

Pengenalan VMare Workstation dan Linux OS

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Pertemuan 2 & 3

Membuat Layanan Hosting (SaaS) berbasis Private Cloud

Conceptual APP

- Virtual OS
 - Aplikasi Vmare Workstation
 - OS pada Komputer Lab
 - Hardware Fisik Komputer Lab
- ↑
Virtualisasi

Vmare Workstation

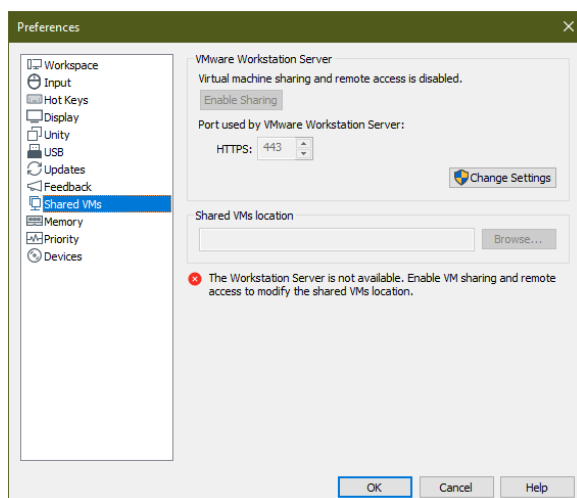
- Digunakan untuk virtualisasi sistem operasi
- Virtualisi “dalam bahasan komputasi, virtualisasi merujuk pada kegiatan untuk menciptakan versi maya(virtual) dari sesuatu hardware, storage, dan resource dari komputer”
- Contoh yang dapat divirtualisasikan: CPU, RAM, Network Adapter, Hard disk, Motherboard, VGA

Memanfaatkan Fasilitas Swapping

Bilamana komputer host (komputer fisik) tidak memiliki RAM yang cukup dapat menggunakan opsi Swapping

Memperbaiki Konflik Port pada XAMPP

Secara Default, Hasil instalasi Vm akan menggunakan port yang biasa digunakan Xampp maka akan terjadi error jika kita menggunakan XAMPP. Cara memperbaikinya dengan cara klik Tab edit lalu Preference



Lalu klik shared Vm lalu ganti status menjadi disable

Linux OS kebutuhan untuk membuat VM

- Linuk OS(Ubuntu 18.10 Live server)
- Periksa di komputer pada “driver C “folder “ISO Library”

Parameter Pembuatan VM

- (CTRL – N) new virtual Machine
- Menggunakan opsi custom untuk mengatur VM secara Manual



- Pilih Kompabilitas Hardware tertinggi untuk sistem operasi VM modern (keluaran Terbaru)
- Bila menggunakan misal windows XP maka digunakan opsi kompabilitas 10 kebawah

New Virtual Machine Wizard [X]

Choose the Virtual Machine Hardware Compatibility
Which hardware features are needed for this virtual machine?

Virtual machine hardware compatibility

Hardware compatibility: Workstation 15.x

Compatible with: ☒ ESX Server

Compatible products:

- Fusion 11.x
- Workstation 15.x

Limitations:

- 64 GB memory
- 16 processors
- 10 network adapters
- 8 TB disk size
- 3 GB shared graphics memory

Help < Back Next > Cancel

- Lalu pilih berkas ISO sistem operasi untuk VM yang akan dibuat
- Informasi mengenai kompatibilitas Easy install akan muncul, namun untuk sistem 18.10 masih berkendala

New Virtual Machine Wizard [X]

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:

DVD RW Drive (F:)

☒ Installer disc image file (iso):

C:\ISO Library\ubuntu-18.10-live-server-amd64.iso Browse...

Ubuntu 64-bit Server 18.10 detected.
This operating system will use Easy Install. [\(What's this?\)](#)

☐ I will install the operating system later.
The virtual machine will be created with a blank hard disk.

Help < Back Next > Cancel

- Karena Berkendala maka isi Form dengan data sembarang

New Virtual Machine Wizard

Easy Install Information
This is used to install Ubuntu 64-bit.

Personalize Linux

Full name: Galih

User name: Galih

Password: ●●●

Confirm: ●●●

Help < Back Next > Cancel

- Isikan nama Virtual Machine
- Dan lokasi menyimpan seperti pada Gambar dibawah

New Virtual Machine Wizard

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:
Ubuntu LAMPP 123170034

Location:
D:\VM-123170034\Ubuntu LAMPP Browse...

The default location can be changed at Edit > Preferences.

< Back Next > Cancel

- Gunakan parameter Processoes sebanyak 2 dan core per processors tetap pada nilai 1
- Opsi ini akan mempercepat kinerja VM

New Virtual Machine Wizard

Processor Configuration
Specify the number of processors for this virtual machine.

Processors

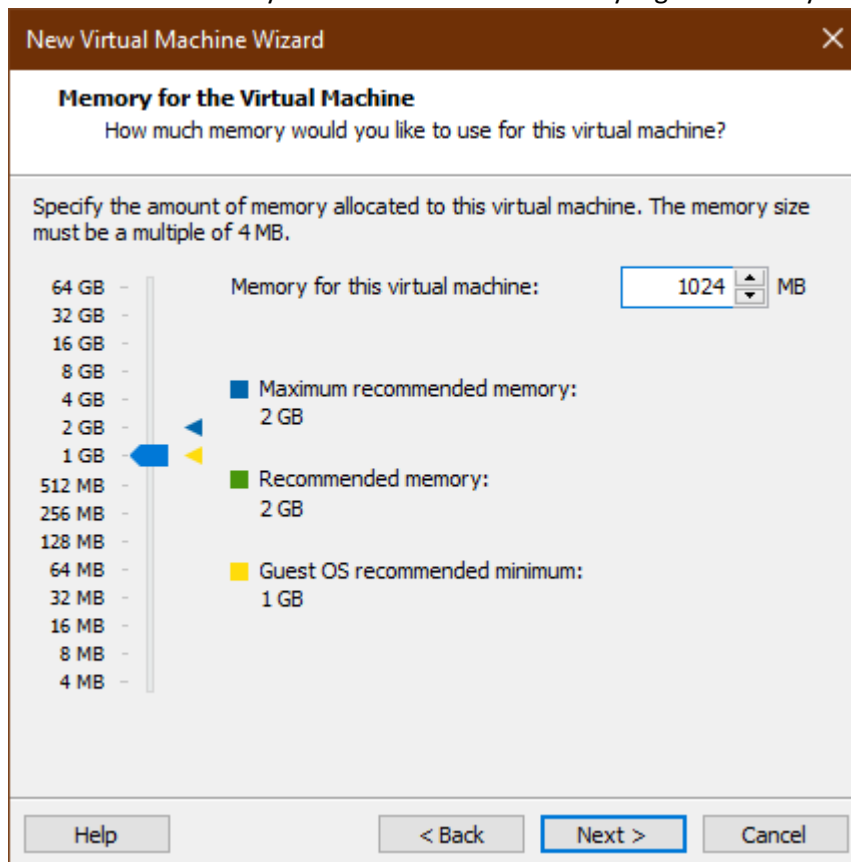
Number of processors: 2

Number of cores per processor: 1

Total processor cores: 2

Help < Back Next > Cancel

- Gunakan Parameter memory sebanyak 1GB atau 1024 MB
- Ubuntu versi Umumnya tidak membutuhkan RAM yang terlalu banyak



- Pilih Network mode network address translation (NAT)
- Mode bridge networking akan memberikan akses VM ke jaringan luar (sama seperti Host) sehingga akan mendapatkan IP eksternal (bisa diakses secara Eksternal)
- Mode NAT mirip seperti Bridged

New Virtual Machine Wizard [X]

Network Type
What type of network do you want to add?

Network connection

☐ Use bridged networking
Give the guest operating system direct access to an external Ethernet network. The guest must have its own IP address on the external network.

☒ Use network address translation (NAT)
Give the guest operating system access to the host computer's dial-up or external Ethernet network connection using the host's IP address.

☐ Use host-only networking
Connect the guest operating system to a private virtual network on the host computer.

☐ Do not use a network connection

Help < Back Next > Cancel

- Pilih Controller type LSI logic (Recomended)
- Mode ini umunya untuk sistem operasi keluaran terbaru

New Virtual Machine Wizard [X]

Select I/O Controller Types
Which SCSI controller type would you like to use?

I/O controller types

SCSI Controller:

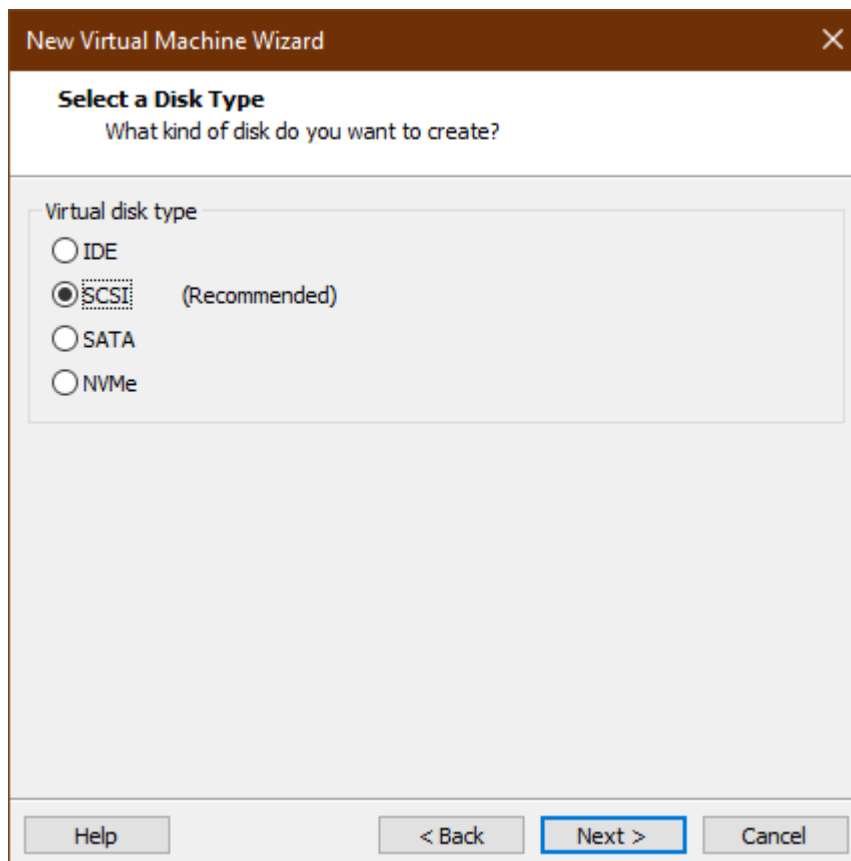
☐ BusLogic (Not available for 64-bit guests)

☒ LSI Logic (Recommended)

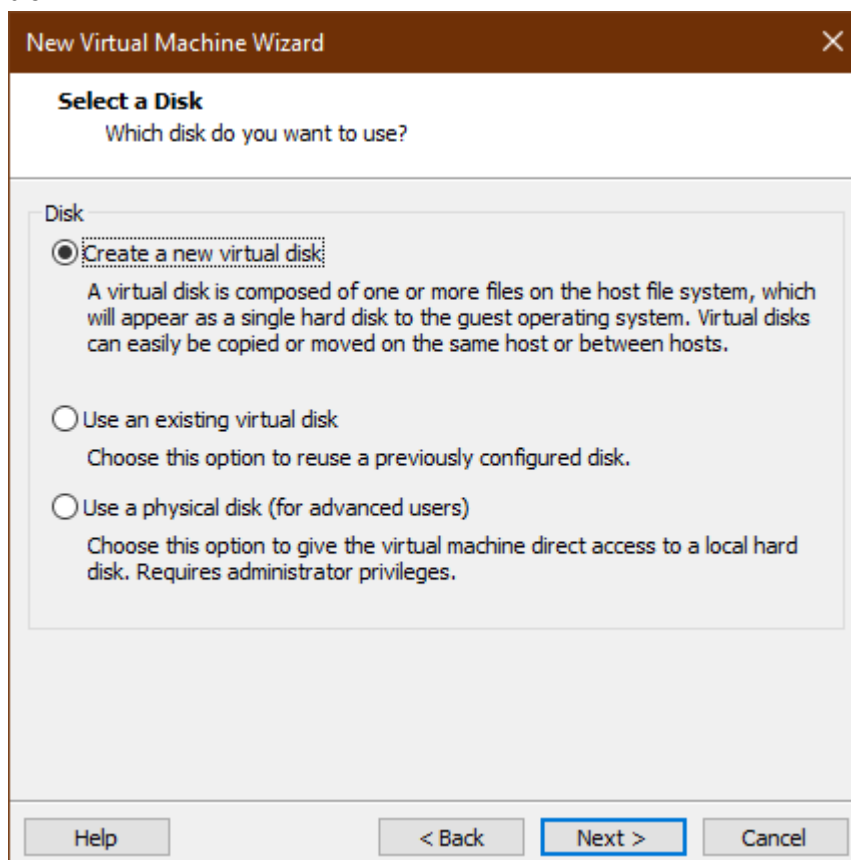
☐ LSI Logic SAS

Help < Back Next > Cancel

- Pilih disk type SCSI (Recomended)

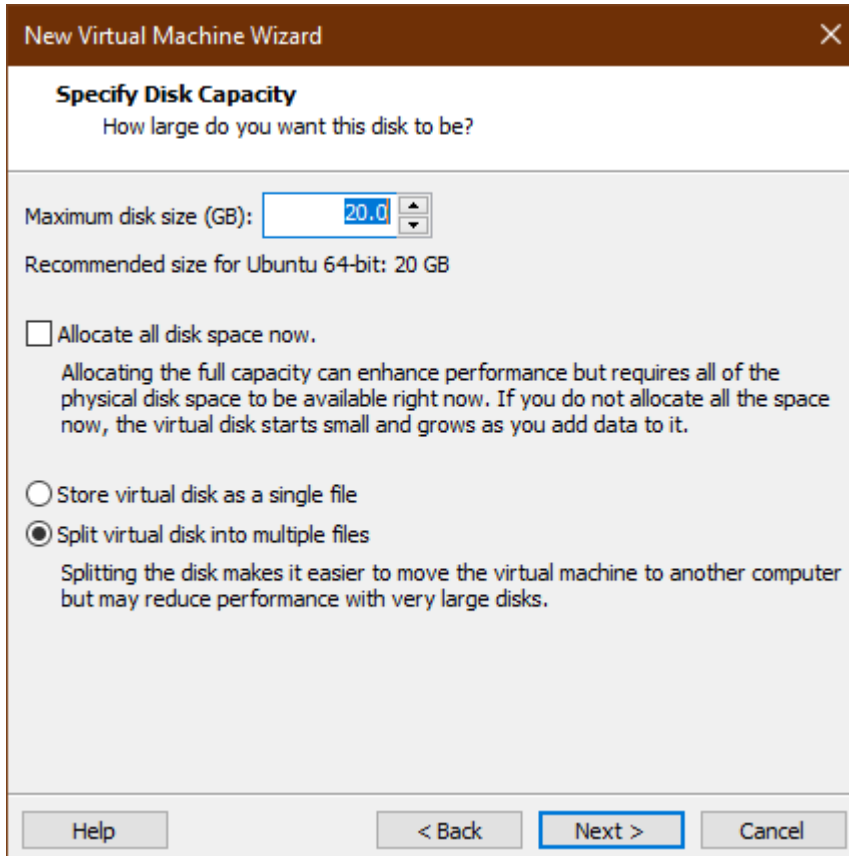


- Dikarenakan Sebelumnya belum pernah memiliki virtual dis, maka pilih create a new virtual disk



- Gunakan ukuran default yang disarankan untuk Ubuntu

- Split Virtual disk into multiple files



The screenshot shows the 'Specify Disk Capacity' step of the 'New Virtual Machine Wizard'. The title bar is brown with a close button. The main area has a light gray background. At the top, the title 'Specify Disk Capacity' is in bold, followed by the subtitle 'How large do you want this disk to be?'. Below this, there is a text input field for 'Maximum disk size (GB):' with the value '20.0' and a small up/down arrow button. Underneath, it says 'Recommended size for Ubuntu 64-bit: 20 GB'. There are two radio button options: 'Allocate all disk space now.' (unchecked) and 'Split virtual disk into multiple files' (checked). A descriptive paragraph explains that allocating full capacity requires all physical disk space, while splitting the disk allows it to grow as data is added. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

Specify Disk Capacity
How large do you want this disk to be?

Maximum disk size (GB):

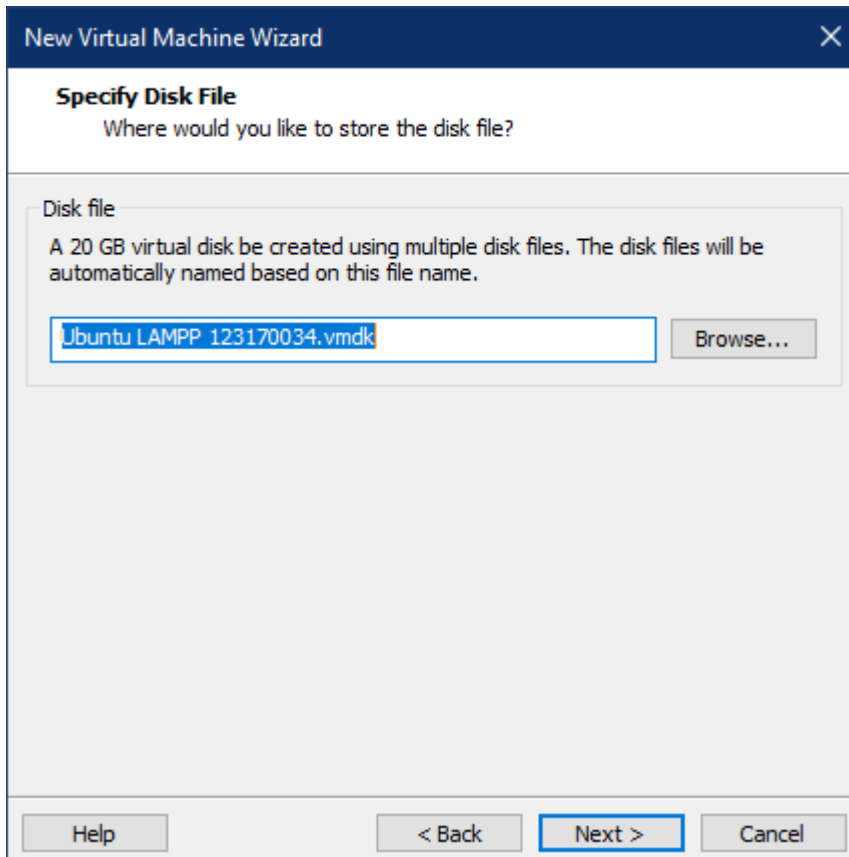
Recommended size for Ubuntu 64-bit: 20 GB

☐ Allocate all disk space now.
Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.

☐ Store virtual disk as a single file
☒ Split virtual disk into multiple files
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

Help < Back Next > Cancel

- Next >



The screenshot shows the 'Specify Disk File' step of the 'New Virtual Machine Wizard'. The title bar is dark blue with a close button. The main area has a light gray background. At the top, the title 'Specify Disk File' is in bold, followed by the subtitle 'Where would you like to store the disk file?'. Below this, there is a text input field for 'Disk file' containing the text 'Ubuntu LAMP 123170034.vmdk'. To the right of the input field is a 'Browse...' button. A descriptive paragraph explains that a 20 GB virtual disk will be created using multiple disk files, and the files will be automatically named based on the file name. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

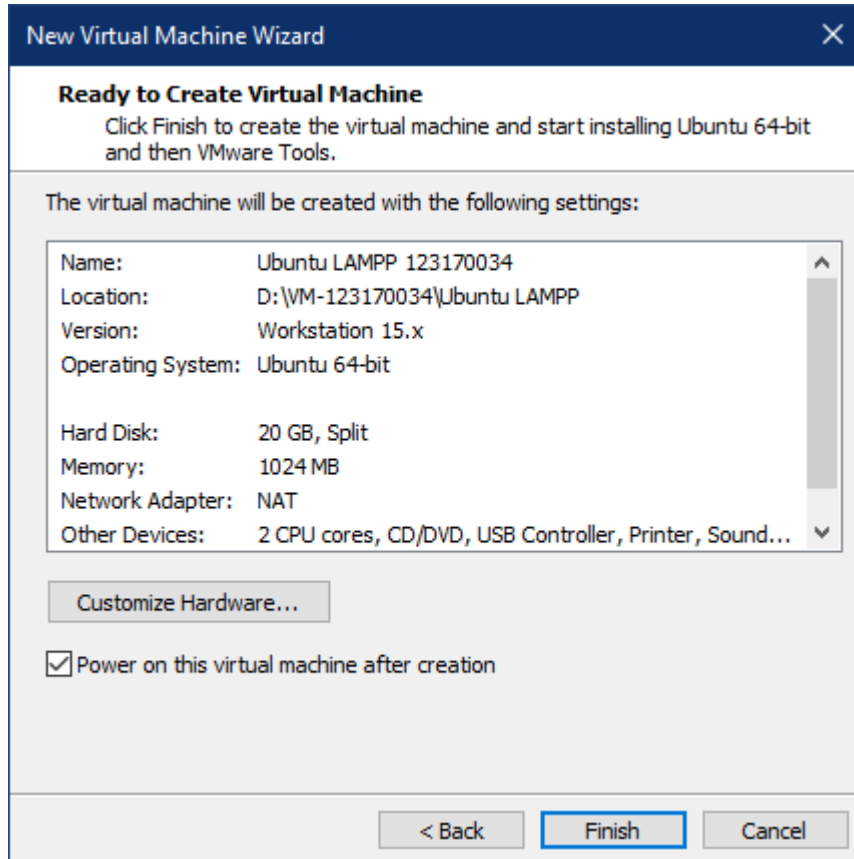
Specify Disk File
Where would you like to store the disk file?

Disk file
A 20 GB virtual disk be created using multiple disk files. The disk files will be automatically named based on this file name.

Browse...

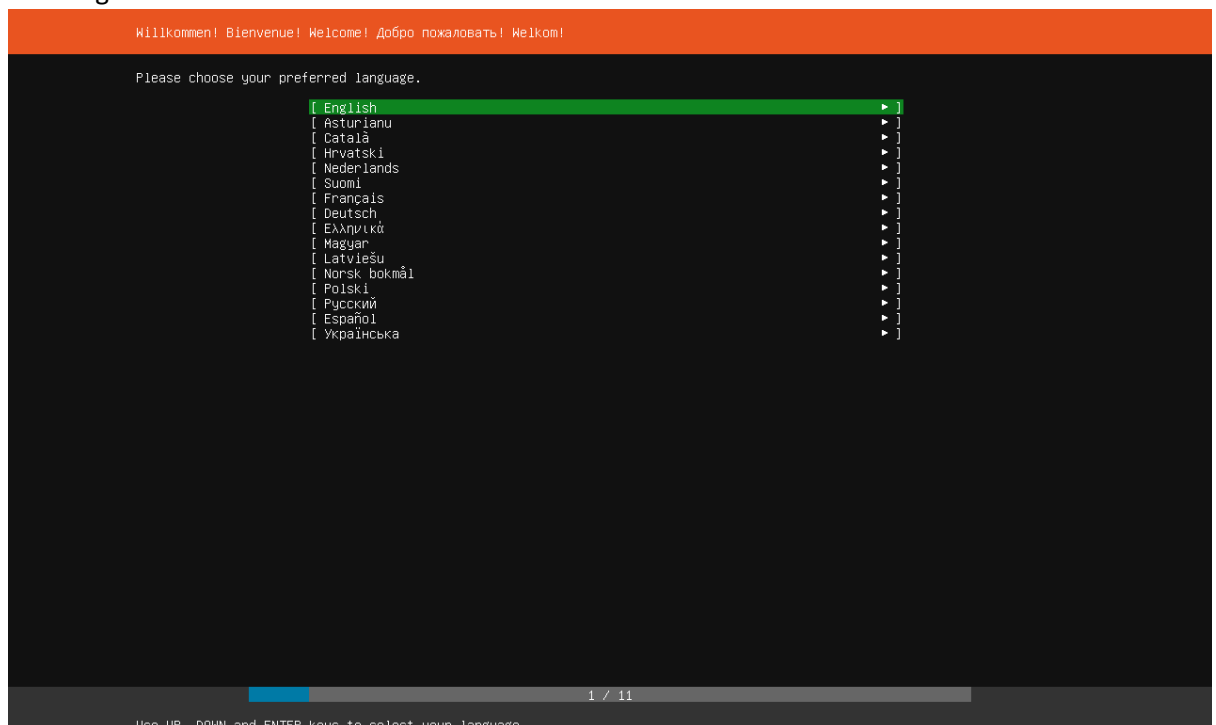
Help < Back Next > Cancel

- Klik Finish

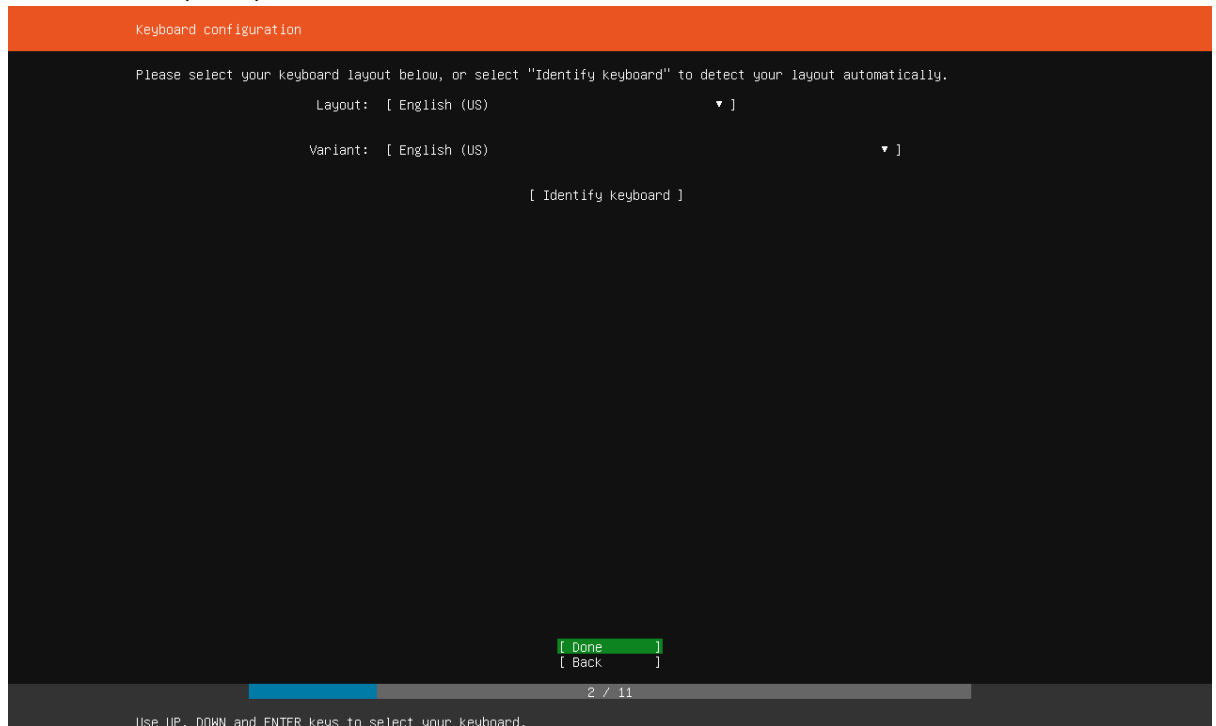


Proses Instalasi Ubuntu Server

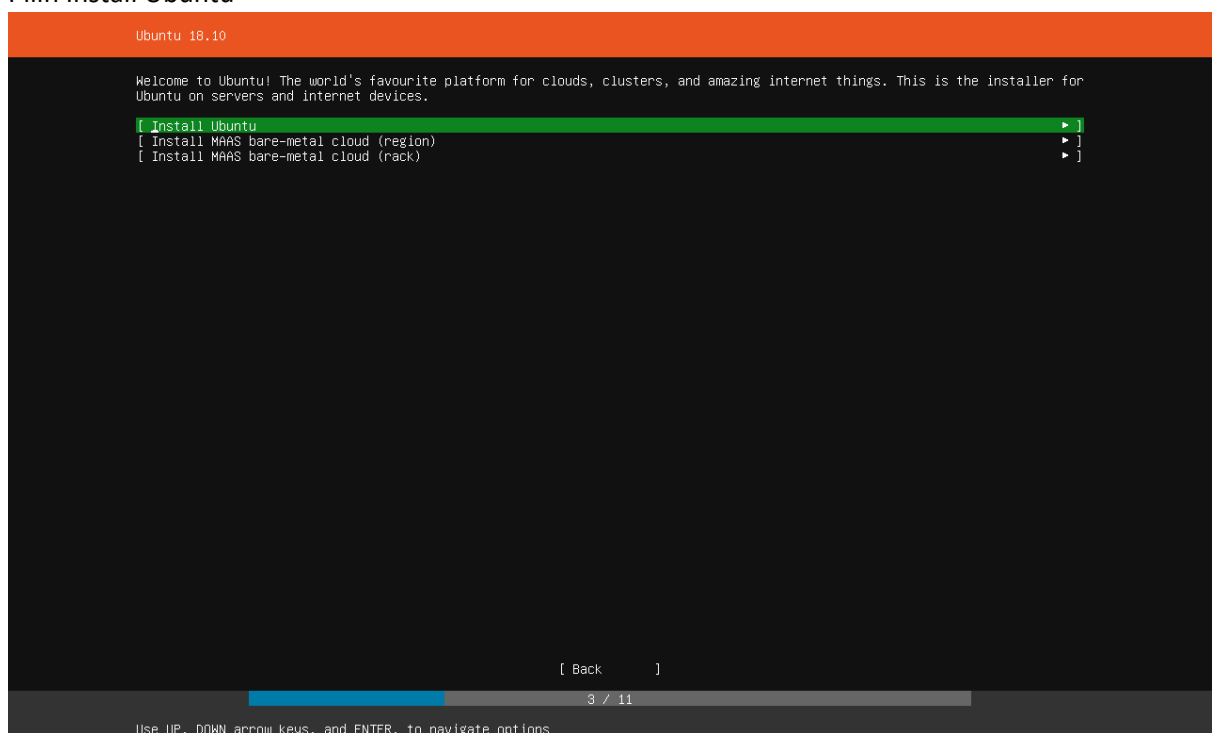
- Untuk masuk ke dalam menu VM klik kotak Vm lalu mouse akan hilang lalu tekan CTRL + G
- Jika ingin keluar CTRL + ALT
- Pilih English



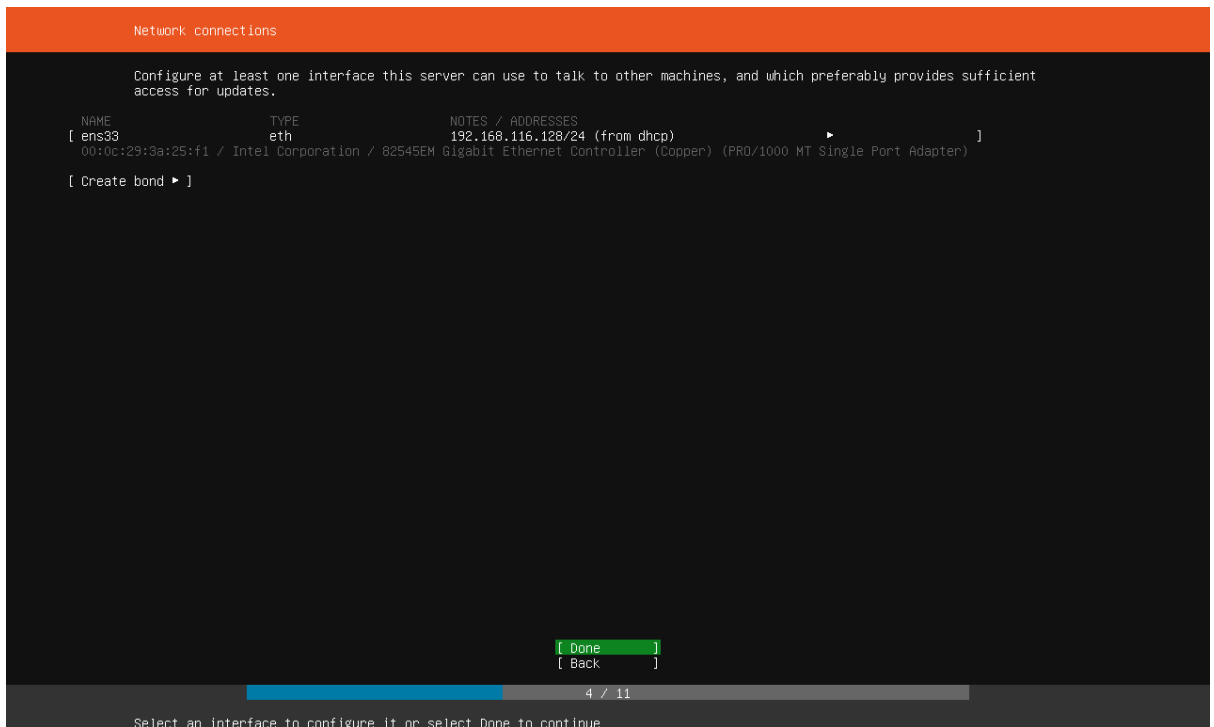
- Lalu klik enter (Done)



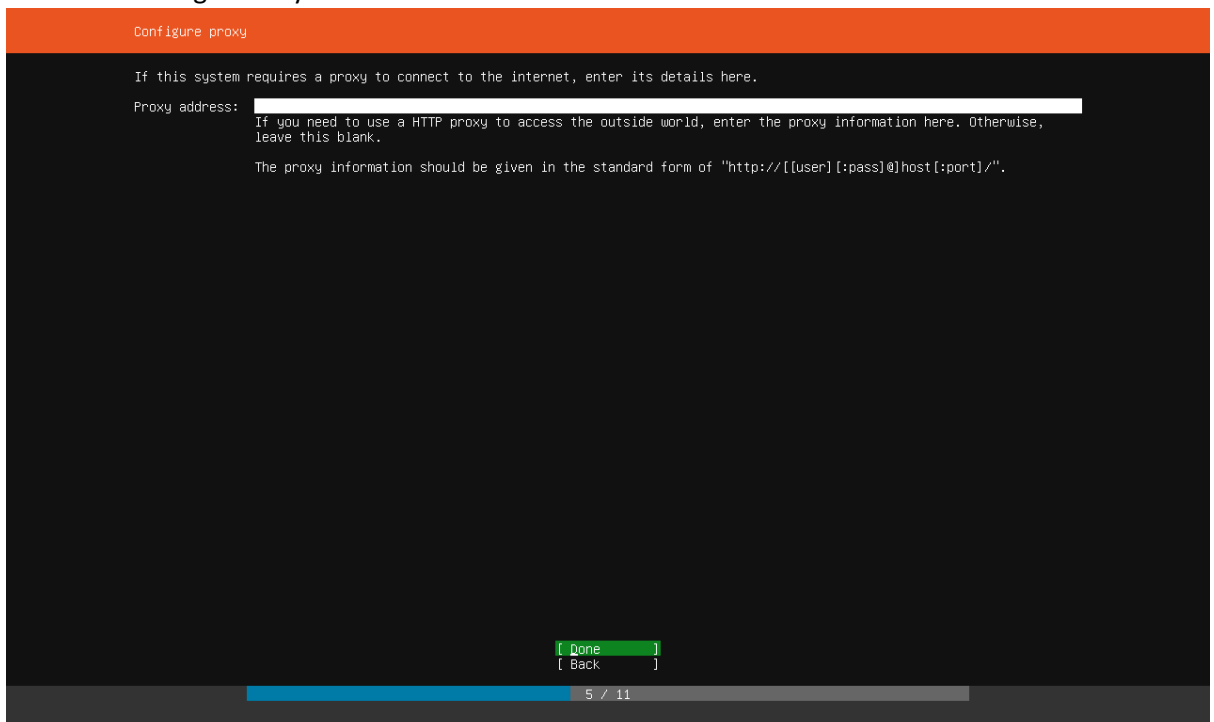
- Pilih Install Ubuntu



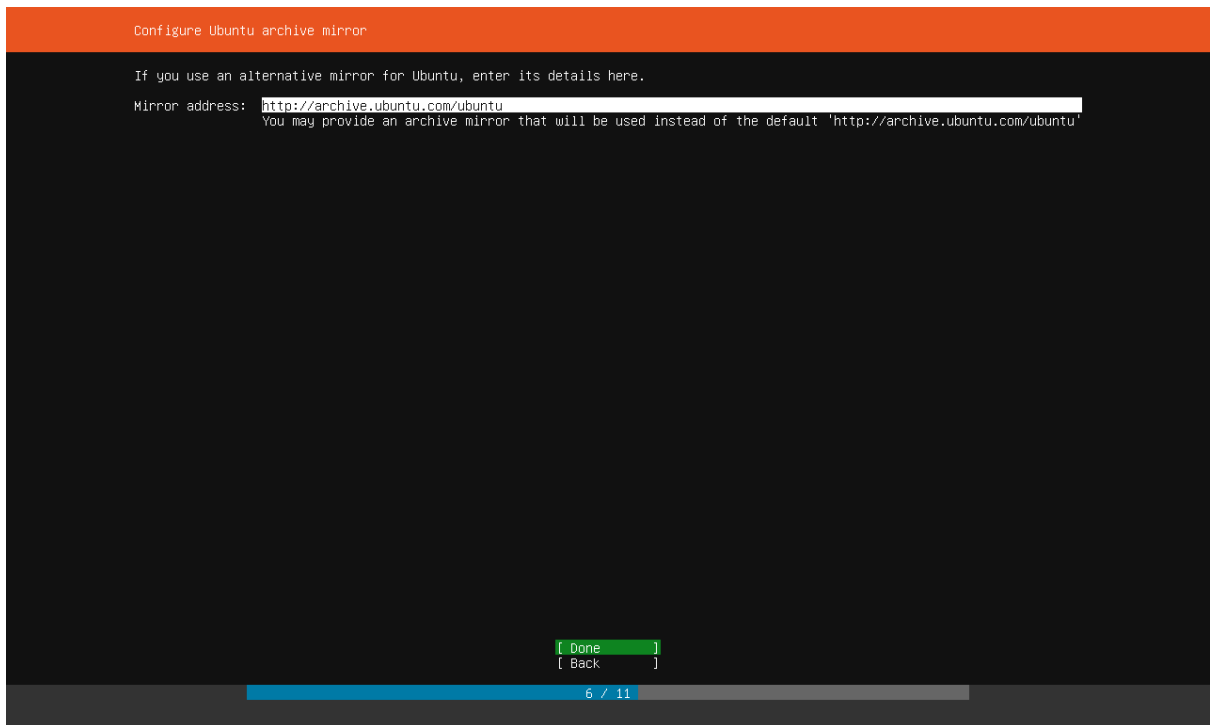
- Maka akan muncul IP address seperti pada gambar dibawah



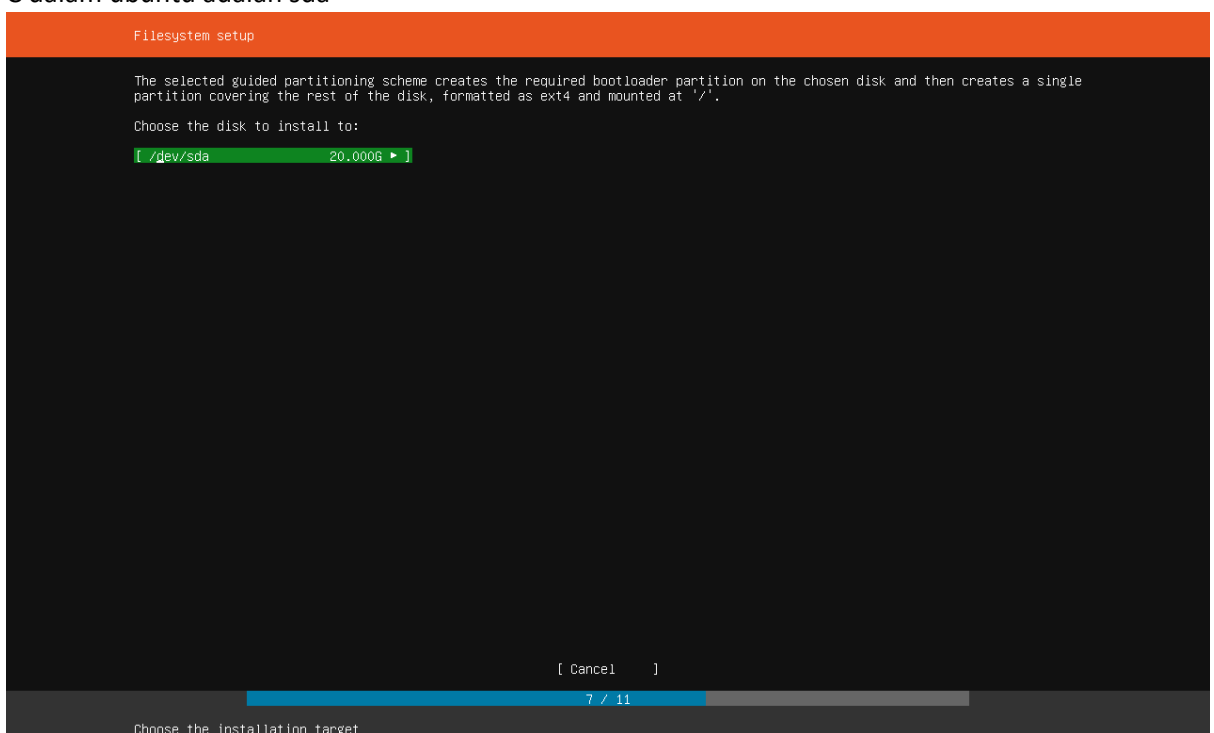
- Tidak usah mengisi Proxy



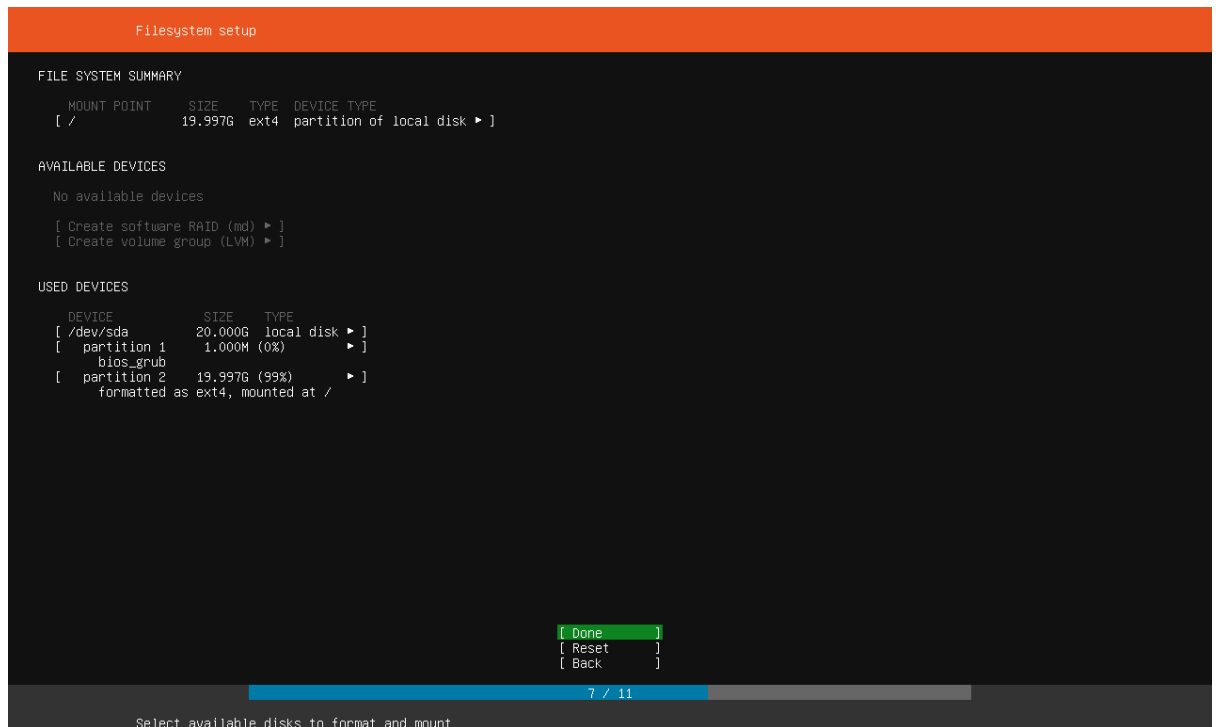
- Gunakan default untuk Mirror Address



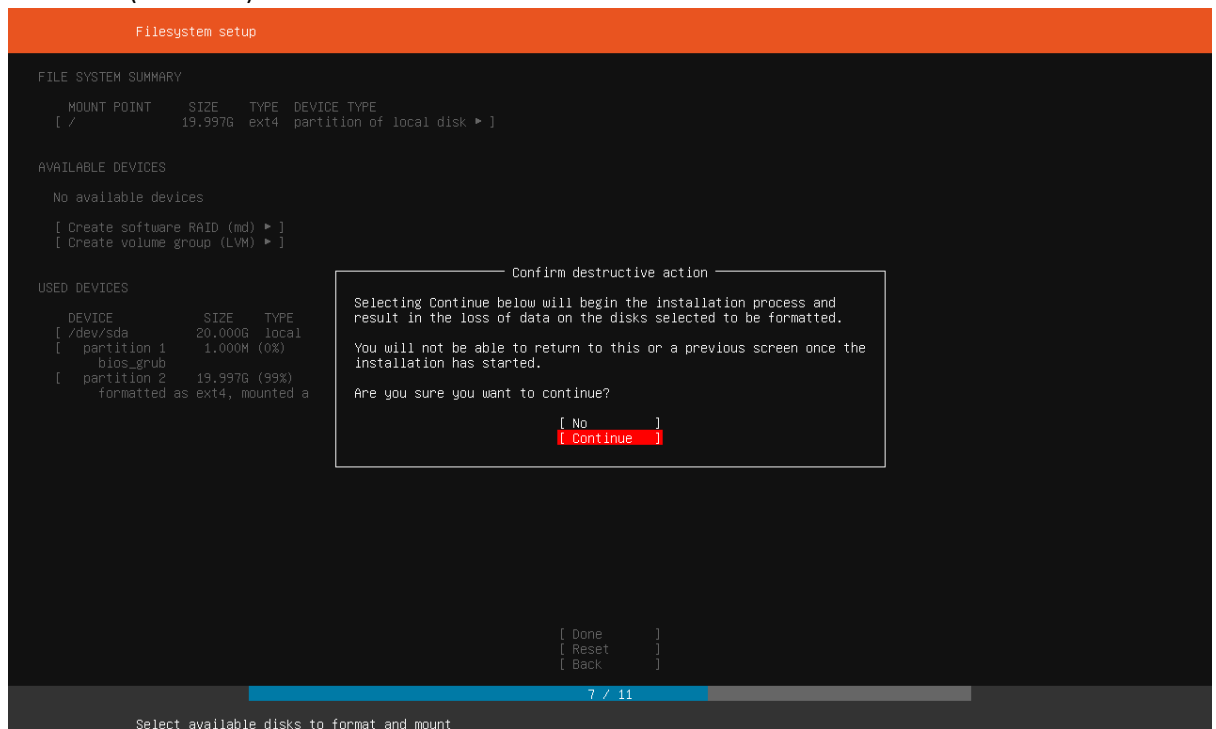
- Pilih /dev/sda 20.000G
- C dalam ubuntu adalah sda



- Lalu muncul informasi system yang akan di instal



- Klik enter (Continue)



- Isi Form sesuai dengan data yang Anda inginkan
- Lalu klik enter (done)

Profile setup

Enter the username and password (or ssh identity) you will use to log in to the system.

Your name:

Your server's name:
The name it uses when it talks to other computers.

Pick a username:

Choose a password:

Confirm your password:

Import SSH identity: [No ▼]
You can import your SSH keys from Github or Launchpad.

Import Username:

[Done]

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Install in progress: installing kernel

- Klik enter (Done) karena tidak membutuhkan aplikasi tambahan

Featured Server Snaps

These are popular snaps in server environments. Select or deselect with SPACE, press ENTER to see more details of the package, publisher and versions available.

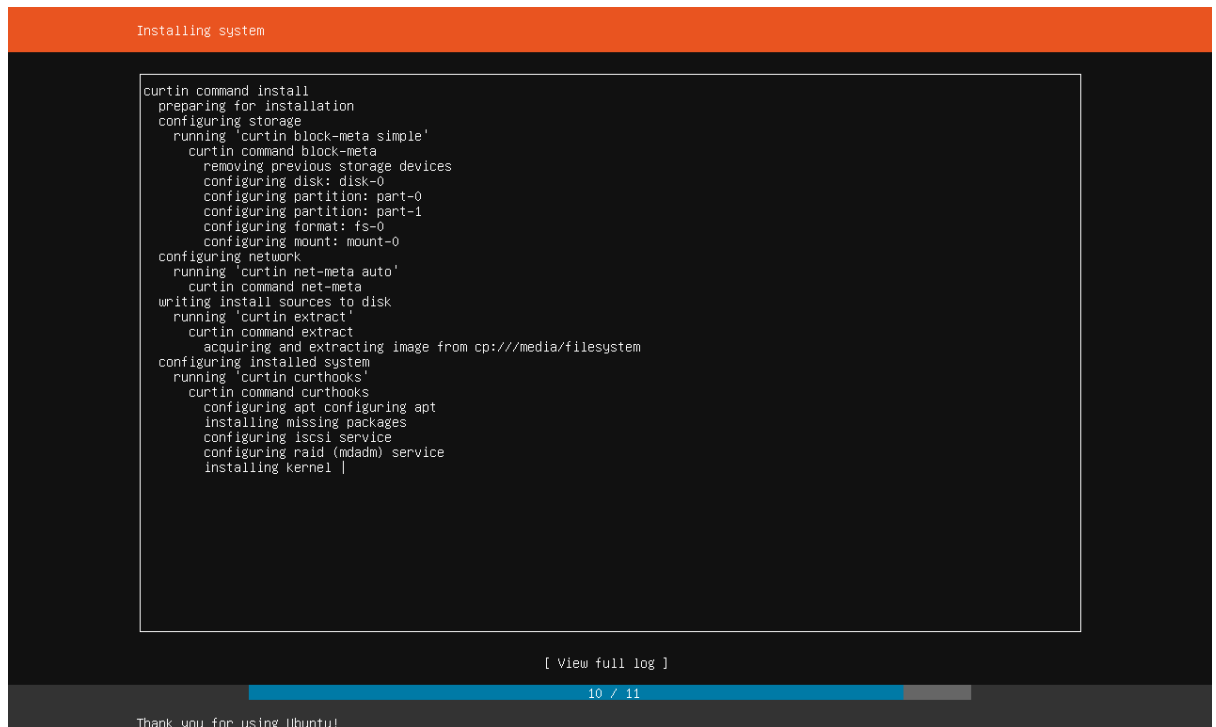
microk8s	canonical	Kubernetes for workstations and appliances
nextcloud	nextcloud	Nextcloud Server - A safe home for all your data
wekan	xet7	Open-Source Kanban
kata-containers	katacontainers	Lightweight virtual machines that seamlessly plug into the containers ecosystem
docker	canonical	Docker container runtime
canonical-l1vepatch	canonical	Canonical Livepatch Client
rocketchat-server	rocketchat	Group chat server for 100s, installed in seconds.
mosquitto	ralight	Eclipse Mosquitto MQTT broker
etcd	canonical	Resilient key-value store by CoreOS
powershell	microsoft-powershell	PowerShell for every system!
stress-ng	cking-kernel-tools	A tool to load, stress test and benchmark a computer system
sabnzbd	safihre	SABnzbd
wormhole	snapcrafters	get things from one computer to another, safely
aws-cli	aws	Universal Command Line Interface for Amazon Web Services
google-cloud-sdk	google-cloud-sdk	Command-line interface for Google Cloud Platform products and services
slcli	softlayer	Python based SoftLayer API Tool.
doctl	digitalocean	DigitalOcean command line tool
conjure-up	canonical	Package runtime for conjure-up spells
minidlna-escoand	escoand	server software with the aim of being fully compliant with DLNA/UPnP clients.
postgresql10	cmd	PostgreSQL is a powerful, open source object-relational database system.
heroku	heroku	CLI client for Heroku
keepalived	keepalived-project	High availability VRRP/BFD and load-balancing for Linux
prometheus	canonical-is-snaps	The Prometheus monitoring system and time series database
juju	canonical	Simple, secure and stable devops. Juju keeps complexity low and productivity high.

[Done]

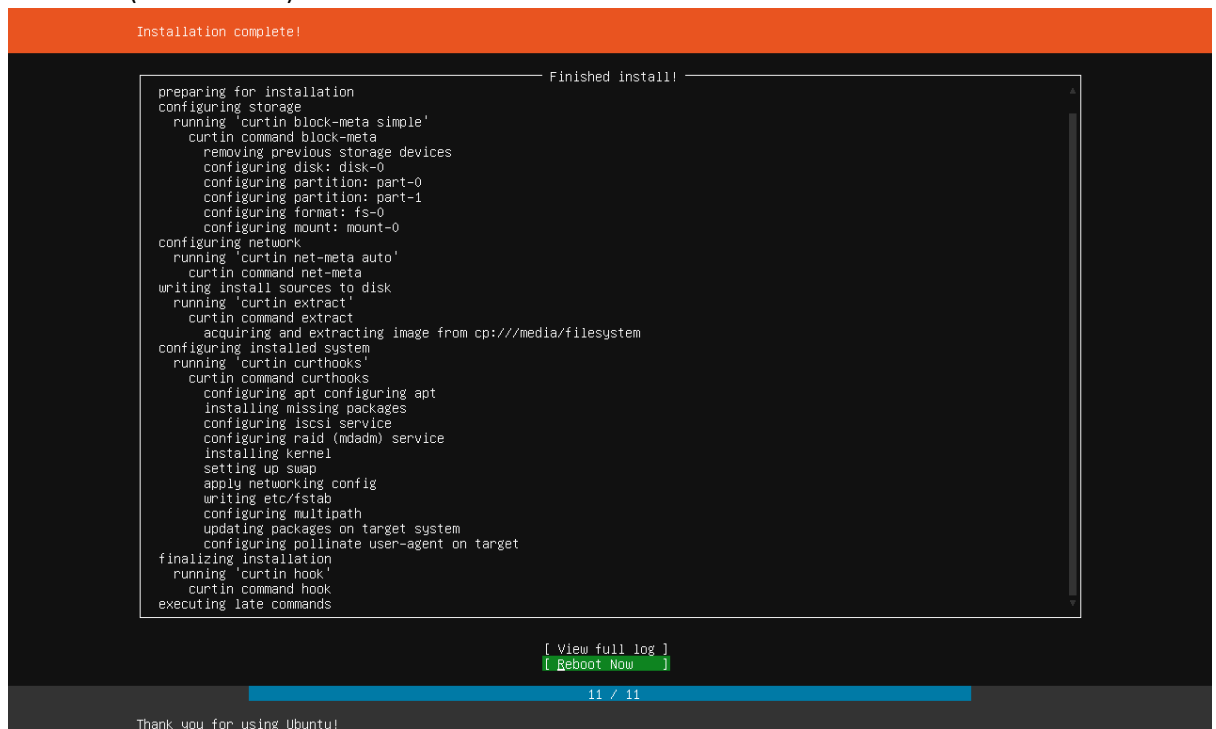
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Install in progress: installing kernel

- Lalu akan berlangsung proses installing



- Klik enter (Reboot Now)



- Jika sudah seperti gambar dibawah artinya sudah selesai


```

galih-server login:          Mounting Mount unit for lxd, revision 9239...
[ OK ] Mounted Mount unit for lxd, revision 9239.
[ OK ] Listening on Socket unix for snap application lxd.daemon.
       Starting Service for snap application lxd.activate...
[ OK ] Started Service for snap application lxd.activate.
[ OK ] Started Wait until snapd is fully seeded.
       Starting Apply the settings specified in cloud-config...
[ 22.542279] cloud-init[1985]: Generating locales (this might take a while)...
[ 23.950682] cloud-init[1985]:   en_US.UTF-8... done
[ 23.951873] cloud-init[1985]: Generation complete.
[ OK ] Started System Logging Service.
[ OK ] Reached target Multi-User System.
[ OK ] Reached target Graphical Interface.
       Starting Update UTMP about System Runlevel Changes...
[ OK ] Started Update UTMP about System Runlevel Changes.
[ 24.166484] cloud-init[1985]: Cloud-init v. 18.4-7-g4652b196-0ubuntu1 running 'modules:config' at Thu, 13 Feb 2020 07:32:48 +0000. Up 22.45 seconds.
[ OK ] Started Apply the settings specified in cloud-config.
       Starting Execute cloud user/final scripts...
ci-info: no authorized ssh keys fingerprints found for user irfandigalih.
<14>Feb 13 07:32:50 ec2:
<14>Feb 13 07:32:50 ec2: #####
<14>Feb 13 07:32:50 ec2: -----BEGIN SSH HOST KEY FINGERPRINTS-----
<14>Feb 13 07:32:50 ec2: 1024 SHA256:Vp8h00a5BgJj0FulLV38VfUEVOEBcPR45k02VncvXk root@galih-server (DSA)
<14>Feb 13 07:32:50 ec2: 256 SHA256:VbtIRirCe5YbJNnQ79p6BU9XsuE63cicM4HuMB+uKI root@galih-server (ECDSA)
<14>Feb 13 07:32:50 ec2: 256 SHA256:Vx3tm59nR1g5Skz040pY+HptE+/dILK246u0vPdP3U root@galih-server (ED25519)
<14>Feb 13 07:32:50 ec2: 2048 SHA256:CB3xgD70VSEzCv0S/Scy0huWj0QLNPF4C1MB0A797urQ root@galih-server (RSA)
<14>Feb 13 07:32:50 ec2: -----END SSH HOST KEY FINGERPRINTS-----
<14>Feb 13 07:32:50 ec2: #####
-----BEGIN SSH HOST KEY KEYS-----
ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAuNTYAAAAIbmlzdhAyNTAABBBN2981dekD2TvkMQ5IEUEMGRHovs809JFIso6IKDF0F9hyf6EK6ancUxAurPhgHh/DD2QIfh8vcsbcrAng13uk=
root@galih-server
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIGDPvt4TknHdGdIH62t16QDcVHA98RRtfeY3U/mm90R root@galih-server
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDPETIrWnCKRhVtBZXTGc9TKxdvB4nZAnPn2Kb0Tlp4BBBSq63Wk7kvhmLeJdnKdgcNlyPG2eQKB5RhafnRKXA6Jbc9W6113bjT6Dd7S4xTfhsYY01dF8+
0ZuMEDHdYMPROSjUHKXbJol18rJapKVgQ/1PTGNIkygJDKwoANUGvCs9/uCQmQJpMECRDn2t2X11K0vrhK83B2ThUWPRJ+AAtdQj9exq9PtKt6N7cCrT+6hIH10+BGay4Mdu+LxvkfGnkfrv60T15N6yqn9PsLJT
M26uz7qhTKJAPWEZ324gASsoduyWvQb6H5u3kg8FrqhSvtmyDX2II2aYw5TX root@galih-server
-----END SSH HOST KEY KEYS-----
[ 24.578231] cloud-init[2085]: Cloud-init v. 18.4-7-g4652b196-0ubuntu1 running 'modules:final' at Thu, 13 Feb 2020 07:32:50 +0000. Up 24.47 seconds.
[ 24.578399] cloud-init[2085]: ci-info: no authorized ssh keys fingerprints found for user irfandigalih.
[ 24.578486] cloud-init[2085]: Cloud-init v. 18.4-7-g4652b196-0ubuntu1 finished at Thu, 13 Feb 2020 07:32:50 +0000. DataSource DataSourceNoCloud [seed=/var/li
b/cloud/seed/nocloud-net] [dsmode=net]. Up 24.57 seconds
[ OK ] Started Execute cloud user/final scripts.
[ OK ] Reached target Cloud-init target.

Ubuntu 18.10 galih-server tty1

galih-server login:

```

- Lalu klik enter dan akan muncul login lalu masukkan username dan password

```

ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAuNTYAAAAIbmlzdhAyNTAABBBN2981dekD2TvkMQ5IEUEMGRHovs809JFIso6IKDF0F9hyf6EK6ancUxAurPhgHh/DD2QIfh8vcsbcrAng13uk=
root@galih-server
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIGDPvt4TknHdGdIH62t16QDcVHA98RRtfeY3U/mm90R root@galih-server
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDPETIrWnCKRhVtBZXTGc9TKxdvB4nZAnPn2Kb0Tlp4BBBSq63Wk7kvhmLeJdnKdgcNlyPG2eQKB5RhafnRKXA6Jbc9W6113bjT6Dd7S4xTfhsYY01dF8+
0ZuMEDHdYMPROSjUHKXbJol18rJapKVgQ/1PTGNIkygJDKwoANUGvCs9/uCQmQJpMECRDn2t2X11K0vrhK83B2ThUWPRJ+AAtdQj9exq9PtKt6N7cCrT+6hIH10+BGay4Mdu+LxvkfGnkfrv60T15N6yqn9PsLJT
M26uz7qhTKJAPWEZ324gASsoduyWvQb6H5u3kg8FrqhSvtmyDX2II2aYw5TX root@galih-server
-----END SSH HOST KEY KEYS-----
[ 24.578231] cloud-init[2085]: Cloud-init v. 18.4-7-g4652b196-0ubuntu1 running 'modules:final' at Thu, 13 Feb 2020 07:32:50 +0000. Up 24.47 seconds.
[ 24.578399] cloud-init[2085]: ci-info: no authorized ssh keys fingerprints found for user irfandigalih.
[ 24.578486] cloud-init[2085]: Cloud-init v. 18.4-7-g4652b196-0ubuntu1 finished at Thu, 13 Feb 2020 07:32:50 +0000. DataSource DataSourceNoCloud [seed=/var/li
b/cloud/seed/nocloud-net] [dsmode=net]. Up 24.57 seconds
[ OK ] Started Execute cloud user/final scripts.
[ OK ] Reached target Cloud-init target.

Ubuntu 18.10 galih-server tty1

galih-server login: irfandigalih
Password:
Welcome to Ubuntu 18.10 (GNU/Linux 4.18.0-25-generic x86_64)

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

System information as of Thu Feb 13 07:36:11 UTC 2020

System load:  0.25          Processes:      195
Usage of /:   20.6% of 19.56GB  Users logged in:  0
Memory usage: 24%           IP address for ens33: 192.168.116.129
Swap usage:   0%

183 packages can be updated.
106 updates are security updates.

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.

irfandigalih@galih-server:~$

```

- Untuk berpindah ke aku administrator (root) menggunakan perintah **sudo su** masukkan password dan klik enter

```

irfandigalih@galih-server:~$ sudo su
[sudo] password for irfandigalih:
root@galih-server:/home/irfandigalih#

```

Untuk keluar gunakan perintah **exit**

Mengubah MOTD

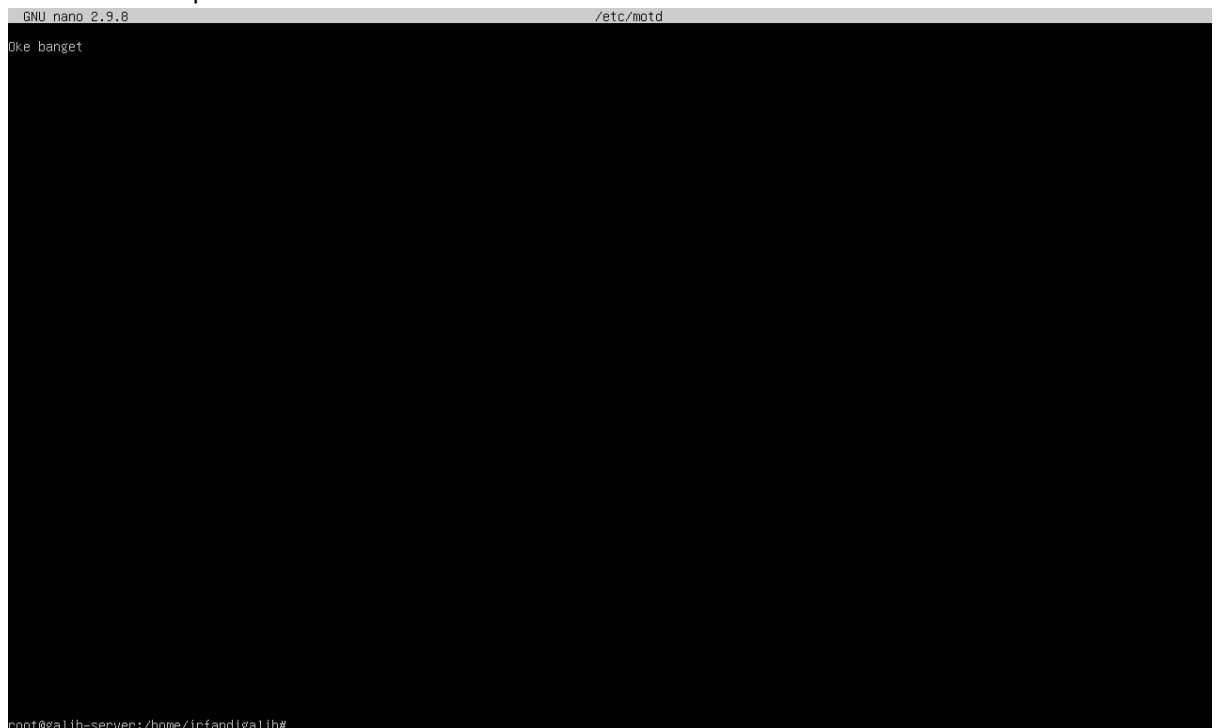
- untuk mengubah MOTD Harus menjadi administrator (root) **nano /etc/motd**
- Lalu akan muncul seperti gambar dibawah



```
GNU nano 2.9.8 /etc/motd

[ New File ]
G Get Help      O Write Out    W Where Is    X Cut Text    J Justify     C Cur Pos    M-U Undo      M-P Mark Text  M-J To Bracket M-_ Previous
X Exit          R Read File   R Replace    U Uncut Text  T To Spell   G Go To Line M-E Redo      M-C Copy Text M-W WhereIs Next M-+ Next
```

- Untuk menyimpan pesan di notepad CTRL + O lalu enter
- CTRL + X untuk perintah exit



```
GNU nano 2.9.8 /etc/motd
Oke banget

root@galih-server: /home/irfandigalih#
```

- Lalu coba exit (2 kali perintah exit) lalu login kembali lalu pesan yang disimpan akan muncul pada tampilan seperti dibawah

```

Ubuntu 18.10 galih-server tty1
galih-server login: irfandigalih
Password:
Last login: Thu Feb 13 07:36:11 UTC 2020 on tty1
Welcome to Ubuntu 18.10 (GNU/Linux 4.18.0-25-generic x86_64)

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

System information as of Thu Feb 13 07:47:06 UTC 2020

System load:  0.1               Processes:    160
Usage of /:   20.6% of 19.56GB   Users logged in:  0
Memory usage: 24%              IP address for ens33: 192.168.116.129
Swap usage:   0%

183 packages can be updated.
106 updates are security updates.

Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Oke banget
irfandigalih@galih-server:~$

```

MENGGUNAKAN REMOTE TERMINAL : PUTTY

- Pertama-tama cari tahu IP yang dimiliki oleh VM saat ini
- Pada tampilan MOTD terdapat informasi IP aktif (192.168.116.129)
- Atau pakai perintah ifconfig



```

Password:
Last login: Thu Feb 13 07:36:11 UTC 2020 on tty1
Welcome to Ubuntu 18.10 (GNU/Linux 4.18.0-25-generic x86_64)

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

System information as of Thu Feb 13 07:47:06 UTC 2020

System load:  0.1               Processes:    160
Usage of /:   20.6% of 19.56GB   Users logged in:  0
Memory usage: 24%              IP address for ens33: 192.168.116.129
Swap usage:   0%

183 packages can be updated.
106 updates are security updates.

Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

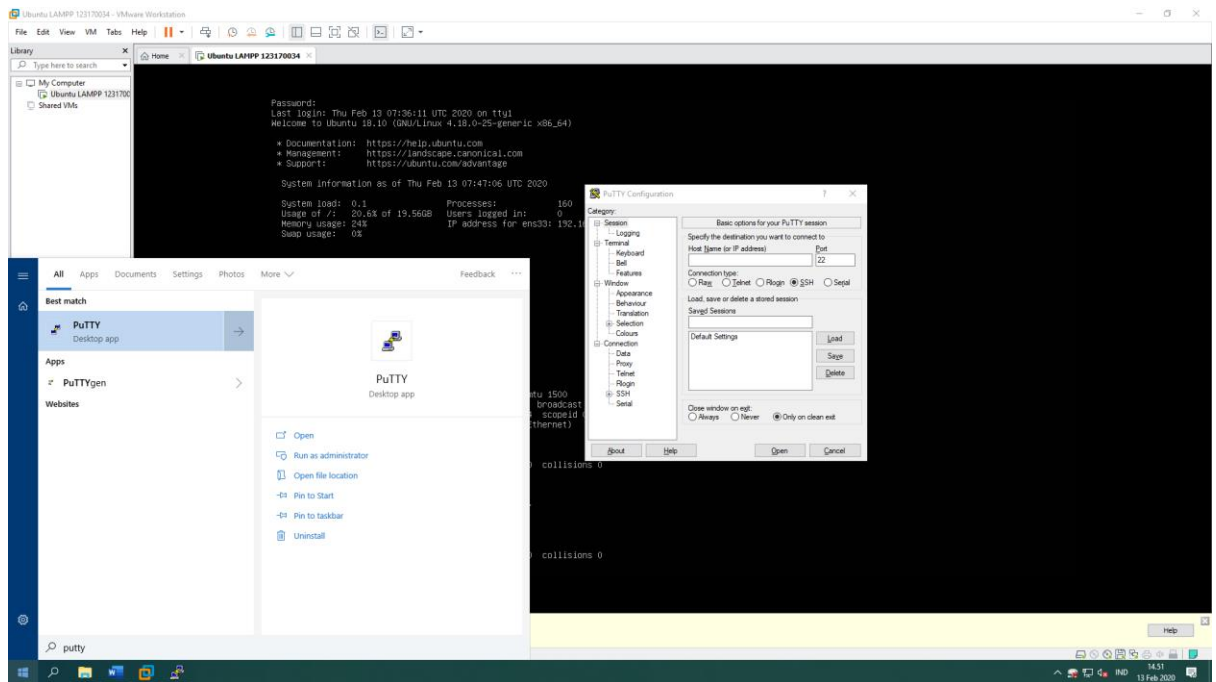
Oke banget
irfandigalih@galih-server:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.116.129 netmask 255.255.255.0 broadcast 192.168.116.255
    inet6 fe80::20c:29ff:fe3a:25f1 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:3a:25:f1 txqueuelen 1000 (Ethernet)
    RX packets 239  bytes 69506 (69.5 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 174  bytes 22655 (22.6 KB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 210  bytes 16628 (16.6 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 210  bytes 16628 (16.6 KB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

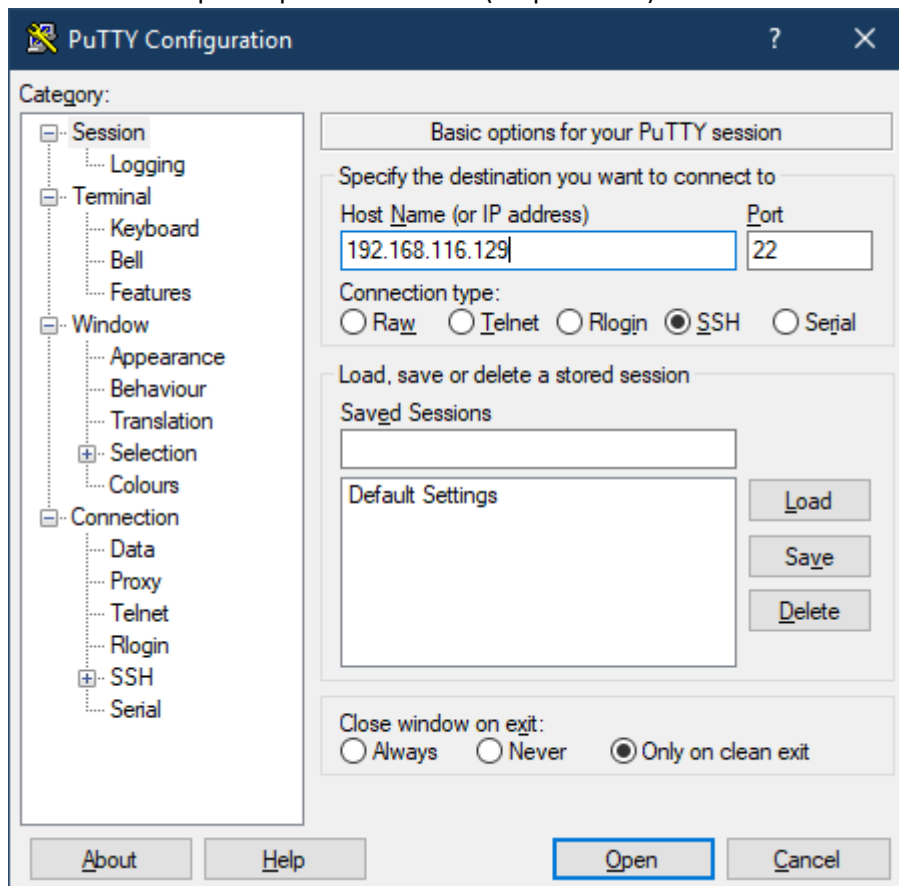
irfandigalih@galih-server:~$

```

- Lalu buka aplikasi PUTTY



- Lalu masukkan ip aktif pada Host Name (or Ip address)



- Lalu klik open
- Dan login menggunakan password dan username tadi

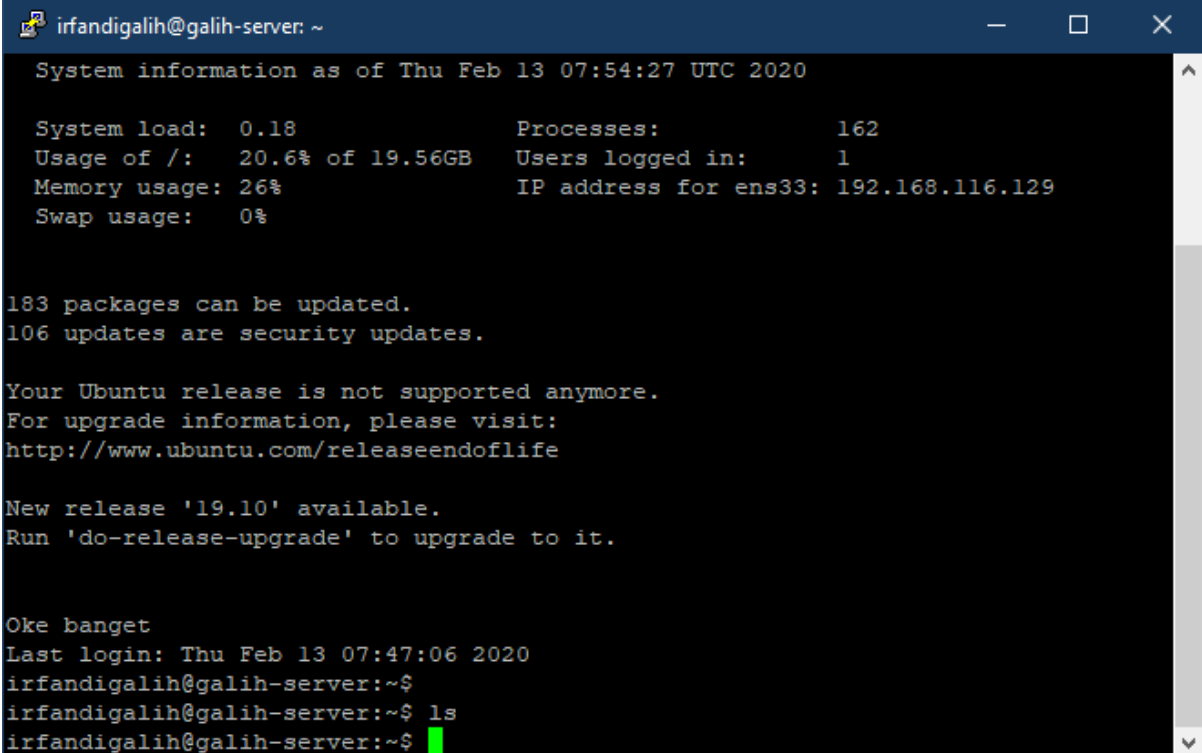
```
irfandigalih@galih-server: ~  
login as: irfandigalih  
irfandigalih@192.168.116.129's password:  
Welcome to Ubuntu 18.10 (GNU/Linux 4.18.0-25-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
System information as of Thu Feb 13 07:54:27 UTC 2020  
  
System load:  0.18               Processes:            162  
Usage of /:   20.6% of 19.56GB   Users logged in:     1  
Memory usage: 26%               IP address for ens33: 192.168.116.129  
Swap usage:   0%  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.
```

Perintah Di Linux

- Sudo
- Sudo su
- Cd
- Mkdir
- Ls
- Cp (copy)
- Mv
- Rm
- Nano
- Apt
- Cat (Text Editor)
- Chown (change owner – ganti kepemilikan)
- Chmod

EVALUASI

1. irfandigalih@galih-server:~\$ ls



```
irfandigalih@galih-server: ~
System information as of Thu Feb 13 07:54:27 UTC 2020

System load:  0.18           Processes:           162
Usage of /:   20.6% of 19.56GB Users logged in:      1
Memory usage: 26%           IP address for ens33: 192.168.116.129
Swap usage:   0%

183 packages can be updated.
106 updates are security updates.

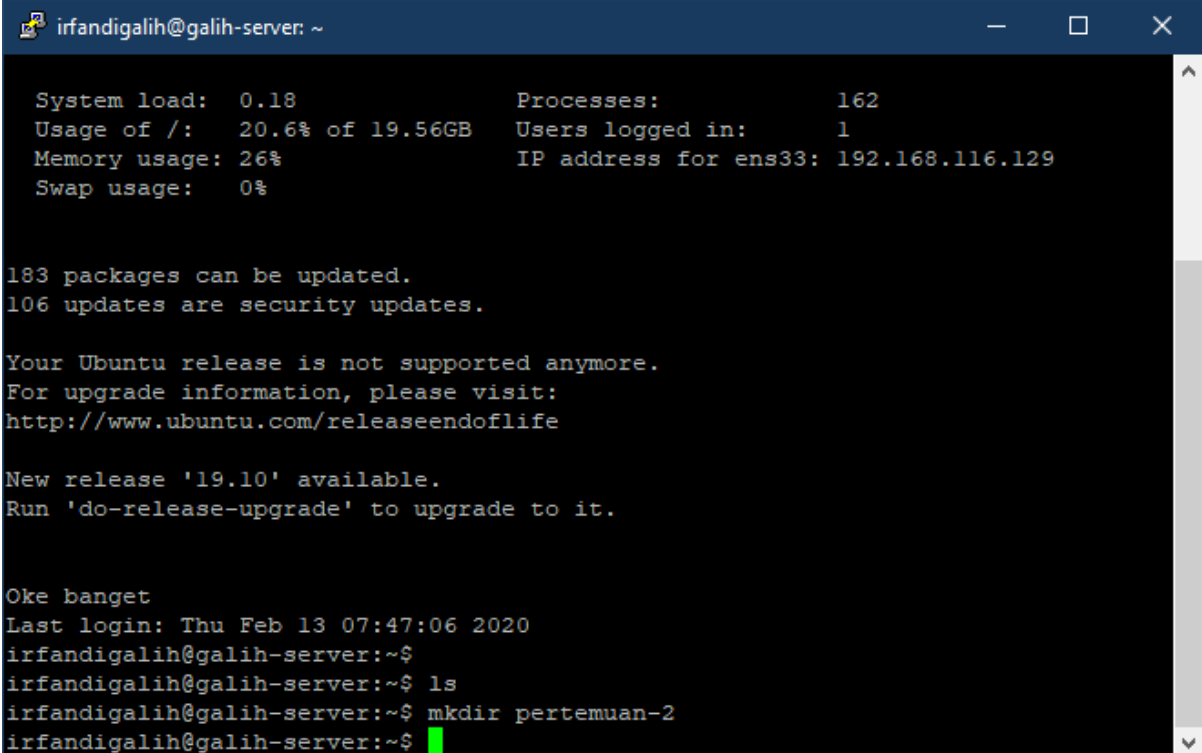
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Oke banget
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$
```

tidak menampilkan output karena belum ada directory yang dibaca/ di list

2. irfandigalih@galih-server:~\$ mkdir pertemuan-2



```
irfandigalih@galih-server: ~
System load:  0.18           Processes:           162
Usage of /:   20.6% of 19.56GB Users logged in:      1
Memory usage: 26%           IP address for ens33: 192.168.116.129
Swap usage:   0%

183 packages can be updated.
106 updates are security updates.

Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Oke banget
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$
```

Tidak menampilkan output karena mkdir membuat directory pertemuan sebanyak 2

3. irfandigalih@galih-server:~\$ ls -l

```
irfandigalih@galih-server: ~  
Memory usage: 26%          IP address for ens33: 192.168.116.129  
Swap usage: 0%  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Oke banget  
Last login: Thu Feb 13 07:47:06 2020  
irfandigalih@galih-server:~$  
irfandigalih@galih-server:~$ ls  
irfandigalih@galih-server:~$ mkdir pertemuan-2  
irfandigalih@galih-server:~$ ls -l  
total 4  
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2  
irfandigalih@galih-server:~$
```

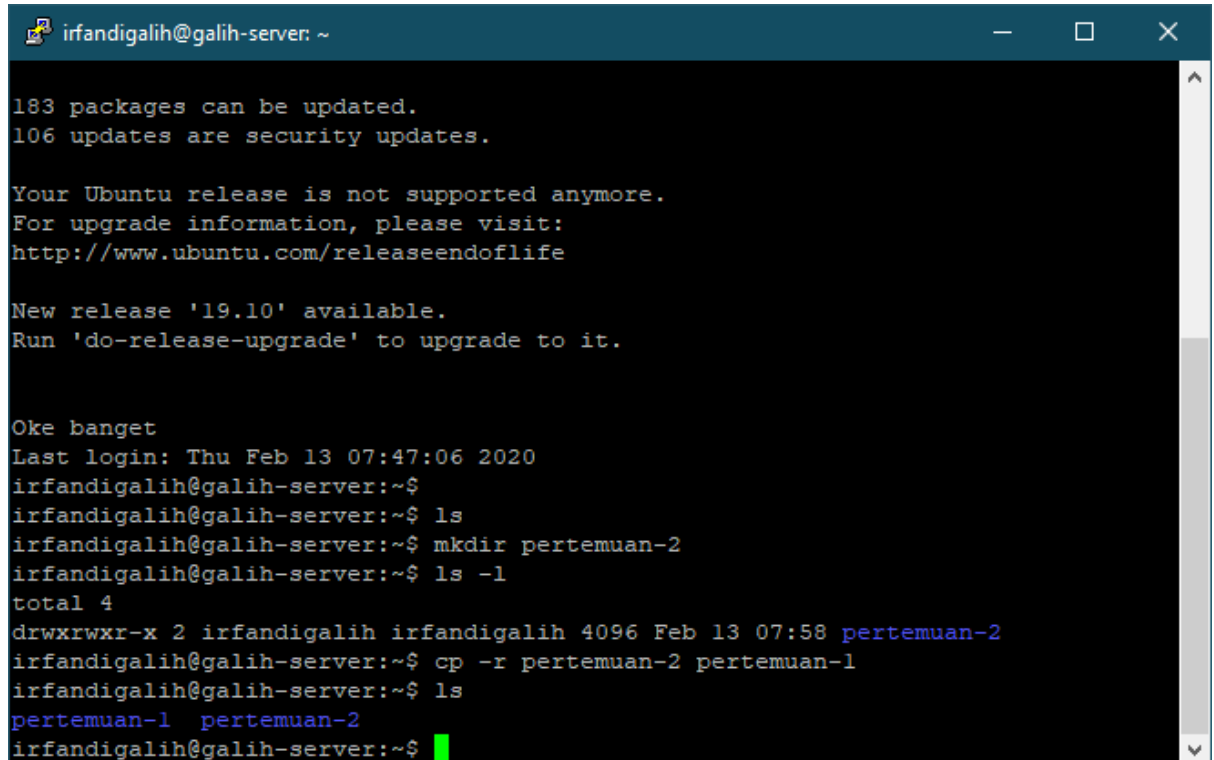
Menampilkan total 4 karena di dalam directory pertemuan -1 terdapat 4 file directory

4. irfandigalih@galih-server:~\$ cp -r pertemuan-2 pertemuan -1

```
irfandigalih@galih-server: ~  
Swap usage: 0%  
  
183 packages can be updated.  
106 updates are security updates.  
  
Your Ubuntu release is not supported anymore.  
For upgrade information, please visit:  
http://www.ubuntu.com/releaseendoflife  
  
New release '19.10' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Oke banget  
Last login: Thu Feb 13 07:47:06 2020  
irfandigalih@galih-server:~$  
irfandigalih@galih-server:~$ ls  
irfandigalih@galih-server:~$ mkdir pertemuan-2  
irfandigalih@galih-server:~$ ls -l  
total 4  
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2  
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1  
irfandigalih@galih-server:~$
```

Meng copy directory pertemuan-2 menjadi folder dengan nama pertemuan-1

5. irfandigalih@galih-server:~\$ ls



```
irfandigalih@galih-server: ~
183 packages can be updated.
106 updates are security updates.

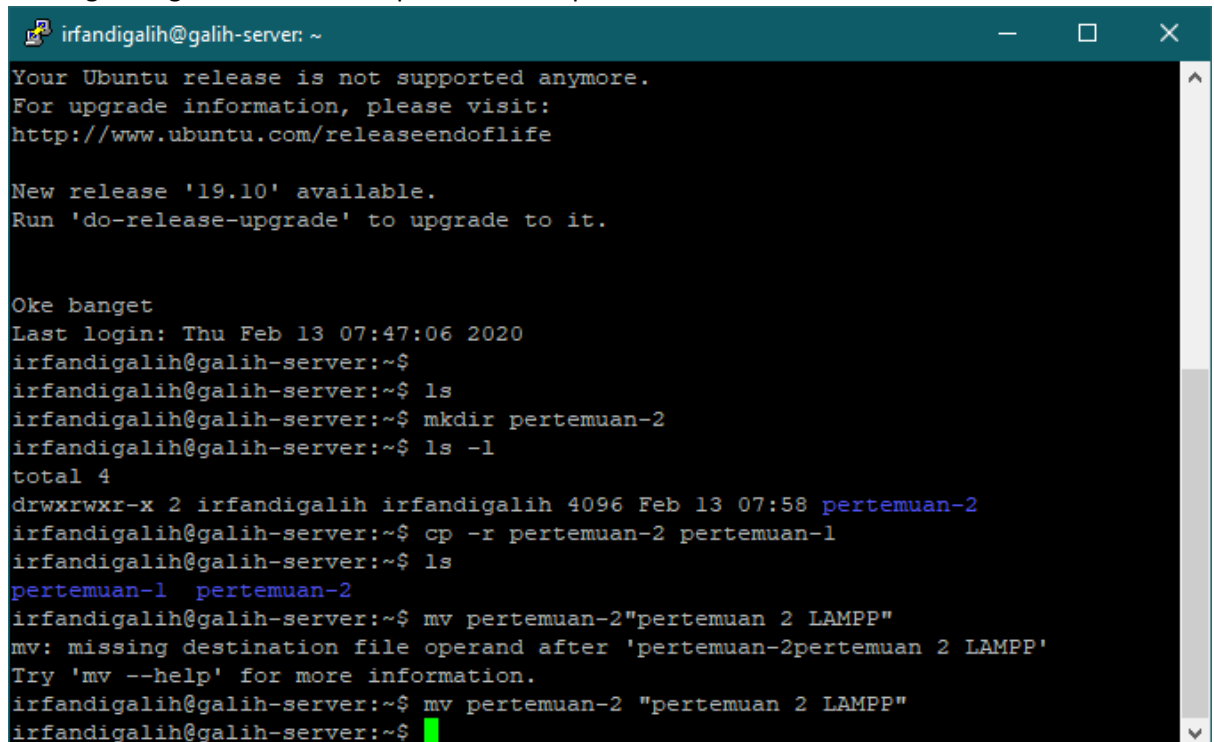
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Oke banget
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$ ls -l
total 4
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1
irfandigalih@galih-server:~$ ls
pertemuan-1  pertemuan-2
irfandigalih@galih-server:~$
```

Me list file yang sedang di copy

6. irfandigalih@galih-server:~\$ mv pertemuan-2 "pertemuan 2 LAMPP"



```
irfandigalih@galih-server: ~
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Oke banget
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$ ls -l
total 4
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1
irfandigalih@galih-server:~$ ls
pertemuan-1  pertemuan-2
irfandigalih@galih-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
mv: missing destination file operand after 'pertemuan-2pertemuan 2 LAMPP'
Try 'mv --help' for more information.
irfandigalih@galih-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
irfandigalih@galih-server:~$
```

Memindahkan move pertemuan-2 ke (rename) " pertemuan 2 LAMPP"

7. irfandigalih@galih-server:~\$ ls


```
irfandigalih@galih-server: ~
http://www.ubuntu.com/releaseendoflife

New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Oke banget
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$ ls -l
total 4
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1
irfandigalih@galih-server:~$ ls
pertemuan-1  pertemuan-2
irfandigalih@galih-server:~$ mv pertemuan-2"pertemuan 2 LAMPP"
mv: missing destination file operand after 'pertemuan-2pertemuan 2 LAMPP'
Try 'mv --help' for more information.
irfandigalih@galih-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
irfandigalih@galih-server:~$ ls
pertemuan-1  'pertemuan 2 LAMPP'
irfandigalih@galih-server:~$
```

Meng list directory yang ada yaitu pertemuan-1 dan pertemuan 2 LAMPP

8. irfandigalih@galih-server:~\$ cd "pertemuan 2 (tab lalu enter)

```
irfandigalih@galih-server: ~/pertemuan 2 LAMPP
Run 'do-release-upgrade' to upgrade to it.

Oke banget
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$ ls -l
total 4
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1
irfandigalih@galih-server:~$ ls
pertemuan-1  pertemuan-2
irfandigalih@galih-server:~$ mv pertemuan-2"pertemuan 2 LAMPP"
mv: missing destination file operand after 'pertemuan-2pertemuan 2 LAMPP'
Try 'mv --help' for more information.
irfandigalih@galih-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
irfandigalih@galih-server:~$ ls
pertemuan-1  'pertemuan 2 LAMPP'
irfandigalih@galih-server:~$ cd "pertemuan
pertemuan-1/      pertemuan 2 LAMPP/
irfandigalih@galih-server:~$ cd "pertemuan 2 LAMPP"/
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
```

Mengganti directory menjadi pertemuan 2 LAMPP

9. irfandigalih@galih-server:~/pertemuan 2 LAMPP \$ nano biodata.txt
membuat file biodata.txt
10. ls -l

```
irfandigalih@galih-server: ~/pertemuan 2 LAMPP
Last login: Thu Feb 13 07:47:06 2020
irfandigalih@galih-server:~$
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$ ls -l
total 4
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1
irfandigalih@galih-server:~$ ls
pertemuan-1  pertemuan-2
irfandigalih@galih-server:~$ mv pertemuan-2"pertemuan 2 LAMPP"
mv: missing destination file operand after 'pertemuan-2pertemuan 2 LAMPP'
Try 'mv --help' for more information.
irfandigalih@galih-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
irfandigalih@galih-server:~$ ls
pertemuan-1  'pertemuan 2 LAMPP'
irfandigalih@galih-server:~$ cd "pertemuan
pertemuan-1/      pertemuan 2 LAMPP/
irfandigalih@galih-server:~$ cd "pertemuan 2 LAMPP"/
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ nano biodata.txt
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ ls -l
biodata.txt
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
```

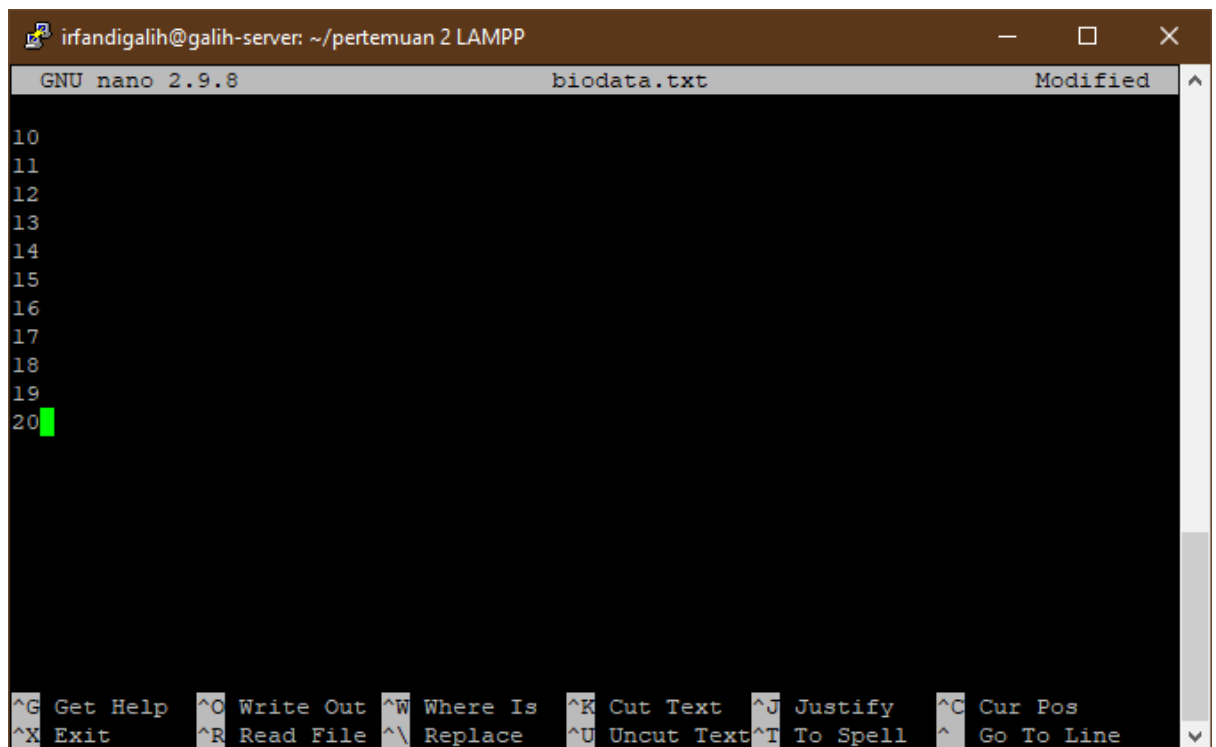
meng list data yang ada di directory yaitu biodata.txt

11. cat biodata.txt

```
irfandigalih@galih-server: ~/pertemuan 2 LAMPP
irfandigalih@galih-server:~$ ls
irfandigalih@galih-server:~$ mkdir pertemuan-2
irfandigalih@galih-server:~$ ls -l
total 4
drwxrwxr-x 2 irfandigalih irfandigalih 4096 Feb 13 07:58 pertemuan-2
irfandigalih@galih-server:~$ cp -r pertemuan-2 pertemuan-1
irfandigalih@galih-server:~$ ls
pertemuan-1  pertemuan-2
irfandigalih@galih-server:~$ mv pertemuan-2"pertemuan 2 LAMPP"
mv: missing destination file operand after 'pertemuan-2pertemuan 2 LAMPP'
Try 'mv --help' for more information.
irfandigalih@galih-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
irfandigalih@galih-server:~$ ls
pertemuan-1  'pertemuan 2 LAMPP'
irfandigalih@galih-server:~$ cd "pertemuan
pertemuan-1/      pertemuan 2 LAMPP/
irfandigalih@galih-server:~$ cd "pertemuan 2 LAMPP"/
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ nano biodata.txt
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ ls -l
biodata.txt
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170034
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
```

Membaca file biodata.txt

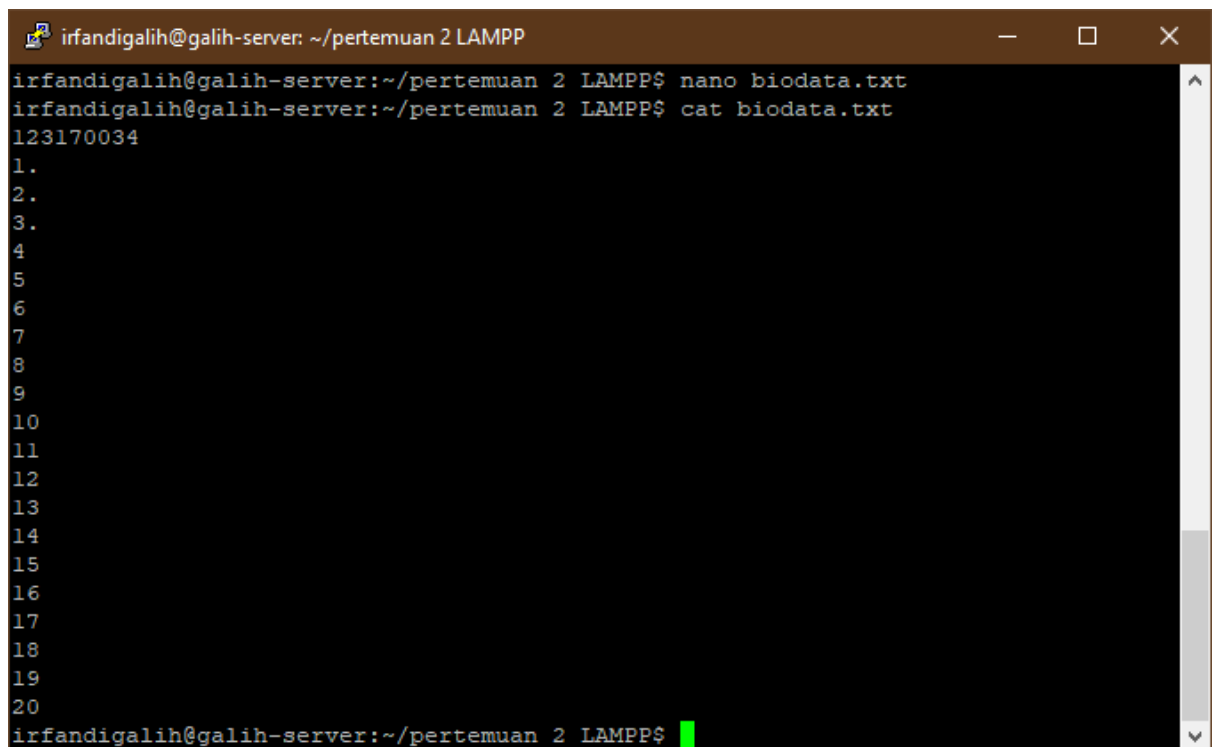
12. nano biodata.txt



```
irfandigalih@galih-server: ~/pertemuan 2 LAMPP
GNU nano 2.9.8 biodata.txt Modified
10
11
12
13
14
15
16
17
18
19
20
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line
```

Edit file biodata.txt

13. cat biodata.txt



```
irfandigalih@galih-server: ~/pertemuan 2 LAMPP
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ nano biodata.txt
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170034
1.
2.
3.
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
```

Membaca file biodata.txt

14. tail biodata.txt

```
irfandigalih@galih-server: ~/pertemuan 2 LAMPP
9
10
11
12
13
14
15
16
17
18
19
20
irfandigalih@galih-server:~/pertemuan 2 LAMPP$ tail biodata.txt
11
12
13
14
15
16
17
18
19
20
irfandigalih@galih-server:~/pertemuan 2 LAMPP$
```

Membaca file biodata.txt tapi bagian akhir (tail)