

CSA1518-CLOUD COMPUTING AND BIG DATA FOR SOCIAL MEDIA

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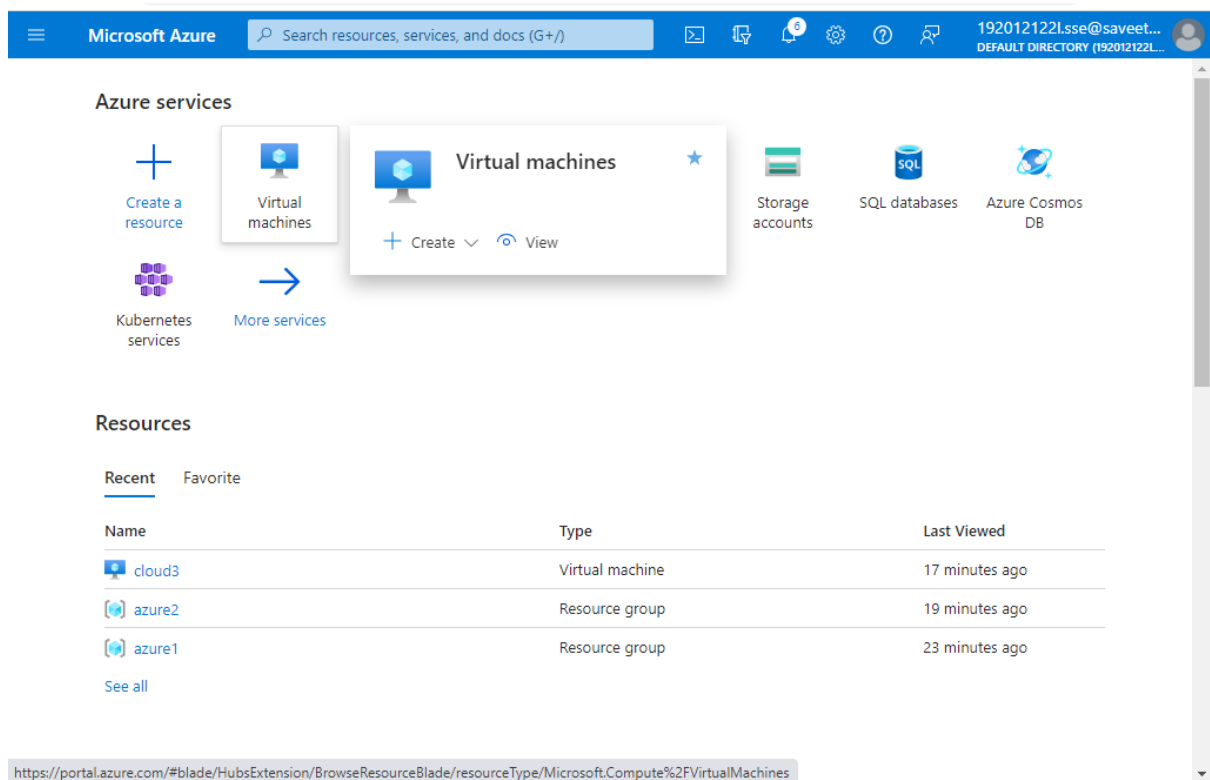
EXPT 14:

AIM:

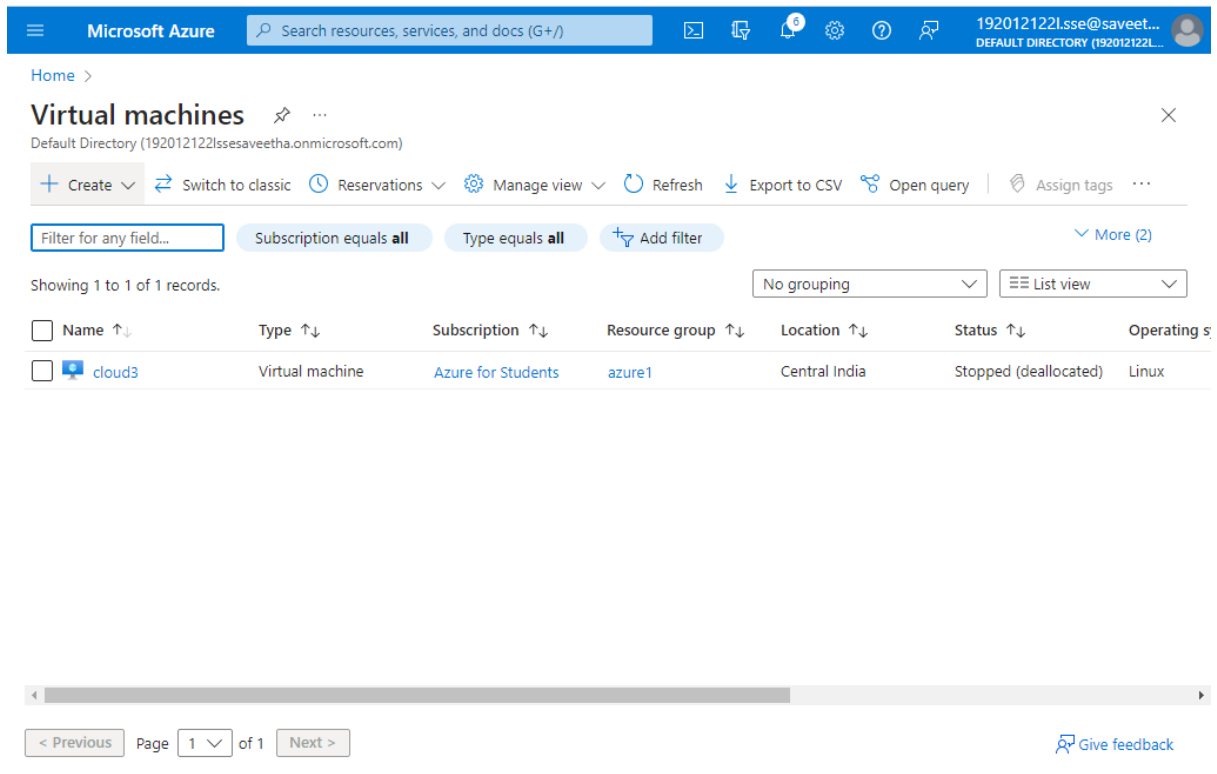
Demonstrate Infrastructure as a Service (IaaS) by establishing the remote connection, launch the created VM image and run in your desktop.

IMPLEMENTATION:

STEP 1:SELECT VIRTUAL MACHINE



STEP 2:CLICK ON CREATE



Microsoft Azure

Search resources, services, and docs (G+)

Home >

Virtual machines

Default Directory (1920121221ssaveetha.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. No grouping List view

| <input type="checkbox"/> Name ↑↓ | Type ↑↓ | Subscription ↑↓ | Resource group ↑↓ | Location ↑↓ | Status ↑↓ | Operating s |
|----------------------------------|-----------------|--------------------|-------------------|---------------|-----------------------|-------------|
| <input type="checkbox"/> cloud3 | Virtual machine | Azure for Students | azure1 | Central India | Stopped (deallocated) | Linux |

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STEP 3:SELECT AZURE VIRTUAL MACHINE

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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 |

STEP 4:FILL THE DETAILS IN MANDATORY COLUMNS

Microsoft Azure

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1920121221s@saveetha.onmicrosoft.com

DEFAULT DIRECTORY (1920121221s@saveetha.onmicrosoft.com)

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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 * [?](#) [Azure for Students](#)

Resource group * [?](#) [azure2](#)
[Create new](#)

Instance details

Virtual machine name * [?](#) [cloud4](#) ✓

Region * [?](#) [\(Asia Pacific\) South India](#)

Availability options [?](#) [No infrastructure redundancy required](#)

Security type [?](#) [Trusted launch virtual machines](#)
[Configure security features](#)

Image * [?](#) [Ubuntu Server 20.04 LTS - x64 Gen2](#)
[See all images](#) | [Configure VM generation](#)

[Review + create](#)

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Microsoft Azure

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

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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)

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STEP 5:CLICK ON NETWORKING

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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

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CREATE DISK

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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

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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> |

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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

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Next : Monitoring >

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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 ⓘ ☐

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CLICK ON TAGS

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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 ⓘ

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 ⓘ

Proximity placement group

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

Proximity placement group ⓘ

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STEP 8:ASSIGN NAME AND VALUE

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Create a virtual machine ...



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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 |
|--------------------------------------|---------------------------------|--|
| <input type="text" value="ubuntu2"/> | <input type="text" value="15"/> | <input type="text" value="13 selected"/> |
| <input type="text"/> | <input type="text" value="15"/> | <input type="text" value="13 selected"/> |

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STEP 9:VALIDATION IS PASSED.CLICK ON CREATE

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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

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STEP 10:DEPLOYMENT IS COMPLETED

OUTPUT

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

Home > **CreateVm-canonical.0001-com-ubuntu-server-focal-2-20** Deployment

Search

Overview Inputs Outputs Template

Deployment name: CreateVm-c... Start time: 7/11/202...
Subscription: Azure for Students Correlation ID: fa463ex
Resource group: azure2

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-2-20230711011845' 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

STEP11:

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

Home > **cloud4** Virtual machine

Search

Connect Start Restart Stop Capture Delete Refresh Open in mobile

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 Configuration

Essentials

Resource group (move) [azure2](#)
Status Running
Location South India
Subscription (move) [Azure for Students](#)
Subscription ID 042e3f3b-8cfe-4e88-82c8-b6bf539841a2

Tags (edit)
ubuntu2 : 15

Operating system Linux (ubuntu 20.04)
Size Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address [20.219.71.190](#)
Virtual network/subnet [cloud4-vnet/default](#)
DNS name [Not configured](#)
Health state -







JSON View

Properties Monitoring Capabilities (7) Recommendations Tutorials

Virtual machine

Microsoft Azure

Search resources, services, and docs (G+)



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DEFAULT DIRECTORY (192012122L...

Home > cloud4

cloud4 | Connect

Virtual machine

Search

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

Configuration

To improve security, enable just-in-time access on this VM. →

RDPSSH Bastion

Connect via SSH with client

^ Suggested method for connecting

Azure has checked the status for the most common prerequisites when connecting using this method.

Checking network security group for inbound access from your client's IP address. [Learn more](#)

The VM's network interface has a Public IP address. [Learn more](#)

The VM is running.

1. Open the client of your choice, for example [WSL on Windows](#), [Terminal on Mac](#) or [Shell on Linux](#).

2. Ensure you have read-only access to the private key. Chmod is only supported on Linux subsystems (e.g. WSL on Windows or Terminal on Mac).

chmod 400 <keyname>.pem

3. Provide a path to your SSH private key file. [Replace/reset your SSH private key](#).

Private key path

~/ssh/<keyname>.pem