

EXPERIMENT 12

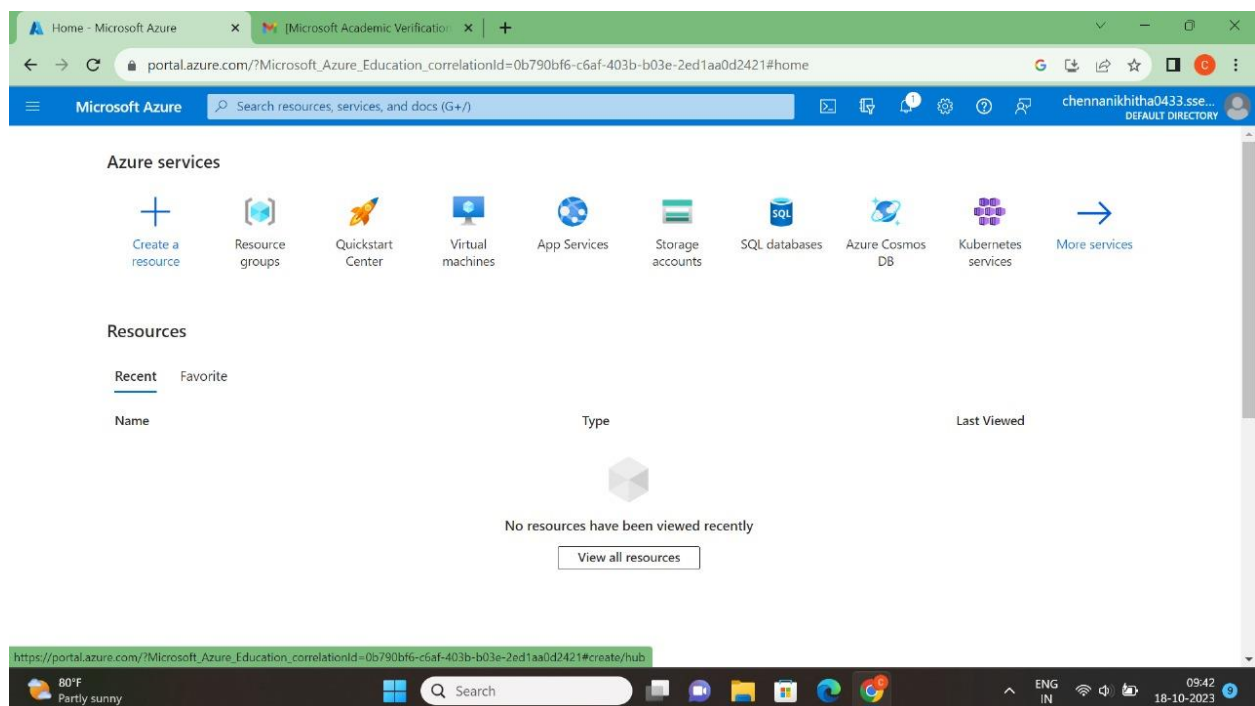
Demonstrate Infrastructure as a Service (IaaS) by creating a Virtual Machine using a Public Cloud Service Provider (Azure), configure with required memory and CPU.

STEP 1:

Create an account in Microsoft azure.

STEP 2:

Goto resource group and create a resource group.



STEP 3:

Give necessary things in resource group.

EXPERIMENT 12

Create a resource group - Micro x +

portal.azure.com/#create/Microsoft.ResourceGroup

Microsoft Azure Search resources, services, and docs (G+)

Home > Resource groups >

Create a resource group

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Project details

Subscription * Azure for Students

Resource group * KEERTHIREDDY

Resource details

Region * (Asia Pacific) South India

Review + create < Previous Next: Tags >

33°C Haze Search ENG US 10:14 AM 18/10/2023

Create a resource group - Micro x +

portal.azure.com/#create/Microsoft.ResourceGroup

Microsoft Azure Search resources, services, and docs (G+)

Home > Resource groups >

Create a resource group

Validation passed.

Basics Tags Review + create

Basics

Subscription	Azure for Students
Resource group	KEERTHIREDDY
Region	South India

Tags

CLOUD	30
COMPUTING	40

Create < Previous Next > Download a template for automation

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STEP 4:

Create a virtual network for to create a virtual machine.

EXPERIMENT 12

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays 'portal.azure.com/#view/HubsExtension/BrowseResourceGroups'. The page title is 'Resource groups'. Below the title, there are filters for 'Subscription equals all' and 'Location equals all'. A table lists three resource groups:

Name	Subscription	Location
keerthi	Azure for Students	South India
KEERTHIREDDY	Azure for Students	South India
NetworkWatcherRG	Azure for Students	Central India

The bottom of the screenshot shows the Windows taskbar with the date and time as 10:15 AM on 18/10/2023.

STEP5:

NOW CREATE A VIRTUAL MACHINE WITH UR IPADDRESS AN USERNAME AND PASSWORD FOR YOUR VIRTUAL MACINE.

The screenshot shows the Microsoft Azure portal interface for Virtual machines. The browser address bar displays 'portal.azure.com/#view/HubsExtension/BrowseResource/resourceType/Microsoft.Compute%2FVirtualMachines'. The page title is 'Virtual machines'. Below the title, there are filters for 'Subscription equals all', 'Type equals all', 'Resource group equals all', and 'Location equals all'. The page indicates 'Showing 0 to 0 of 0 records'. A large message in the center states 'No virtual machines to display' and provides instructions to create a virtual machine. A 'Create' button is visible.

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

The bottom of the screenshot shows the Windows taskbar with the date and time as 10:41 AM on 18/10/2023.

EXPERIMENT 12

Create a virtual machine - Micro x +

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure for Students

Resource group * (New) Resource group

[Create new](#)

Instance details

Virtual machine name *

[Review + create](#) < Previous Next : Disks > [Give feedback](#)

33°C Haze

Create a virtual machine - Micro x +

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

Administrator account

Authentication type

☐ SSH public key

☒ Password

Username * keerthireddy ✓

Password * ✓

Confirm password * ✓

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)

[Review + create](#) < Previous Next : Disks > [Give feedback](#)

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EXPERIMENT 12

Create a virtual machine - Micro x +

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

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

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host ☐

Encryption at host is not registered for the selected subscription. [Learn more about enabling this feature](#)

OS disk

OS disk size

OS disk type *

Delete with VM ☒

[Review + create](#) < Previous Next: Networking > [Give feedback](#)

33°C Haze Search 10:43 AM 18/10/2023

Create a virtual machine - Micro x +

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

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

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network *
[Create new](#)

Subnet *

Public IP
[Create new](#)

NIC network security group ☐ None ☒ Basic ☐ Advanced

[Review + create](#) < Previous Next: Management > [Give feedback](#)

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EXPERIMENT 12

Create a virtual machine - Micro x +

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

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

Configure management options for your VM.

Microsoft Defender for Cloud
Microsoft Defender for Cloud provides unified security management and advanced threat protection across hybrid cloud workloads. [Learn more](#)

Enable basic plan for free ☐ This will apply to every VM in the selected subscription

Identity
Enable system assigned managed identity ☐

Azure AD
Login with Azure AD ☐
RBAC role assignment of Virtual Machine Administrator Login or Virtual Machine User Login is required when using Azure AD login. [Learn more](#)

[Review + create](#) < Previous Next: Monitoring > [Give feedback](#)

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Create a virtual machine - Micro x +

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

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

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name	Value	Resource
database	: 30	All resources
management	: 40	13 selected
		13 selected

[Review + create](#) < Previous Next: Review + create > [Give feedback](#)

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EXPERIMENT 12

The image shows two screenshots from the Microsoft Azure portal. The top screenshot is the 'Create a virtual machine' wizard, and the bottom screenshot is the 'Overview' page of a completed deployment.

Top Screenshot: Create a virtual machine

Validation passed

Subscription	Azure for Students
Resource group	KEERTHIREDDY
Virtual machine name	keerthireddy
Region	Central India
Availability options	Availability zone
Availability zone	1
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Ubuntu Server 20.04 LTS - Gen2
VM architecture	x64
Size	Standard D2s v3 (2 vcpus, 8 GiB memory)
Authentication type	Password
Username	keerthireddy

Buttons: Create, < Previous, Next >, Download a template for automation, Give feedback

Bottom Screenshot: Overview

CreateVm-canonical.0001-com-ubuntu-server-focal-2-20231018104127 | Overview

Deployment

Search

Buttons: Delete, Cancel, Redeploy, Download, Refresh

Your deployment is complete

Deployment name: CreateVm-canonical.0001-com-ubuntu-server-f... Start time: 10/18/2023, 10:44:44 AM
Subscription: Azure for Students Correlation ID: f2352066-8e41-438e-8743-02a2
Resource group: KEERTHIREDDY

Deployment details

Next steps

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

Buttons: Go to resource, Create another VM

Give feedback

Tell us about your experience with deployment

Cost Management

Get notified to stay within your budget and prevent unexpected charges on your bill. Set up cost alerts >

Microsoft Defender for Cloud

Secure your apps and infrastructure Go to Microsoft Defender for Cloud >

Free Microsoft tutorials

Start learning today >

Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure

EXPERIMENT 12

The screenshot displays the Microsoft Azure portal interface. The top navigation bar shows the user 'keerthireddy' and the account 'keerthireddy@keerthireddy.com'. The main content area shows the 'Overview' page for a virtual machine named 'keerthireddy'. The VM is running on Linux (ubuntu 20.04) and is located in the Central India (Zone 1) region. The subscription ID is e7dc773a-8e2d-42f6-9d4c-f23c9d3530ea. The VM has a public IP address of 20.197.52.139 and a private IP address of 10.1.0.4. The VM is tagged with 'database : 30' and 'management : 40'. The left sidebar shows the 'Overview' page selected, with other options like 'Activity log', 'Access control (IAM)', 'Tags', 'Diagnose and solve problems', 'Settings', 'Networking', 'Connect', 'Disks', 'Size', 'Microsoft Defender for Cloud', 'Advisor recommendations', 'Extensions + applications', and 'Availability + scaling'. The bottom status bar shows the temperature '33°C', the time '10:45 AM', and the date '18/10/2023'.

Microsoft Azure

Search resources, services, and docs (G+)

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20231018104127 | Overview >

keerthireddy

Virtual machine

Search

Connect Start Restart Stop Capture Delete Refresh Open in mobile Feedback CLI / PS

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Networking

Connect

Disks

Size

Microsoft Defender for Cloud

Advisor recommendations

Extensions + applications

Availability + scaling

Essentials

Resource group (move) : KEERTHIREDDY

Status : Running

Location : Central India (Zone 1)

Subscription (move) : Azure for Students

Subscription ID : e7dc773a-8e2d-42f6-9d4c-f23c9d3530ea

Availability zone : 1

Tags (edit) : database : 30 management : 40

Operating system : Linux (ubuntu 20.04)

Size : Standard D2s v3 (2 vcpus, 8 GiB memory)

Public IP address : 20.197.52.139

Virtual network/subnet : keerthireddy-vnet/default

DNS name : Not configured

Health state : *

JSON View

Properties Monitoring Capabilities (7) Recommendations Tutorials

Virtual machine

Computer name : keerthireddy

Operating system : Linux (ubuntu 20.04)

Image publisher : canonical

Image offer : 0001-com-ubuntu-server-focal

Networking

Public IP address : 20.197.52.139 (Network interface : keerthireddy43_z1)

Public IP address (IPv6) : -

Private IP address : 10.1.0.4

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Search

ENG US

10:45 AM 18/10/2023