IMPLEMENTATION OF VIRTUAL MACHINES

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Aim

To create and configure a local virtual machine using VMware and deploy a cloud-based virtual machine using Microsoft Azure.

Tools Required

- VMware Workstation
- Ubuntu ISO
- Microsoft Azure Portal
- Internet Connection
- SSH Client / Terminal

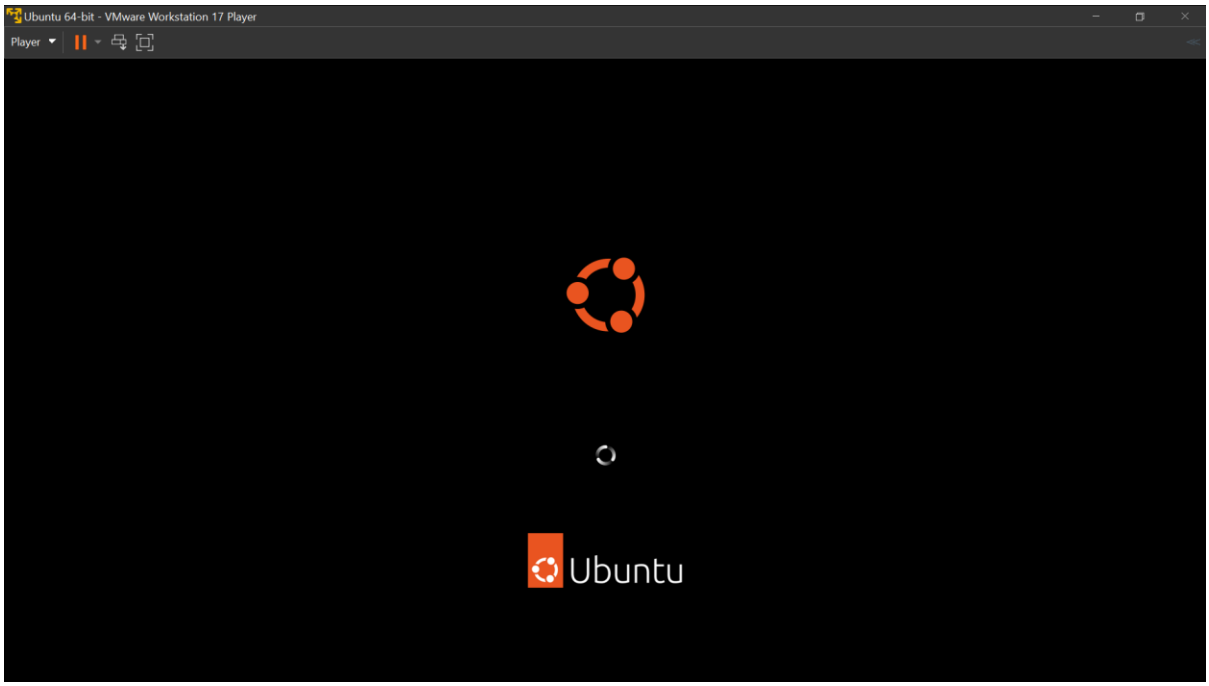
Procedure

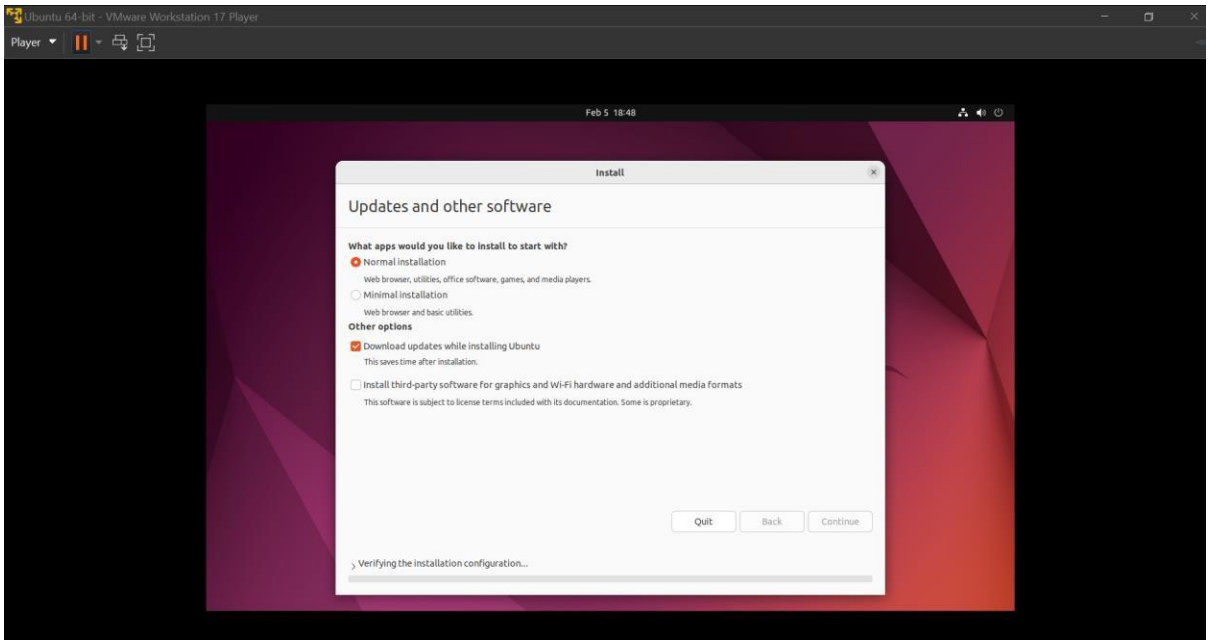
Local Virtual Machine (Ubuntu)

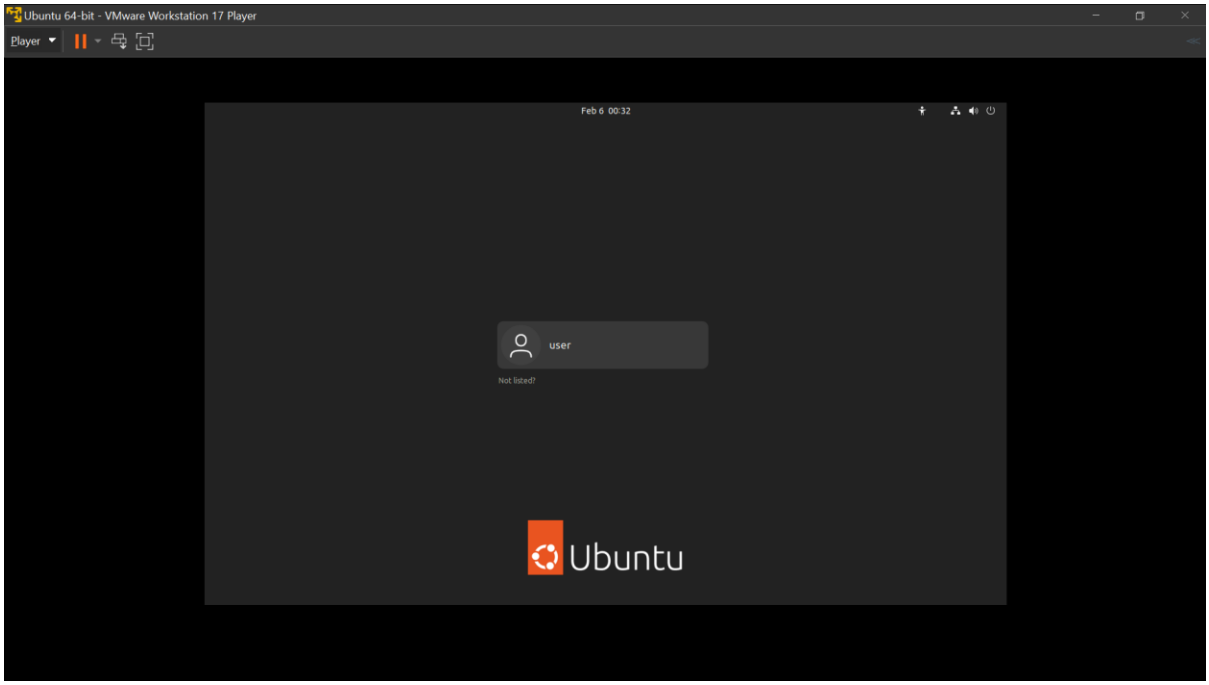
- ❖ Installed VMware Workstation and launched the application.
- ❖ Created a new virtual machine and selected the Ubuntu ISO file.
- ❖ Allocated system resources such as RAM, processor, and storage.
- ❖ Installed the Ubuntu operating system by following the setup instructions.

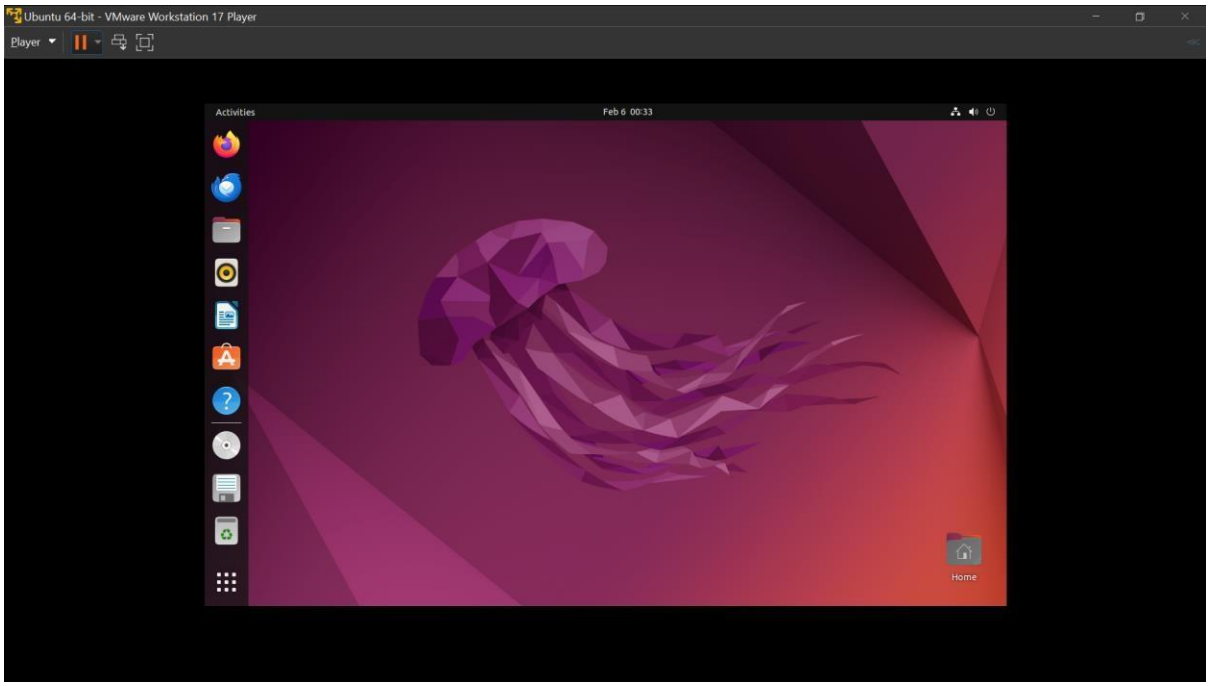
❖ Logged into the system and verified functionality using terminal commands.

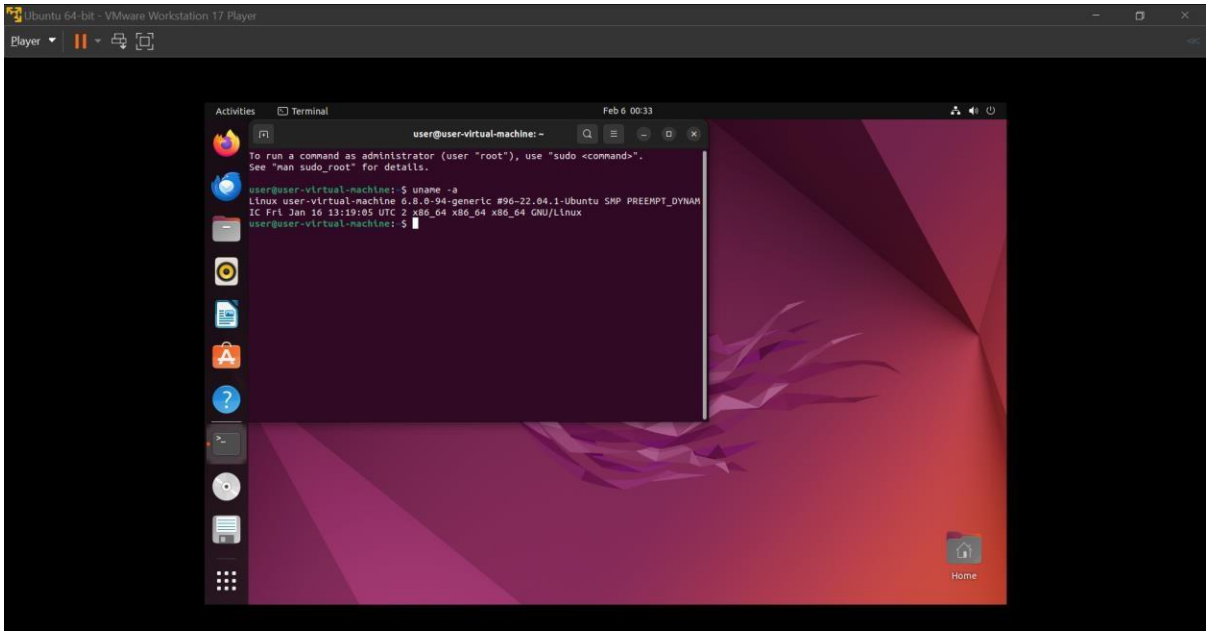
Outputs:

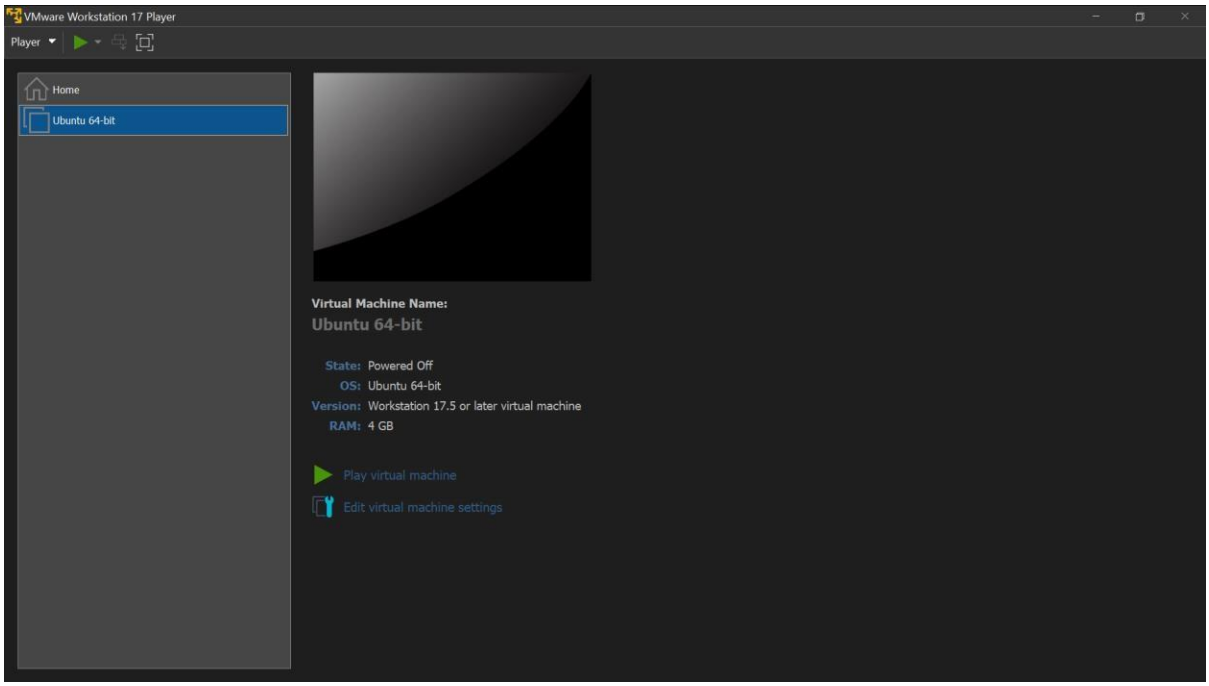





Ubuntu 64-bit - VMware Workstation 17 Player
Player
Feb 6 00:32
user
Not listed?
Ubuntu

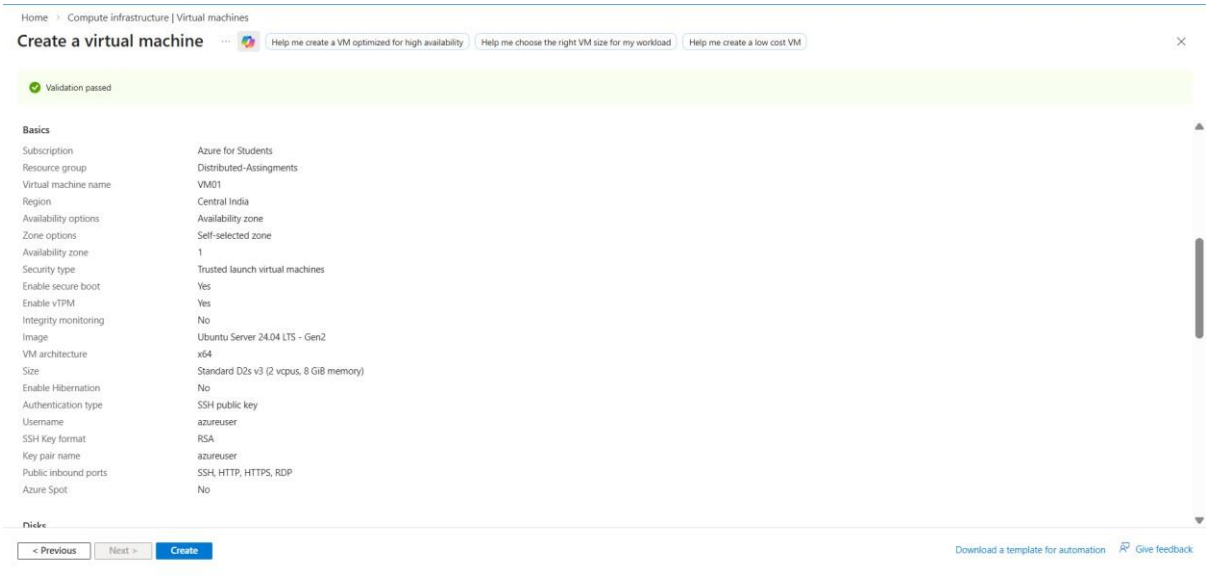

Ubuntu 64-bit - VMware Workstation 17 Player
Player
Activities
Feb 6 00:33
Home

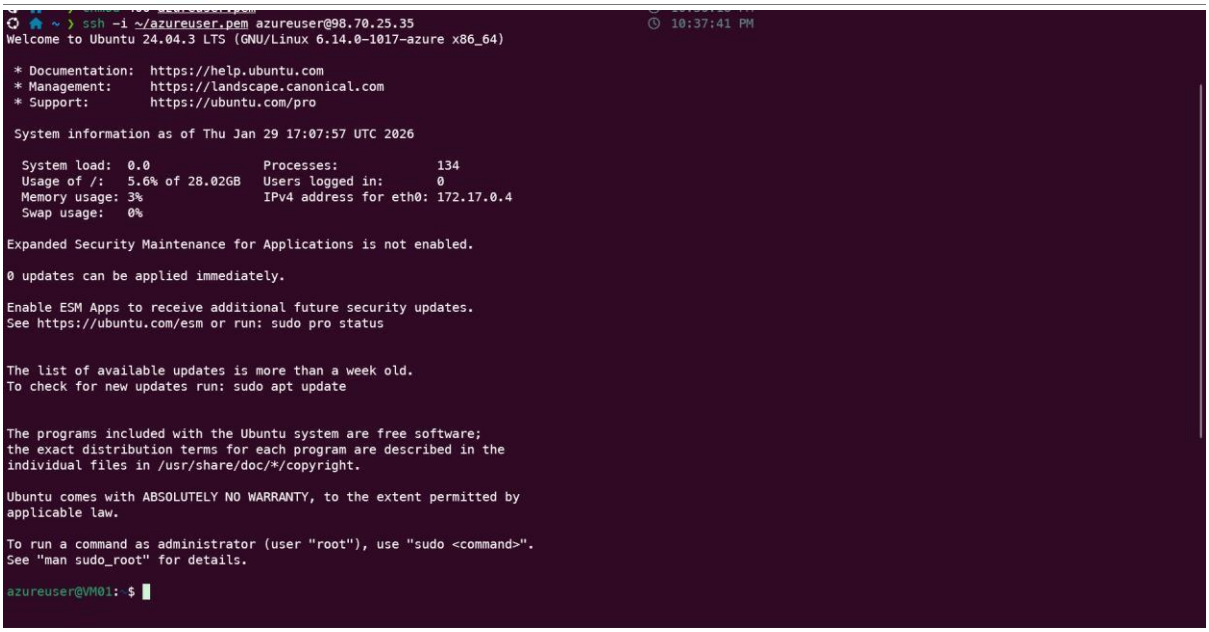

Ubuntu 64-bit - VMware Workstation 17 Player
Player
Activities
Terminal
Feb 6 00:33
user@user-virtual-machine: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
user@user-virtual-machine:~$ uname -a
Linux user-virtual-machine 6.8.0-94-generic #96-22.04.1-Ubuntu SMP PREEMPT_DYNAM
IC Fri Jan 16 13:19:05 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
user@user-virtual-machine:~$
Home


VMware Workstation 17 Player
Player
Home
Ubuntu 64-bit
Virtual Machine Name:
Ubuntu 64-bit
State: Powered Off
OS: Ubuntu 64-bit
Version: Workstation 17.5 or later virtual machine
RAM: 4 GB
Play virtual machine
Edit virtual machine settings

Cloud Virtual Machine (Azure)

1. Logged into the Microsoft Azure portal.
2. Created a new virtual machine by selecting the required OS and size.
3. Configured networking settings and security rules.
4. Launched the VM and obtained the public IP address.
5. Connected to the virtual machine remotely using SSH and verified its operation.





Result:

Both local and cloud virtual machines were successfully created, configured, and accessed. The Ubuntu VM operated on VMware, while the Azure VM was deployed and managed through the cloud.

Conclusion:

This experiment helped in understanding virtualization concepts by implementing both local and cloud-based virtual machines,

demonstrating their importance in modern computing environments.