



CLOUD COMPUTING

BSE (V-B)

Submitted By:

Musfira Farooq

Roll No:

2023-BSE-045

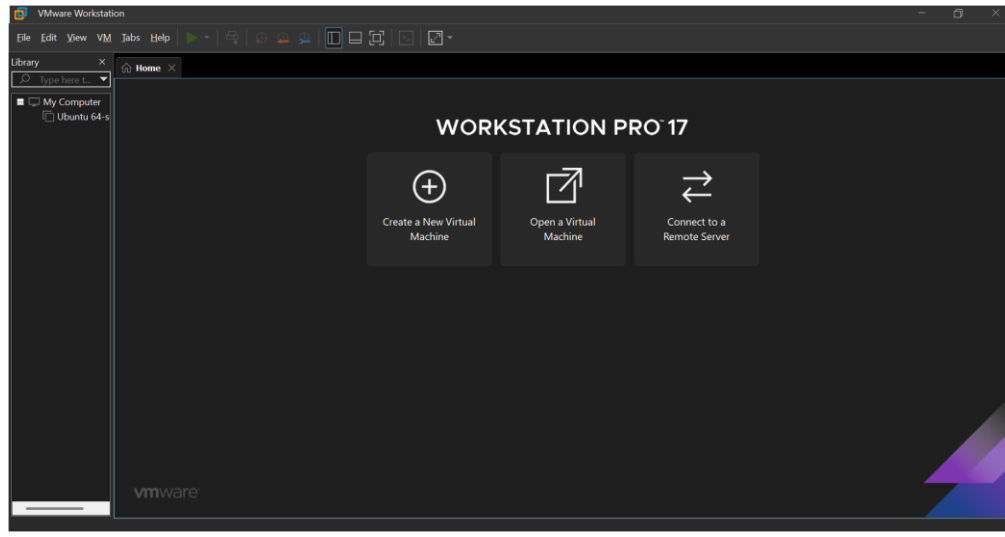
Submitted To:

Sir Muhammad Shoaib

LAB 01

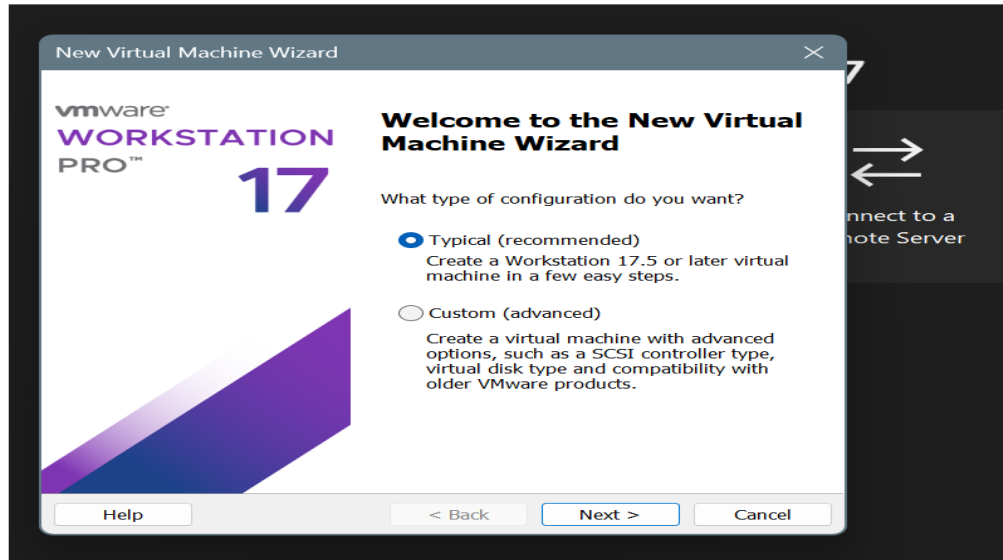
INSTALLATION OF LINUX (UBUNTU)

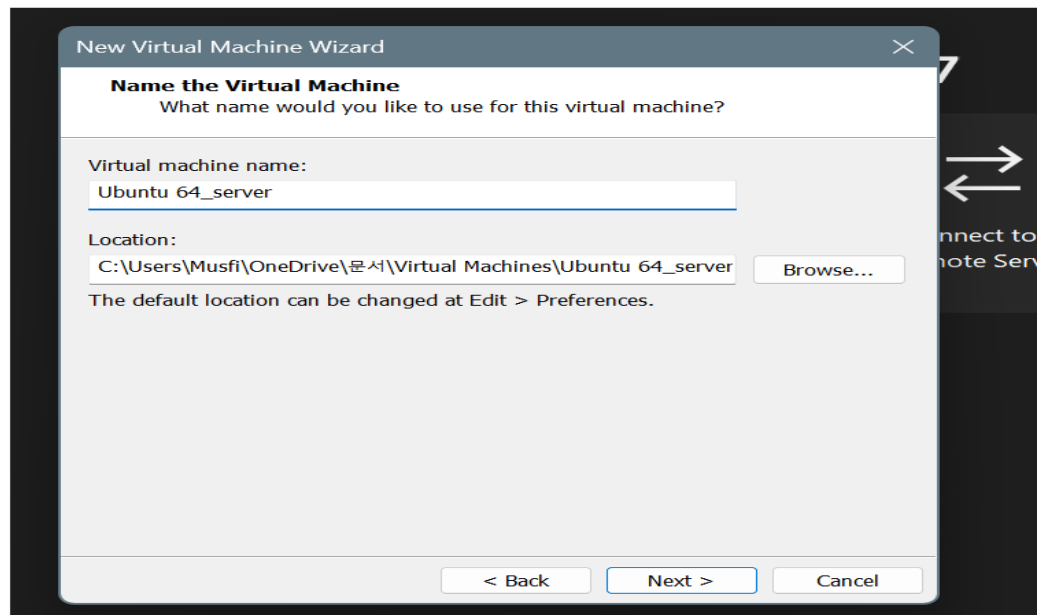
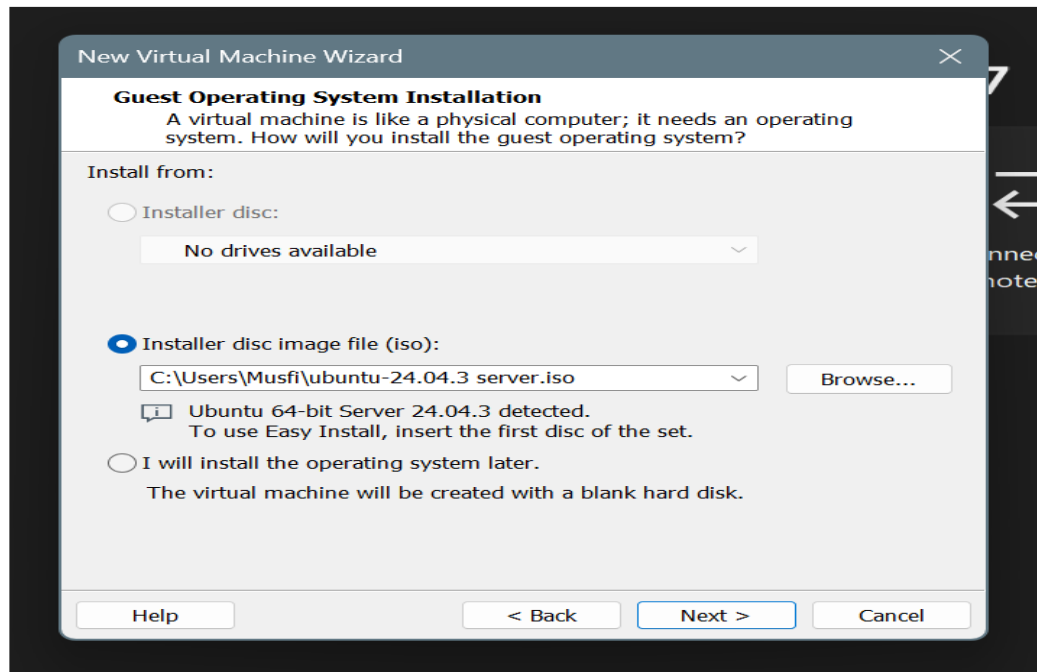
➤ INSTALLATION OF VMWARE 17 WORKSTATION PRO:

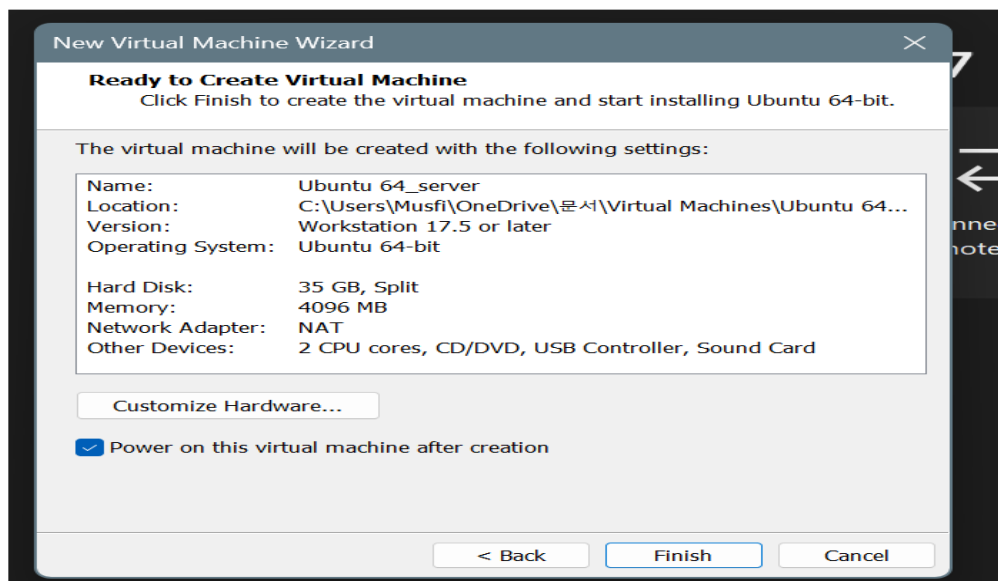
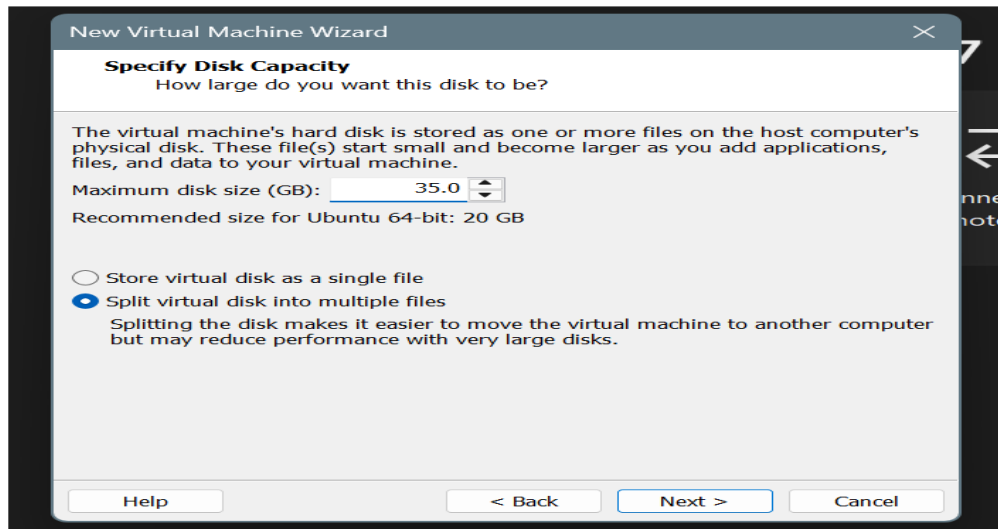


➤ INSTALLATION OF UBUNTU 24.4.3:

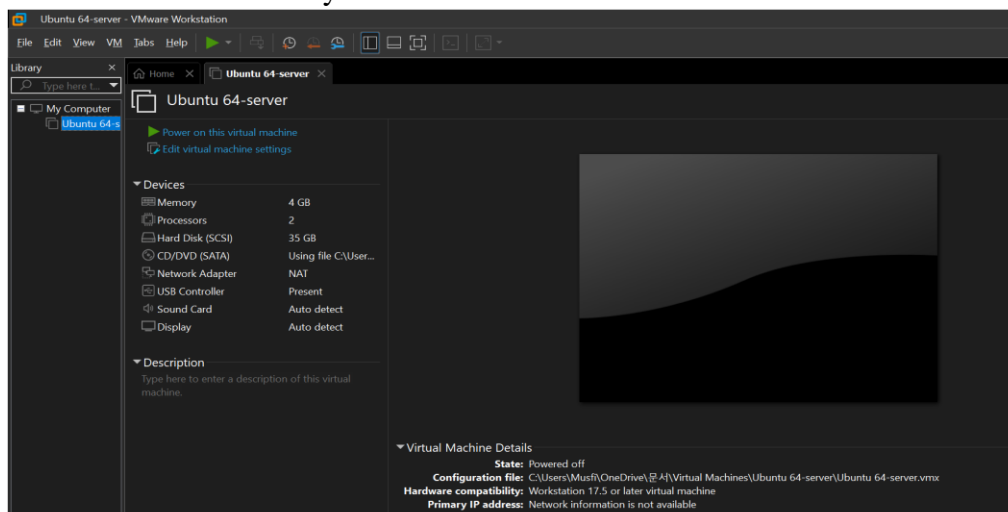
- Install the ISO file of Ubuntu with latest version.
- After that Create a Virtual Machine on VMware.







- Power on the virtual machine you created.



```

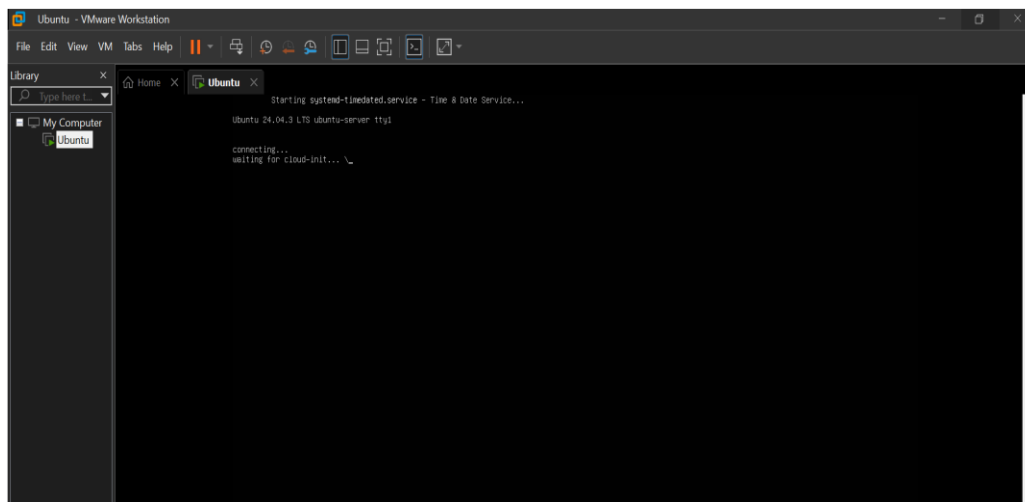
rt
[ 2.646637] pci 0000:00:15.6: PCI bridge to [bus 09]
[ 2.647496] pci 0000:00:15.6: bridge window [mem 0xfbc00000-0xfbcfffff]
[ 2.648681] pci 0000:00:15.6: bridge window [mem 0xe6200000-0xe62fffff 64bi
t pref]
[ 2.651444] pci 0000:00:15.6: PME# supported from D0 D3hot D3cold
[ 2.654260] pci 0000:00:15.7: [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]
[ 2.657686] pci 0000:00:15.7: bridge window [mem 0xe5e00000-0xe5efffff 64bi
t pref]
[ 2.659980] 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]

```

```

Home x Ubuntu 64-server x
[ OK ] Listening on dbus.socket - D-Bus System Message Bus Socket.
[ OK ] Listening on lscmd.socket - Open-ESXi lscmd Socket.
Starting lxd-installer.socket - Helper to install lxd snap on demand...
[ OK ] Listening on ssh.socket - OpenSSH Secure Shell server socket.
[ OK ] Listening on uidd.socket - UID daemon activation socket.
[ OK ] Listening on lxd-installer.socket elper to install lxd snap on demand.
[ OK ] Listening on snapd.socket - Socket activation for snapgy daemon.
[ OK ] Reached target sockets.target - Socket Units.
[ OK ] Reached target basic.target - Basic System.
[ 13.956405] pml4:smbus 0000:00:07.3: SMBus Host Controller not enabled!
Starting dbus.service - D-Bus System Message Bus...
[ OK ] Started dmccg.service - Save initial kernel messages after boot.
Starting e2scrub_reap.service - Reuse ext4 Metadata Check Snapshots...
Starting grub-common.service - Record successful boot for GRUB...
Starting polkit.service - Authorization Manager...
Starting rsyslog.service - System Logging Service...
[ OK ] Reached target getty-pre.target - Preparation for Login.
Starting snapd.seeded.service - Wait until snapd is fully seeded...
Starting snapd.service - Snap Daemon...
Starting sysstat.service - Resets System Activity Logs...
Starting systemd-logind.service - User Login Management...
Starting udisks2.service - Disk Manager...
[ OK ] Started dbus.service - D-Bus System Message Bus.
[ OK ] Finished e2scrub_reap.service - Reuse ext4 Metadata Check Snapshots.
[ OK ] Finished sysstat.service - Resets System Activity Logs.
[ OK ] Started systemd-logind.service - User Login Management.
[ OK ] Started unattended-upgrades.service - Unattended Upgrades Shutdown.
[ OK ] Finished grub-common.service - Record successful boot for GRUB.
Starting grub-initrd-fallback.service - GRUB failed boot detection...
[ OK ] Started polkit.service - Authorization Manager.
Starting ModemManager.service - Modem Manager...
[ OK ] Finished grub-initrd-fallback.service - GRUB failed boot detection.
[ OK ] Finished systemd-networkd-wait-online.service - Wait for Network to be Configured.
[ OK ] Reached target network-online.target - Network is Online.
[ OK ] Started update-notifier-download.timer - Download data for packages that failed at package install time.
[ OK ] Started update-notifier-notd.timer - Check to see whether there is a new version of Ubuntu available.
[ OK ] Reached target timers.target - Timer Units.
[ OK ] Reached target remote-fs.target - Preparation for Remote File Systems.
[ OK ] Reached target remote-fs.target - Remote File Systems.
Starting apport.service - automatic crash report generation...
Starting ssh.service - OpenSSH Secure Shell server...
[ OK ] Started cron.service - Regular background program processing daemon.
Starting system-user-sessions.service - Permit User Sessions...
[ OK ] Finished system-user-sessions.service - Permit User Sessions.
Starting plymouth-quit-wait.service - Hold until boot process finishes up...
Starting plymouth-quit.service - Terminate Plymouth Boot Screen...
[ OK ] Finished plymouth-quit-wait.service - Hold until boot process finishes up.

```



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:

☒ Use an entire disk

[/dev/sda local disk 20.00GB ▼]

☒ 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_voigroup: lvm_voigroup-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 NWE over TCP
installing kernel \
```

[\[View full log \]](#)

Ctrl+G.

Home X

Ubuntu 64-server X

Ubuntu 24.04.3 LTS ubuntuserver tty1

ubuntuserver login: musfira_45

Password:

Login successful

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@ubuntuuserver: ~  
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 SHA256:1FG7iVX58HFoUZfyksNgm8ymLMX9zOL40UYpXryvdu0.  
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          Processes:           216  
Usage of /:   37.4% of 16.07GB  Users logged in:    1  
Memory usage: 9%            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@ubuntuuserver: ~  
(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  
  
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  
  
Last login: Tue Sep 30 13:03:52 2025 from 192.168.111.1  
musfira_45@ubuntuuserver:~$ |
```