Azure Administrator Role

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. Candidates should have a minimum of six months of hands-on experience administering Azure. Candidates should have a strong understanding of core Azure services, Azure workloads, security, and governance. Candidates for this exam should have experience in using PowerShell, the Command Line Interface, Azure Portal, and ARM templates.

Course Description

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.

Level: Intermediate

Course Audience

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.

Prerequisites

Successful Azure Administrators start this role with experience in virtualization, networking, identity, and storage.

- Understanding on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks.

- Understanding network configurations, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies.

- Understanding Active Directory concepts, including users, groups, and role-based access control.

- Understanding resilience and disaster recovery, including backup and restore operations.

You can gain the prerequisites and a better understanding of Azure by taking AZ-104: Prerequisites for Azure Administrators. This free online training will give you the experience you need to be successful in this course.

Expected learning

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

- Manage subscriptions, accounts, Azure policies, and Role-Based Access Control.

- Administer Azure using the Resource Manager, Azure Portal, Cloud Shell, Azure PowerShell, CLI, and ARM templates.

- Configure virtual networks including planning, IP addressing, Azure DNS, Network Security Groups, and Azure Firewall.

- Configure intersite connectivity solutions like VNet Peering, virtual network gateways, and Site-to-Site VPN connections.

- Manage network traffic using network routing and service endpoints, Azure Load Balancer, and Azure Application Gateway.

- Implement, manage, and secure Azure storage accounts, blob storage, and Azure files with File Sync.

- Plan, create, and scale virtual machines.

- Administer Azure App Service, Azure Container Instances, and Kubernetes.

- Backup files, folders, and virtual machines.

- Monitor the Azure infrastructure with Azure Monitor, Azure alerts, Log Analytics, and Network Watcher.

Course Outline

Module 01 – Identity
In this module, you will learn how to secure identities with Azure Active Directory and implement users and groups. This module includes:
- Azure Active Directory
- Users and Groups
- Lab 01 - Manage Azure Active Directory Identities

Module 02 – Governance and Compliance

In this module, you will learn about managing your subscriptions and accounts, implementing Azure policies, and role-based access control. This module includes:

- Subscriptions and Accounts
- Azure Policy
- Role-based Access Control (RBAC)
- Lab 02a - Manage Subscriptions and RBAC
- Lab 02b - Manage Governance via Azure Policy

Module 03 – Azure Administration

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

- Resource Manager
- Azure Portal and Cloud Shell
- Azure PowerShell and CLI
- ARM Templates
- Lab 03a - Manage Azure resources by Using the Azure Portal
- Lab 03b - Manage Azure resources by Using ARM Templates
- Lab 03c - Manage Azure resources by Using Azure PowerShell (optional)
- Lab 03d - Manage Azure resources by Using Azure CLI (optional)

Module 04 – 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. This module includes:

- Virtual Networks
- IP Addressing
- Network Security groups
- Azure Firewall
- Azure DNS
- Lab 04 - Implement Virtual Networking

Module 05 – Intersite Connectivity

In this module, you will learn about intersite connectivity features including VNet Peering, VPN Gateway Connections, ExpressRoute, and Virtual WAN. This module includes:

- VNet Peering
- VPN Gateway Connections
- ExpressRoute and Virtual WAN
- Lab 05 - Implement Intersite Connectivity

Module 06 – Network Traffic Management

In this module, you will learn about network traffic strategies including network routing, Azure Load Balancer, and Azure Application Gateway. This module includes:

- Network Routing and Endpoints
- Azure Load Balancer
- Azure Application Gateway
- Lab 06 - Implement Traffic Management

Module 07 – Azure Storage

In this module, you will learn about basic storage features including storage accounts, blob storage, storage security, Azure files and File Sync, and managing storage (tooling). This module includes:

- Storage Accounts
- Blob Storage
- Storage Security
- Azure Files and File Sync
- Managing Storage
- Lab 07 - Manage Azure storage

Module 08 – Azure Virtual Machines

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

- Virtual Machine Planning
- Creating Virtual Machines
- Virtual Machine Availability
- Virtual Machine Extensions
- Lab 08 - Manage Virtual Machines

Module 09 - PaaS Compute Services

In this module, you will learn how to administer computing features like Azure App Service Plans, Azure App Service, Container Services, and Azure Kubernetes Service.

- Azure App Service Plans
- Azure App Service
- Azure Container Instances
- Azure Kubernetes Service
- Lab 09a - Implement Web Apps
- Lab 09b - Implement Azure Container Instances
- Lab 09c - Implement Azure Kubernetes Service

Module 10 – Data Protection

In this module, you will learn about backing up files and folders, and virtual machine backups. This module includes:

- File and Folder Backups
- Virtual Machine Backups
- Lab 10 - Implement Data Protection

Module 11 – Monitoring

In this module, you will learn about monitoring your Azure infrastructure including Azure Monitor, alerting, and log analytics. This module includes:

- Azure Monitor
- Azure Alerts
- Log Analytics
- Network Watcher
- Lab 11 - Implement Monitoring