



Microsoft Azure Administrator

Course AZ-103A 4 Days Instructor-led, Hands on

Course Information

This course is for Azure Administrators. Azure Administrators manage the cloud services that span storage, networking, and compute cloud capabilities, with a deep understanding of each service across the full IT lifecycle. They take end-user requests for new cloud applications and make recommendations on services to use for optimal performance and scale, as well as provision, size, monitor and adjust as appropriate. This role requires communicating and coordinating with vendors. Azure Administrators use the Azure Portal and as they become more proficient they use PowerShell and the Command Line Interface.

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

4 SATV credits required

At Course Completion

Upon successful completion of this course, students will be able to:

- Implement access management with Azure users, groups, and role-based access control.
- Use Azure Monitor to configure Azure alerts and review the Azure Activity Log.
- Query and analyze Log Analytics data.
- Deploy resources with ARM templates and organize Azure resources.
- Optimize your use of Azure tools like the Azure portal, Azure PowerShell, Cloud Shell and the Azure CLI.
- Create Azure storage accounts for different data replication, pricing, and content scenarios.
- Implement virtual machine storage, blob storage, Azure files, and structured storage.
- Secure and manage storage with shared access keys, Azure backup, and Azure File Sync.
- Store and access data using Azure Content Delivery Network, and the Import and Export service.
- Explain virtual machine usage cases, storage options, pricing, operating systems, networking capabilities, and general planning considerations.
- Create Windows virtual machines in the Azure Portal, with Azure PowerShell, or using ARM Templates.
- Deploy custom server images and Linux virtual machines.

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- Configure virtual machine networking and storage options.
- Implement virtual machine high availability, scalability, and custom scripts extensions.
- Backup, restore, and monitor virtual machines.
- Understand virtual networking components, IP addressing, and network routing options.
- Implement Azure DNS domains, zones, record types, and resolution methods.
- Configure network security groups, service endpoints, logging, and network troubleshooting.
- Implement site connectivity schemas including VNet-to-VNet connections and virtual network peering.
- Implement Azure Active Directory, Self-Service Password Reset, Azure AD Identity Protection, and integrated SaaS applications.
- Configure domains and tenants, users and groups, roles, and devices.
- Implement and manage Azure Active Directory integration options and Azure AD Application Proxy.
- Implement and configure Azure Load Balancer, Azure Traffic Manager, and Azure Application Gateway.
- Use Azure RBAC to grant a granular level of access based on an administrator's assigned tasks.
- Use Azure Multi-Factor Authentication to configure a strong authentication for users at sign-in.

Prerequisites

This course requires that you meet the following prerequisites:

- 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

Course Outline

Module 1: Azure Administration

In this module, you'll learn about tooling Azure Administrator uses to manage their infrastructure. This includes the Azure Portal, Cloud Shell, Azure PowerShell, CLI, Resource Manager, and Resource Manager Templates. The demonstrations in this module will ensure you are successful in the course labs.

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Lessons

- Azure Portal and Cloud Shell
- Azure PowerShell and CLI
- Resource Manager
- ARM Templates

Module 2: Azure Virtual Machines

In this module, you'll learn about Azure virtual machines including planning, creating, availability and extensions.

Lessons

- Virtual Machine Planning
- Creating Virtual Machines
- Virtual Machine Availability
- Virtual Machine Extensions

Lab : Deploy and Manage Virtual Machines

Lab : Virtual Machines and Scale Sets

Module 3: Azure Storage

In this module, you'll learn about basic storage features including storage accounts, blob storage, Azure files, and storage security.

Lessons

- Storage Accounts
- Azure Blobs
- Azure Files
- Storage Security

Lab : Implement and Manage Storage

Module 4: Virtual Networking

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

Lessons

- Virtual Networks
- IP Addressing and Endpoints
- Azure DNS
- Network Security Groups

Lab : Configure Azure DNS

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Module 5: Intersite Connectivity

In this module, you'll learn about intersite connectivity features including VNet Peering, VNet-to-VNet connections, Site-to-Site Connections, and ExpressRoute.

Lessons

- VNet Peering
- VNet-to-VNet Connections
- ExpressRoute Connections

Lab : VNet Peering and Service Chaining

Module 6: Monitoring

In this module, you'll learn about monitoring your Azure infrastructure including Azure Monitor, alerting, log analytics, and Network Watcher.

Lessons

- Azure Monitor
- Azure Alerts
- Log Analytics
- Network Watcher

Lab : Network Watcher

Module 7: Data Protection

In this module, you'll learn about data replication strategies, backing up files and folders, and virtual machine backups.

Lessons

- Data Replication
- File and Folder Backups
- Virtual Machine Backups

Lab : Azure Site Recovery Between Regions

Module 8: Network Traffic Management

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

Lessons

- Network Routing
- Azure Load Balancer
- Azure Traffic Manager

Lab : Load Balancer and Traffic Manager

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Module 9: Azure Active Directory

In this module, you'll learn about Azure Active Directory (AD) including Azure AD Connect and Azure AD Join.

Lessons

- Azure Active Directory
- Azure AD Connect
- Azure AD Join

Lab : Implement Directory Synchronization

Module 10: Securing Identities

In this module, you'll learn how to secure identities including Multi-Factor Authentication, Azure AD Identity Protection, and Self-Service Password Reset.

Lessons

- Multi-Factor Authentication
- Azure AD Identity Protection
- Self-Service Password Reset

Lab : Azure AD Identity Protection

Lab : Self-Service Password Reset

Module 11: Governance and Compliance

In this module, you'll learn about managing your subscriptions and accounts including role-based access control, users and groups, and Azure policy.

Lessons

- Subscriptions and Accounts
- Role-Based Access Control (RBAC)
- Users and Groups
- Azure Policy

Lab : Role-Based Access Control

Lab : Governance and Compliance

Module 12: Data Services

In this module, you'll learn how to effectively share data using Import and Export service, Data Box, Content Delivery Network, and File Sync.

Lessons

- Content Delivery Network

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- File Sync
- Import and Export Service
- Data Box

Lab : File Sync