

CSA1518-CLOUD COMPUTING AND BIG DATA ANALYTICS

Harini.A

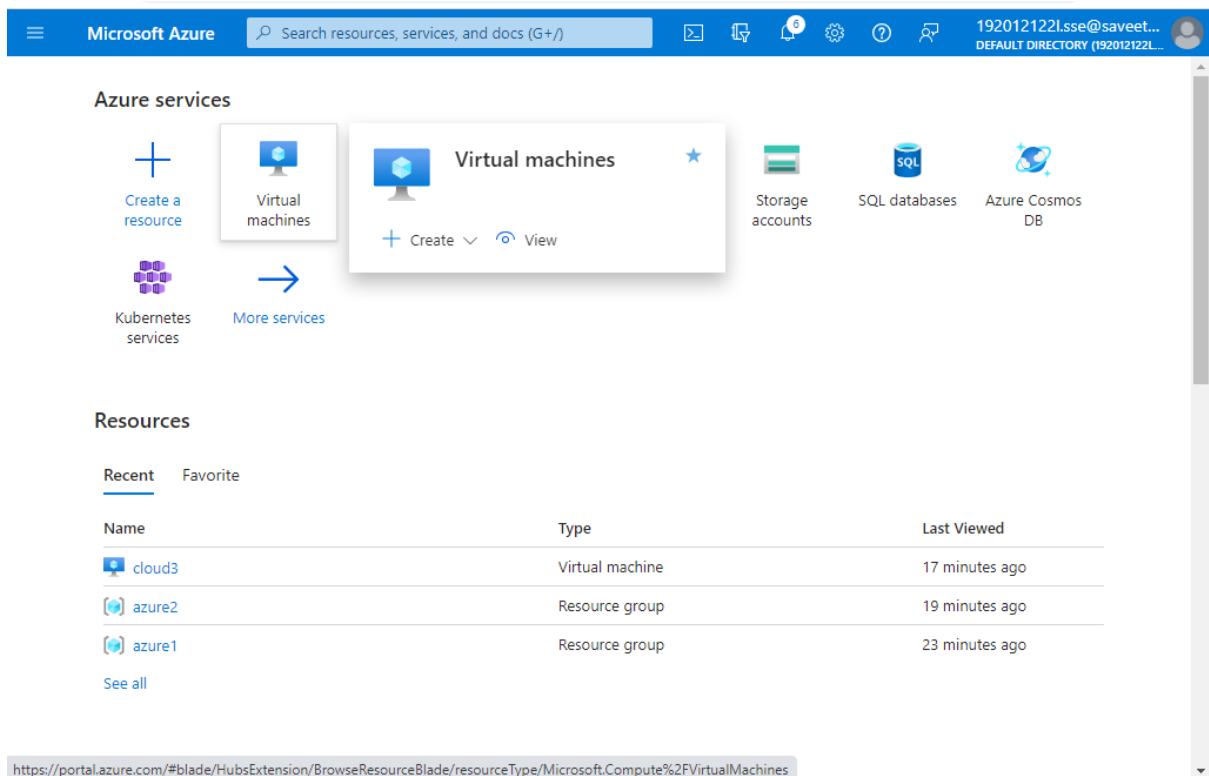
192011344

EXPERIMENT 13:

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

IMPLEMENTATION:

STEP 1:SELECT VIRTUAL MACHINE



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information for '192012122L.sse@saveet...'. The main content area displays 'Azure services' with a grid of icons for various services. The 'Virtual machines' icon is highlighted with a white border and a star. Below the 'Virtual machines' icon, there are links for '+ Create' and 'View'. Other visible services include 'Storage accounts', 'SQL databases', and 'Azure Cosmos DB'. The 'Resources' section is visible below the services, showing a table of recent resources.

Name	Type	Last Viewed
cloud3	Virtual machine	17 minutes ago
azure2	Resource group	19 minutes ago
azure1	Resource group	23 minutes ago

The URL at the bottom of the browser window is: <https://portal.azure.com/#blade/HubsExtension/BrowseResourceBlade/resourceType/Microsoft.Compute%2FVirtualMachines>

STEP 2:CLICK ON CREATE

Virtual machines

Default Directory (192012122lssesaveetha.onmicrosoft.com)

+ Create ▾ Switch to classic Reservations ▾ Manage view ▾ Refresh Export to CSV Open query Assign tags ...

Filter for any field... Subscription equals all Type equals all Add filter More (2)

Showing 1 to 1 of 1 records.

Name ↑↓	Type ↑↓	Subscription ↑↓	Resource group ↑↓	Location ↑↓	Status ↑↓	Operating system
cloud3	Virtual machine	Azure for Students	azure1	Central India	Stopped (deallocated)	Linux

< Previous Page 1 of 1 Next >

[Give feedback](#)





STEP 3:SELECT AZURE VIRTUAL MACHINE

[Home](#) >

Virtual machines

Default Directory (1920121221s@saveetha.onmicrosoft.com)

[+](#) Create [↔](#) Switch to classic [⌚](#) Reservations [⚙️](#) Manage view [🔄](#) Refresh [📄](#) Export to CSV [🔗](#) Open query [🏷️](#) Assign tags ...

-  **Azure virtual machine**
Create a virtual machine hosted by Azure
-  **Azure virtual machine with preset configuration**
Create a virtual machine with presets based on your workloads
-  **Azure Arc virtual machine**
Create a new Azure Arc virtual machine in one of your non-Azure environments
-  **Azure VMware Solution virtual machine**
Create a VMware virtual machine hosted by Azure

Type equals **all** [+ Add filter](#) [More \(2\)](#)

No grouping [List view](#)

Subscription ↑↓	Resource group ↑↓	Location ↑↓	Status ↑↓	Operating system
Azure for Students	azure1	Central India	Stopped (deallocated)	Linux

[< Previous](#) Page **1** of 1 [Next >](#)

[Give feedback](#)

STEP 4:FILL THE DETAILS IN MANDATORY COLUMNS

Microsoft Azure [Search resources, services, and docs \(G+\)](#) [📧](#) [📁](#) [🔔](#) [⚙️](#) [?](#) [🗨️](#) 1920121221s@saveetha...
DEFAULT DIRECTORY (1920121221s@saveetha.onmicrosoft.com)

[Home](#) > [Virtual machines](#) >

Create a virtual machine

Project details

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

Subscription * ⓘ

Resource group * ⓘ
[Create new](#)

Instance details

Virtual machine name * ⓘ ✓

Region * ⓘ

Availability options ⓘ

Security type ⓘ
[Configure security features](#)

Image * ⓘ
[See all images](#) | [Configure VM generation](#)

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

Microsoft Azure

Search resources, services, and docs (G+)

192012122L.sse@saveet...

DEFAULT DIRECTORY (192012122L...

[Home](#) > [Virtual machines](#) >

Create a virtual machine

[See all sizes](#)

Administrator account

Authentication type ⓘ
☐ SSH public key
☒ Password

Username * ⓘ
Mrudula1807 ✓

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](#)

STEP 5:CLICK ON NETWORKING

Microsoft Azure

Search resources, services, and docs (G+)

192012122L.sse@saveet...

DEFAULT DIRECTORY (192012122L...

[Home](#) > [Virtual machines](#) >

Create a virtual machine

OS disk

OS disk type * ⓘ
Premium SSD (locally-redundant storage) ✓

Delete with VM ⓘ
☒

Key management ⓘ
Platform-managed key ✓

Enable Ultra Disk compatibility ⓘ
☐
Ultra disk is not supported with selected security type.

Data disks for cloud4

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM ⓘ
Create and attach a new disk Attach an existing disk					

Advanced

Review + create

< Previous

Next : Networking >

[Give feedback](#)

CREATE DISK

[Home](#) > [Virtual machines](#) > [Create a virtual machine](#) >

Create a new disk ...



Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. [Learn more](#)

Name *	<input type="text" value="cloud4_DataDisk_0"/>
Source type * ⓘ	<div>None (empty disk) ▾</div>
Size * ⓘ	<div>64 GiB Premium SSD LRS Change size</div>
Key management ⓘ	<div>Platform-managed key ▾</div>
Enable shared disk	<div><input type="radio"/> Yes <input checked="" type="radio"/> No</div>
Delete disk with VM	<div><input type="checkbox"/></div>

OK

STEP 6:CLICK NEXT: MANAGEMENT

[Home](#) > [Virtual machines](#) >

Create a virtual machine ...



	<div><input checked="" type="radio"/> Allow selected ports</div>
Select inbound ports *	<div>SSH (22) ▾</div>
	<div>⚠ 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.</div>
Delete public IP and NIC when VM is deleted ⓘ	<div><input type="checkbox"/></div>
Enable accelerated networking ⓘ	<div><input checked="" type="checkbox"/></div>
Load balancing	
You can place this virtual machine in the backend pool of an existing Azure load balancing solution. Learn more	
Place this virtual machine behind an existing load balancing solution?	<div><input type="checkbox"/></div>

Review + create

< Previous

Next : Management >

Give feedback

STEP 7:CLICK NEXT:MONITORING

Create a virtual machine

×

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](#)

ⓘ

Azure AD login now uses SSH certificate-based authentication. You will need to use an SSH client that supports OpenSSH certificates. You can use Azure CLI or Cloud Shell from the Azure Portal. [Learn more](#)

Auto-shutdown

Enable auto-shutdown ⓘ ☐

Backup

Enable backup ⓘ ☐

Guest OS updates

Patch orchestration options ⓘ

Image default

ⓘ

Some patch orchestration options are not available for this image. [Learn more](#)

Review + create

< Previous

Next : Monitoring >

Give feedback

CLICK ON ADVANCED

Create a virtual machine

×

Basics

Disks

Networking

Management

Monitoring

Advanced

Tags

Review + create

Configure monitoring options for your VM.

Alerts

Enable recommended alert rules ⓘ ☐

Diagnostics

Boot diagnostics ⓘ

☒ Enable with managed storage account (recommended)

☐ Enable with custom storage account

☐ Disable

Enable OS guest diagnostics ⓘ ☐

Review + create

< Previous

Next : Advanced >

Give feedback

CLICK ON TAGS

[Home](#) > [Virtual machines](#) >

Create a virtual machine ...



Host

Azure Dedicated Hosts allow you to provision and manage a physical server within our data centers that are dedicated to your Azure subscription. A dedicated host gives you assurance that only VMs from your subscription are on the host, flexibility to choose VMs from your subscription that will be provisioned on the host, and the control of platform maintenance at the level of the host. [Learn more](#)

Host group ⓘ

No host groups found

Capacity reservations

Capacity reservations allow you to reserve capacity for your virtual machine needs. You get the same SLA as normal virtual machines with the security of reserving the capacity ahead of time. [Learn more](#)

Capacity reservation group ⓘ

None

Proximity placement group

Proximity placement groups allow you to group Azure resources physically closer together in the same region. [Learn more](#)

Proximity placement group ⓘ

No proximity placement groups found

[Review + create](#)

[< Previous](#)

[Next : Tags >](#)

[Give feedback](#)

STEP 8:ASSIGN NAME AND VALUE

[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
ubuntu2	15	13 selected
	15	13 selected

[Review + create](#)

[< Previous](#)

[Next : Review + create >](#)

[Give feedback](#)

STEP 9:VALIDATION IS PASSED.CLICK ON CREATE

[Home](#) > [Virtual machines](#) >

Create a virtual machine ...



✓ Validation passed

Tags


ubuntu2	15 (Auto-shutdown schedule)
ubuntu2	15 (Availability set)
ubuntu2	15 (Disk)
ubuntu2	15 (Network interface)
ubuntu2	15 (Network security group)
ubuntu2	15 (Public IP address)
ubuntu2	15 (Recovery Services vault)
ubuntu2	15 (SQL Virtual Machine)
ubuntu2	15 (SSH key)
ubuntu2	15 (Storage account)
ubuntu2	15 (Virtual machine)
ubuntu2	15 (Virtual machine extension)
ubuntu2	15 (Virtual network)

Create

< Previous

Next >

[Download a template for automation](#)

 [Give feedback](#)

STEP 10:DEPLOYMENT IS COMPLETED

OUTPUT

Microsoft Azure

Search resources, services, and docs (G+)

192012122L.sse@saveet...
DEFAULT DIRECTORY (192012122L...

Home >

CreateVm-canonical.0001-com-ubuntu-server-focal-2-202307111011845

Deployment

Search

«

Delete

Cancel

Redeploy

Download

Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name: CreateVm-c...

Subscription: Azure for Students

Resource group: azure2

Start time: 7/11/202...

Correlation ID: fa463ex

Deployment details

Next steps

Setup auto-shutdown Recommended

Monitor VM health, performance and network dependencies Recommended

Run a script inside the virtual machine Recommended

Go to resource

Create another VM

Give feedback

Tell us about your experience with deployment

✓ Deployment succeeded

Deployment 'CreateVm-canonical.0001-com-ubuntu-server-focal-2-202307111011845' to resource group 'azure2' was successful.

Go to resource

Pin to dashboard

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