

MS-AZ1007: DEPLOY AND ADMINISTER LINUX VIRTUAL MACHINES ON AZURE



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Intermediate	Azure	Instructor-led	NA

INTRODUCTION

Azure Virtual Machines enables you to create on-demand, scalable computing resources. Azure Architects commonly use virtual machines to gain greater control over the computing environment.

Your company is doing consumer research, and your team manages the on-premises servers. The servers you administer run the entire company infrastructure from web servers to databases. However, the hardware is aging and starting to struggle to keep up with some of the new data analysis applications being deployed. Rather than upgrade the hardware, the company decided to deploy Azure virtual machines. You're responsible for deploying the new virtual machines. Your deployment tasks include correctly sizing the machines, selecting storage, and configuring networking.

In this module, you learn how to configure virtual machine names and locations. You examine virtual machine pricing models and discover how to determine the correct virtual machine size. You learn how to configure virtual machine storage, and how to create a virtual machine in the Azure portal. You select a secure virtual machine connection method, and how to configure Windows and Linux virtual machine connections.

The goal of this module is to learn how to configure and manage virtual machines in Azure.

AUDIENCE PROFILE

This course is designed for:

- Azure Administrators: Individuals who manage Azure virtual machine workloads as part of their daily responsibilities.
- IT Professionals: Those looking to gain skills in deploying and managing Linux-based virtual machines on Azure.
- Students: Learners preparing for the credential associated with this course.
- Participants should have experience with the Azure portal and CLI, identity management, role-based access control, and basic knowledge of Linux operating systems.

PREREQUISITES

Before attending this course, delegates must know:

- Cloud computing concepts. Familiarity with Infrastructure as a Service (IaaS), virtualization, and resource provisioning in a cloud environment.
- Azure fundamentals. Understanding of basic Azure concepts, including Azure subscriptions, resource groups, and storage accounts.
- Networking fundamentals. Knowledge of basic networking concepts, including IP addressing, virtual networks, and subnets.
- Azure portal. Ability to create and configure resources in the Azure portal.

COURSE OBJECTIVES

After completion of this course, you will be able 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.

COURSE CONTENT

Module 1: Configure virtual machines

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

Lessons

- Introduction
- 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
- Interactive lab simulation
- Knowledge check.
- Summary.

Learning Objectives:

- 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.

Module 2: Add and size disks in Azure virtual machines

Understand and create the different types of disk storage available to Azure virtual machines (VMs).

Lessons

- Introduction.
- Understand storage options for virtual machines (VMs)
- Exercise - Add a data disk to a VM
- Determine whether to use premium storage
- Resize virtual machine disks
- Exercise - Resize a VM disk
- Summary.

Learning Objectives:

- Create a virtual machine (VM)
- Configure and attach virtual hard drives (VHDs) to an existing VM
- Determine whether you need premium disks
- Resize disks for a VM

Module 3: Monitor your Azure virtual machines with Azure Monitor

Learn how to monitor your Azure VMs by using Azure Monitor to collect and analyse VM host and client metrics and logs.

Lessons

- Introduction.
- Monitoring for Azure VMs
- Monitor VM host data
- Use Metrics Explorer to view detailed host metrics
- Collect client performance counters by using VM insights
- Collect VM client event logs
- Summary.

Learning objectives:

- Understand which monitoring data you need to collect from your VM.
- Enable and view recommended alerts and diagnostics.
- Use Azure Monitor to collect and analyse VM host metrics data.
- Use Azure Monitor Agent to collect VM client performance metrics and event logs.

Module 4: Protect your virtual machines by using Azure Backup

Use Azure Backup to help protect on-premises servers, virtual machines, SQL Server, Azure file shares, and other workloads.

Lessons

- Introduction.
- Azure Backup features and scenarios
- Back up an Azure virtual machine by using Azure Backup
- Exercise - Back up an Azure virtual machine
- Restore virtual machine data
- Exercise - Restore Azure virtual machine data
- Summary.

Learning Objectives:

- Identify the scenarios for which Azure Backup provides backup and restore capabilities
- Back-up and restore an Azure virtual machine

Module 5: Manage virtual machines with the Azure CLI

Learn how to use the cross-platform Azure CLI to create, start, stop, and perform other management tasks related to virtual machines in Azure.

Lessons

- Introduction.
- What is the Azure CLI?
- Exercise - Create a virtual machine

- Exercise - Test your new virtual machine
- Exercise - Explore other VM images
- Exercise - Sizing VMs properly
- Exercise - Query system and runtime information about the VM
- Exercise - Start and stop your VM with the Azure CLI
- Exercise - Install software on your VM
- Summary.

Learning objectives:

- Create a virtual machine with the Azure CLI.
- Resize virtual machines with the Azure CLI.
- Perform basic management tasks using the Azure CLI.
- Connect to a running VM with SSH and the Azure CLI.

Module 6: Implement access management for Azure resources

Explore how to use built-in Azure roles, managed identities, and RBAC-policy to control access to Azure resources. Identity is the key to secure solutions.

Lessons

- Introduction.
- Assign Azure roles
- Configure custom Azure roles
- Create and configure managed identities
- Access Azure resources with managed identities
- Analyse Azure role permissions
- Configure Azure Key Vault RBAC policies
- Retrieve objects from Azure Key Vault
- Explore Microsoft Entra Permissions Management
- Knowledge check
- Summary.

Learning objectives:

- Configure and use Azure roles within Microsoft Entra ID
- Configure and managed identity and assign it to Azure resources
- Analyse the role permissions granted to or inherited by a user
- Configure access to data in Azure Key Vault using RBAC-policy

Module 7: Configure Azure Files and Azure File Sync

Learn how to configure Azure Files and Azure File Sync.

Lessons

- Introduction.
 - Compare storage for file shares and blob data
 - Manage Azure file shares
 - Create file share snapshots
 - Implement soft delete for Azure Files
 - Use Azure Storage Explorer
 - Deploy Azure File Sync
 - Knowledge check
 - Summary.
- Learning Objectives:
- Identify storage for file shares versus 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.

Module 8: Copy and move blobs from one container or storage account to another using the AzCopy command

- Learn how to use AzCopy to copy and move blobs between contains and storage accounts both synchronously and asynchronously.
- Lessons
- Introduction.
 - Move Azure Storage blobs using AzCopy
 - Exercise - Move Azure Storage blobs using AzCopy
 - Summary.

- Learning Objectives:
- Copy and move blobs between Azure Storage accounts using the AzCopy tool.

Module 9: Guided Project: Deploy and administer Linux virtual machines on Azure
In this guided project module, you prepare and study for the *Deploy and administer Linux virtual machines on Azure* Applied Skill.

- Lessons
- Introduction.
 - Exercise - Create and configure Linux virtual machines
 - Exercise - Monitor virtual machines
 - Exercise - Configure storage for virtual machines
 - Exercise - Back up virtual machines
 - Knowledge check
 - Summary.
- Learning Objectives:
- In this module, you practice for the Deploy and administer Linux virtual machines on Azure Applied Skill. You also gain skills to help with day-to-day administrator job tasks. The content combines topics on compute, storage, and monitoring tasks.

ASSOCIATED CERTIFICATION & EXAM

There is no Associated Certification or Exam for this course.