CLOUD COMPUTING

BSE (V-B)

Submitted By:

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Roll No:

2023-BSE-045

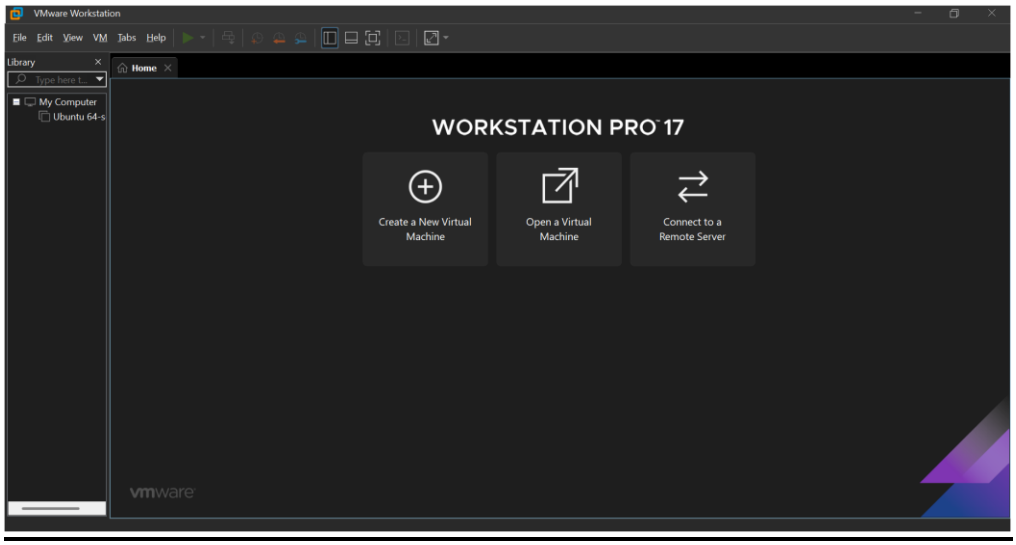
Submitted To:

Sir Muhammad Shoaib

LAB 01

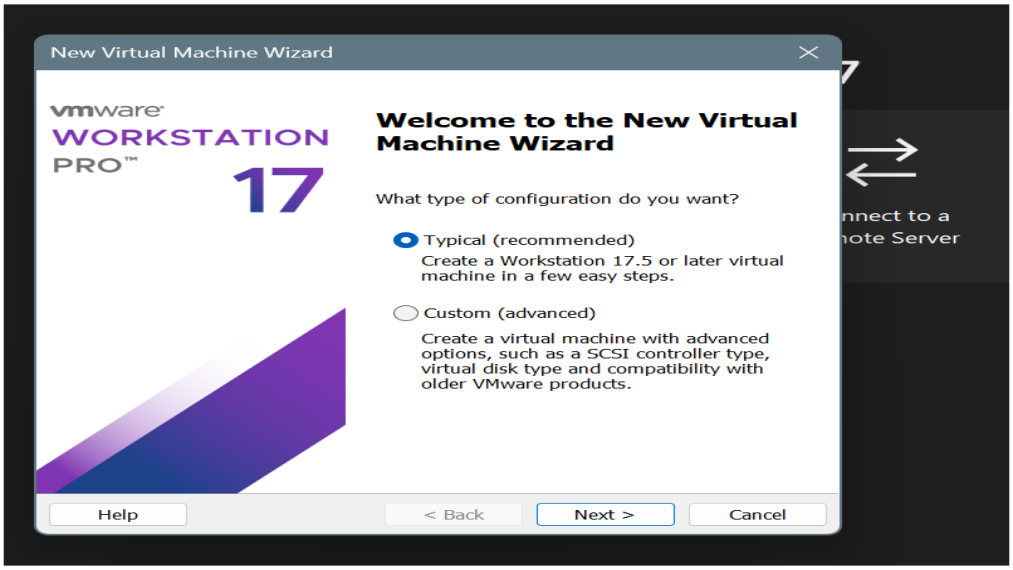
INSTALLATION OF LINUX (UBUNTU)

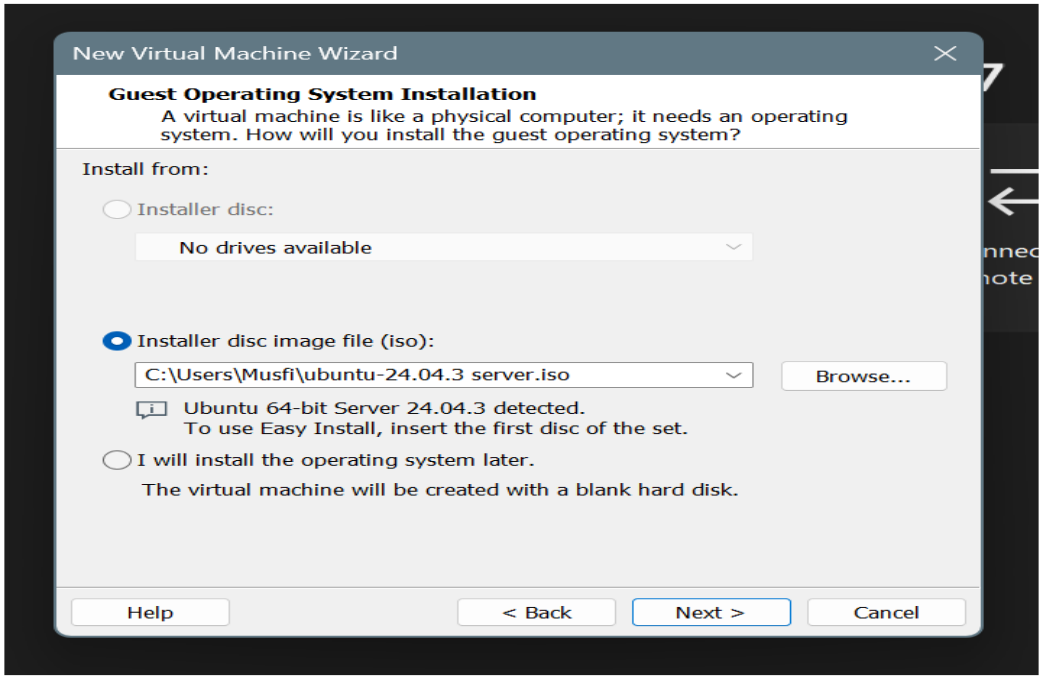
➢ INSTALLATION OF VMWARE 17 WORKSTATION PRO:

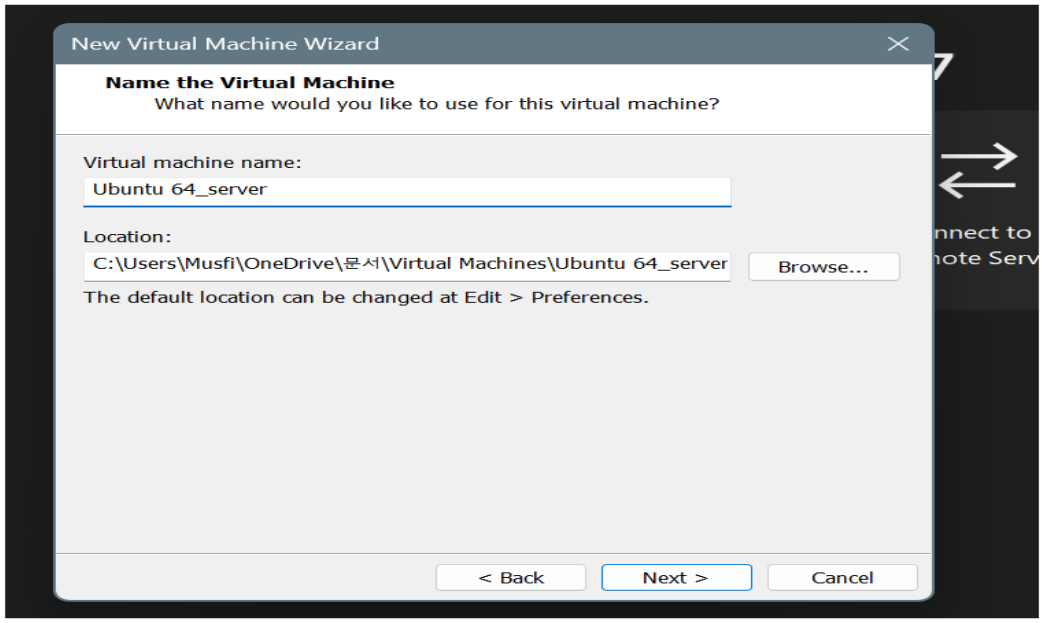


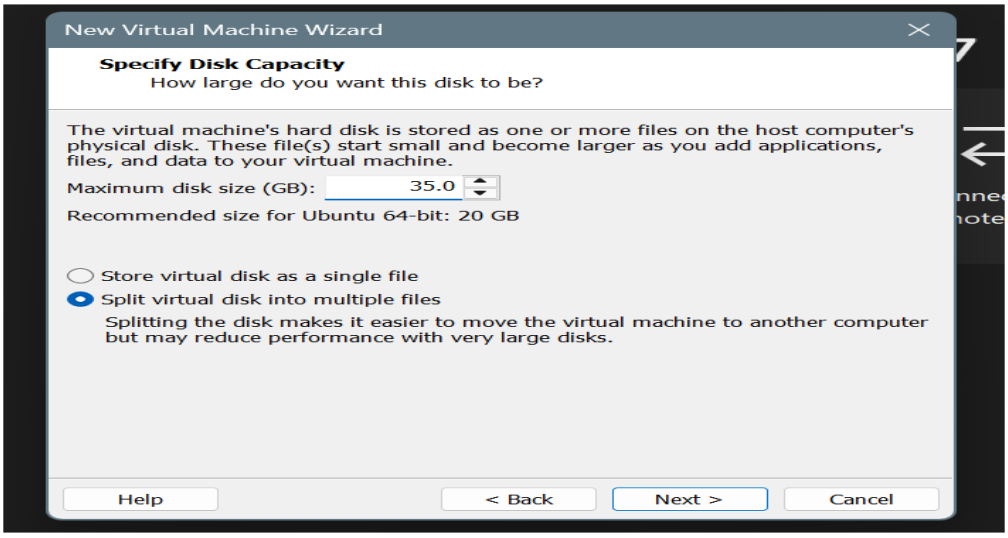
➢ INSTALLATION OF UBUNTU 24.4.3:

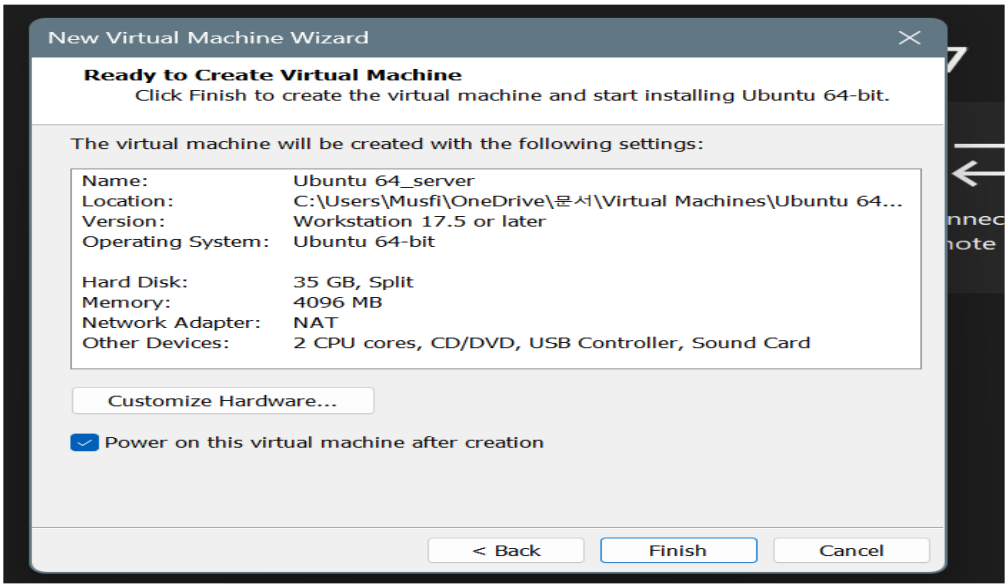
- Install the ISO file of Ubuntu with latest version.
- After that Create a Virtual Machine on VMware.



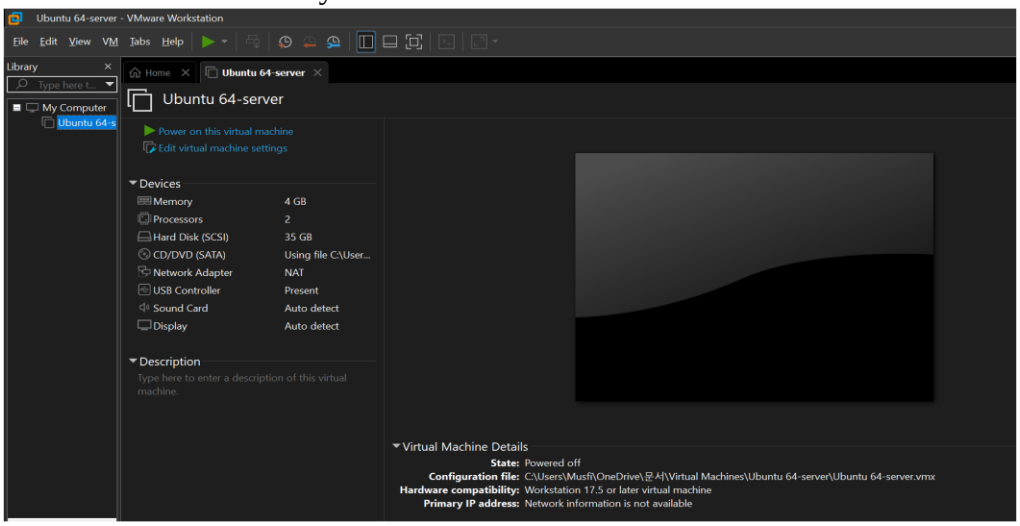

New Virtual Machine Wizard
Guest Operating System Installation
A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?
Install from:
Installer disc:
No drives available
Installer disc image file (iso):
C:\Users\Musfi\ubuntu-24.04.3 server.iso
Browse...
Ubuntu 64-bit Server 24.04.3 detected.
To use Easy Install, insert the first disc of the set.
I will install the operating system later.
The virtual machine will be created with a blank hard disk.
Help
< Back
Next >
Cancel


New Virtual Machine Wizard
Name the Virtual Machine
What name would you like to use for this virtual machine?
Virtual machine name:
Ubuntu 64_server
Location:
C:\Users\Musfi\OneDrive\문서\Virtual Machines\Ubuntu 64_server
Browse...
The default location can be changed at Edit > Preferences.
< Back
Next >
Cancel

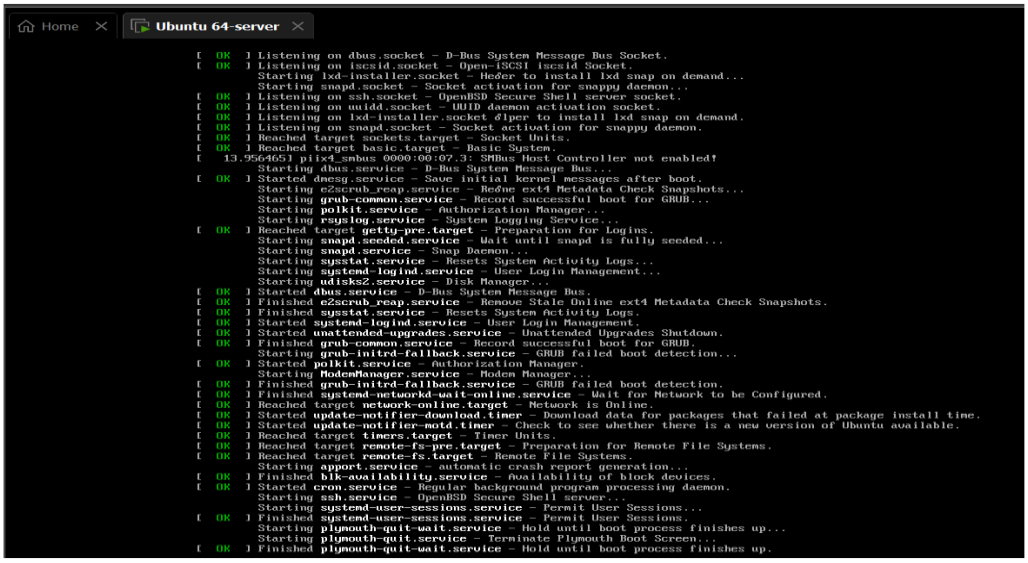


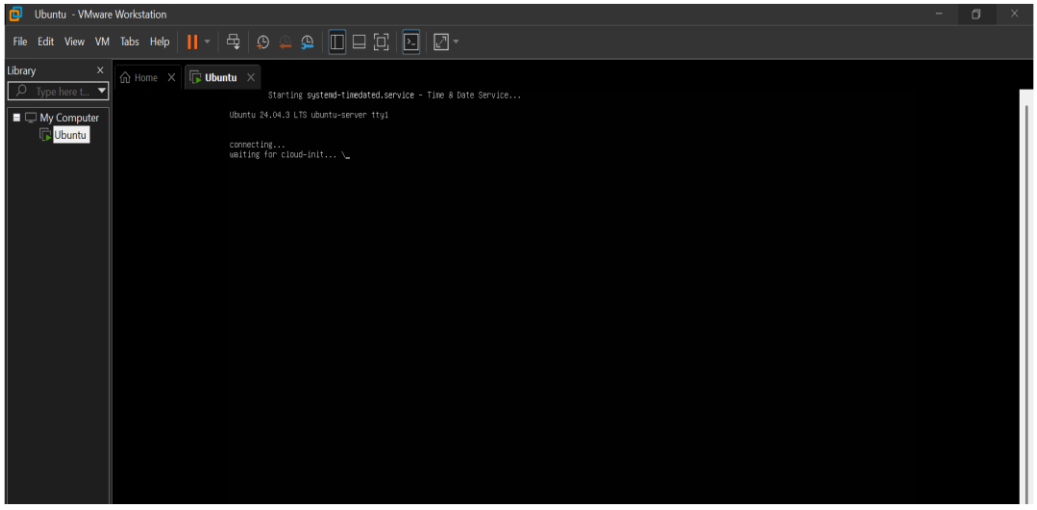


- Power on the virtual machine you created.

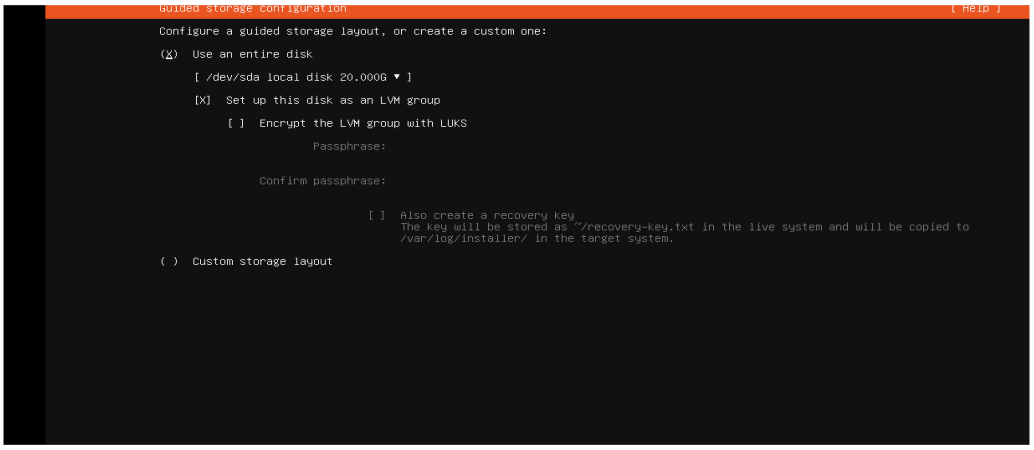


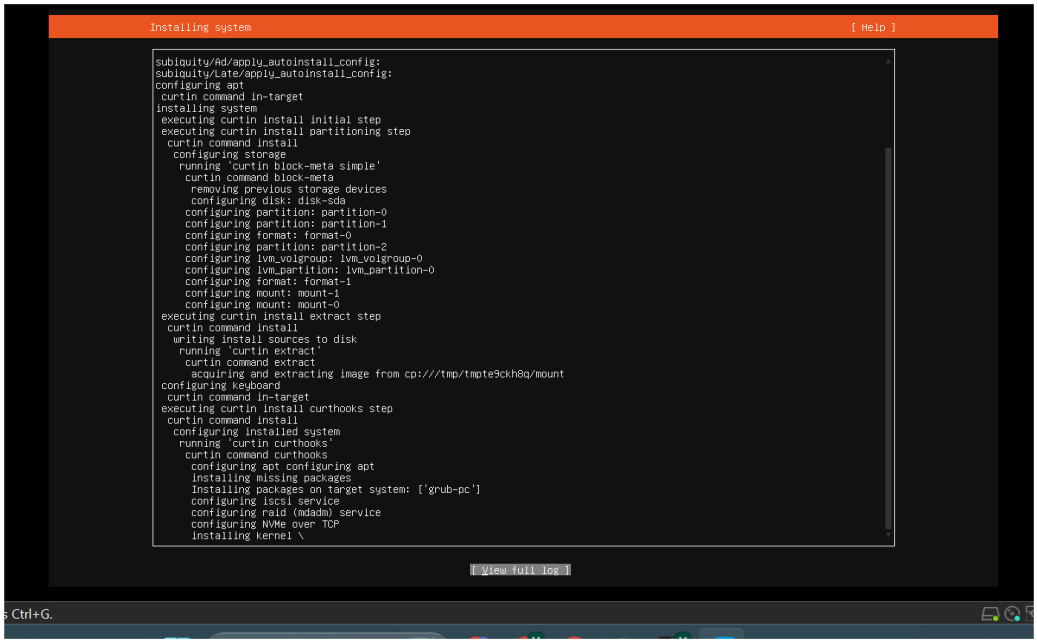
```
rt
[     2.646637] pci 0000:00:15.6: PCI bridge to [bus 09]
[     2.647496] pci 0000:00:15.6:   bridge window [mem 0xfbc00000-0xfbcfffff]
[     2.648601] pci 0000:00:15.6:   bridge window [mem 0xe6200000-0xe62fffff 64bi
t pref]
[     2.651444] pci 0000:00:15.6: PME# supported from D0 D3hot D3cold
[     2.654260] pci 0000:00:15.7: [15ad:07a0] type 01 class 0x060400 PCIe Root Po
rt
[     2.655505] pci 0000:00:15.7: PCI bridge to [bus 0a]
[     2.656493] pci 0000:00:15.7:   bridge window [mem 0xfb800000-0xfb8fffff]
[     2.657606] pci 0000:00:15.7:   bridge window [mem 0xe5e00000-0xe5efffff 64bi
t pref]
[     2.659900] pci 0000:00:15.7: PME# supported from D0 D3hot D3cold
[     2.662421] pci 0000:00:16.0: [15ad:07a0] type 01 class 0x060400 PCIe Root Po
rt
[     2.663919] pci 0000:00:16.0: PCI bridge to [bus 0b]
[     2.664442] pci 0000:00:16.0:   bridge window [io  0x5000-0x5fff]
[     2.665438] pci 0000:00:16.0:   bridge window [mem 0xfd300000-0xfd3fffff]
[     2.666589] pci 0000:00:16.0:   bridge window [mem 0xe7900000-0xe79fffff 64bi
t pref]
[     2.669290] pci 0000:00:16.0: PME# supported from D0 D3hot D3cold
[     2.670621] pci 0000:00:16.1: [15ad:07a0] type 01 class 0x060400 PCIe Root Po
rt
[     2.672415] pci 0000:00:16.1: PCI bridge to [bus 0c]
[     2.673287] pci 0000:00:16.1:   bridge window [io  0x9000-0x9fff]
```

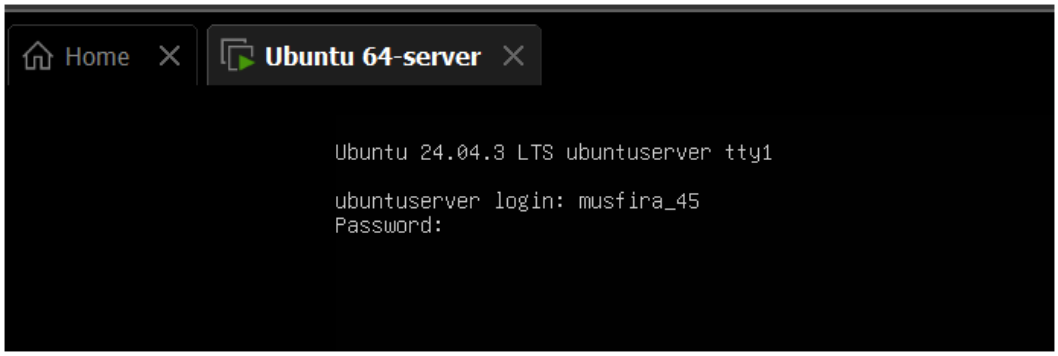




Proxy configuration
[Help]
If this system requires a proxy to connect to the internet, enter its details here.
Proxy address:
If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.
The proxy information should be given in the standard form of "http://[[user][:pass]@]host[:port]/".

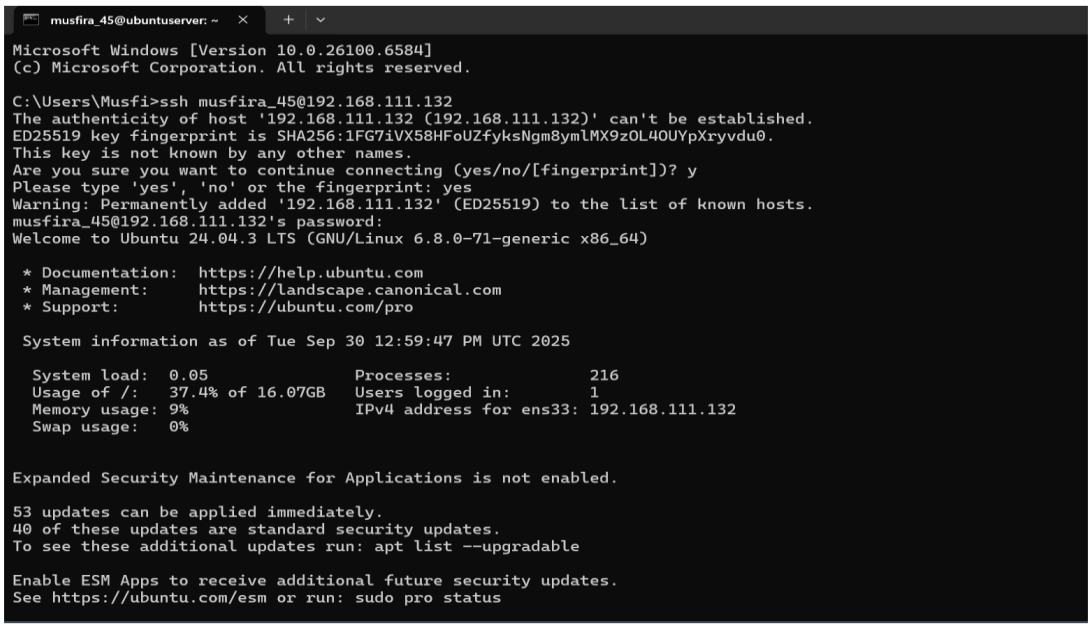

Guided storage configuration
[Help]
Configure a guided storage layout, or create a custom one:
(X) Use an entire disk
[/dev/sda local disk 20.000G ▾]
[X] Set up this disk as an LVM group
[ ] Encrypt the LVM group with LUKS
Passphrase:
Confirm passphrase:
[ ] Also create a recovery key
The key will be stored as ~/recovery-key.txt in the live system and will be copied to /var/log/installer/ in the target system.
( ) Custom storage layout


Installing system
[Help]
subiquity/Ad/apply_autoinstall_config:
subiquity/Late/apply_autoinstall_config:
configuring apt
curtin command in-target
installing system
executing curtin install initial step
executing curtin install partitioning step
curtin command install
configuring storage
running 'curtin block-meta simple'
curtin command block-meta
removing previous storage devices
configuring disk: disk-sda
configuring partition: partition-0
configuring partition: partition-1
configuring format: format-0
configuring partition: partition-2
configuring lvm_volgroup: lvm_volgroup-0
configuring lvm_partition: lvm_partition-0
configuring format: format-1
configuring mount: mount-1
configuring mount: mount-0
executing curtin install extract step
curtin command install
writing install sources to disk
running 'curtin extract'
curtin command extract
acquiring and extracting image from cp:///tmp/tmpte9ckh8q/mount
configuring keyboard
curtin command in-target
executing curtin install curthooks step
curtin command install
configuring installed system
running 'curtin curthooks'
curtin command curthooks
configuring apt configuring apt
installing missing packages
Installing packages on target system: ['grub-pc']
configuring iscsi service
configuring raid (mdadm) service
configuring NVMe over TCP
installing kernel \
[View full log]
Ctrl+G.




```
ubuntuserver login: musfira_45
Password:
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-71-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Tue Sep 30 01:58:46 PM UTC 2025

  System load:  1.12              Processes:             244
  Usage of /:   37.5% of 16.07GB  Users logged in:       0
  Memory usage: 7%                IPv4 address for ens33: 192.168.111.132
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

53 updates can be applied immediately.
40 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


musfira_45@ubuntuserver:~$ _
```

```
musfira_45@ubuntuserver:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:6b:7b:04 brd ff:ff:ff:ff:ff:ff
    altname enp2s1
    inet 192.168.111.132/24 metric 100 brd 192.168.111.255 scope global dynamic ens33
       valid_lft 1713sec preferred_lft 1713sec
    inet6 fe80::20c:29ff:fe6b:7b04/64 scope link
       valid_lft forever preferred_lft forever
musfira_45@ubuntuserver:~$ _
```


musfira_45@ubuntuserver: ~
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Musfi>ssh musfira_45@192.168.111.132
The authenticity of host '192.168.111.132 (192.168.111.132)' can't be established.
ED25519 key fingerprint is SHA256:1FG7iVX58HFoUZfyksNgm8ymlMX9zOL4OUYpXryvdu0.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '192.168.111.132' (ED25519) to the list of known hosts.
musfira_45@192.168.111.132's password:
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-71-generic x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
System information as of Tue Sep 30 12:59:47 PM UTC 2025
System load: 0.05
Usage of /: 37.4% of 16.07GB
Memory usage: 9%
Swap usage: 0%
Processes: 216
Users logged in: 1
IPv4 address for ens33: 192.168.111.132
Expanded Security Maintenance for Applications is not enabled.
53 updates can be applied immediately.
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To see these additional updates run: apt list --upgradable
Enable ESM Apps to receive additional future security updates.
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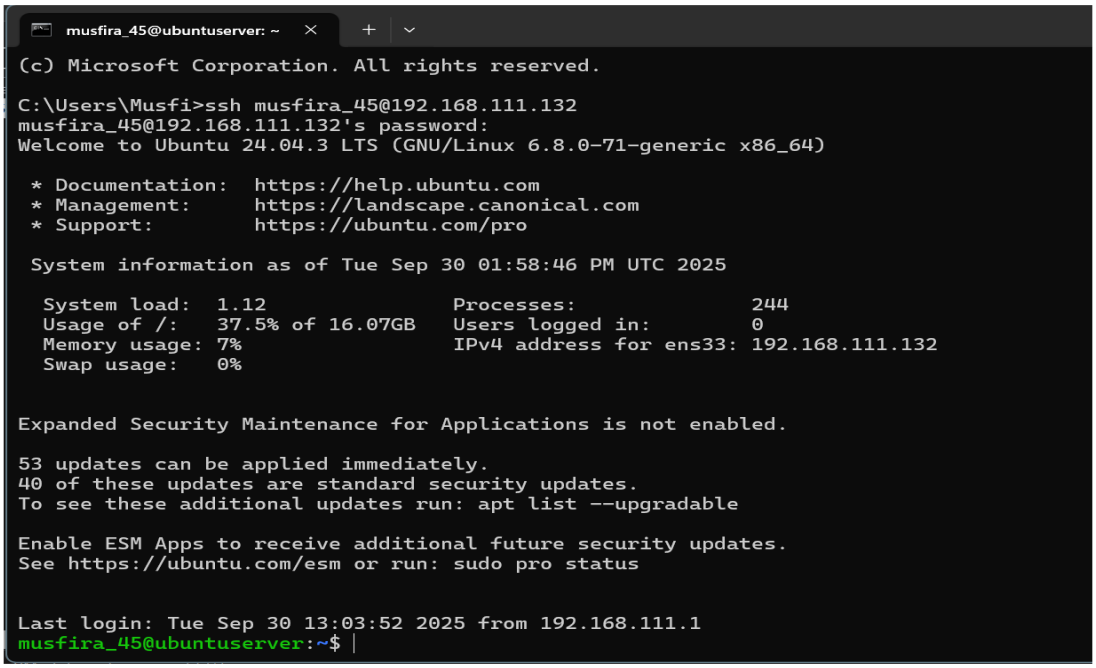
musfira_45@ubuntuserver: ~
(c) Microsoft Corporation. All rights reserved.
C:\Users\Musfi>ssh musfira_45@192.168.111.132
musfira_45@192.168.111.132's password:
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-71-generic x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
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53 updates can be applied immediately.
40 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: Tue Sep 30 13:03:52 2025 from 192.168.111.1
musfira_45@ubuntuserver:~$