

# MICROSOFT AZURE

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**GIT LINK:**

[https://github.com/MadhushreeRamachandran/Azure\\_Madhushree.git](https://github.com/MadhushreeRamachandran/Azure_Madhushree.git)

## Welcome to Azure Cloud Shell

**Sandbox:**

- azvm create --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --name my-vm --public-ip-sku Standard --image Ubuntu2204 --admin-username azureuser --generate-ssh-keys
- azvm extension set --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --vm-name my-vm --name customScript --publisher Microsoft.Azure.Extensions --version 2.1 --settings '{"fileUris":["https://raw.githubusercontent.com/MicrosoftDocs/mslearn-welcome-to-azure/master/configure-nginx.sh"]}' --protected-settings '{"commandToExecute": "./configure-nginx.sh"}'
- sudo apt-get update
- ssh azureuser@4.186.40.129
- echo "sudo apt-get update -y"
- sudo apt-get install nginx -y

- `sudosystemctl start nginx`
- `sudosystemctl enable nginx" > setup_nginx.sh`
- `chmod +x setup_nginx.sh`
- `./setup_nginx.sh`
  
- `echo "<html><body><h2>Welcome to Azure! My name is $(hostname).</h2></body></html>" | sudo tee -a /var/www/html/index.html`
  
- `sudosystemctl status nginx`
  
- `azvm open-port --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --name my-vm --port 80`
  
- `azvm list-ip-addresses --resource-group "learn-1dd151f8-37c6-44cc-a975-8f08e65c30c2" --name my-vm --output table`
- `ssh azureuser@4.186.40.129`
- `sudo apt-get update`
- `git clone https://github.com/MadhushreeRamachandran/myportfolio.git`
- `sudo cp -r html/* /var/www/html/`
- `sudochown -R www-data:www-data /var/www/html`
- `sudochmod -R 755 /var/www/html`
- `sudosystemctl restart nginx`

# MICROSOFT SANDBOX CREATION AND DEPLOYMENT:

## 1. Creation of Sandbox

The screenshot shows a Microsoft Learn exercise titled "Exercise - Create an Azure virtual machine". The exercise is part of "Describe Azure compute and networking services" in "Unit 3 of 14". It requires 100 XP. The content explains that a sandbox provides access to Azure resources without charging, intended for learning purposes only. It includes a note about permanent loss of access if used for other reasons. A "Review permissions" button is present. The exercise summary states: "In this exercise, you create an Azure virtual machine (VM) and install Nginx, a popular web server." The Windows taskbar at the bottom shows the date as 09-08-2024.

## 2. Activation of Sandbox

The screenshot shows the same Microsoft Learn exercise page after activation. A message in the sidebar says "Sandbox activated! Time remaining: 59 min". The main content area now displays a terminal window titled "Azure Cloud Shell" with the message "Requesting a Cloud Shell.". The Windows taskbar at the bottom shows the date as 09-08-2024.

### 3. Execution of Commands

The screenshot shows a Microsoft Edge browser window with multiple tabs open. The main content area displays the Azure Cloud Shell interface. On the left, there is a code editor window containing the command:

```
az vm create \
--resource-group "learn-61b0f037-6bfb-497f-972a-0aa8b715b0de" \
--name my-vm \
--public-ip-sku Standard \
--image Ubuntu2204 \
--admin-username azureuser \
--generate-ssh-keys
```

Below the code editor, a message states: "Your VM takes a few moments to come up. You named the VM my-vm. You use this name to refer to the VM in later steps." To the right of the code editor is the Cloud Shell terminal window, which shows the output of the command:

```
To run a command as administrator (user "root"), use "sudo <command>". See "man sudo_root" for details.

azureuser@my-vm:~$ echo "sudo apt-get update -y"
sudo apt-get install nginx -y
sudo systemctl start nginx
sudo systemctl enable nginx" > setup_nginx.sh
chmod +x setup_nginx.sh
./setup_nginx.sh
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://archive.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.18.0-6ubuntu14.4).
0 upgraded, 0 newly installed, 0 to remove and 10 not upgraded.
Synchronizing state of nginx.service with SysV service script with /lib/systemd/system-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable nginx
azureuser@my-vm:~$
```

The terminal window also shows the status bar indicating "Wrestling" and the date "09-08-2024".

The screenshot shows a Microsoft Edge browser window with multiple tabs open. The main content area displays the Azure Cloud Shell interface. On the left, there is a code editor window containing the command:

```
az vm create \
--resource-group "learn-61b0f037-6bfb-497f-972a-0aa8b715b0de" \
--name my-vm \
--public-ip-sku Standard \
--image Ubuntu2204 \
--admin-username azureuser \
--generate-ssh-keys
```

Below the code editor, a message states: "Your VM takes a few moments to come up. You named the VM my-vm. You use this name to refer to the VM in later steps." To the right of the code editor is the Cloud Shell terminal window, which shows the output of the command:

```
azureuser@my-vm:~$ echo "sudo apt-get update -y"
sudo apt-get install nginx -y
sudo systemctl start nginx
sudo systemctl enable nginx" > setup_nginx.sh
chmod +x setup_nginx.sh
./setup_nginx.sh
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://archive.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.18.0-6ubuntu14.4).
0 upgraded, 0 newly installed, 0 to remove and 10 not upgraded.
Synchronizing state of nginx.service with SysV service script with /lib/systemd/system-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable nginx
azureuser@my-vm:~$ echo "html><body><h2>Welcome to Azure! My name is $(hostname)</h2></body></html>" | sudo tee -a /var/www/html/index.html
azureuser@my-vm:~$ sudo systemctl status nginx
azureuser@my-vm:~$
```

The terminal window also shows the status bar indicating "26°C Mostly cloudy" and the date "09-08-2024".

```

az vm create \
--resource-group "learn-61b0f037-6bfb-497f-972a-0aa8b715b0de" \
--name my-vm \
--public-ip-sku Standard \
--image Ubuntu2204 \
--admin-username azureuser \
--generate-ssh-keys

```

Your VM takes a few moments to come up. You named the VM **my-vm**. You use this name to refer to the VM in later steps.

2. Run the following az vm extension set command to configure Nginx on your VM:

```

az vm extension set \
--resource-group "learn-61b0f037-6bfb-497f-972a-0aa8b715b0de" \
--name my-vm \
--customScript \
--publisher Microsoft.Azure.Extensions \
--version 2.1 \
--settings '{"fileUris":["https://raw.githubusercontent.com/Micr..."]}' \
--protected-settings '{"commandToExecute": "./configure-nginx.sh"}'

```

```

az vm extension set \
--resource-group "learn-61b0f037-6bfb-497f-972a-0aa8b715b0de" \
--name my-vm \
--customScript \
--publisher Microsoft.Azure.Extensions \
--version 2.1 \
--settings '{"fileUris":["https://raw.githubusercontent.com/Micr..."]}' \
--protected-settings '{"commandToExecute": "./configure-nginx.sh"}'

```

Sandbox activated! Time remaining: 35 min

You have used 1 of 10 sandboxes for today. More sandboxes will be available tomorrow.

In this exercise, you create an Azure virtual machine (VM) and install Nginx, a popular web server.

You could use the Azure portal, the Azure CLI, Azure PowerShell, or an Azure Resource Manager (ARM) template.

**Exercise - Create an Azure virtual machine**

Sandbox activated! Time remaining: 33 min

You have used 1 of 10 sandboxes for today. More sandboxes will be available tomorrow.

In this exercise, you create an Azure virtual machine (VM) and install Nginx, a popular web server.

You could use the Azure portal, the Azure CLI, Azure PowerShell, or an Azure Resource Manager (ARM) template.

```
az upgrade, 0 newly installed, 0 to remove and 10 not upgraded.
Synchronizing state of nginx.service with SysV service script with /lib/systemd/system-sysv-install.
Executing: /lib/systemd/system-sysv-install enable nginx
azuser@my-vm:~$ echo "<html><body><h2>Welcome to Azure! My name is $(hostname)</h2></body></html>" | sudo tee -a /var/www/html/index.html
<html><body><h2>Welcome to Azure! My name is my-vm.</h2></body></html>
azuser@my-vm:~$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-08-09 03:52:54 UTC; 16min ago
     Docs: man:nginx(8)
     Main PID: 2351 (nginx)
        Tasks: 2 (limit: 4011)
       Memory: 4.8M
          CPU: 32ms
         CGroup: /system.slice/nginx.service
             ├─2351 nginx: master process /usr/sbin/nginx -g daemon on; master_process
             ├─2356 nginx: worker process
Aug 09 03:52:54 my-vm systemd[1]: Starting A high performance web server and a reverse proxy server...
Aug 09 03:52:54 my-vm systemd[1]: Started A high performance web server and a reverse proxy server.
```

## 4. Assigning learn resource group

**Exercise - Create an Azure virtual machine**

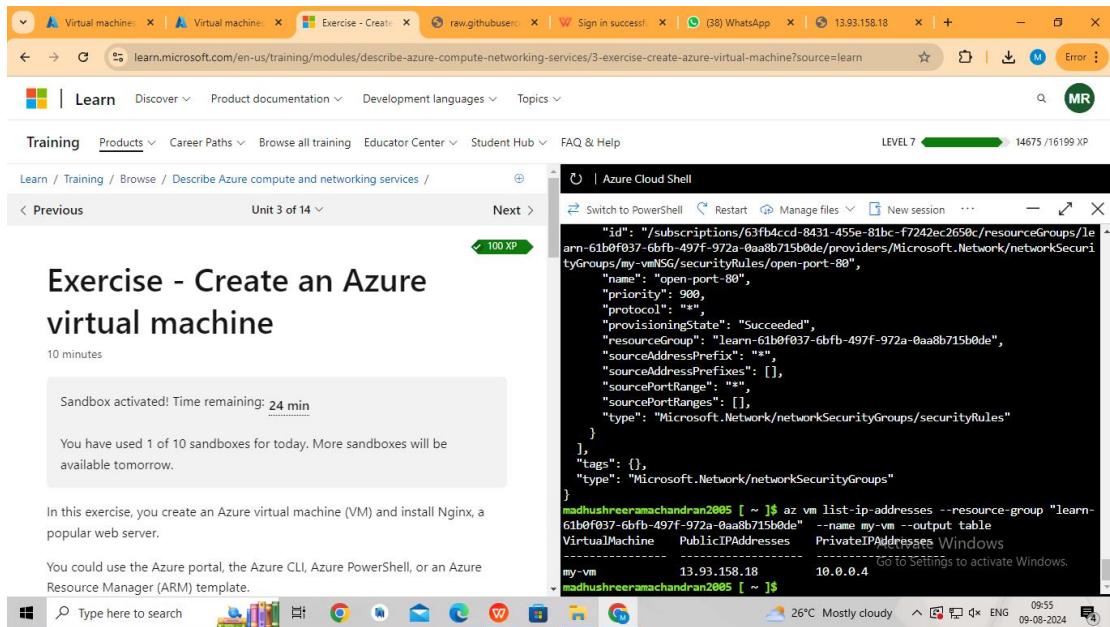
Sandbox activated! Time remaining: 24 min

You have used 1 of 10 sandboxes for today. More sandboxes will be available tomorrow.

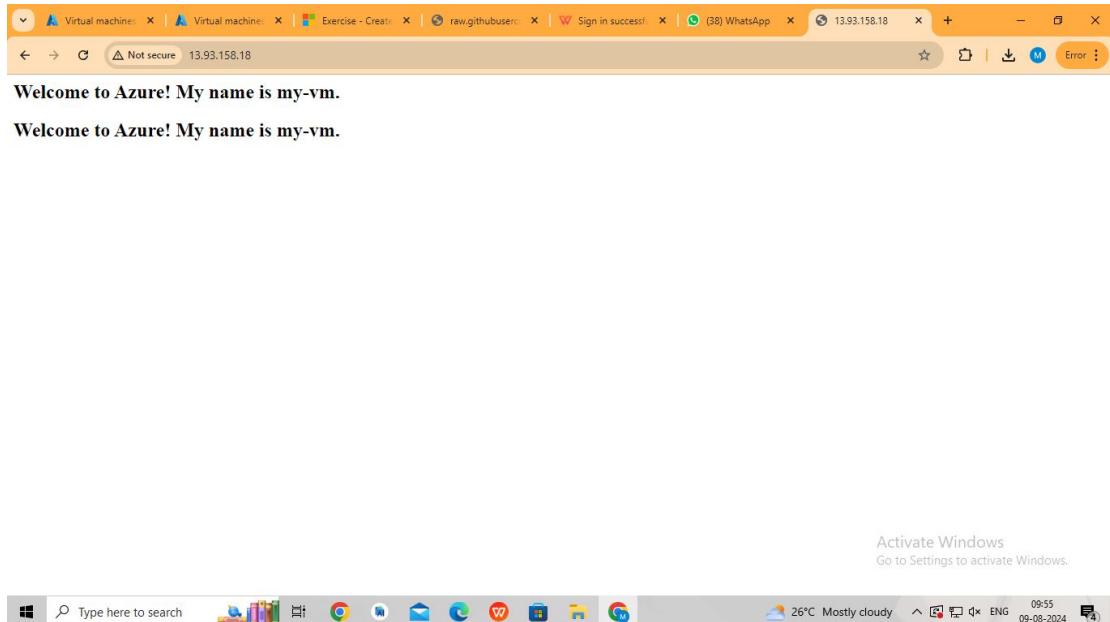
In this exercise, you create an Azure virtual machine (VM) and install Nginx, a popular web server.

You could use the Azure portal, the Azure CLI, Azure PowerShell, or an Azure Resource Manager (ARM) template.

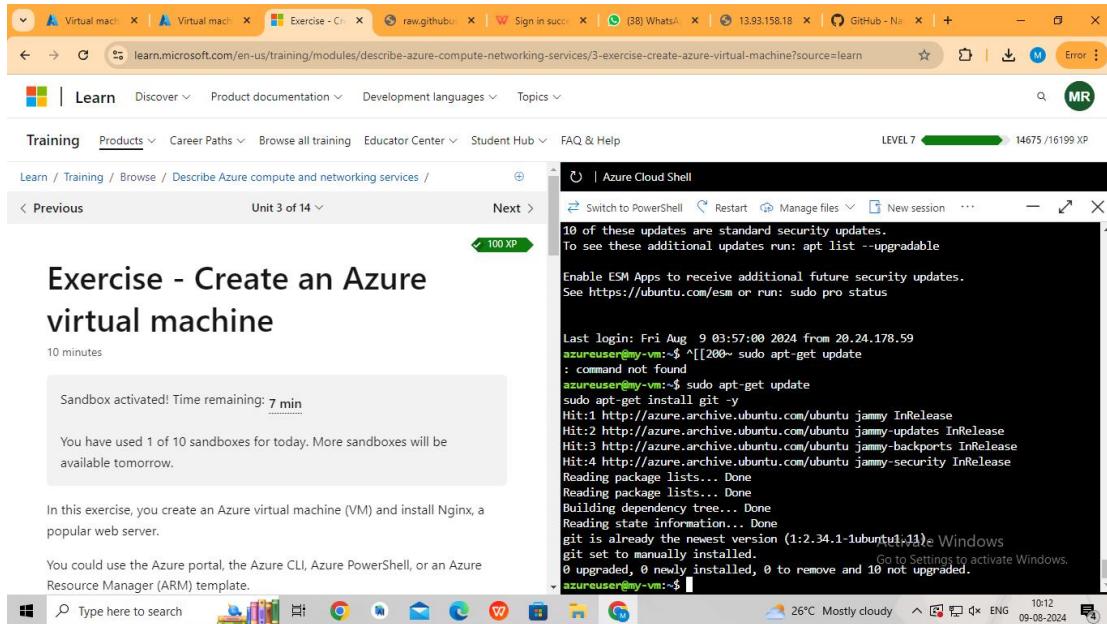
```
Read more about the command in reference docs
madhusreeramchandran2025 [ ~ ]$ az vm open-port --resource-group "learn-61b0f037-6fb-497f-972a-0aa8b715b0de" --name my-vm --port 80
bash: $'\v': command not found
madhusreeramchandran2025 [ ~ ]$ az vm open-port --resource-group "learn-61b0f037-6fb-497f-972a-0aa8b715b0de" --name my-vm --port 80
{
  "defaultSecurityRules": [
    {
      "access": "Allow",
      "description": "Allow inbound traffic from all VMs in VNET",
      "destinationAddressPrefix": "VirtualNetwork",
      "destinationAddressPrefixes": [],
      "destinationPortRange": "*",
      "destinationPortRanges": [],
      "direction": "Inbound",
      "etag": "W/"a761fef-6a5c-41a6-a1f2-e57af72c1693"",
      "id": "/subscriptions/63fb4cccd-8431-455e-81bc-f7242e2650c/resourceGroups/learn-61b0f037-6fb-497f-972a-0aa8b715b0de/providers/Microsoft.Network/networkSecurityGroups/my-vmNSG/defaultSecurityRules/AllowVnetInbound",
      "name": "AllowVnetInbound",
      "priority": 65000,
      "protocol": "*",
      "provisioningState": "Succeeded",
      "sourceAddressPrefix": "VirtualNetwork"
    }
  ]
}
```



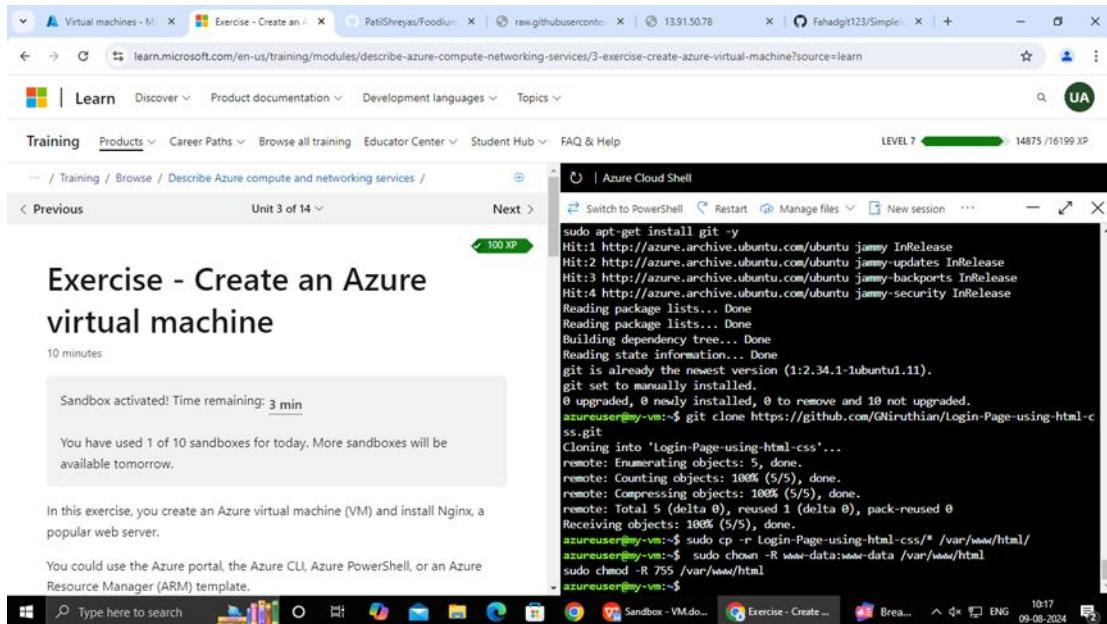
## 5. Running the ip address in browser and execution of the content in resource group



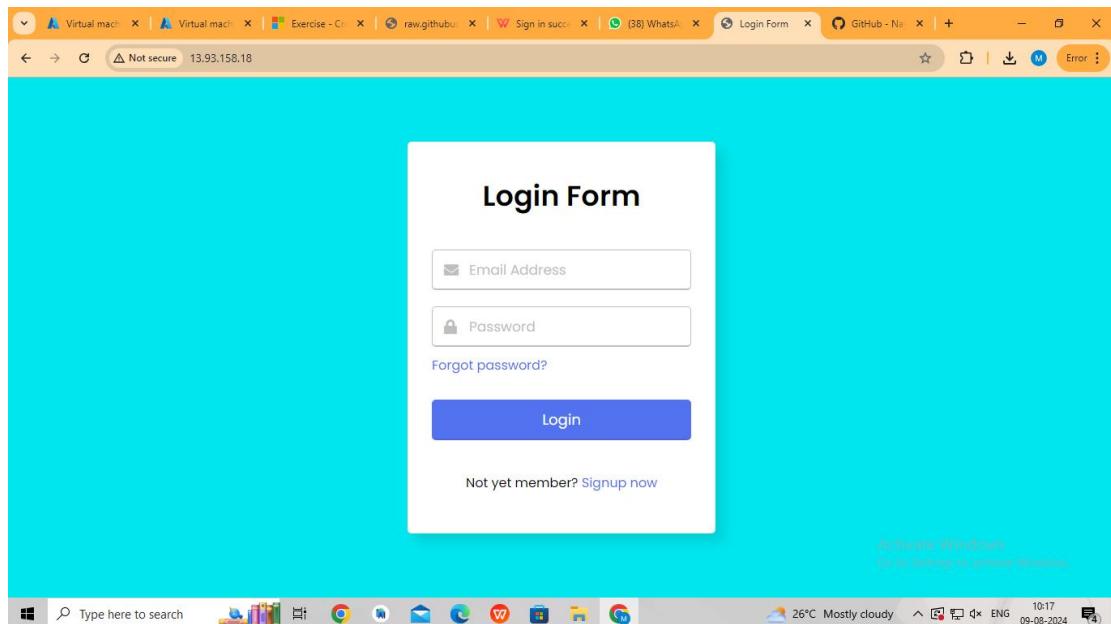
## 6. Installing Git



## 7. Passing the github link and cloning



## 8. Output:



## VIRTUAL MACHINE :

### COMMANDS:

- ssh Madhushree@4.186.40.129
- sudo apt update
- sudo apt install git
- sudo apt install nginx
- sudo systemctl start nginx
- sudo systemctl enable nginx
- cd /var/www/html
- sudo rm -rf \*
- sudo git clone https://github.com/GNiruthian/Login-Page-using-html-css.git .
- sudo chown -R www-data:www-data /var/www/html

## CREATION AND DEPLOYMENT:

### 1. Creation of virtual machine

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The top navigation bar includes 'Create a virtual machine - Microsoft Azure', the Azure logo, and a search bar. The main content area is titled 'Create a virtual machine'.

A message at the top says: 'Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.' Below it are three buttons: 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'.

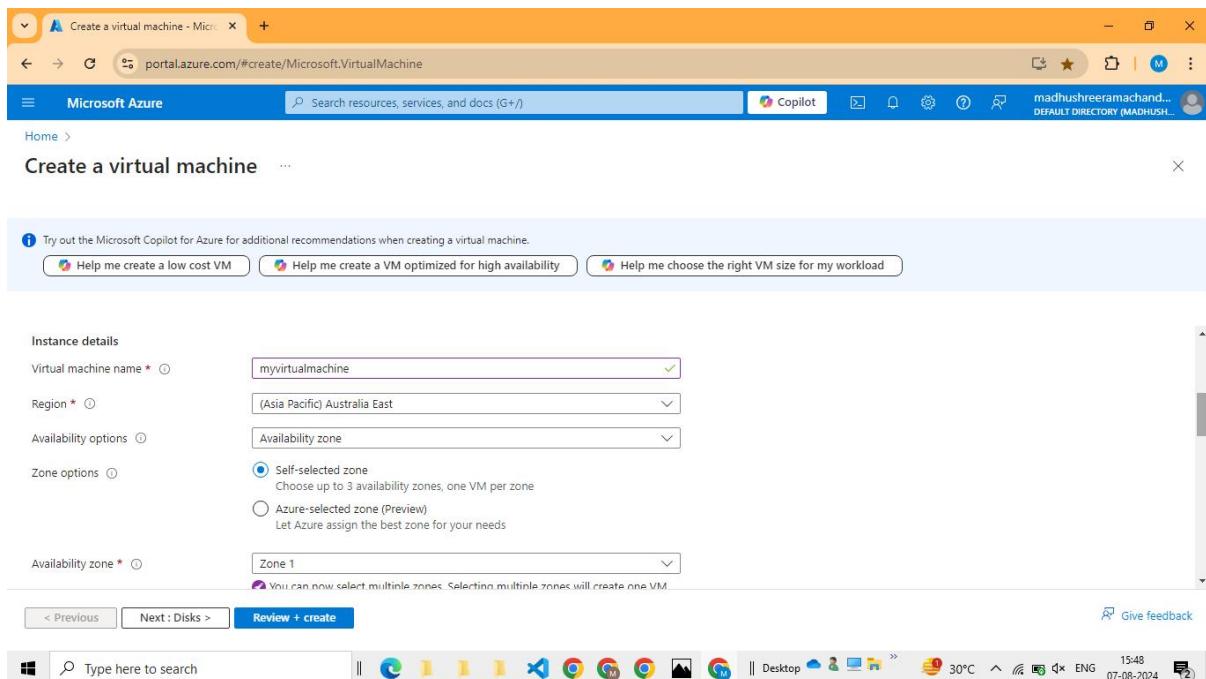
A note in a blue box states: 'This subscription may not be eligible to deploy VMs of certain sizes in certain regions.'

The 'Project details' section contains fields for 'Subscription' (set to 'Azure for Students') and 'Resource group' (set to '(New) myvirtualmachine\_group'). There is also a 'Create new' button.

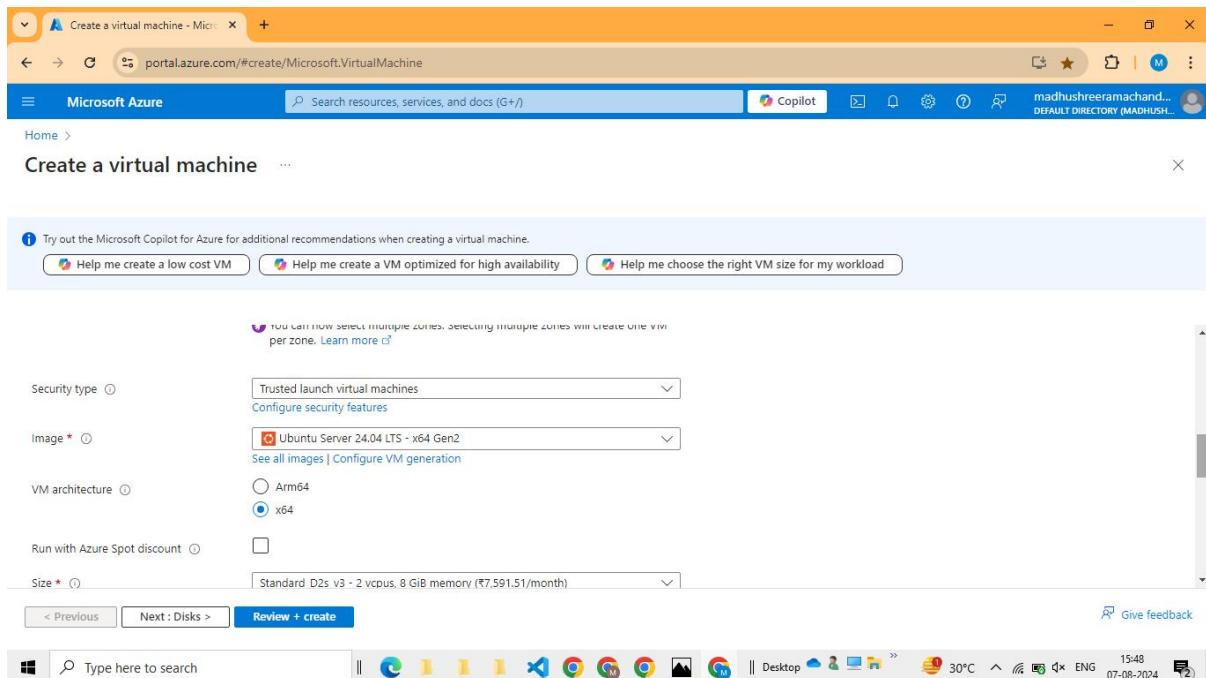
The 'Instance details' section is partially visible at the bottom.

At the bottom of the page are navigation buttons: '< Previous', 'Next : Disks >', 'Review + create', and 'Give feedback'. The status bar at the bottom right shows system information: 30°C, ENG, 15:48, 07-08-2024, and battery level.

## ● Declaring virtual machine name



## ● Setting up the environment



## ● Administrator account settings

Try out the Microsoft Copilot for Azure for additional recommendations when creating 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

Hibernate does not currently support Trusted launch and Confidential virtual machines for Linux images. [Learn more](#)

Administrator account

Authentication type:  Password  SSH public key

Username \*: Madhushree

Password \*: .....  
Confirm password \*: .....

< Previous | Next : Disks > | Review + create | Give feedback

## ● After review and create, the virtual machine is created

myvirtualmachine

Virtual machine

Search

Connect | Start | Restart | Stop | Hibernate | Capture | Delete | Refresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Bastion

Networking

Settings

Availability + scale

Security

Backup + disaster recovery

Essentials

Resource group ([move](#))  
[myvirtualmachine\\_group](#)

Status  
Stopped (deallocated)

Location  
Australia East (Zone 1)

Subscription ([move](#))  
[Azure for Students](#)

Subscription ID  
b72b7add-d59e-42c0-ac91-e485c5b2efc4

Availability zone  
1

Operating system  
Linux

Size  
Standard DS1 v2 (1 vcpu, 3.5 GiB memory)

Public IP address  
20.5.196.124

Virtual network/subnet  
[myvirtualmachine-vnet/default](#)

DNS name  
[Not configured](#)

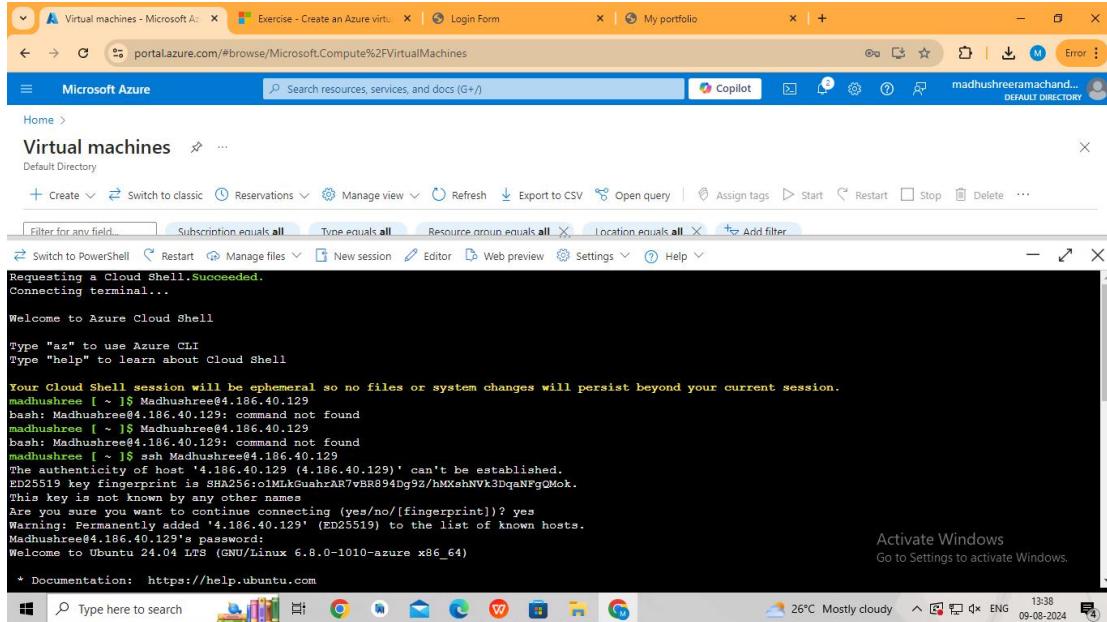
Health state  
-

Time created  
8/7/2024, 10:45 AM UTC

Tags ([edit](#))  
[Add tags](#)

JSON View

## ● Execution of Commands



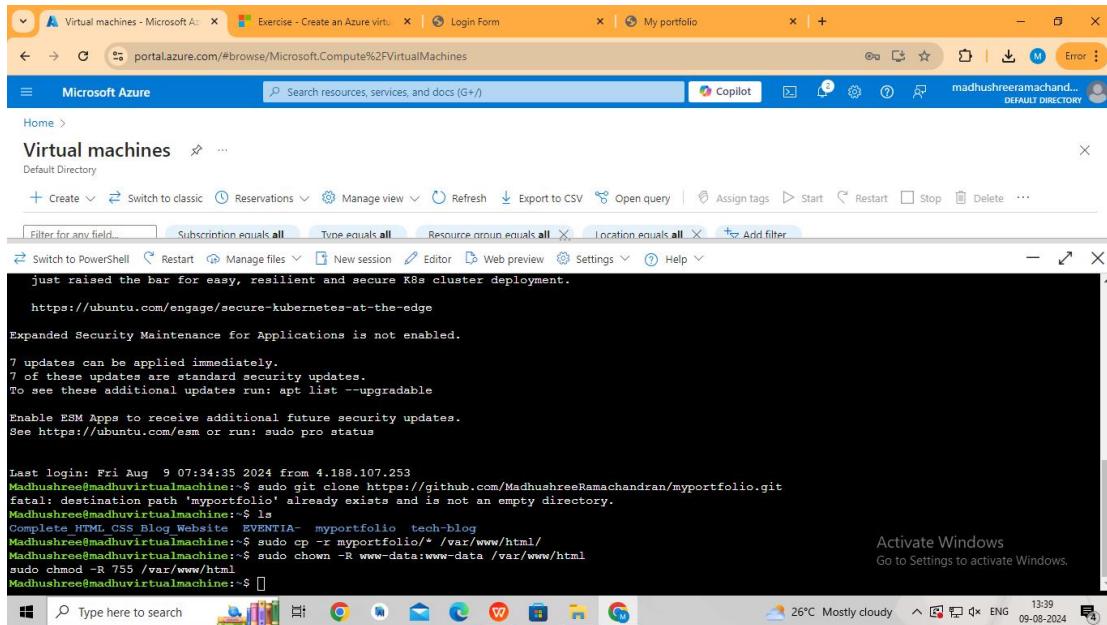
The screenshot shows a Microsoft Azure Cloud Shell terminal window. The terminal output is as follows:

```
Requesting a Cloud Shell. Succeeded.
Connecting terminal...
Welcome to Azure Cloud Shell
Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell
Your Cloud Shell session will be ephemeral so no files or system changes will persist beyond your current session.
madhushreee@4.186.40.129: ~ % ls
madhushreee@4.186.40.129: ~ % command not found
madhushreee@4.186.40.129: ~ % command not found
madhushreee@4.186.40.129: ~ % ssh Madhushreee@4.186.40.129
The authenticity of host '4.186.40.129 (4.186.40.129)' can't be established.
ED25519 key fingerprint is SHA256:1MLkguahrAR7vBBS94dg92/hMXehNVk3DqaNFgQMoK.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '4.186.40.129' (ED25519) to the list of known hosts.
Madhushreee@4.186.40.129's password:
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1010-azure x86_64)

 * Documentation: https://help.ubuntu.com

madhushreee@4.186.40.129: ~ %
```

## ● Passing github repository link



The screenshot shows a Microsoft Azure Cloud Shell terminal window. The terminal output is as follows:

```
just raised the bar for easy, resilient and secure K8s cluster deployment.
https://ubuntu.com/engage/secure-kubernetes-at-the-edge

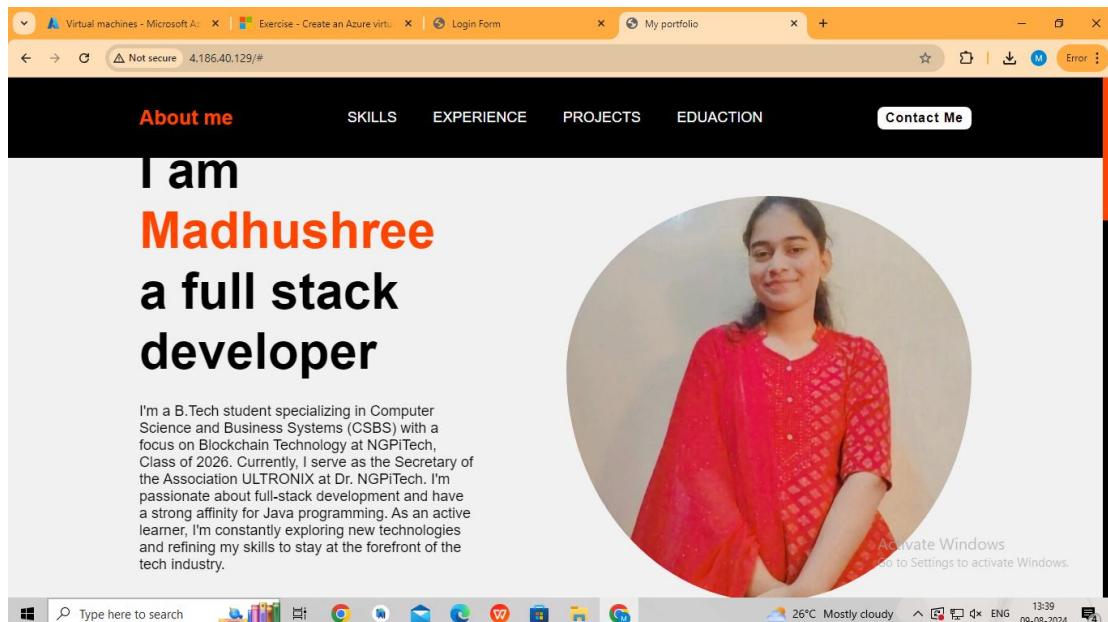
Expanded Security Maintenance for Applications is not enabled.

7 updates can be applied immediately.
7 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

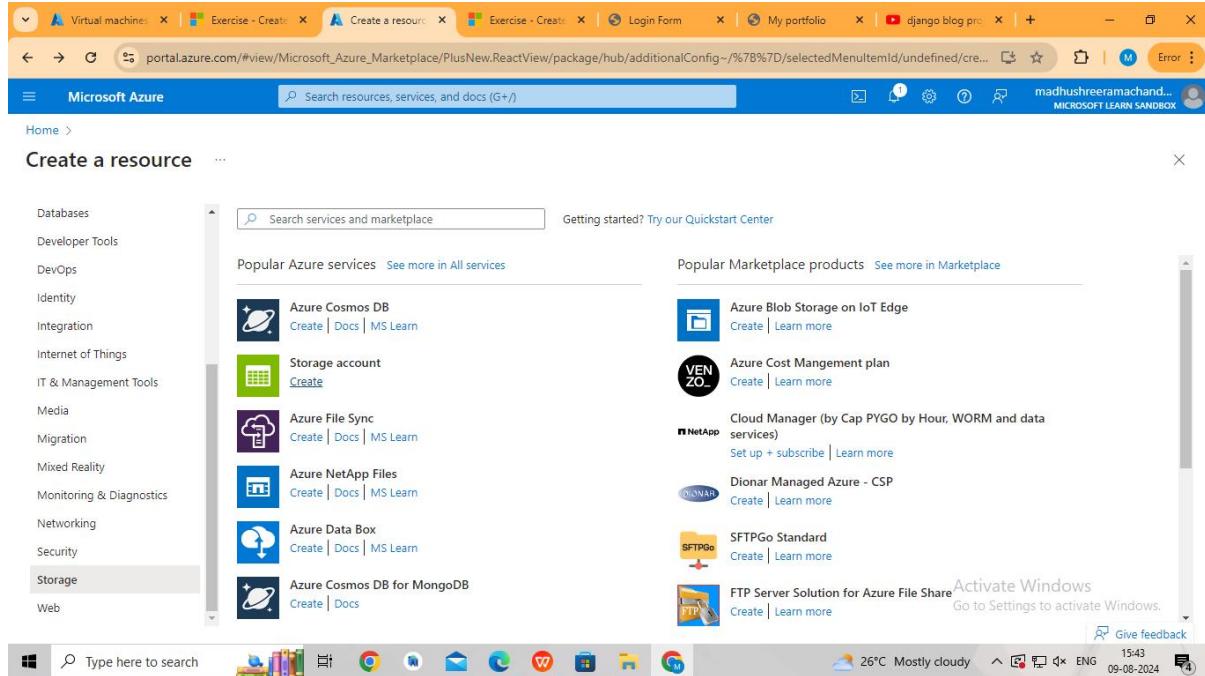
Last login: Fri Aug  9 07:34:35 2024 from 4.188.107.253
Madhushreee@adhuvirtualmachine:~$ sudo git clone https://github.com/MadhushreeRamachandran/myportfolio.git
fatal: destination path 'myportfolio' already exists and is not an empty directory.
Madhushreee@adhuvirtualmachine:~$ ls
Complete HTML CSS Blog Website EVENTIA- myportfolio tech-blog
Madhushreee@adhuvirtualmachine:~$ sudo cp -r myportfolio/* /var/www/html/
Madhushreee@adhuvirtualmachine:~$ sudo chown -R www-data:www-data /var/www/html
sudo chmod -R 755 /var/www/html
Madhushreee@adhuvirtualmachine:~$
```

➤ **Running the ip address and execution of my portfolio**



# STORAGE ACCOUNT

## 1. Creation of storage account



The screenshot shows the Microsoft Azure portal's 'Create a resource' interface. The left sidebar has 'Storage' selected. The main area lists popular Azure services and marketplace products.

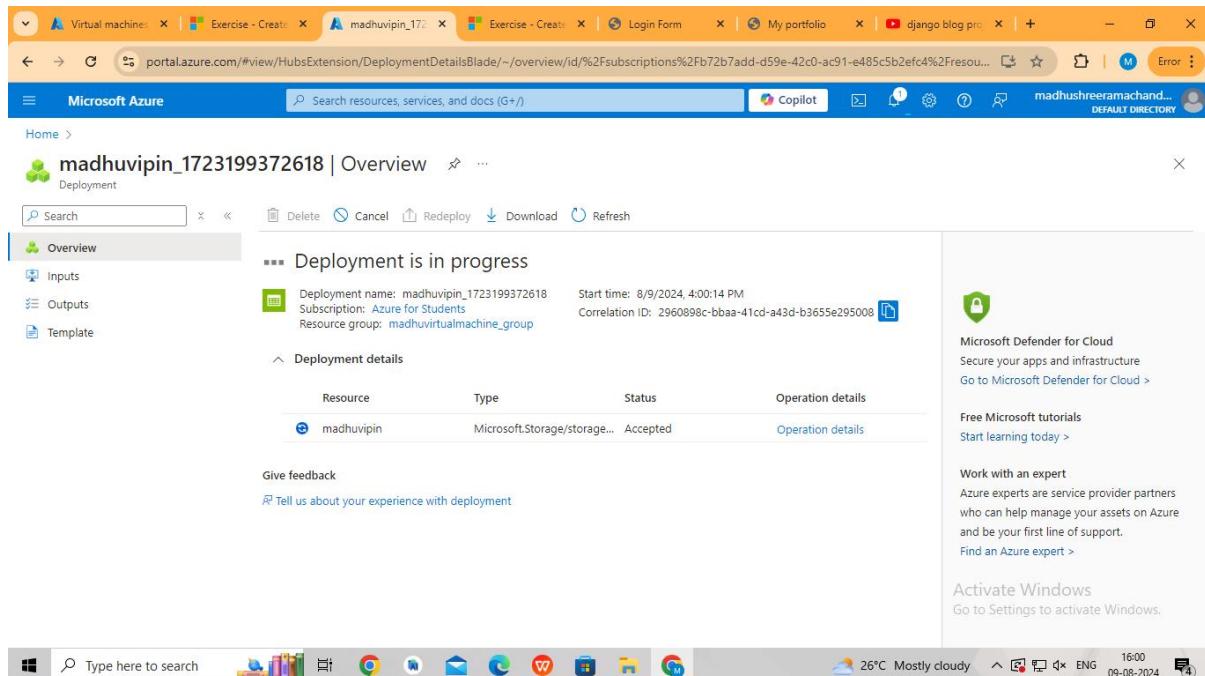
**Popular Azure services:**

- Azure Cosmos DB
- Storage account
- Azure File Sync
- Azure NetApp Files
- Azure Data Box
- Azure Cosmos DB for MongoDB

**Popular Marketplace products:**

- Azure Blob Storage on IoT Edge
- Azure Cost Management plan
- Cloud Manager (by Cap PYGO by Hour, WORM and data services)
- Dionar Managed Azure - CSP
- SFTPGo Standard
- FTP Server Solution for Azure File Share

## 2. Deployment of account



The screenshot shows the Microsoft Azure portal's deployment details for a specific resource. The deployment is currently in progress.

**Deployment details:**

| Resource   | Type                         | Status   | Operation details                 |
|------------|------------------------------|----------|-----------------------------------|
| madhuvipin | Microsoft.Storage/storage... | Accepted | <a href="#">Operation details</a> |

**Right sidebar links:**

- Microsoft Defender for Cloud
- Free Microsoft tutorials
- Work with an expert
- Activate Windows

### 3. Creation of container

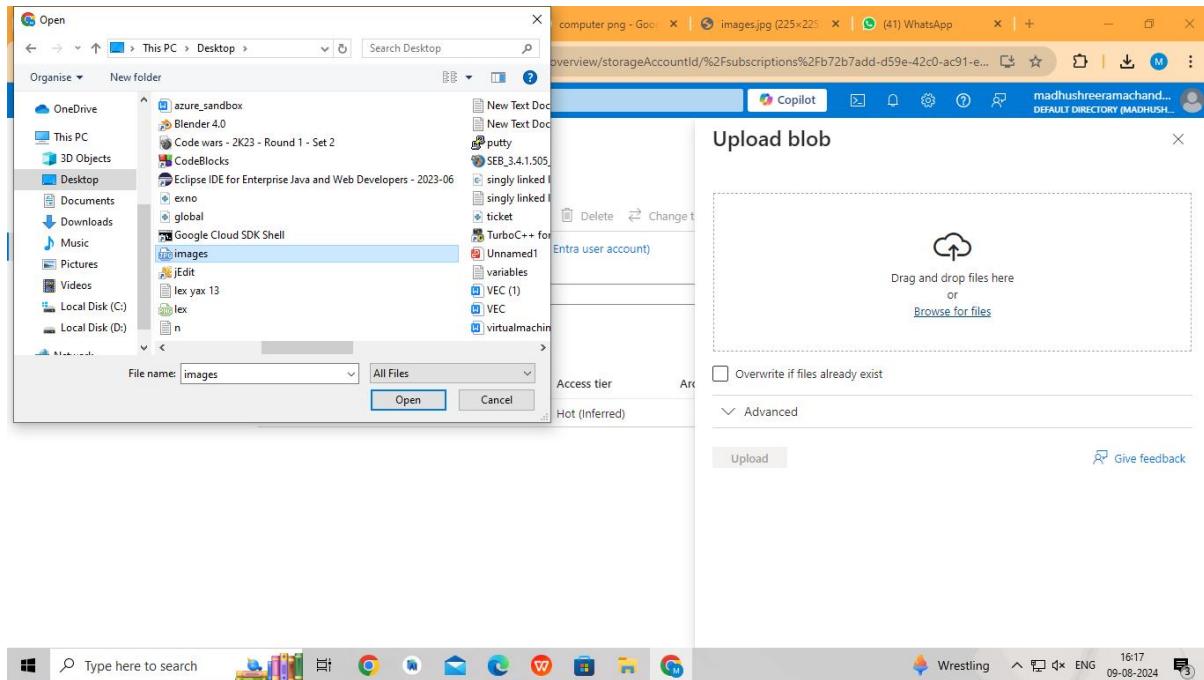
The screenshot shows the Microsoft Azure portal interface. The left sidebar is titled 'madhuvipin | Containers' and includes sections for Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, and Data storage (with sub-options for Containers, File shares, Queues, and Tables). The main content area displays a table of containers:

| Name       | Last modified        | Anonymous access level | Lease state |
|------------|----------------------|------------------------|-------------|
| Slogs      | 8/9/2024, 4:00:48 PM | Private                | Available   |
| madhuvipin | 8/9/2024, 4:10:59 PM | Blob                   | Available   |

At the bottom of the page, there are buttons for '+ Container', 'Change access level', 'Restore containers', 'Refresh', 'Delete', and 'Give feedback'. A search bar at the top right says 'Search resources, services, and docs (G+)'. The status bar at the bottom right shows '16:16 09-08-2024'.

The screenshot shows the Microsoft Azure portal interface. The left sidebar is titled 'madhuvipin' and includes sections for Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, and Monitoring (classic). The main content area displays the 'Overview' tab for the storage account, showing details such as Resource group, Location, Subscription, Disk state, and Tags. It also shows tabs for Properties, Monitoring, Capabilities (7), Recommendations (0), Tutorials, and Tools + SDKs. The 'Properties' tab is selected. Below the properties, there are sections for Blob service and Security. The status bar at the bottom right shows '26°C Mostly cloudy 16:01 09-08-2024'.

## 4. Uploading the image in container



The screenshot shows the Microsoft Azure Storage Container Overview page for 'madhuvipin'. The 'Overview' tab is selected. A success message at the top right states 'Successfully uploaded blob(s)'. The main table lists the uploaded blob 'images.jpg' with details: Name: images.jpg, Modified: 8/9/2024, 4:17:40 PM, Access tier: Hot (Inferred), Archive status: Not yet archived, Blob type: Block blob, Size: 5.77 KiB, Lease state: Available.

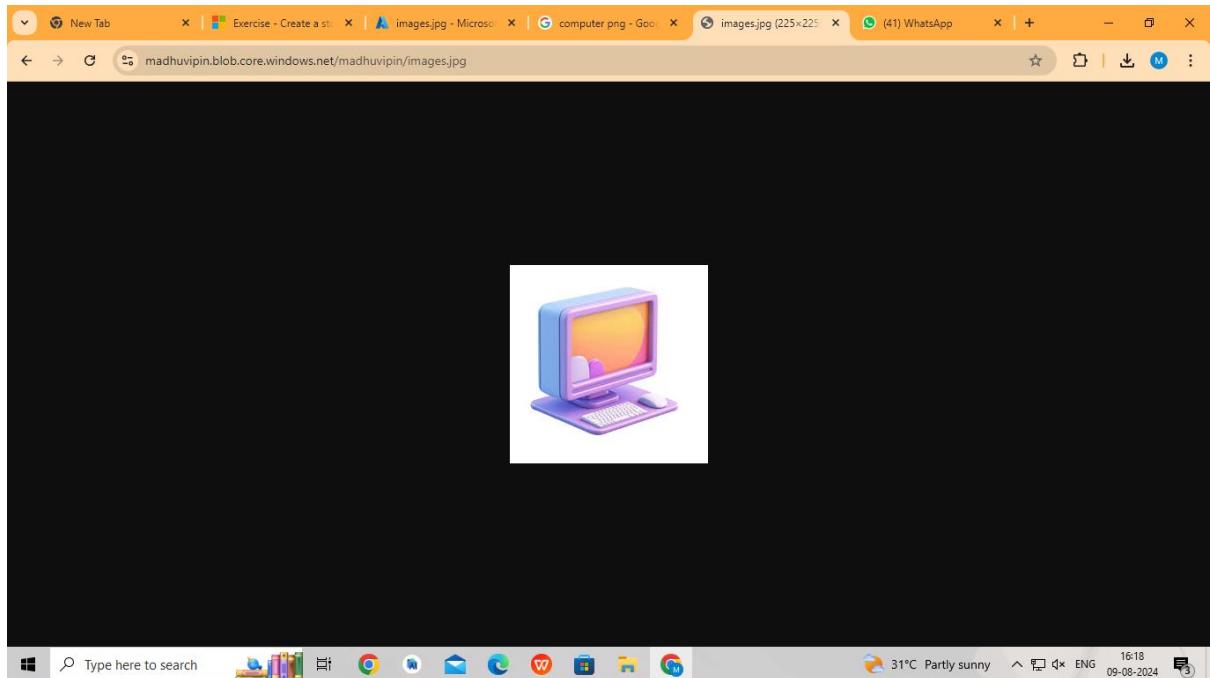
| Name       | Modified             | Access tier    | Archive status   | Blob type  | Size     | Lease state |
|------------|----------------------|----------------|------------------|------------|----------|-------------|
| images.jpg | 8/9/2024, 4:17:40 PM | Hot (Inferred) | Not yet archived | Block blob | 5.77 KiB | Available   |



## 5. Executing the image in browser by running the URL

The screenshot shows the Microsoft Azure Storage Blob Properties page for a file named 'images.jpg'. The URL listed is <https://madhuvipin.blob.core.windows.net/madhuvipin/images.jpg>. The blob type is 'Block blob' and the size is 5.77 KiB. The file was last modified on 8/9/2024 at 4:17:40 PM.

## Output



# COST MANAGEMENT

## ● PRICING CALCULATOR

The screenshot shows a Microsoft Edge browser window with multiple tabs open. The active tab is titled 'Exercise - Estimate workload costs using the Pricing calculator' from learn.microsoft.com. The page content includes a section titled 'Explore the Pricing calculator' with instructions to start with a quick tour. It lists four tabs: 'Products', 'Example scenarios', 'Saved estimates', and 'FAQs'. Below these tabs is a blue bar with the placeholder text 'Select a product to include it in your estimate.' A bulleted list explains each tab's purpose: 'Products' (choose Azure services), 'Example scenarios' (reference architectures), 'Saved estimates' (previous estimates), and 'FAQs' (frequently asked questions). The status bar at the bottom shows the URL as https://azure.microsoft.com/pricing/calculator/.

The screenshot shows a Microsoft Edge browser window with multiple tabs open. The active tab is titled 'Pricing calculator' from azure.microsoft.com. The page content includes a 'Create a pay-as-you-go account' button and a navigation bar with 'MC', 'M+', 'M', 'MR', 'check', and 'AC' buttons. Below the navigation bar is a user profile section for 'Madhushree Ramachandran' with the email 'madhushreeramachandran2005@gmail.com'. The main area features a 'Products' tab selected, followed by 'Example scenarios', 'Saved estimates', and 'FAQs'. A blue bar below the tabs says 'Select a product to include it in your estimate.' On the left is a sidebar with categories: Popular, Compute, Networking (highlighted in blue), Storage, Web, Mobile, Containers, Databases, Analytics, and AI + machine learning. To the right are cards for 'Virtual Network Manager', 'Load Balancer', 'Application Gateway', and 'VPN Gateway', each with an 'Add to estimate' button. A notification bubble for the Application Gateway card says 'Application Gateway added.' The status bar at the bottom shows the URL as https://azure.microsoft.com/en-us/pricing/calculator/.

The screenshot shows the Azure Virtual Machines Pricing Calculator page. At the top, there's a promotional message: "Get \$200 credit plus free monthly amounts of popular services for 12 months—including Virtual Machines. See free amounts". Below this are several filter options: Region (West US), Operating system (Windows), Type (OS Only), Tier (Standard), Category (All), Instance Series (All), and a detailed view of the D2 v3 instance (2 vCPUs, 8 GB RAM, 50 GB Temporary storage, \$0.209/hour). A "Virtual machines" button is also present. On the right, there's a "Savings Options" section with a "Chat with Sales" button. The bottom of the screen shows a Windows taskbar with various pinned icons and a weather widget indicating 31°C Partly sunny.

The screenshot shows the Azure SQL Database Pricing Calculator page. It features a similar promotional message: "Get \$200 credit plus free monthly amounts of popular services for 12 months—including Azure SQL Database. See free amounts". The configuration options include Region (West US), Type (Single Database), Purchase Model (vCore), Service Tier (General Purpose), Compute Tier (Provisioned), Hardware Type (Standard-series (Gen 5)), Instance (8 vCore), and Disaster Recovery (Primary or Geo replica). Below these, a "Compute" section includes a Redundancy dropdown set to "Locally Redundant". The bottom of the screen shows a Windows taskbar with various pinned icons and a weather widget indicating 31°C Partly sunny.

The screenshot shows the Azure Pricing Calculator interface for the Application Gateway. The configuration details are as follows:

- Region:** West US 2
- Tier:** Web Application Firewall
- Size:** Medium

A note indicates: "No charge for the first 10 TB of data processed for a Medium instance."

**Gateway hours:** 2 instances for 730 hours at \$183.96.

**Data processed:** 1 TB at \$0.00.

**Outbound Data Transfer:** 5 GB at \$0.00.

The status bar at the bottom shows: Type here to search, 31°C Partly sunny, 16:46, 09-08-2024.

The screenshot shows the Azure Pricing Calculator interface with the following summary:

- Estimated upfront cost:** \$0.00
- Estimated monthly cost:** \$2,056.49

A modal window titled "Save estimate" displays the message: "Your estimate has been saved. Click on the Saved Estimates tab to view all your saved estimates." It includes "Export", "Save", and "Save as" buttons, and a "Done" button.

The status bar at the bottom shows: Type here to search, 31°C Partly sunny, 16:48, 09-08-2024.

## ● TCO CALCULATOR

**Define your workloads**

Enter the specifications of your on-premises infrastructure into the TCO Calculator.

1. Go to the [TCO Calculator](#).
2. Under Define your workloads, select Add server workload to create a row for your bank of Windows Server VMs.
3. Under Servers, set the value for each of these settings:

Setting Value

|                          |                      |
|--------------------------|----------------------|
| Name                     | Servers: Windows VMs |
| Workload                 | Windows/Linux Server |
| Environment              | Virtual Machines     |
| Operating system         | Windows              |
| Operating System License | Datacenter           |

https://azure.microsoft.com/pricing/tco/calculator/

**Define your workloads**

Enter the details of your on-premises workloads. This information will be used to understand your current TCO and recommended services in Azure.

**Servers**

Enter the details of your on-premises server infrastructure. After adding a workload, select the workload type and enter the remaining details.

(+) Add server workload

**Databases**

Enter the details of your on-premises database infrastructure. After adding a database, enter the details of your on-premises database infrastructure in the Source section. In the Destination section, select the Azure service you would like to use.

(+) Add database

Storage

Chat with Sales



## Define your workloads

Enter the details of your on-premises workloads. This information will be used to understand your current TCO and recommended services in Azure.

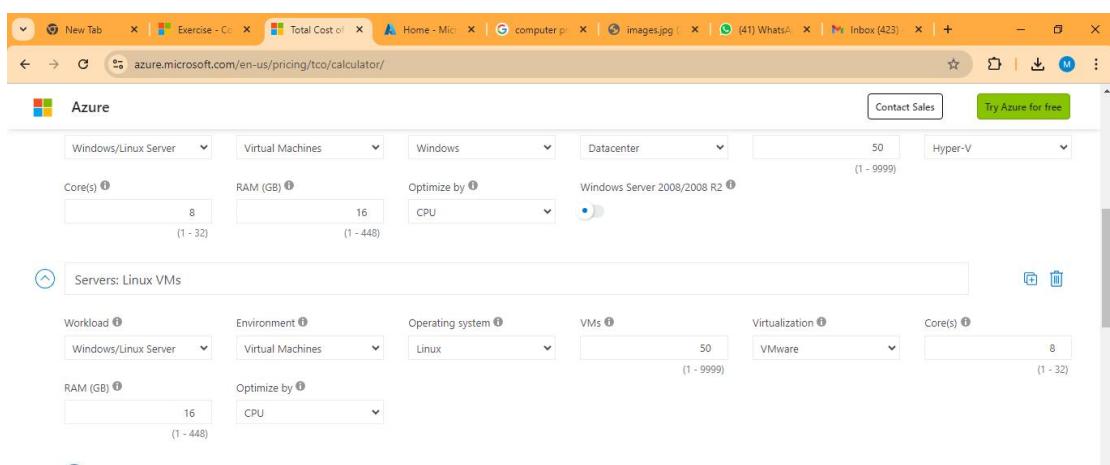
### Servers

Enter the details of your on-premises server infrastructure. After adding a workload, select the workload type and enter the remaining details.

Servers: Windows VMs

|                      |                  |                  |                             |                  |                |
|----------------------|------------------|------------------|-----------------------------|------------------|----------------|
| Workload             | Environment      | Operating system | Operating System License    | VMs              | Virtualization |
| Windows/Linux Server | Virtual Machines | Windows          | Datacenter                  | 50<br>(1 - 9999) | Hyper-V        |
| Core(s)              | RAM (GB)         | Optimize by      | Windows Server 2008/2008 R2 |                  |                |
| 8<br>(1 - 32)        | 16<br>(1 - 448)  | CPU              | ●                           |                  |                |

+ Add server workload



### Databases

Enter the details of your on-premises database infrastructure. After adding a database, enter the details of your on-premises database infrastructure in the Source section.



The screenshot shows the Azure TCO calculator interface. In the 'Storage' section, there is a form to enter details about on-premises storage infrastructure. The fields include:

- Storage type: Local Disk/SAN
- Disk type: HDD
- Capacity: 60 TB (1 - 5000)
- Backup: 120 TB (0 - 5000)
- Archive: 0 TB (0 - 5000)

Below the form is a blue button labeled '+ Add storage'. The background shows a blurred Windows desktop environment.

The screenshot shows the Azure TCO calculator interface. In the 'Networking' section, there is a form to enter details about network bandwidth consumption. The fields include:

- Outbound bandwidth: 15 TB (1 - 2000)
- Destination Region: East Asia

Below the form is a blue 'Next' button. To the right of the button is a red rectangular badge with white text that reads 'CERTIFIED BY NUCLEUS RESEARCH'. The background shows a blurred Windows desktop environment.

The screenshot shows a Microsoft Edge browser window with the URL <https://azure.microsoft.com/en-us/pricing/calculator/>. The page title is "Estimate the cost savings you can realize by migrating your workloads to Azure". A progress bar at the top indicates three steps: 1. Define your workloads (highlighted with a blue circle), 2. Adjust assumptions, and 3. View report. Below the progress bar, there are sections for "My saved reports" and a user profile for "Madhushree Ramachandran" ([madhushreeramachandran2005@gmail.com](mailto:madhushreeramachandran2005@gmail.com)). A large callout box in the center says "Over 3 year(s) with Microsoft Azure, your estimated cost savings could be as much as **\$663,656**". The Windows taskbar at the bottom shows various pinned icons and the date/time as 09-08-2024.

The screenshot shows a Microsoft Edge browser window with the URL <https://azure.microsoft.com/en-us/pricing/calculator/>. The page title is "Pricing Calculator". A modal dialog box titled "Share Estimate" displays a unique URL: <https://azure.com/e/7d3680c2195d4d238d4fb5ef676d4b2d>. The URL is preceded by "Copied!" and followed by "Done". The background shows the Azure Pricing Calculator interface with sections for "Estimated upfront cost" (\$0.00) and "Estimated monthly cost" (\$2,056.49). The Windows taskbar at the bottom shows various pinned icons and the date/time as 09-08-2024.

Azure

\$1,319,436  
Cost over 3 year(s)

\$655,780  
Cost over 3 year(s)

| Category       | Cost           |
|----------------|----------------|
| Compute        | \$903,106.08   |
| Hardware       | \$632,224.00   |
| Software       | \$123,100.00   |
| Electricity    | \$42,166.08    |
| Virtualization | \$105,616.00   |
| Data Center    | \$68,917.56    |
| Networking     | \$213,237.39   |
| Storage        | \$19,174.40    |
| IT Labor       | \$115,000.23   |
| Total          | \$1,319,436.00 |

| Category    | Cost         |
|-------------|--------------|
| Compute     | \$364,284.00 |
| Data Center | \$0.00       |
| Networking  | \$27,639.00  |
| Storage     | \$148,856.83 |
| IT Labor    | \$115,000.23 |
| Total       | \$655,780.00 |

Chat with Sales

Type here to search

31°C Partly sunny 16:58  
16:58 09-08-2024