure storage accounts
- Configure Azure Blob Storage
- Configure Azure Storage security
- Configure Azure Files and Azure File Sync
- · Configure Azure Storage with tools
- · Configure virtual machines
- Configure virtual machine availability
- Configure Azure App Service plans
- Configure Azure App Service
- Configure Azure Container Instances
- · Configure file and folder backups
- Configure virtual machine backups
- Configure Azure Monitor
- Configure Azure alerts
- Configure Log Analytics
- Configure Network Watcher

## **Configure Microsoft Entra ID**

Learn how to configure Microsoft Entra ID, including features like Microsoft Entra join and self-service password reset.

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.
- Implement the Microsoft Entra join feature.
- Use the Microsoft Entra self-service password reset feature.
- Describe Microsoft Entra ID benefits and features
- Describe Microsoft Entra concepts
- Compare Active Directory Domain Services to Microsoft Entra ID
- Select Microsoft Entra editions
- Implement Microsoft Entra join
- Implement Microsoft Entra self-service password reset

#### Configure user and group accounts

Learn how to configure user and group accounts.

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.
- Create user accounts
- · Manage user accounts
- · Create bulk user accounts
- · Create group accounts
- · Create administrative units

## **Configure subscriptions**

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

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.
- Identify Azure regions
- Implement Azure subscriptions
- Obtain an Azure subscription
- Identify Azure subscription usage
- Implement Microsoft Cost Management
- Apply resource tagging
- Apply cost savings

#### **Configure Azure Policy**

Learn how to configure Azure Policy to implement compliance requirements.

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

#### Configure role-based access control

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.
- · Implement role-based access control
- Create a role definition
- · Create a role assignment
- Compare Azure roles to Microsoft Entra roles
- · Apply role-based access control
- Review fundamental 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.

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 the Azure portal
- Use Azure Cloud Shell

- Use Azure PowerShell
- Interactive lab simulation (Azure PowerShell)
- Use Azure CLI
- Interactive lab simulation (Azure CLI)

#### **Use Azure Resource Manager**

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

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.
- Review Azure Resource Manager benefits
- Review Azure resource terminology
- Create resource groups
- Create Azure Resource Manager locks
- Reorganize Azure resources
- · Remove resources and resource groups
- Determine resource limits

## **Configure resources with Azure Resource Manager templates**

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

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

- List the advantages of Azure templates.
- Identify the Azure template schema components.
- Specify Azure template parameters.
- Locate and use Azure Quickstart Templates.
- Review Azure Resource Manager template advantages
- Explore the Azure Resource Manager template schema
- Explore the Azure Resource Manager template parameters
- Consider Bicep templates
- Review QuickStart templates

• Interactive lab simulation - templates

## **Configure virtual networks**

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

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.
- Plan virtual networks
- Create subnets
- Create virtual networks
- Plan IP addressing
- Create public IP addressing
- Associate public IP addresses
- Allocate or assign private IP addresses

## Configure network security groups

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

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.
- Implement network security groups
- Determine network security group rules
- Determine network security group effective rules
- · Create network security group rules
- Implement application security groups
- Interactive lab simulation

## **Configure Azure DNS**

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

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.
- · Identify domains and custom domains
- Verify custom domain names
- Create Azure DNS zones
- Delegate DNS domains
- · Add DNS record sets
- Plan for Azure Private DNS zones
- Review Azure Private DNS zone scenarios

#### **Configure Azure Virtual Network peering**

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

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.
- Determine Azure Virtual Network peering uses
- Determine gateway transit and connectivity
- Create virtual network peering
- Extend peering with user-defined routes and service chaining

#### Configure network routing and endpoints

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

- 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.
- Introduction
- Review system routes
- · Identify user-defined routes

- Determine service endpoint uses
- Determine service endpoint services
- · Identify private link uses

#### **Configure Azure Load Balancer**

Learn how to configure an internal or public load balancer.

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.
- Determine Azure Load Balancer uses
- Implement a public load balancer
- · Implement an internal load balancer
- Determine load balancer SKUs
- Create back-end pools
- · Create health probes
- Create load balancer rules

#### **Configure Azure Application Gateway**

Learn how to configure Azure Application Gateway.

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.
- Implement Azure Application Gateway
- Determine Azure Application Gateway routing
- Configure Azure Application Gateway components

#### **Configure storage accounts**

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

- 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.
- Implement Azure Storage
- Explore Azure Storage services
- Determine storage account types
- Determine replication strategies
- Access storage
- Secure storage endpoints

#### **Configure Azure Blob Storage**

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

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.
- Implement Azure Blob Storage
- Create blob containers
- · Assign blob access tiers
- Add blob lifecycle management rules
- Determine blob object replication
- Upload blobs
- Determine Blob Storage pricing

## **Configure Azure Storage security**

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

- 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.
- Review Azure Storage security strategies

- · Create shared access signatures
- Identify URI and SAS parameters
- Determine Azure Storage encryption
- Create customer-managed keys
- Apply Azure Storage security best practices

## **Configure Azure Files and Azure File Sync**

Learn how to configure Azure Files and Azure File Sync.

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.
- · Compare storage for file shares and blob data
- Manage Azure file shares
- Create file share snapshots
- Implement Azure File Sync
- Identify Azure File Sync components
- Deploy Azure File Sync

#### **Configure Azure Storage with tools**

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

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.
- Use Azure Storage Explorer
- Use the Azure Import/Export service
- Use the WAImportExport tool
- · Use the AzCopy tool

## **Configure virtual machines**

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

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.
- Review cloud services responsibilities
- Plan virtual machines
- · Determine virtual machine sizing
- Determine virtual machine storage
- Create virtual machines in the Azure portal
- · Connect to virtual machines

#### Configure virtual machine availability

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

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.
- Plan for maintenance and downtime
- Create availability sets
- · Review update domains and fault domains
- Review availability zones
- Compare vertical and horizontal scaling
- Implement Azure Virtual Machine Scale Sets
- Create Virtual Machine Scale Sets
- · Implement autoscale
- · Configure autoscale

## **Configure Azure App Service plans**

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

- Identify features and usage cases for Azure App Service.
- Select an appropriate Azure App Service plan pricing tier.
- Scale an Azure App Service plan.
- Implement Azure App Service plans
- Determine Azure App Service plan pricing
- Scale up and scale out Azure App Service
- Configure Azure App Service autoscale

#### **Configure Azure App Service**

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

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.
- Back up and restore your Azure App Service app.
- Configure Azure Application Insights.
- Implement Azure App Service
- · Create an app with App Service
- · Explore continuous integration and deployment
- Create deployment slots
- · Add deployment slots
- Secure your App Service app
- Create custom domain names
- Back up and restore your App Service app
- · Use Azure Application Insights

## **Configure Azure Container Instances**

Learn how to configure Azure Container Instances including container groups.

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

- Review Azure Container Instances
- · Implement container groups
- · Review the Docker platform

#### Configure file and folder backups

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

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.
- Describe Azure Backup benefits
- Implement Backup Center for Azure Backup
- Configure Azure Recovery Services vault backup options
- Use the Microsoft Azure Recovery Services (MARS) agent
- Configure on-premises file and folder backups

#### Configure virtual machine backups

Learn how to configure virtual machine backups including restore operations.

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.
- Explore options to protect virtual machine data
- Create virtual machine snapshots in Azure Backup
- Set up Azure Recovery Services vault backup options
- Back up your virtual machines
- · Restore your virtual machines
- Implement System Center DPM and Azure Backup Server
- Compare the MARS agent and Azure Backup Server
- Implement soft delete for your virtual machines
- Implement Azure Site Recovery

#### **Configure Azure Monitor**

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

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.
- Describe Azure Monitor key capabilities
- Describe Azure Monitor components
- Define metrics and logs
- · Identify monitoring data and tiers
- · Describe activity log events
- Query the activity log

#### **Configure Azure alerts**

Learn how to configure Azure alerts including action groups.

In this module, you learn how to:

- Identify Azure Monitor alerts, including alert types and alert states.
- · Configure Azure Monitor alerts.
- Create alert rules and action groups.
- Describe Azure Monitor alerts
- Manage Azure Monitor alerts
- · Create alert rules
- Create action groups

## **Configure Log Analytics**

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

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.
- Determine Log Analytics uses
- Create a Log Analytics workspace
- Create Kusto (KQL) queries
- Structure Log Analytics queries

## **Configure Network Watcher**

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

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.
- Describe Azure Network Watcher features
- Review IP flow verify diagnostics
- Review next hop diagnostics
- Visualize the network topology