

Day 2 – Create an Azure Virtual Machine (Azure)

Challenge

100 Days of Cloud – Azure Track

Day 2 – Compute Fundamentals

Objective

Create an **Azure Virtual Machine (VM)** using the Azure Portal.

This task demonstrates understanding of core Azure compute concepts, resource organization, and basic VM configuration required to run workloads in the cloud.

Task Overview

An Azure Virtual Machine provides scalable computing resources in the cloud. In this task, a Linux-based VM is created using the Azure Portal with secure authentication and default networking components.

The screenshot shows a mobile application window titled "Task". At the top right, there is a clock icon showing "56:43" and a settings gear icon. The main content area contains the following text:

The Nautilus DevOps team is planning to migrate a portion of their infrastructure to the Azure cloud incrementally. As part of this migration, you are tasked with creating an Azure Virtual Machine (VM).

The requirements are:

- 1) Use the existing resource group.
- 2) The VM name must be `datacenter-vm`, it should be in `West US` region.
- 3) Use the `Ubuntu 22.04 LTS` image for the VM.
- 4) The VM size must be `Standard_B1s`.
- 5) Attach a default Network Security Group (NSG) that allows inbound SSH (port 22).
- 6) Attach a 30 GB storage disk of type `Standard HDD`.
- 7) The rest of the configurations should remain as default.

After completing these steps, make sure you can SSH into the virtual machine.

Use below given Azure Credentials: (You can run the `showcreds` command on the `azure-client` host to retrieve credentials)

Concept Overview

An **Azure Virtual Machine** allows you to:

- Run applications and services in the cloud
- Choose operating system, size, and region
- Control access using SSH keys
- Integrate with Azure networking and storage services

Virtual Machines are a foundational building block for cloud infrastructure.

Implementation (Azure Portal)

Step 1: Log in to Azure Portal

- Logged in to the **Azure Portal** using the provided credentials
- Confirmed access to the active subscription

The screenshot shows the Microsoft Azure Portal interface. At the top, there's a search bar labeled "Search resources, services, and docs (G+)" and a "Copilot" button. The top navigation bar includes links for "Create a resource", "Quickstart Center", "Foundry", "Kubernetes services", "Virtual machines", "App Services", "Storage accounts", "SQL databases", "Azure Cosmos DB", and "More services". Below this is a "Resources" section with tabs for "Recent" and "Favorite". A message says "No resources have been viewed recently" with a "View all resources" button. Further down are sections for "Navigate" (with links to "Subscriptions", "Resource groups", "All resources", and "Dashboard"), "Tools" (with links to "Microsoft Learn", "Azure Monitor", "Microsoft Defender for Cloud", and "Cost Management"), and "Useful links".

Step 2: Navigate to Virtual Machines Service

- Used the Azure search bar
- Searched for **Virtual Machines**
- Clicked on **Virtual Machines** under Services

Microsoft Azure

Search resources, services, and docs (G+/-)

Copilot

Home > Compute infrastructure

Compute infrastructure | Virtual machines

Virtual machines Get started

Overview All resources Infrastructure

Virtual machines

Virtual Machine Scale Set (VMSS)

Compute Fleet

Disks + images Capacity + placement Related services Monitoring+Policy Help

Check which VMs cannot access the internet Identify VMs with network connectivity issues Show me protected VMs in XXX region

+ Create Reservations Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Services

You are viewing a new version of Browse experience. Click here to access the old experience.

Filter for any field... Subscription equals all Type equals all Resource Group equals all Location equals all Add filter

No virtual machines to display

Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.

+ Create

[Learn more about Windows virtual machines](#)

[Learn more about Linux virtual machines](#)

Showing 1 - 0 of 0. Display count: auto

Step 3: Start Virtual Machine Creation

- Clicked **Create → Azure virtual machine**

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. Key configuration details include:

- Subscription:** Azure Free Labs
- Resource group:** kml_rg_main-3ffdbf1c806f4f32 (selected from dropdown)
- Virtual machine name:** datacenter-vm
- Region:** (US) West US
- Image:** Ubuntu Server 22.04 LTS - x64 Gen2

At the bottom, there are navigation buttons: < Previous, Next : Disks >, and Review + create.

Step 4: Configure Basic VM Settings

Configured the following settings:

- **Subscription:** Selected the active subscription
- **Resource Group:** Selected an existing resource group for organization
- **Virtual Machine Name:** Assigned a meaningful VM name
- **Region:** Selected the appropriate Azure region
- **Image:** Selected a Linux-based OS image
- **Size:** Chosen based on workload requirements – According to task [Standard_B1](#)
- **Authentication Type:** SSH public key
- **SSH Key:** Selected the previously created SSH key

Create a virtual machine

Help me create a low cost VM **Help me create a VM optimized for high availability** **Help me choose the right VM size for my workload**

⚠️ Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

Availability options: No infrastructure redundancy required

Security type: Trusted launch virtual machines

Image: Ubuntu Server 22.04 LTS - x64 Gen2

VM architecture: Recommended Gen 2 Images compatible with Trusted launch

Run with Azure Spot discount

Size: Ubuntu Server 22.04 LTS - x64 Gen2

Enable Hibernation

Administrator account

Authentication type

< Previous **Next : Disks >**

Select a VM size

Search by VM size... **vCPUs : All** **RAM (GiB) : All** **Display cost : Monthly** **Add filter**

Showing 1008 VM sizes. | Subscription: Azure Free Labs | Region: West US | Current size: Standard_B1s | Image: Ubuntu Server 22.04 LTS | [Learn more about VM sizes](#)

VM Size ↑↓	Type ↑↓	vCPUs ↑↓	RAM (GiB) ↑↓	Data disks ↑↓	Max IOPS ↑↓	Local storage (GiB) ↑↓	Premium
B-Series	Ideal for workloads that do not need continuous full CPU performance						
B1s	General purpose	1	1	2	320	4 (SCSI)	Support
B2s	General purpose	2	4	4	1280	8 (SCSI)	Support
D-Series v3	The 3rd generation D family sizes for your general purpose needs						
Size not available	See the info bubble next to a size for details on availability						
Blocked by Policy	Your organization has Azure Policies in place that restrict these sizes.						

Select

Step 5: Configure Networking

- Used default Virtual Network and Subnet
- Ensured Public IP was enabled
- Allowed SSH access for secure connectivity

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * ⓘ

None
 Allow selected ports

Select inbound ports *

SSH (22) ▾

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

< Previous

Next : Disks >

Review + create

Step 6: Review and Create

- Reviewed all configuration settings
- Clicked **Create** to deploy the virtual machine

Create a virtual machine

Validation passed

Help me create a low cost VM | Help me create a VM optimized for high availability | Help me choose the right VM size for my workload

Help me create a low cost VM | Help me create a VM optimized for high availability | Help me choose the right VM size for my workload

Basics Disks Networking Management Monitoring Advanced Tags **Review + create**

Price

1 X Standard B1s by Microsoft

Subscription credits apply ⓘ **0.0124 USD/hr**

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TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Name

Preferred e-mail address

Preferred phone number

⚠ You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Basics

Subscription	Azure Free Labs
Resource group	kml_rg_main-3ffdbf1c806f4f32
Virtual machine name	datacenter-vm
Region	West US
Availability options	No infrastructure redundancy required
Zone options	Self-selected zone
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Ubuntu Server 22.04 LTS - Gen2

< Previous | Next > | **Create**

Deployment complete:

Home >

CreateVm-canonical.0001-com-ubuntu-server-jammy-2-20251231024311 | Overview ⚙ ...

Deployment

Search | Delete | Cancel | Redeploy | Download | Refresh

Overview

>Your deployment is complete

Deployment name: CreateVm-canonical.0001-com-ubuntu-server-j... Start time: 12/31/2025, 3:04:51 AM Correlation ID: 4cf46983-0bda-4e1e-9ed7-ect456aab43b

Subscription: Azure Free Labs Resource group: kml_rg_main-3ffdbf1c806f4f32

Deployment details

Setup auto-shutdown Recommended
Monitor VM health, performance and network dependencies Recommended
Run a script inside the virtual machine Recommended

Next steps

Go to resource | Create another VM

Give feedback | Tell us about your experience with deployment

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Outcome

- Successfully created an Azure Virtual Machine
 - VM is running and accessible via SSH
 - Compute resources are ready for application deployment
-

Key Takeaways

- Azure Virtual Machines provide flexible compute capacity
 - Proper configuration of region, size, and authentication is critical
 - SSH keys improve security over password-based access
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Proof of Work

This task demonstrates hands-on experience with:

- Azure Portal navigation
- Virtual Machine provisioning
- Secure VM authentication
- Azure compute resource management

Screenshots included provide visual proof of real Azure console work.

Next: Day 3 – Create Virtual Machine Using Azure CLI