

Azure Virtual Machines:4

Do the following:

1. Create a Linux VM with ubuntu OS.
2. Install apache2 software.
3. Create image out of VM.

Select ubuntu image and name it and select proper rg.

The screenshot shows the 'Create a virtual machine' wizard in the Azure portal, specifically the 'Basics' tab. The page is titled 'Create a virtual machine' and includes a progress bar with steps: Basics, Disks, Networking, Management, Monitoring, Advanced, Tags, Review + create. A note states: 'This subscription may not be eligible to deploy VMs of certain sizes in certain regions.' The 'Project details' section shows 'Subscription' as 'Free Trial' and 'Resource group' as '(New) forassignment3-4.group'. The 'Instance details' section includes: 'Virtual machine name' as 'forassignment3-4', 'Region' as '(US) East US', 'Availability options' as 'No infrastructure redundancy required', 'Security type' as 'Trusted launch virtual machines', 'Image' as 'Ubuntu Server 20.04 LTS - x64 Gen2 (free services eligible)', 'VM architecture' as 'x64', and 'Run with Azure Spot discount' as 'No'. At the bottom, there are 'Review + create', '< Previous', and 'Next: Disks >' buttons, along with a 'Give feedback' link.

Choose password authentication type and fill in the credentials that you want. Click on review and create.

The screenshot shows the 'Create a virtual machine' wizard in the Azure portal, specifically the 'Inbound port rules' tab. The page is titled 'Create a virtual machine' and includes a progress bar with steps: Basics, Disks, Networking, Management, Monitoring, Advanced, Tags, Review + create. A note states: 'You are in the free trial period. Costs associated with this VM can be covered by any remaining credits on your subscription.' The 'Size' is 'Standard_B1s - 1 vcpu, 1 GiB memory (\$96.22/month) (free services eligi...)'. The 'Administrator account' section shows 'Authentication type' as 'Password', 'Username' as 'MyUser', and 'Password' as 'MyPassword'. The 'Inbound port rules' section shows 'Public inbound ports' as 'Allow selected ports' and 'Select inbound ports' as 'SSH (22)'. A warning message states: '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.' At the bottom, there are 'Review + create', '< Previous', and 'Next: Disks >' buttons, along with a 'Give feedback' link.

VM has been created. Copy th public ip.

The screenshot shows the Azure portal interface for a virtual machine named 'forassignment3-4'. The 'Overview' tab is selected, displaying various details about the VM. The public IP address is highlighted as 13.68.196.18. The operating system is Linux (ubuntu 20.04), and the size is Standard. The virtual network/subnet is forassignment3-4-vnet/default.

| Property | Value |
|------------------------|--------------------------------------|
| Resource group | forassignment3-4_group |
| Status | Running |
| Location | East US |
| Subscription | Free Trial |
| Subscription ID | 5b06583f-9e72-4b4d-9c6b-7040d85ba0cb |
| Tags | Click here to add tags |
| Operating system | Linux (ubuntu 20.04) |
| Size | Standard, Copied, 1 GB memory |
| Public IP address | 13.68.196.18 |
| Virtual network/subnet | forassignment3-4-vnet/default |
| DNS name | Not configured |

Paste the ip in PUTTY and open.

The screenshot shows the PuTTY Configuration dialog box. The 'Host Name (or IP address)' field is set to 13.68.196.18. The 'Connection type' is set to SSH. The 'Load, save or delete a stored session' button is visible. The 'Open' button is highlighted.

Provide credentials and you have been sshed into VM.

The screenshot shows a terminal window with the following output:

```
MyUser@forassignment3-4:~$ sudo apt-get update
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 apt 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.
MyUser@forassignment3-4:~$
```

Here update guest os and install Apache2.

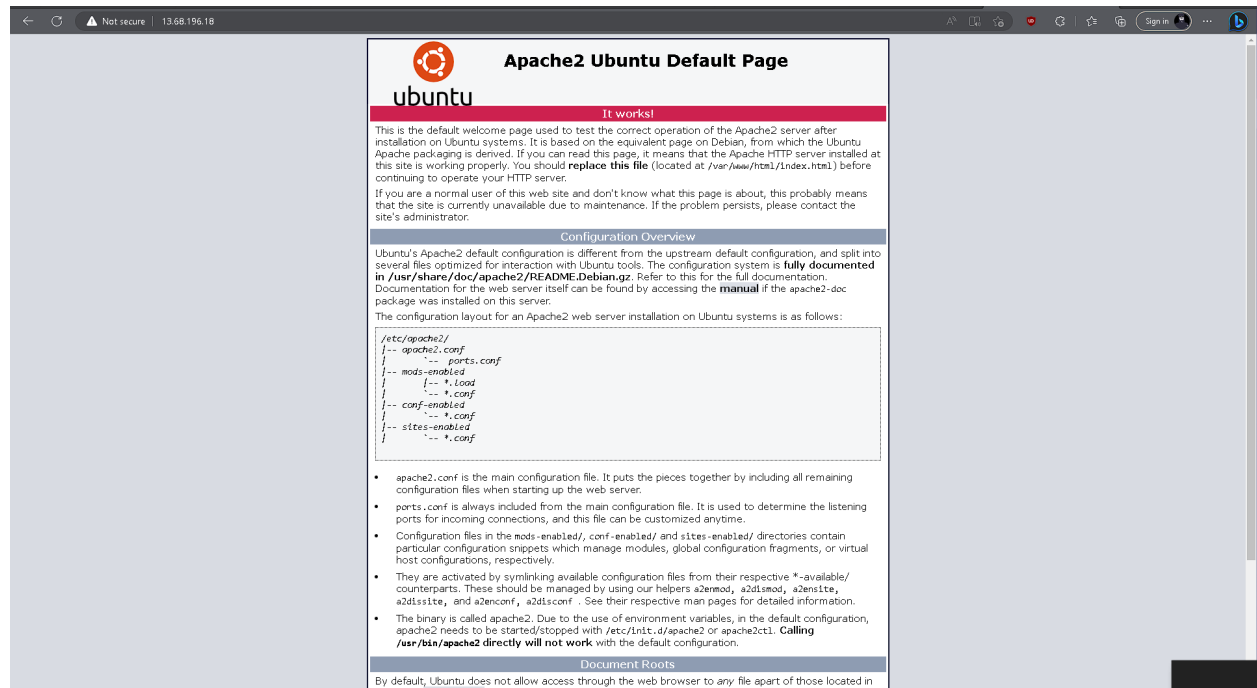
sudo apt-get update

sudo apt-get install apache2

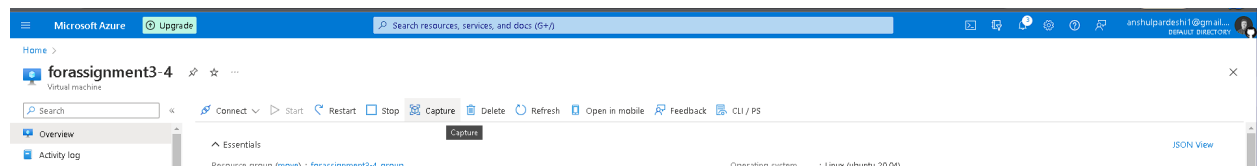
The screenshot shows the output of the 'sudo apt-get install apache2' command. The output includes the following lines:

```
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module ssl.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36-6ubuntu1) ...
Processing triggers for systemd (245.4-4ubuntu2.0) ...
Processing triggers for man-db (2.9.4-1) ...
Processing triggers for libc-bin (2.31-0ubuntu9) ...
MyUser@forassignment3-4:~$ apache2 --version
Command 'apache2' not found, did you mean:
  command 'apache2' from deb apache2-bin (2.4.41-4ubuntu3.14)
Try: sudo apt install <deb name>
MyUser@forassignment3-4:~$ apache2 --version
[Thu Apr 05 15:56:56.184500 2023] [core:warn] [pid 1094] AH00111: Config variable 'APACHE_RUN_DIR' is not defined
apache2: Syntax error on line 80 of /etc/apache2/apache2.conf: DefaultRuntimeDir must be a valid directory, absolute or relative to ServerRoot
MyUser@forassignment3-4:~$ apache2 --version
```

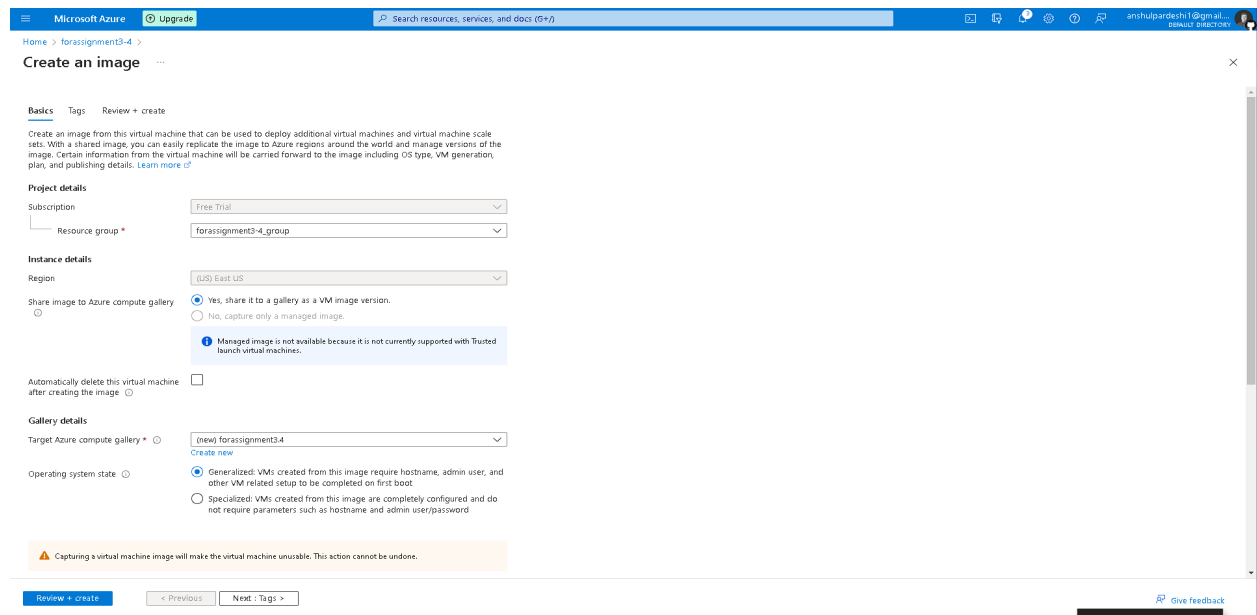
Copy the ip address and paste it in the browser. You can see apache2 has been installed.
Note: While making a VM make sure you have opened the http inbound port.



Now let us create an image out of this VM.
Stop the VM then select Capture from above given options.



In gallery details, create new and name it.



Create a new target VM image definition, name it and save.

Microsoft Azure

Upgrade

Search resources, services, and docs (6+)

Home > forassignment3-4 >

Create an image

Gallery details

Target Azure compute gallery *
(new) forassignment3.4
[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

Capturing a virtual machine image will make the virtual machine unusable. This action cannot be undone.

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

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 replica count *
1

Target regions

Target region replica count

Storage account type

(US) East US
1
Standard HDD LRS

1
Standard HDD LRS

Create a VM image definition

VM image definition name *
forassignment3.4

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 HVMe (preview)
☐

Accelerated networking (preview)
☐

Publisher *
canonical

Offer *
0001-com-ubuntu-server-focal

Sku *
20_04-lts-gen2

Publishing options (Optional)

Review + create

< Previous

Next : Tags >

OK

Cancel

Give a version number to start with. Select premium storage account and review create.

Microsoft Azure

Upgrade

Search resources, services, and docs (6+)

Home > forassignment3-4 >

Create an image

Gallery details

Target Azure compute gallery *
(new) forassignment3.4
[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

Capturing a virtual machine image will make the virtual machine unusable. This action cannot be undone.

Target VM image definition *
(new) forassignment3.4
[Create new](#)

Version details

Version number *
0.0.1

Exclude from latest
☐

End of life date
MM/DD/YYYY

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 replica count *
1

Target regions

Target region replica count

Storage account type

(US) East US
1
Premium SSD LRS

1
Standard HDD LRS

Review + create

< Previous

Next : Tags >

Create

Our image deployment is completed.

Microsoft Azure

Upgrade

Search resources, services, and docs (5+)

Home > Microsoft.Compute-CaptureVM-20230405210330 | Overview >

0.0.1 (forassignment3.4/forassignmen3.4/0.0.1)
VM image version

Search

Create VMCreate VMSSDeleteRefresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Update replication

Configuration

Properties

Locks

Automation

Tasks (preview)

Export template

Help

New Support Request

Essentials

Resource group (new)forassignment3.4_group

Status: Succeeded

Location: East US

Subscription (new)Free Trial

Subscription ID: 5b06583f-9a72-4b4d-9c6b-7040d895ba0b

Tag (edit): Click here to add tags

See less

Azure compute gallery: forassignment3.4

VM image definition: forassignment3.4

Replication status: Completed

Confidential compute en...: -

Encryption type: Platform-managed key

End of life date: -

Exclude from latest: No

Storage account type: Standard HDD LRS

JSON View