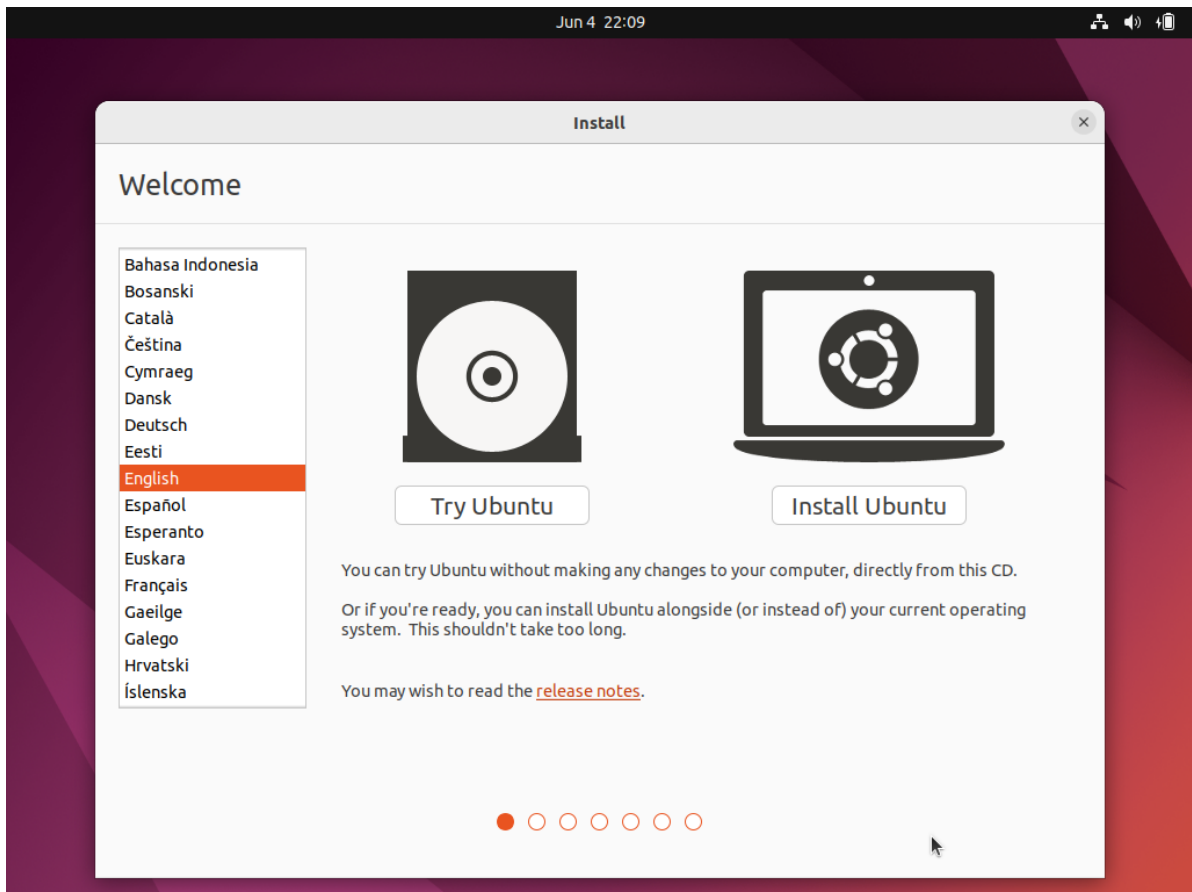
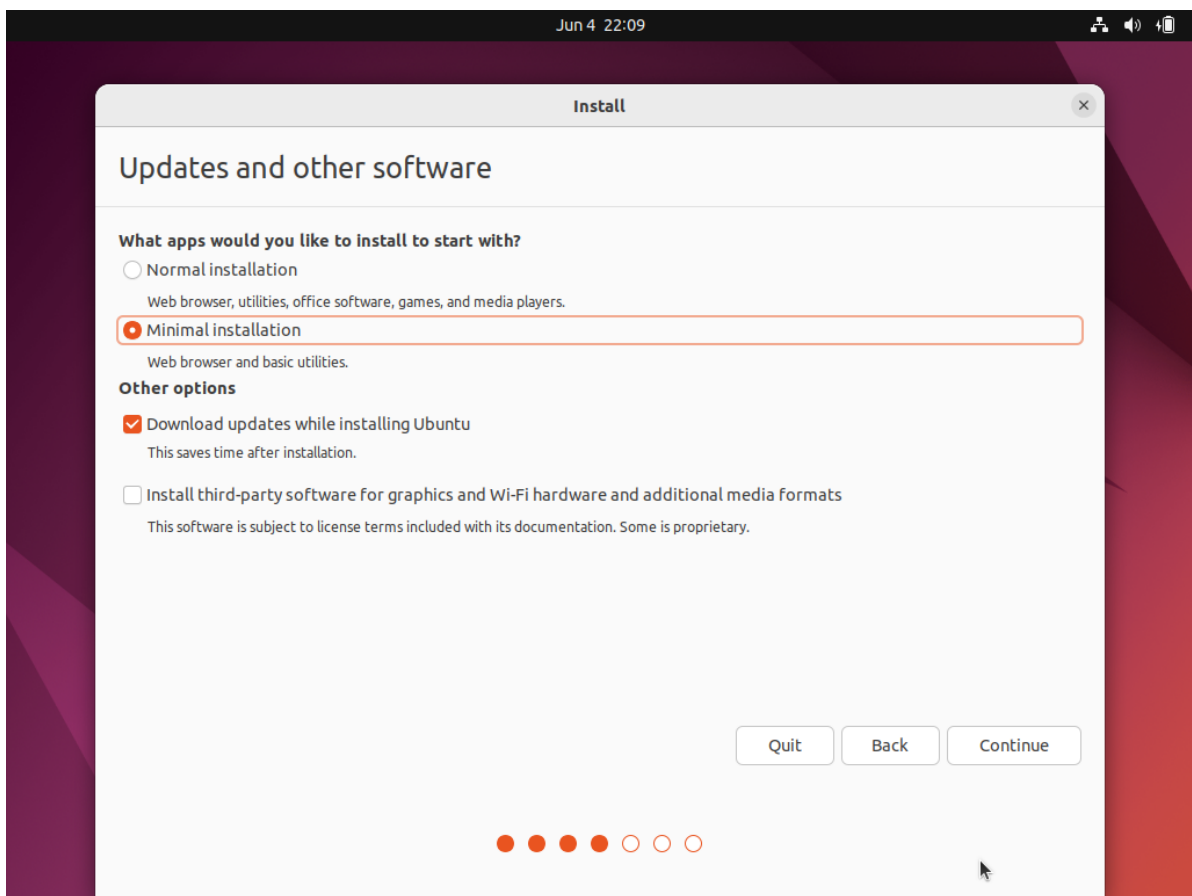
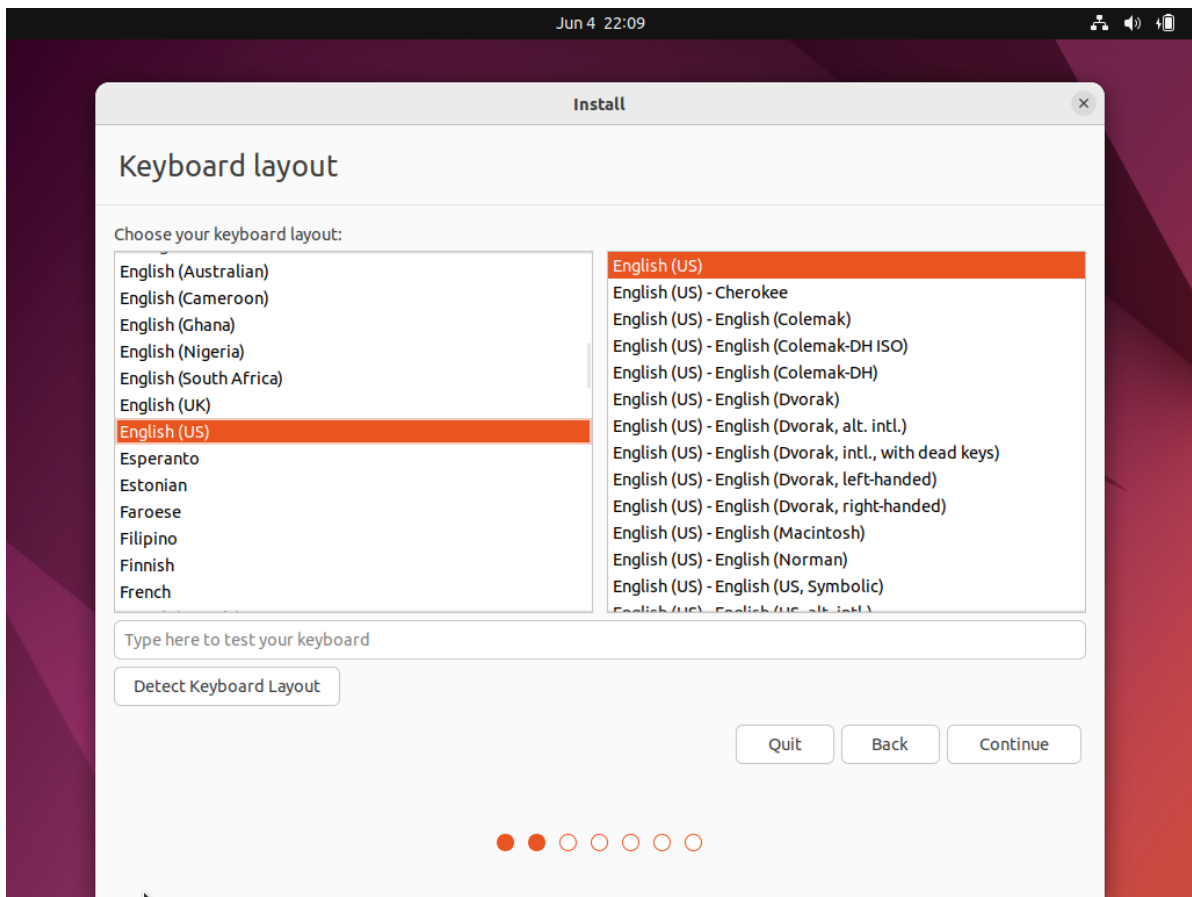


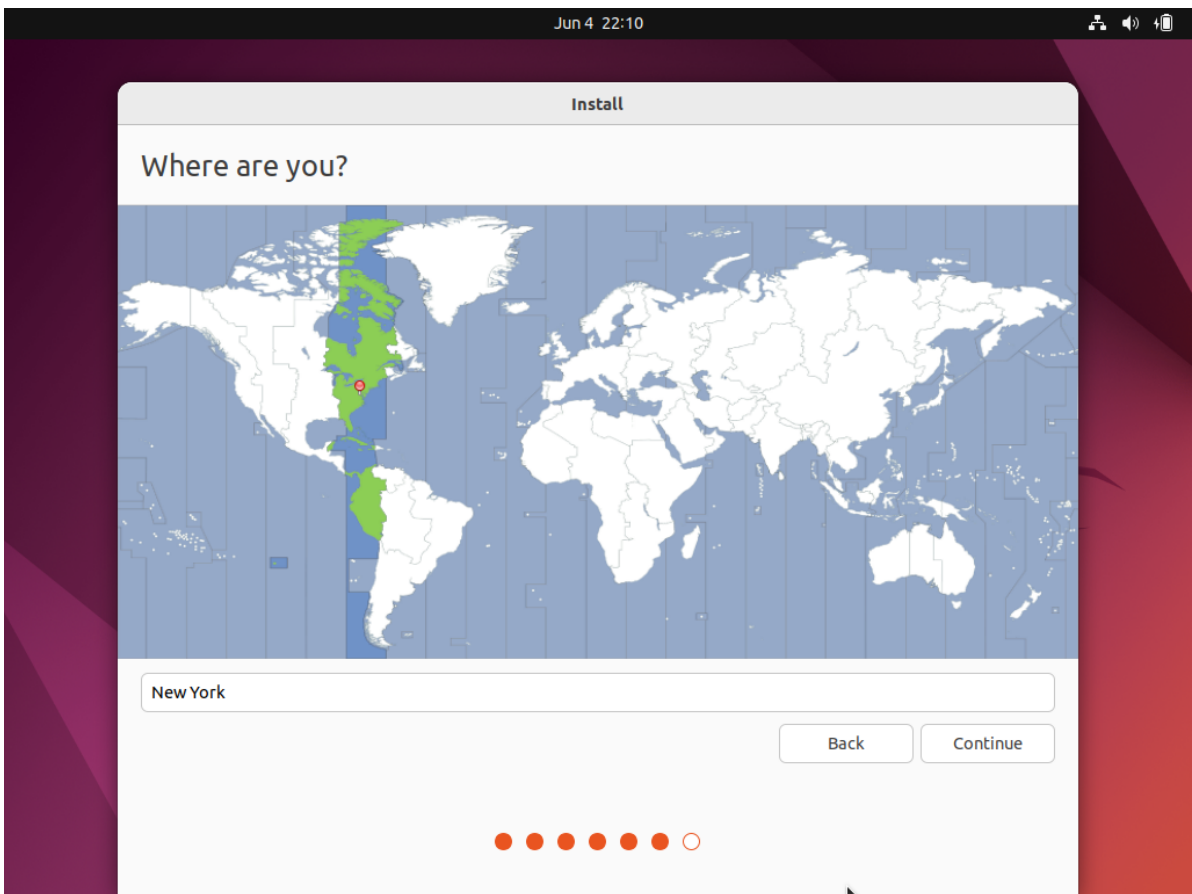
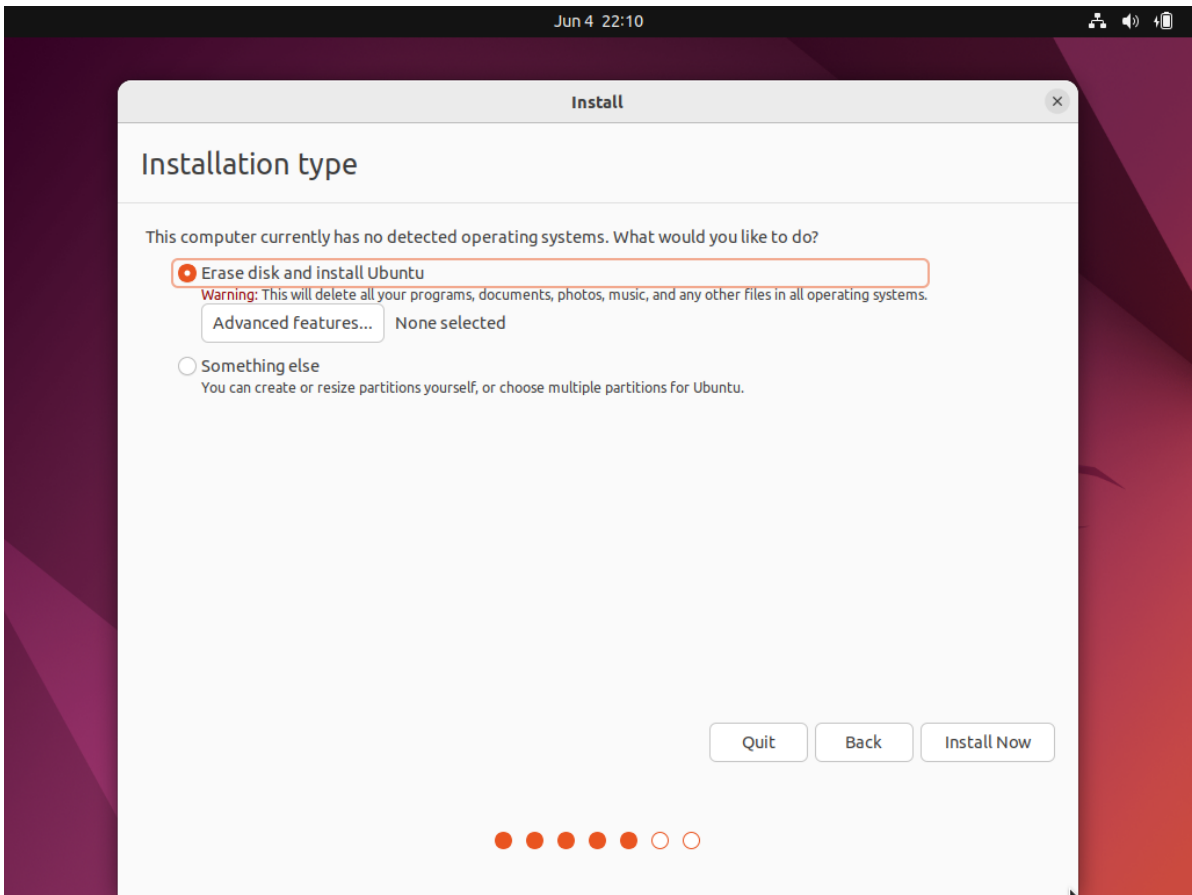
Setup Linux Machine

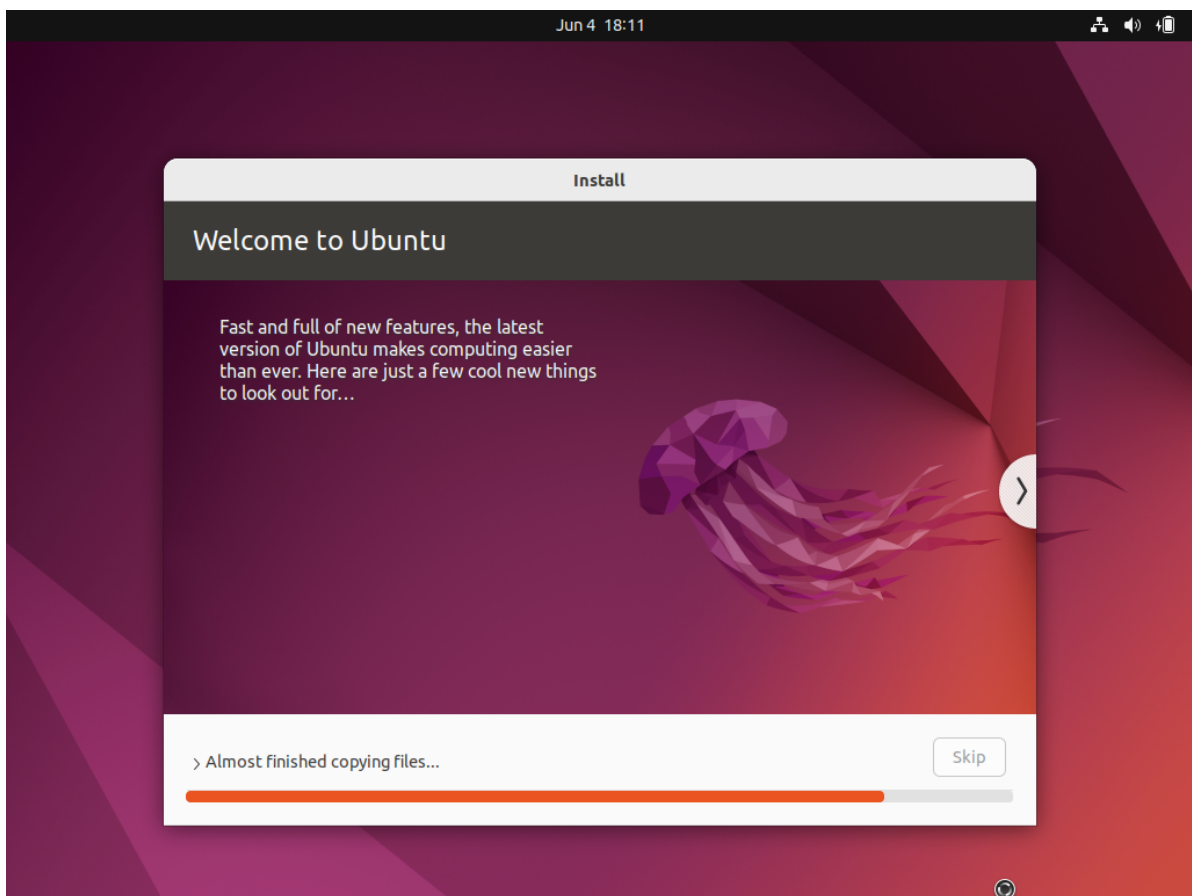
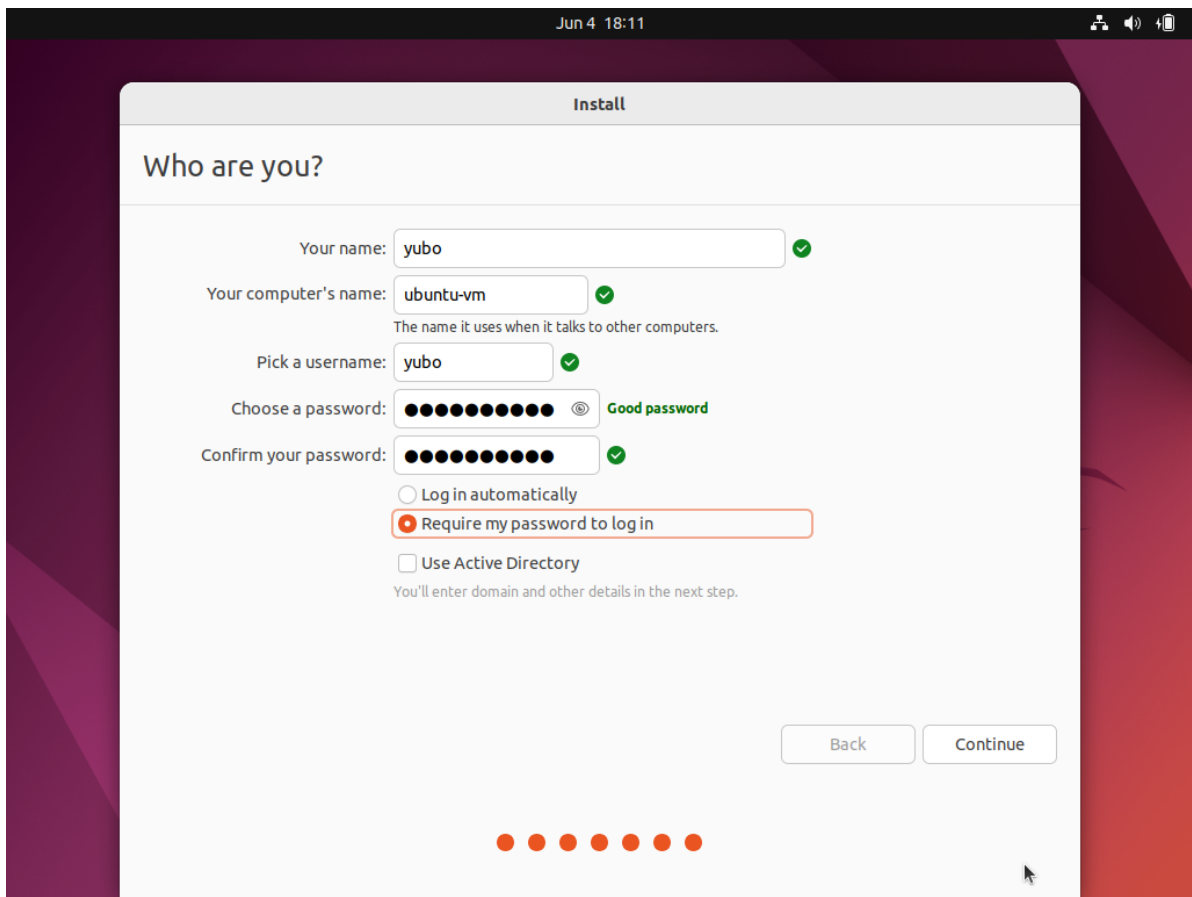
VMWare

- Download VMWare Player. It is free.
- Download Ubuntu iso. It is free.
- Create a virtual machine, using Ubuntu as system image. Follow the following procedures to make it:





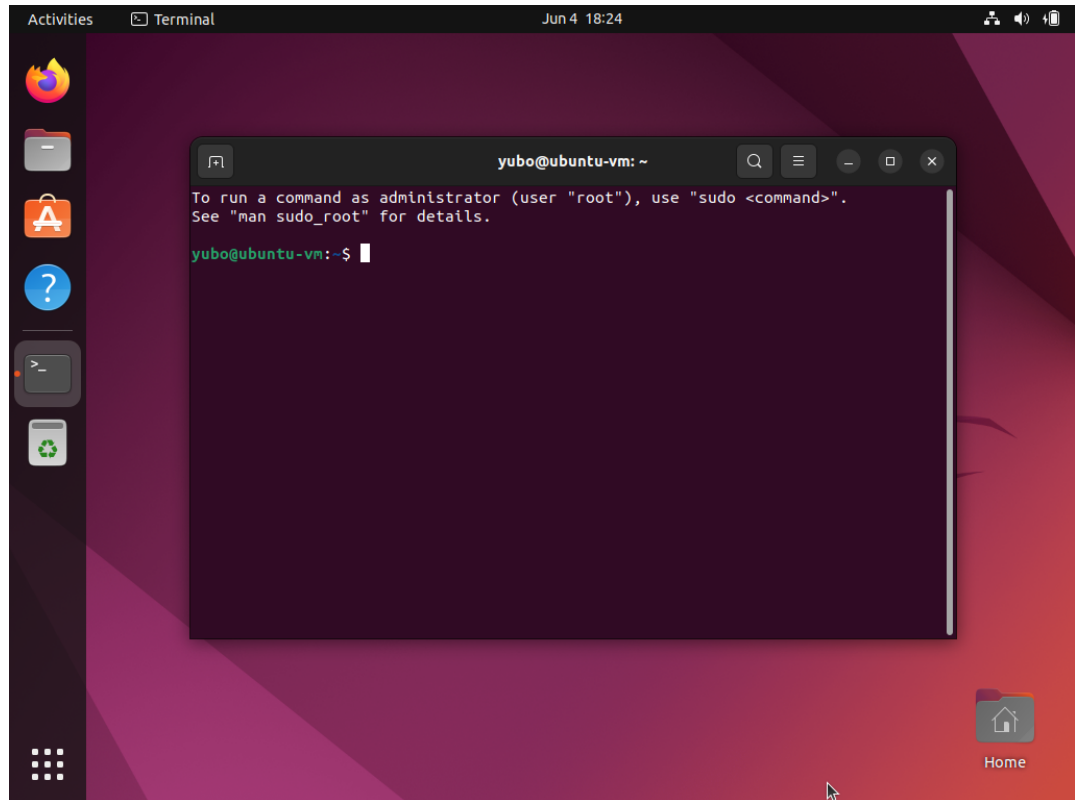




Root

Terminal

- `Ctrl + Alt + T`



- **Don't worry** if this terminal looks shabby and you want to go back to your windows machine. **SSH** will help!

Root

- Sudo allow you execute command with `root` privilege.
- However, Ubuntu did some trick so that you can't login as `root`. Sometrick will be provided to address that.
- **Do not do that for competition machine**, this is just to make life easier, but make the system more vulnerable.

NOPASSWD

- `sudo visudo`, go to the line where `%sudo` is presented, and modify it as follows
 - `%sudo ALL=(ALL:ALL) NOPASSWD: ALL`

ROOT

- `sudo passwd root`
 - Type the password you want to set for `root`. Nothing will change in the terminal, but the password is recorded.
- after that, `su root` and type the password you have set. Everything would work.
 - However, you still can not login in to GUI as root. They won't release that restriction.
- Virtual terminal would work. Type `Ctrl+Alt+F2` to login as root.

```
Ubuntu 22.04 LTS ubuntu-vm tty3
ubuntu-vm login: root
Password:
Welcome to Ubuntu 22.04 LTS (GNU/Linux 5.15.0-35-generic x86_64)

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

127 updates can be applied immediately.
46 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

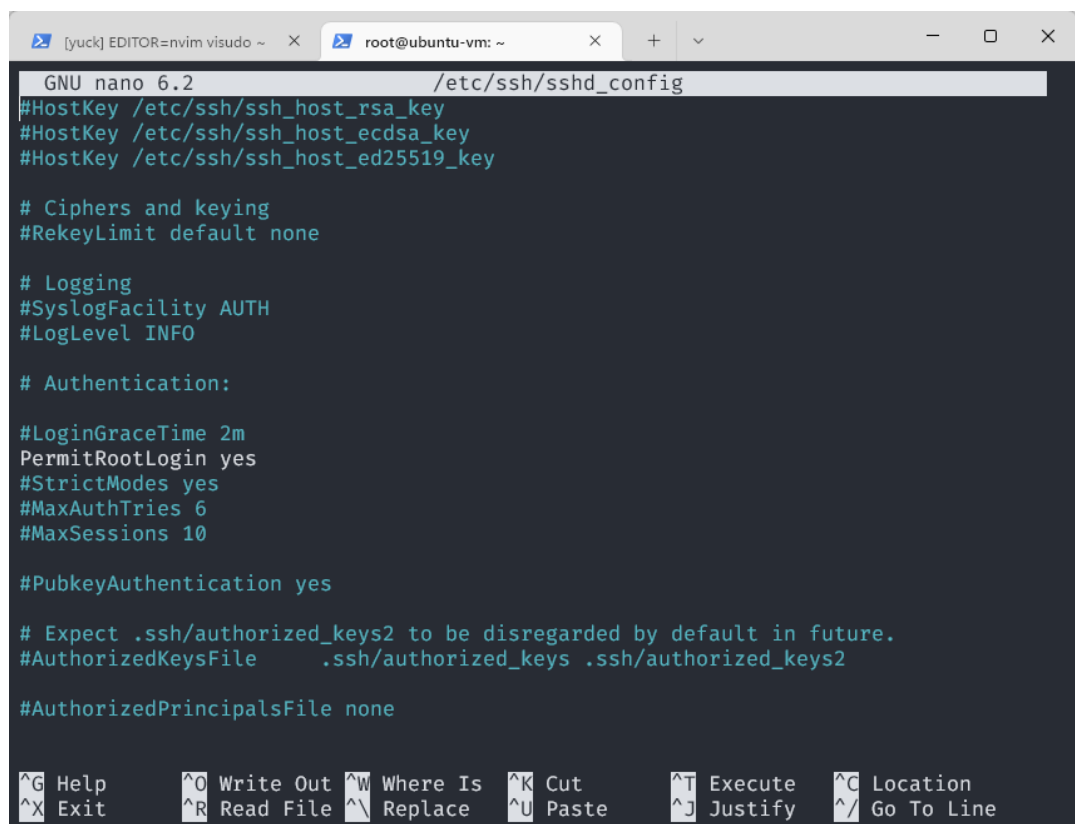
Last login: Sat Jun  4 18:38:05 EDT 2022 on tty2
root@ubuntu-vm:~# A_
```

○

SSH

- `apt install openssh-server`
- `vim /etc/ssh/sshd_config`

○



```
[yuck] EDITOR=nvim visudo ~ x root@ubuntu-vm: ~ + v
GNU nano 6.2 /etc/ssh/sshd_config
#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key
#HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
#RekeyLimit default none

# Logging
#SyslogFacility AUTH
#LogLevel INFO

# Authentication:
#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10

#PubkeyAuthentication yes

# Expect .ssh/authorized_keys2 to be disregarded by default in future.
#AuthorizedKeysFile .ssh/authorized_keys .ssh/authorized_keys2

#AuthorizedPrincipalsFile none

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^_ Go To Line
```

- Change `PermiRootLogin` to `yes`
- `ip --family inet --color address | perl -nle 'print $1 if /(?:\d{1,3}\.){3}\d{1,3}).*eth0/'`
 - Issue this command to get ip address of your guest machine.
- On **windows**, execute `ssh -l root $ip`, where `$ip` is obtained in previous step.

- Type yes for the prompt.
- Type password for root in the Ubuntu machine.