

Step 1: Create a Virtual Machine in Azure

1. Log in to the Azure Portal:

- Go to the [Azure Portal](#) and sign in with your account.

2. Create a New Virtual Machine:

- In the Azure Portal, click on "**Create a resource**" from the left-hand menu.

3. Configure the VM Basics:

- **Subscription:** Choose your subscription.
- **Resource Group:** You can either create a new resource group or select an existing one.
- **Virtual Machine Name:** Give your VM a name.
- **Region:** Select "**West US**" from the dropdown menu.
- **Availability Options:** Choose according to your needs (No infrastructure redundancy, Availability zone, etc.).
- **Image:** Select "**Ubuntu**" from the list of available images (choose the specific version you need, e.g., Ubuntu 20.04 LTS).
- **Size:** Choose the VM size based on your requirements.

4. Configure Administrator Account:

- Choose the **Authentication type** (SSH public key or password). If using SSH, you'll need to generate an SSH key pair if you haven't already.
- Enter the **Username** and **SSH public key** (if applicable).

5. Configure Networking:

- Under the **Networking** tab, ensure a new virtual network and subnet are created or select an existing one.
- Make sure to allow **Public IP** to connect to your VM.

6. Open SSH Port:

- In the **Networking** section, add an inbound port rule to allow **SSH (port 22)**.

7. Review + Create:

- Review your settings and click **"Create"** to provision the VM. This may take a few minutes.

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CreateVm-canonical.ubuntu-24_04-lts-server-20240926084259 | Overview

Deployment

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Overview

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Deployment is in progress

Deployment name: CreateVm-canonical.ubuntu-24_04-lts-server-2... Start time: 9/26/2024, 8:45:40 AM
Subscription: Free Trial Correlation ID: 4c869783-43dd-4407-b845-7e3cdc151231
Resource group: ubuntu_group

Deployment details

| Resource | Type | Status | Operation details |
|--------------|-------------------------------------|---------|-----------------------------------|
| ubuntu | Microsoft.Compute/virtualMachines | Created | Operation details |
| ubuntu979_z1 | Microsoft.Network/networkInterfa... | Created | Operation details |
| ubuntu-ip | Microsoft.Network/publicIpAddre... | OK | Operation details |
| ubuntu-nsg | Microsoft.Network/networkSecuri... | OK | Operation details |
| ubuntu-vnet | Microsoft.Network/virtualNetworks | OK | Operation details |

ubuntu | Network settings

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Rules

Network security group ubuntu-nsg (attached to networkInterface: ubuntu979_z1)

Impacts 0 subnets, 1 network interfaces

Create port rule

Search rules

Source == all Destination == all Protocol == all Action == all

| Priority | Name | Port | Protocol | Source | Destination | Action |
|----------|------|------|----------|--------|-------------|--------|
| 300 | SSH | 22 | TCP | Any | Any | Allow |

Step 2: Connect to the Linux VM using Terminal

1. Get the Public IP Address:

- Once the VM is created, go to the **"Overview"** page of your VM in the Azure Portal.
- Note the **Public IP address** of the VM.

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Refresh Troubleshoot More Options Feedback

Connecting using

Public IP address | 20.244.84.29

Admin username : azureuser

Port (change) : 22 [Check access](#)

Just-in-time policy : Unsupported by plan

2. Open Terminal:

- On your local machine, open a terminal (Linux, macOS, or Windows with WSL).

3. Connect to the VM:

- Use the following command to connect via SSH:

Native SSH



Connect from your local machine (Windows)

A public IP address is required to connect via this connection method.

Configured

2 Open a local shell (on Windows)

Open Terminal (Windows 11), PowerShell (Windows 10 or less), or a shell of your choice. Or switch the local machine OS above to view more instructions.

3 Copy and execute SSH command

Provide a path to your SSH private key file on your local machine.

ubuntu_key.pem

Can't find your private key? [Reset your SSH private key](#)

SSH to VM with specified private key.

```
ssh -i ubuntu_key.pem azureuser@20.244.84.29
```



Copied

Other Information

Using a Linux subsystem like WSL or Ubuntu on Terminal?

Copy your private key path to the Linux subsystem and ensure it has the correct read-only access.

Move your private key to the Linux subsystem. Use chmod to assign read-only access, then SSH.

```
mv /mnt/c/<your-private-key> ~/.ssh/
```



```
chmod 400 ~/.ssh/<your-private-key>
```



```
ssh -i ~/.ssh/<your-private-key> azureuser@20.244.84.29
```



4. Accept the SSH Key:

- The first time you connect, you'll be asked to confirm the authenticity of the host. Type "yes" and hit **Enter**.

```
Microsoft Windows [Version 10.0.22631.4169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Mohd Shahid\Downloads>ssh -i ubuntu_key.pem azureuser@20.244.84.29
The authenticity of host '20.244.84.29 (20.244.84.29)' can't be established.
ED25519 key fingerprint is SHA256:4fA3F09zmhQZqMwLJteU0fMl/9dm04iFCuVxz7LxbzE.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])?
```

- If you used a password for authentication, enter it when prompted.

```
System information as of Thu Sep 26 03:20:44 UTC 2024

System load:  0.09               Processes:            112
Usage of /:   5.0% of 28.02GB    Users logged in:     0
Memory usage: 28%               IPv4 address for eth0: 10.0.0.4
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

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

azureuser@ubuntu:~$
```

Step 3: Install Docker

Once connected to your VM, follow these steps to install Docker:

Update the package index

sudo apt update

Install Docker

sudo apt install -y docker.io

Start Docker service

sudo systemctl start docker

Enable Docker to start on boot

sudo systemctl enable docker

Step 4: Pull the hshar/webapp Repository

Now that Docker is installed, you can pull the hshar/webapp repository:

docker pull hshar/webapp

Step 5: Create a New File in the Docker Image

To create a new file in the hshar/webapp image, you'll need to run a container from that image and then create the file within that container.

1. Run a Container from the Image:

sudo docker run -it --name my_webapp_container hshar/webapp /bin/bash

This command will start an interactive terminal session inside the container.

2. Create a New File: Inside the container, create a new file:

touch new_file.txt

echo "This is a new file created in the hshar/webapp container." > new_file.txt

3. Exit the Container: To exit the container while keeping it running:

exit