Module 4: Assignment 4

Tasks To Be Performed:

1. Create a Linux VM with Ubuntu OS

2. Install Apache2 software

3. Create image out of VM

Solution:

1. Create a Linux VM with Ubuntu OS

Navigate to the Azure Portal:

Go to the Azure Portal and log in with your credentials.

Create a New VM:

In the search bar, type "Virtual machines" and click on it.

Click on "Create" and select "Azure Virtual Machine."

Basics Tab:

Subscription: Select your Azure subscription.

Resource group: Select an existing resource group or create a new one.

Virtual machine name: Provide a name for your VM.

Region: Choose the region where you want the VM to be deployed.

Availability options: Choose if you need high availability.

Image: Select "Ubuntu Server" as the OS.

Size: Choose the size of the VM (e.g., Standard_B1s).

Authentication type: Choose SSH public key or password.

Username: Enter a username for the VM.

Public inbound ports: Allow SSH (port 22) for access.

Disks Tab:

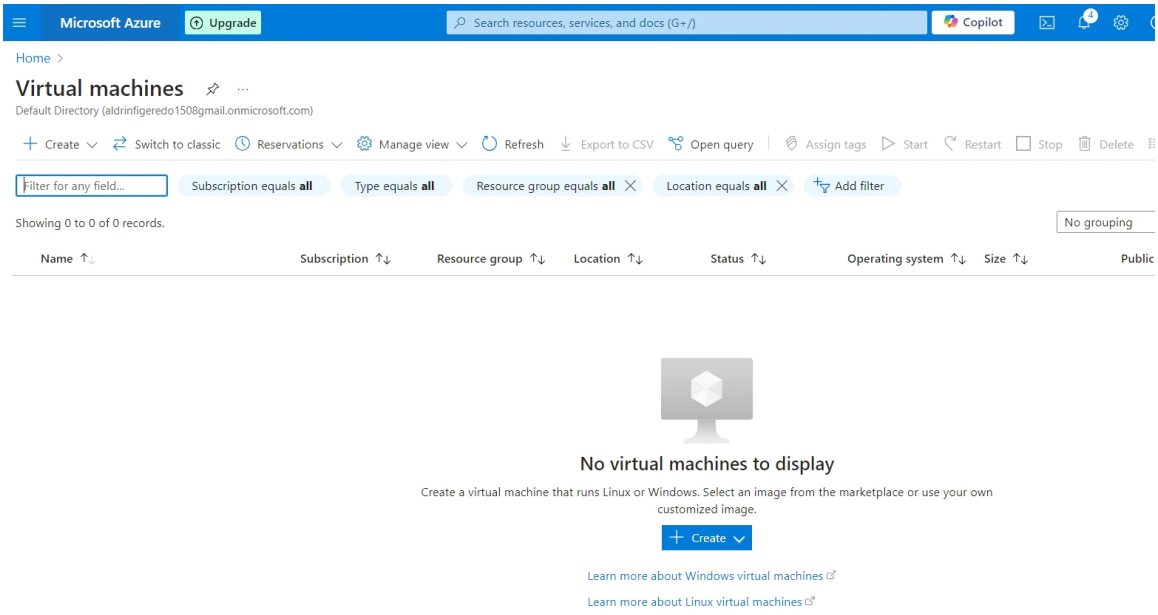
Configure the OS disk and any additional disks as per your requirement.

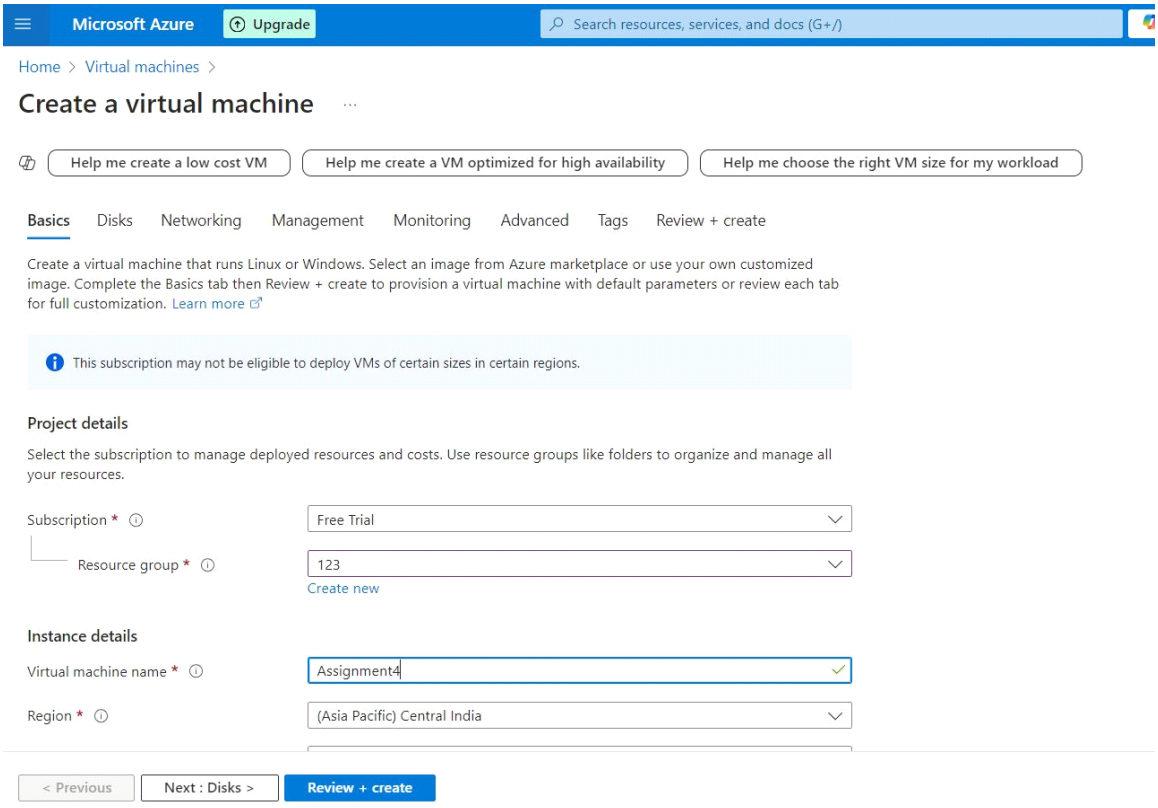
Networking Tab:

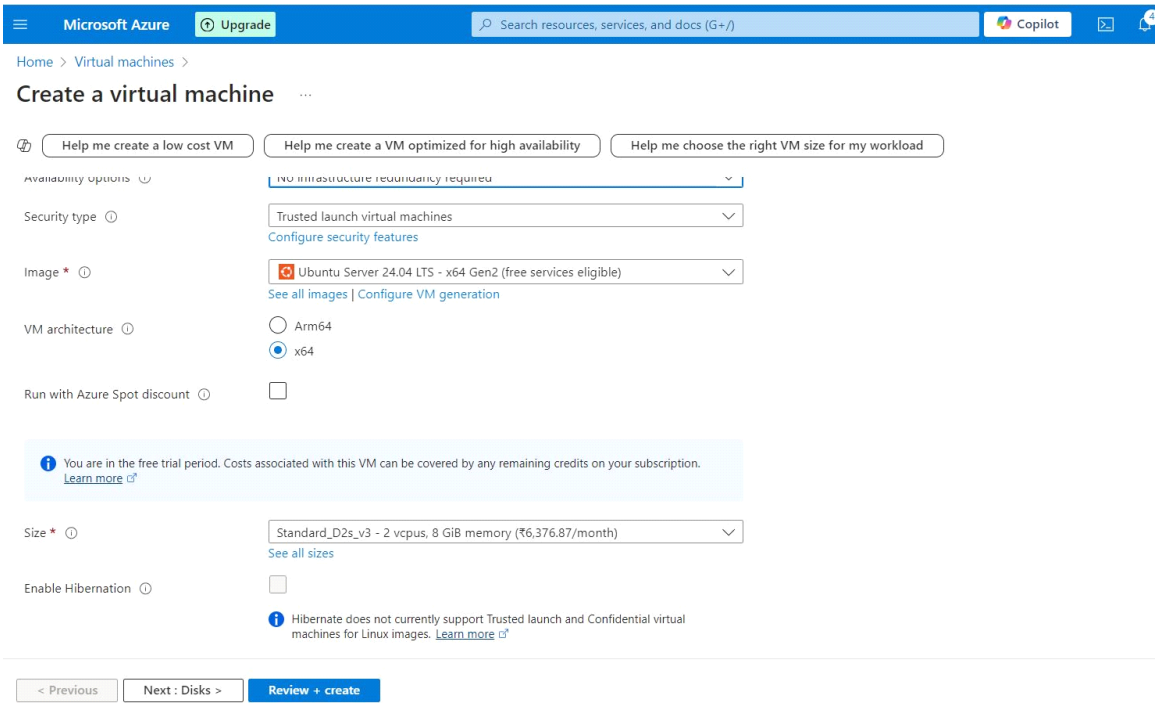
Configure the virtual network, subnet, and public IP as needed.

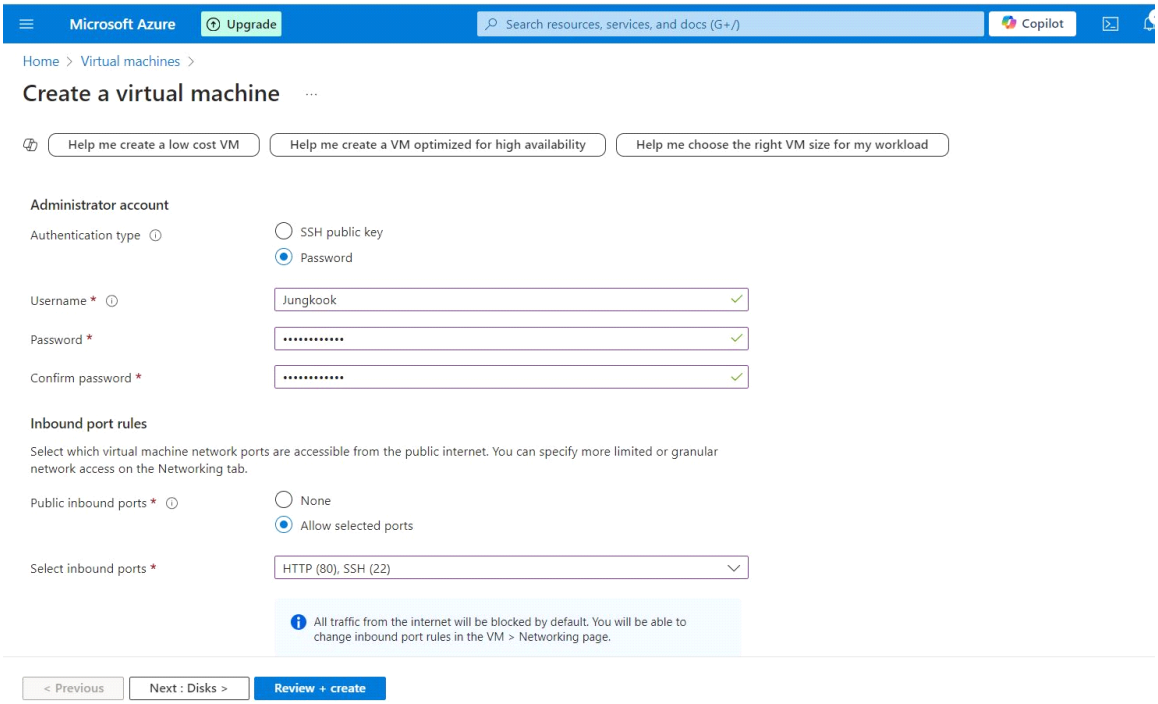
Review and Create:

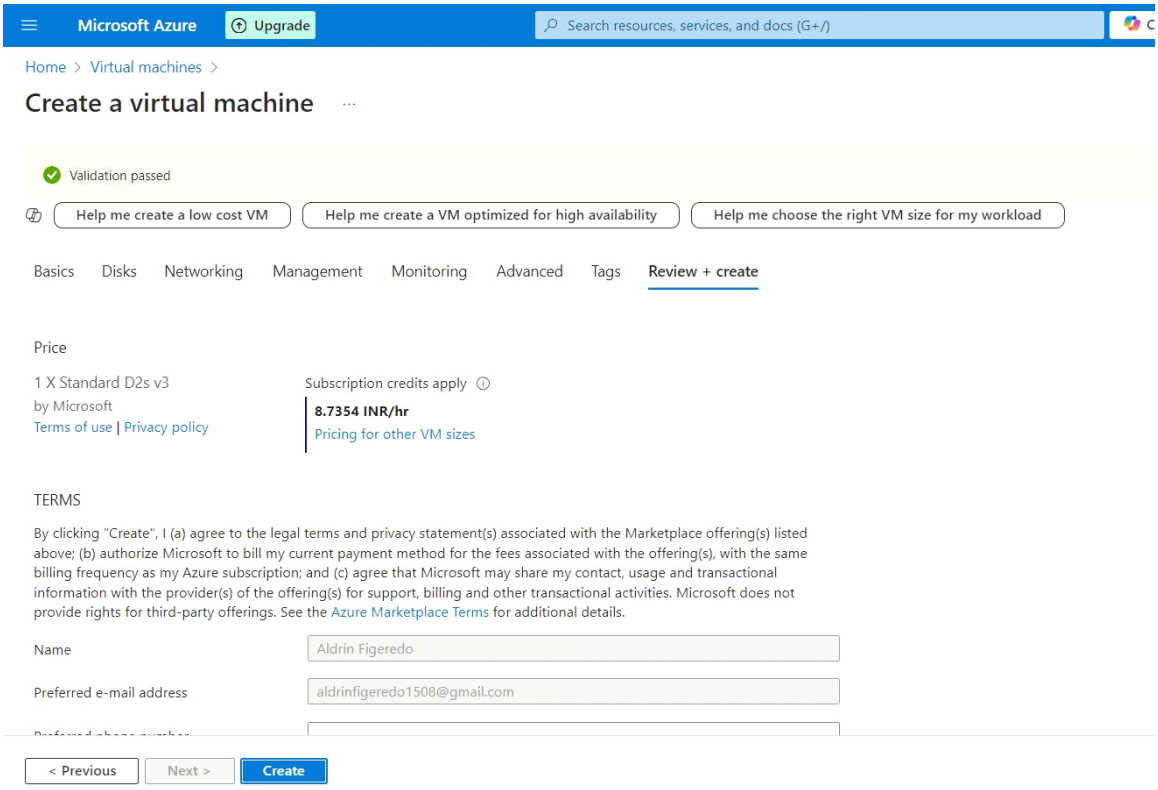
Review all your settings and click "Create."

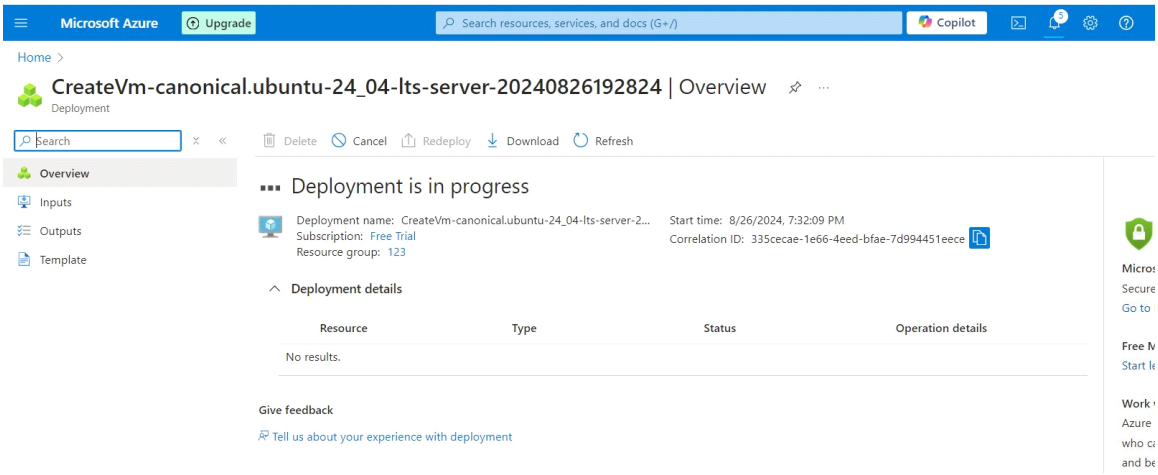


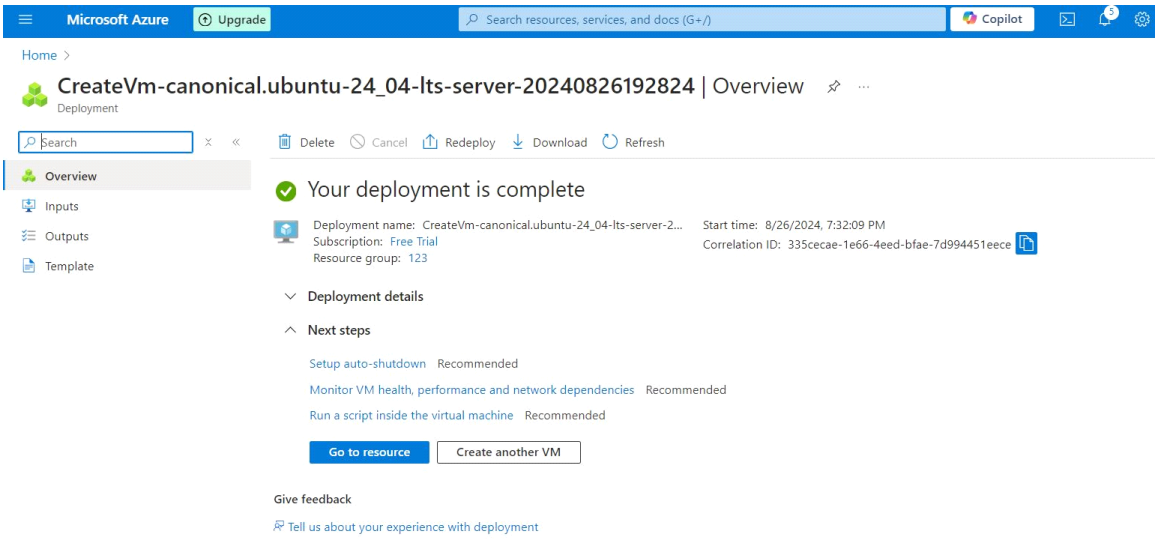

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines >
Create a virtual machine
Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload
Basics Disks Networking Management Monitoring Advanced 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 *
Free Trial
Resource group *
123
Create new
Instance details
Virtual machine name *
Assignment4
Region *
(Asia Pacific) Central India
< Previous
Next : Disks >
Review + create

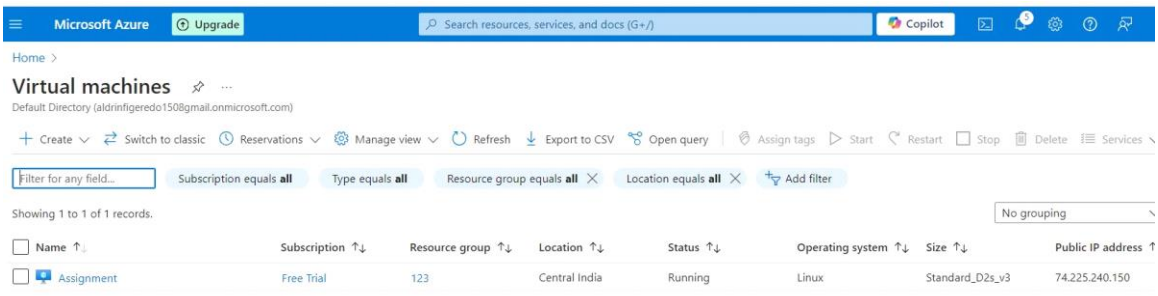

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
Home > Virtual machines >
Create a virtual machine
Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload
Security type
Trusted launch virtual machines
Configure security features
Image *
Ubuntu Server 24.04 LTS - x64 Gen2 (free services eligible)
See all images | Configure VM generation
VM architecture
Arm64
x64
Run with Azure Spot discount
You are in the free trial period. Costs associated with this VM can be covered by any remaining credits on your subscription.
Learn more
Size *
Standard_D2s_v3 - 2 vcpus, 8 GiB memory (₹6,376.87/month)
See all sizes
Enable Hibernation
Hibernate does not currently support Trusted launch and Confidential virtual machines for Linux images. Learn more
< Previous
Next : Disks >
Review + create


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
Home > Virtual machines >
Create 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
Administrator account
Authentication type
SSH public key
Password
Username *
Jungkook
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 *
HTTP (80), SSH (22)
All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.
< Previous
Next : Disks >
Review + create


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines >
Create a virtual machine
Validation passed
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
Basics
Disks
Networking
Management
Monitoring
Advanced
Tags
Review + create
Price
1 X Standard D2s v3
by Microsoft
Terms of use | Privacy policy
Subscription credits apply
8.7354 INR/hr
Pricing for other VM sizes
TERMS
By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.
Name
Aldrin Figeredo
Preferred e-mail address
aldrinfigeredo1508@gmail.com
< Previous
Next >
Create







2. Install Apache2 Software

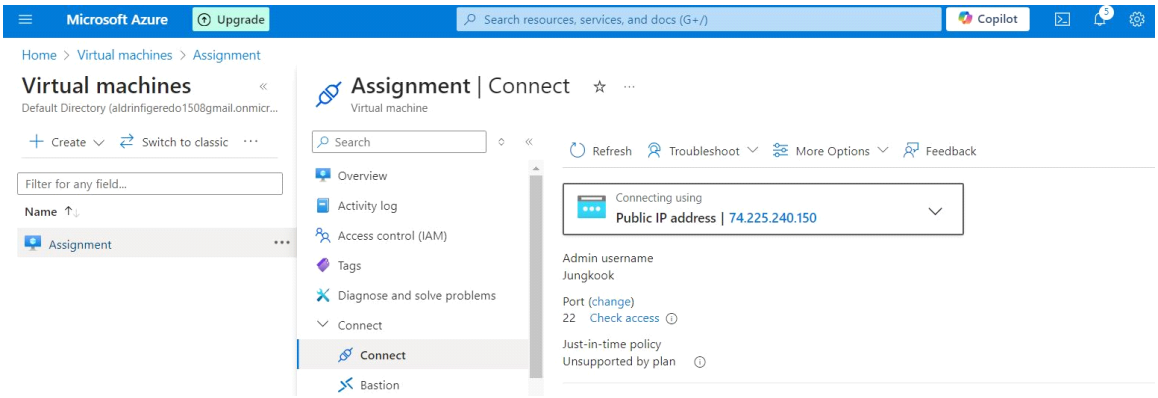
Access the VM:

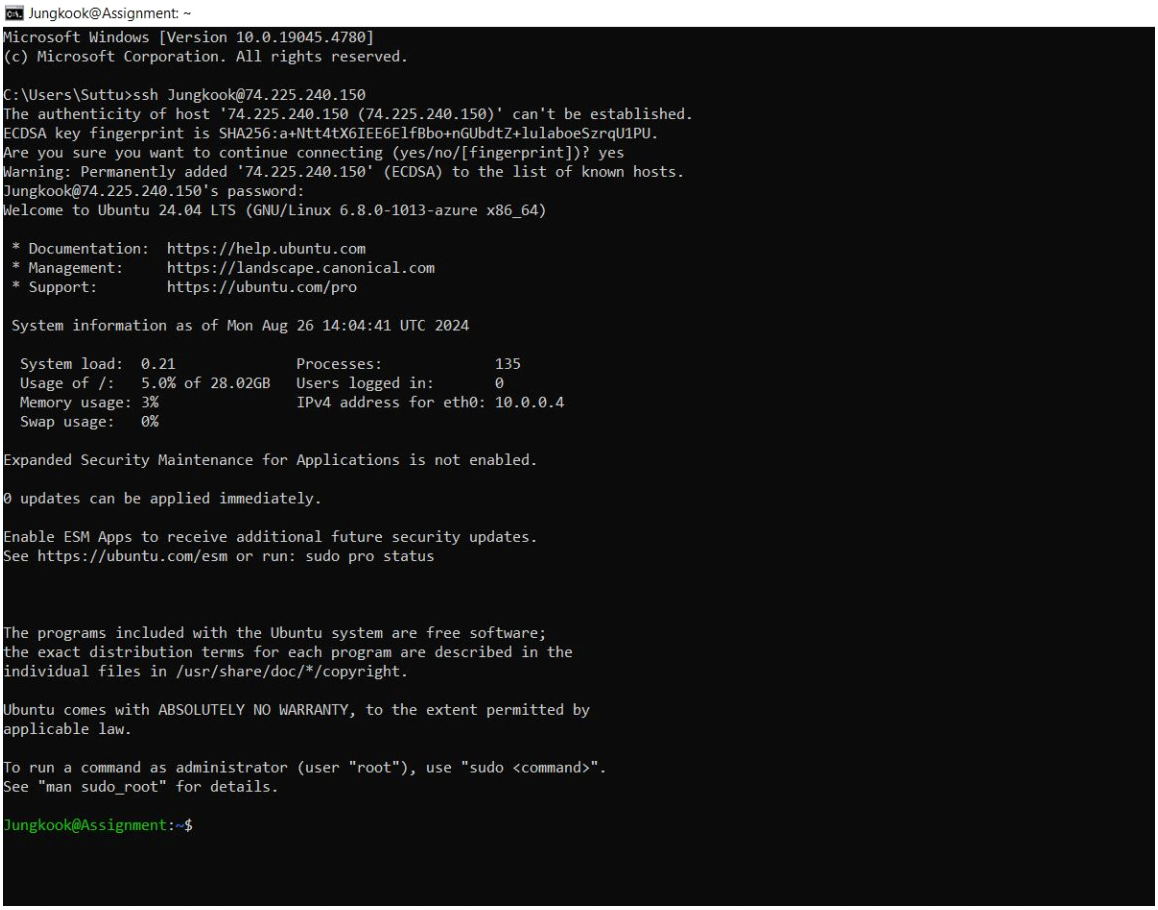
Once the VM is created, go to the "Virtual machines" section in the Azure Portal.

Click on your newly created VM and copy the public IP address.

Use an SSH client (like PuTTY or your terminal) to connect to the VM:

ssh <username>@<public-ip-address>





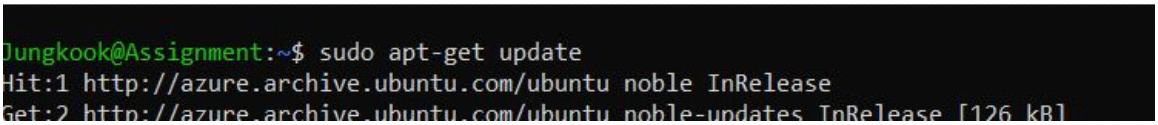
Install Apache2:

Once connected, run the following commands to update the package list and install Apache2:

sudo apt update

sudo apt install apache2 -y

Verify that Apache2 is running by visiting the public IP address in a web browser. You should see the default Apache2 Ubuntu page.



```
Jungkook@Assignment:~$ sudo apt-get install apache2 -y
Reading package lists... Done
Building dependency tree... Done
```

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
Jungkook@Assignment:~$ cd /var/www/html/
Jungkook@Assignment:/var/www/html$ ls
index.html
Jungkook@Assignment:/var/www/html$ sudo rm index.html
Jungkook@Assignment:/var/www/html$ ls
Jungkook@Assignment:/var/www/html$ sudo nano index.html
```

Jungkook@Assignment: /var/www/html

```
  GNU nano 7.2
THIS IS ASSIGNMENT 4 OF MODULE 4

Tasks To Be Performed:
1. Create a Linux VM with Ubuntu OS
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```
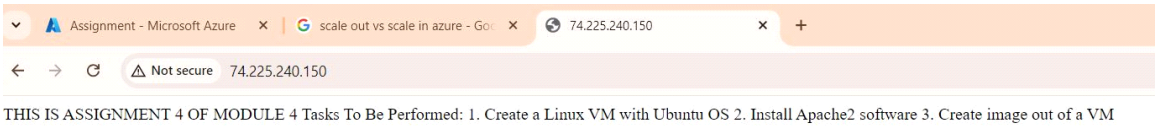

```
Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
Jungkook@Assignment:~$ cd /var/www/html/
Jungkook@Assignment:/var/www/html$ ls
index.html
Jungkook@Assignment:/var/www/html$ sudo rm index.html
Jungkook@Assignment:/var/www/html$ ls
Jungkook@Assignment:/var/www/html$ sudo nano index.html
Jungkook@Assignment:/var/www/html$ sudo cat index.html
THIS IS ASSIGNMENT 4 OF MODULE 4

Tasks To Be Performed:
1. Create a Linux VM with Ubuntu OS
2. Install Apache2 software
3. Create image out of a VM
Jungkook@Assignment:/var/www/html$ sudo systemctl restart apache2
Jungkook@Assignment:/var/www/html$
```



THIS IS ASSIGNMENT 4 OF MODULE 4 Tasks To Be Performed: 1. Create a Linux VM with Ubuntu OS 2. Install Apache2 software 3. Create image out of a VM

3. Create an Image Out of the VM

Deallocate the VM:

Before creating an image, the VM must be deallocated.

In the Azure Portal, navigate to your VM and click on "Stop."

Create Image:

After the VM is deallocated, go to the "Virtual machines" section.

Click on the VM and then click on "Capture" from the top menu.

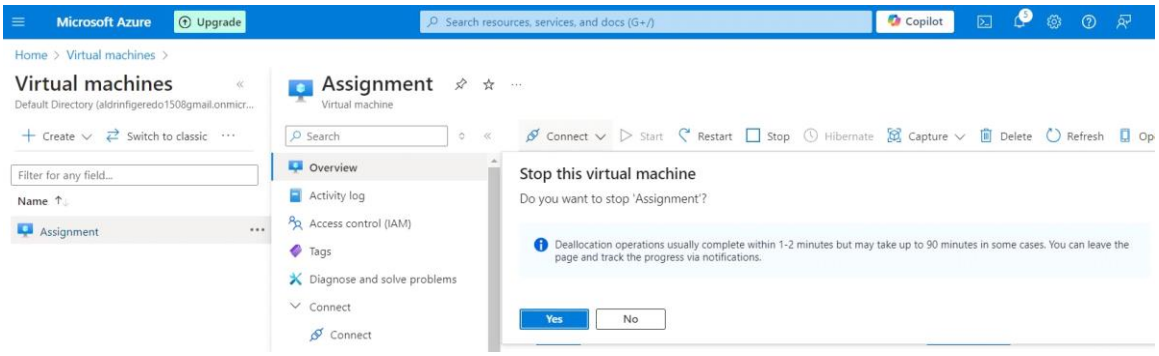
Image Name: Provide a name for the image.

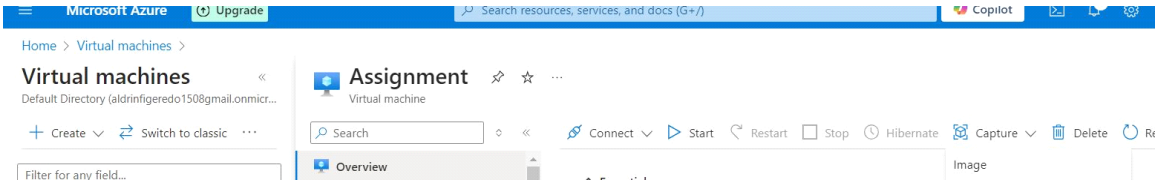
Resource group: Select a resource group for the image.

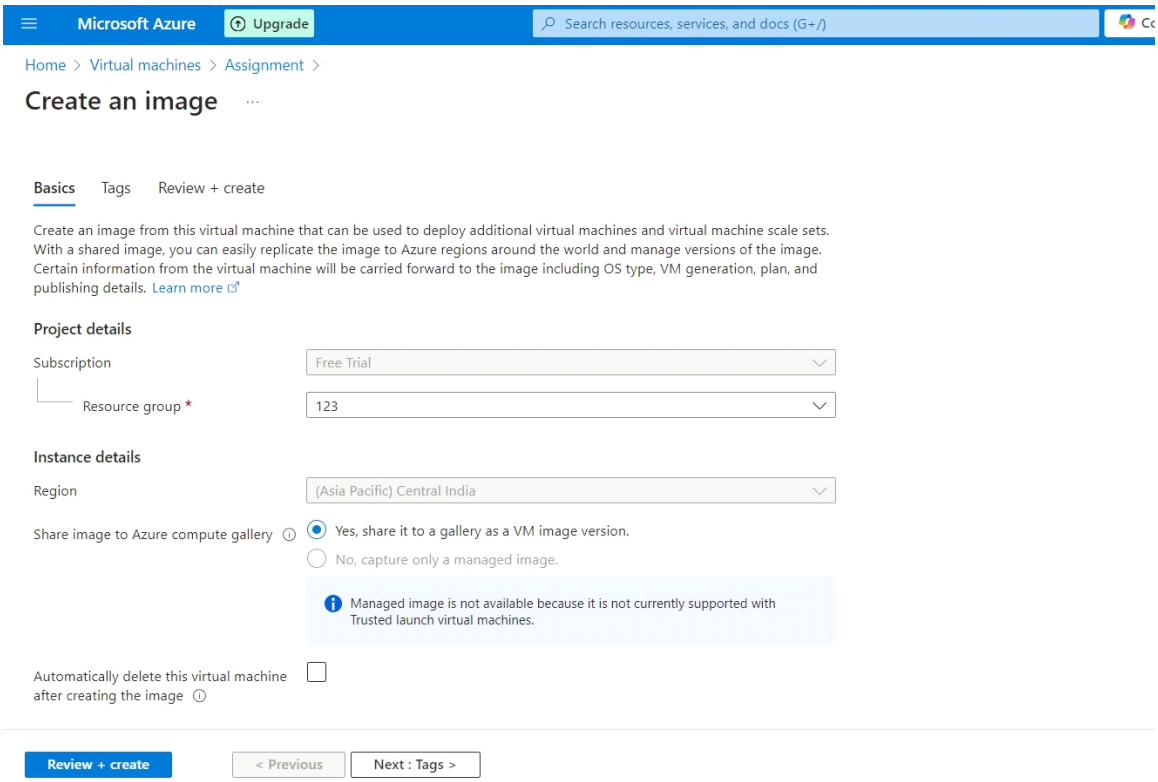
Automatically delete this virtual machine after creating the image: Choose whether to delete the VM or keep it.

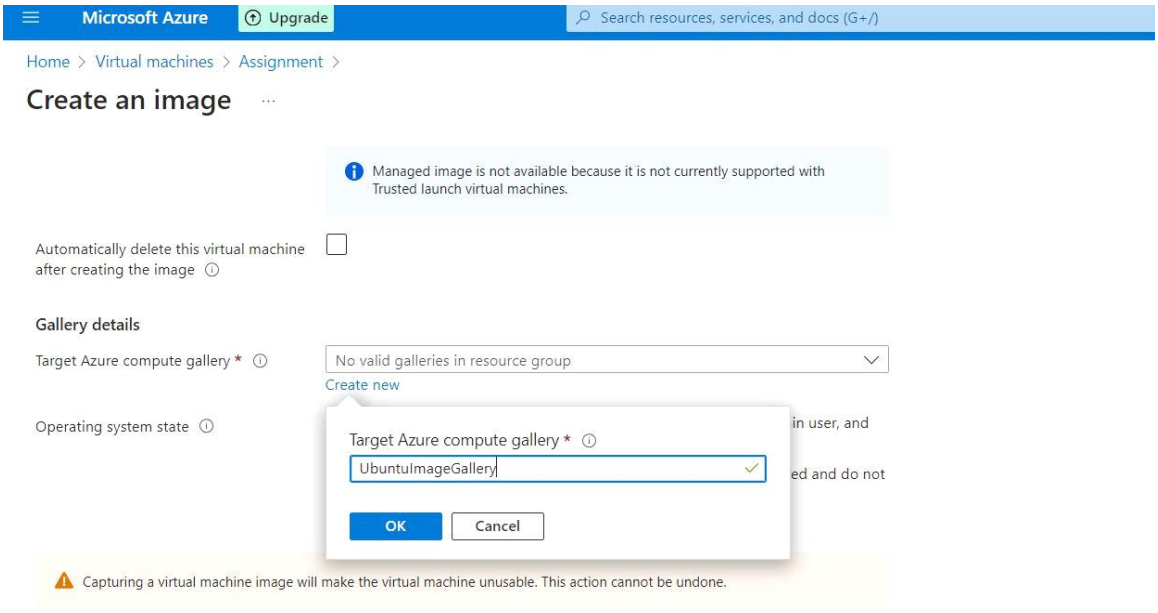
Click "Review + Create" to create the image.

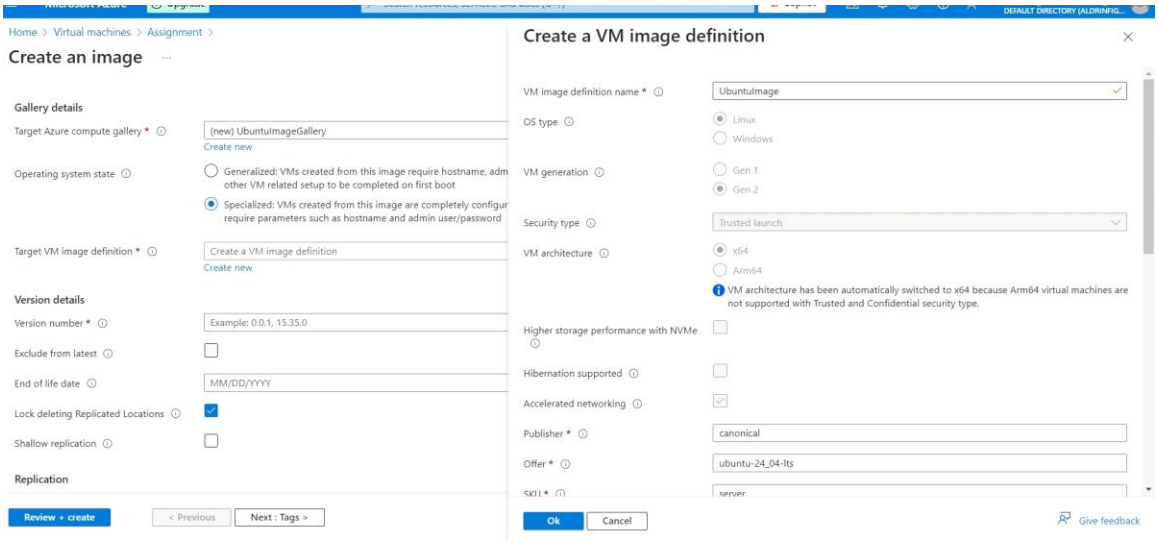
Your image will now be available under "Images" in the Azure portal, and you can use it to create new VMs with the same configuration.

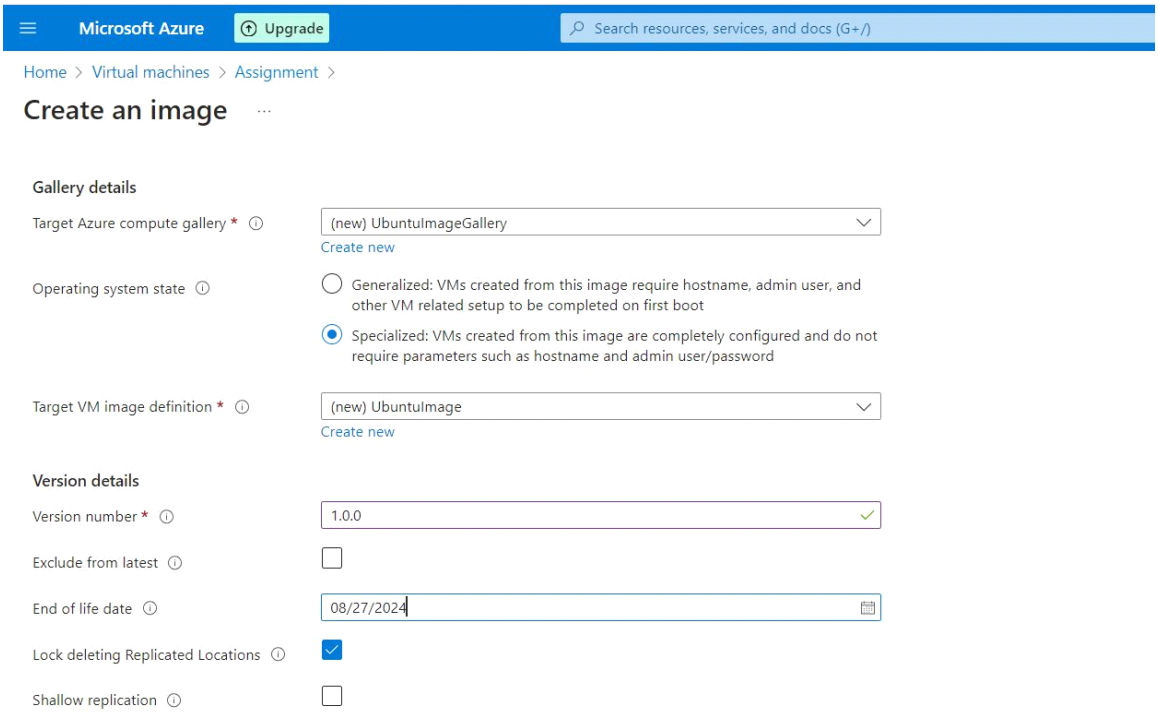





Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines > Assignment >
Create an image
Basics
Tags
Review + create
Create an image from this virtual machine that can be used to deploy additional virtual machines and virtual machine scale sets. With a shared image, you can easily replicate the image to Azure regions around the world and manage versions of the image. Certain information from the virtual machine will be carried forward to the image including OS type, VM generation, plan, and publishing details. Learn more
Project details
Subscription
Free Trial
Resource group *
123
Instance details
Region
(Asia Pacific) Central India
Share image to Azure compute gallery
Yes, share it to a gallery as a VM image version.
No, capture only a managed image.
Managed image is not available because it is not currently supported with Trusted launch virtual machines.
Automatically delete this virtual machine after creating the image
Review + create
< Previous
Next : Tags >


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines > Assignment >
Create an image
Managed image is not available because it is not currently supported with Trusted launch virtual machines.
Automatically delete this virtual machine after creating the image
Gallery details
Target Azure compute gallery *
No valid galleries in resource group
Create new
Operating system state
Target Azure compute gallery *
UbuntuImageGallery
OK
Cancel
Capturing a virtual machine image will make the virtual machine unusable. This action cannot be undone.


Home > Virtual machines > Assignment >
Create an image
Gallery details
Target Azure compute gallery *
(new) UbuntuImageGallery
Create new
Operating system state
Generalized: VMs created from this image require hostname, adm
other VM related setup to be completed on first boot
Specialized: VMs created from this image are completely configur
require parameters such as hostname and admin user/password
Target VM image definition *
Create a VM image definition
Create new
Version details
Version number *
Example: 0.0.1, 15.35.0
Exclude from latest
End of life date
MM/DD/YYYY
Lock deleting Replicated Locations
Shallow replication
Replication
Review + create
< Previous
Next : Tags >
Create a VM image definition
VM image definition name *
UbuntuImage
OS type
Linux
Windows
VM generation
Gen 1
Gen 2
Security type
Trusted launch
VM architecture
x64
Arm64
VM architecture has been automatically switched to x64 because Arm64 virtual machines are not supported with Trusted and Confidential security type.
Higher storage performance with NVMe
Hibernation supported
Accelerated networking
Publisher *
canonical
Offer *
ubuntu-24_04-lts
server
Ok
Cancel
Give feedback


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines > Assignment >
Create an image
Gallery details
Target Azure compute gallery *
(new) UbuntuImageGallery
Create new
Operating system state
Generalized: VMs created from this image require hostname, admin user, and other VM related setup to be completed on first boot
Specialized: VMs created from this image are completely configured and do not require parameters such as hostname and admin user/password
Target VM image definition *
(new) UbuntuImage
Create new
Version details
Version number *
1.0.0
Exclude from latest
End of life date
08/27/2024
Lock deleting Replicated Locations
Shallow replication

Replication

A VM image version can be replicated to different regions depending on what makes sense for your organization. One example is to always replicate the latest image in multiple regions while all older versions are only available in 1 region. This can help save on storage costs for VM image versions.

Default storage sku ⓘ: Zone-redundant

Default replica count * ⓘ: 1

Target regions	Replica count	Storage sku
(Asia Pacific) Central India	1	Zone-redundant
(US) East US	1	Standard HDD LRS

Review + create | < Previous | Next : Tags >

Home > Virtual machines > Assignment >

Create an image ...

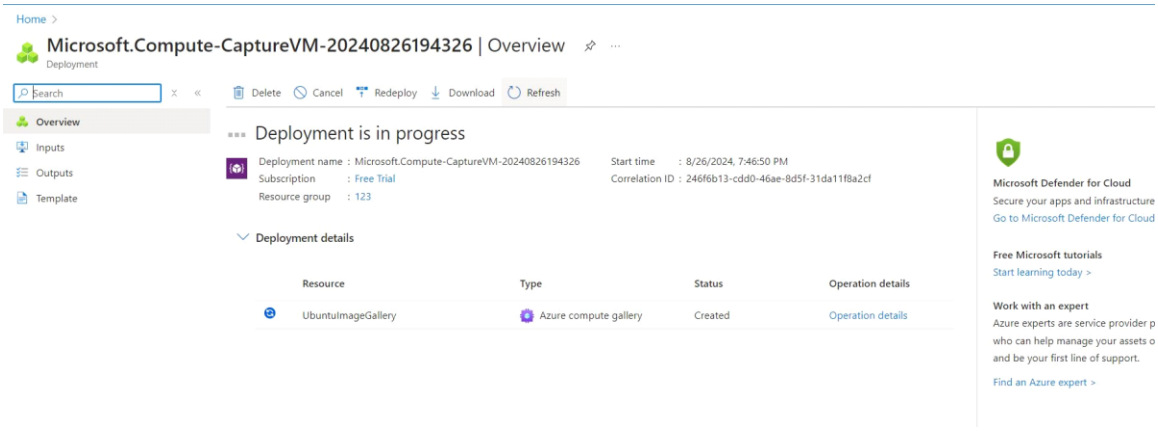
Validation passed

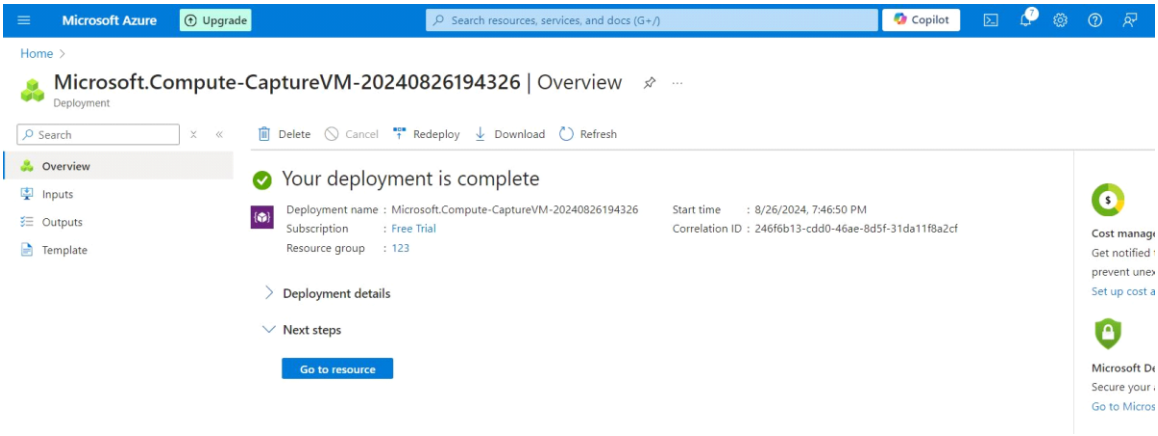
Basics | Tags | Review + create

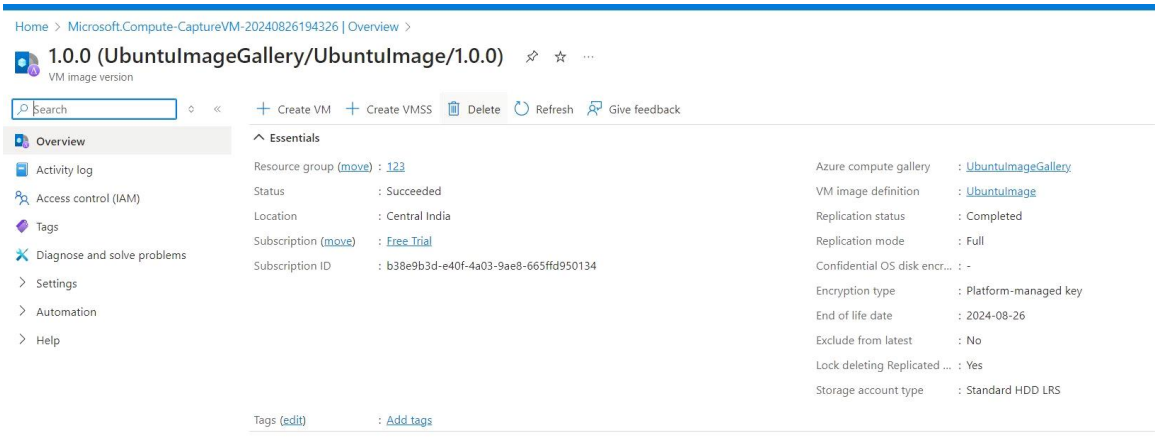
Basics

Subscription	Free Trial
Resource group	123
Region	Central India
Share image to Azure compute gallery	Yes
Automatically delete this virtual machine after creating the image	No
Azure compute gallery	(new) UbuntuImageGallery
Operating system state	Specialized
Target VM image definition	(new) UbuntuImage
Version number	1.0.0
Source virtual machine	Assignment
Exclude from latest	No
End of life date	2024-08-26
Lock deleting Replicated Locations	Yes
Shallow replication	No

Create | < Previous | Next > | Download a template for automation


Home
Microsoft.Compute-CaptureVM-20240826194326 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Deployment is in progress
Deployment name : Microsoft.Compute-CaptureVM-20240826194326
Subscription : Free Trial
Resource group : 123
Start time : 8/26/2024, 7:46:50 PM
Correlation ID : 246f6b13-cdd0-46ae-8d5f-31da11f8a2cf
Deployment details
Resource
Type
Status
Operation details
UbuntuImageGallery
Azure compute gallery
Created
Operation details
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
Find an Azure expert >


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
Home
Microsoft.Compute-CaptureVM-20240826194326 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : Microsoft.Compute-CaptureVM-20240826194326
Subscription : Free Trial
Resource group : 123
Start time : 8/26/2024, 7:46:50 PM
Correlation ID : 246f6b13-cdd0-46ae-8d5f-31da11f8a2cf
Deployment details
Next steps
Go to resource


Home
Microsoft.Compute-CaptureVM-20240826194326 | Overview
1.0.0 (UbuntuImageGallery/UbuntuImage/1.0.0)
VM image version
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Automation
Help
Create VM
Create VMSS
Delete
Refresh
Give feedback
Essentials
Resource group (move) : 123
Status : Succeeded
Location : Central India
Subscription (move) : Free Trial
Subscription ID : b38e9b3d-e40f-4a03-9ae8-665ffd950134
Azure compute gallery : UbuntuImageGallery
VM image definition : UbuntuImage
Replication status : Completed
Replication mode : Full
Confidential OS disk encr... : -
Encryption type : Platform-managed key
End of life date : 2024-08-26
Exclude from latest : No
Lock deleting Replicated ... : Yes
Storage account type : Standard HDD LRS
Tags (edit) : Add tags