

## Praktikum Cloud Computing Pertemuan 2

Taufiqul Aptiyan Bagaskara / 123170066

Materi : Pengenalan VMware Workstation dan Linux OS

-Pengenalan aplikasi VMware

Layer => virtual os, aplikasi vmware, os pada komputer, hardware => menjadi keterikatan / virtualisasi

Vmware => digunakan untuk virtualisasi sistem operasi

Swapping => digunakan jika komputer tidak memiliki RAM yang cukup untuk menjalankan VM

Edit->preference->memory->swap

-Memperbaiki konflik port pada xampp

Edit->preference->Shared VMs->disable sharing

-Instalasi OS

Kebutuhan = Linux OS (file ISO)

Proses instalasi OS

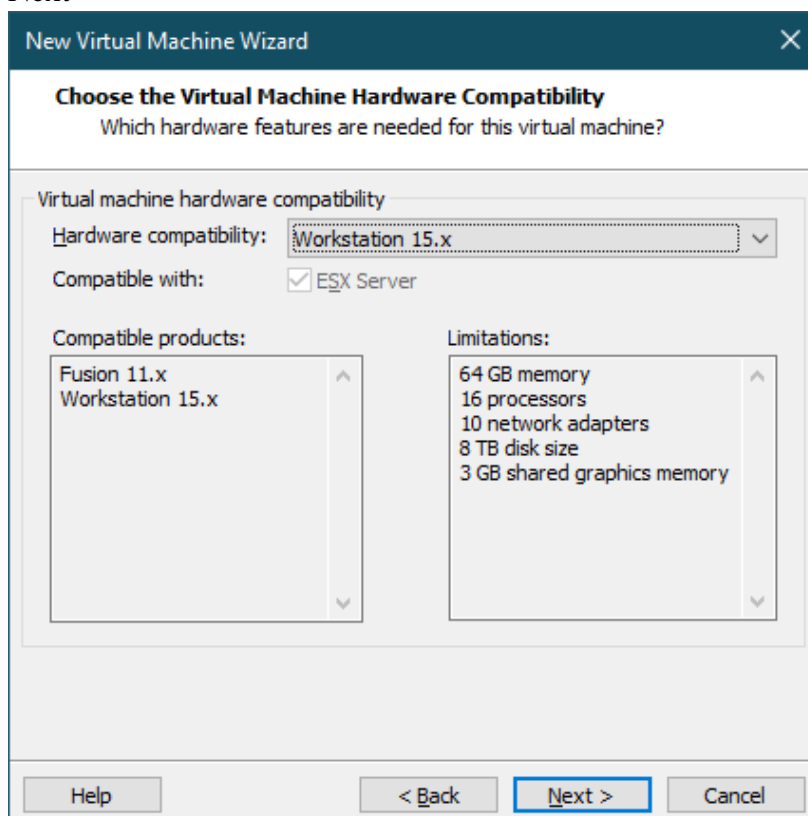
1. Klik Create new a virtual machine



2. Pilih opsi custom (advance)



3. Pilih hardware compability sesuai dengan OS yang sudah terinstal dikomputer,lalu Next



4. Pilih installer disc image file dan pilih browse ke file ISO yang akan diinstal

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Guest Operating System Installation' step. The window title is 'New Virtual Machine Wizard'. Below the title bar, there's a section titled 'Guest Operating System Installation' with a subtitle: 'A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?'. The main area is titled 'Install from:' and contains three radio button options. The first option is 'Installer disc:', with a dropdown menu showing 'DVD RW Drive (E:)'. The second option is 'Installer disc image file (iso):', which is selected. It has a dropdown menu showing 'C:\ISO Library\ubuntu-18.10-live-server-amd64.iso' and a 'Browse...' button. Below this, there's a message: 'Ubuntu 64-bit Server 18.10 detected. This operating system will use Easy Install. (What's this?)'. The third option is 'I will install the operating system later.', with a subtitle: 'The virtual machine will be created with a blank hard disk.' At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

5. Isi Personalize Linux lalu next

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Easy Install Information' step. The window title is 'New Virtual Machine Wizard'. Below the title bar, there's a section titled 'Easy Install Information' with a subtitle: 'This is used to install Ubuntu 64-bit.' The main area is titled 'Personalize Linux' and contains four text input fields. The first field is 'Full name:' with the value 'Taufiqul Aptiyan'. The second field is 'User name:' with the value 'taufiqulaptiyan'. The third field is 'Password:' with a masked value '.....'. The fourth field is 'Confirm:' with a masked value '.....'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

6. Isi sesuai dengan kebutuhan dan simpan, lalu next

The screenshot shows the 'New Virtual Machine Wizard' dialog box with the title 'New Virtual Machine Wizard'. The main heading is 'Name the Virtual Machine' with the subtitle 'What name would you like to use for this virtual machine?'. There are two input fields: 'Virtual machine name:' containing 'Ubuntu LAMPP 123170066' and 'Location:' containing 'D:\VM-123170066\Ubuntu LAMPP'. A 'Browse...' button is next to the location field. Below the fields is the text 'The default location can be changed at Edit > Preferences.' At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

7. Pilih jumlah prosesor dan core sesuai dengan kebutuhan, lalu next

The screenshot shows the 'New Virtual Machine Wizard' dialog box with the title 'New Virtual Machine Wizard'. The main heading is 'Processor Configuration' with the subtitle 'Specify the number of processors for this virtual machine.' Under the 'Processors' section, there are two dropdown menus: 'Number of processors:' set to '2' and 'Number of cores per processor:' set to '1'. Below these is the text 'Total processor cores: 2'. At the bottom are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

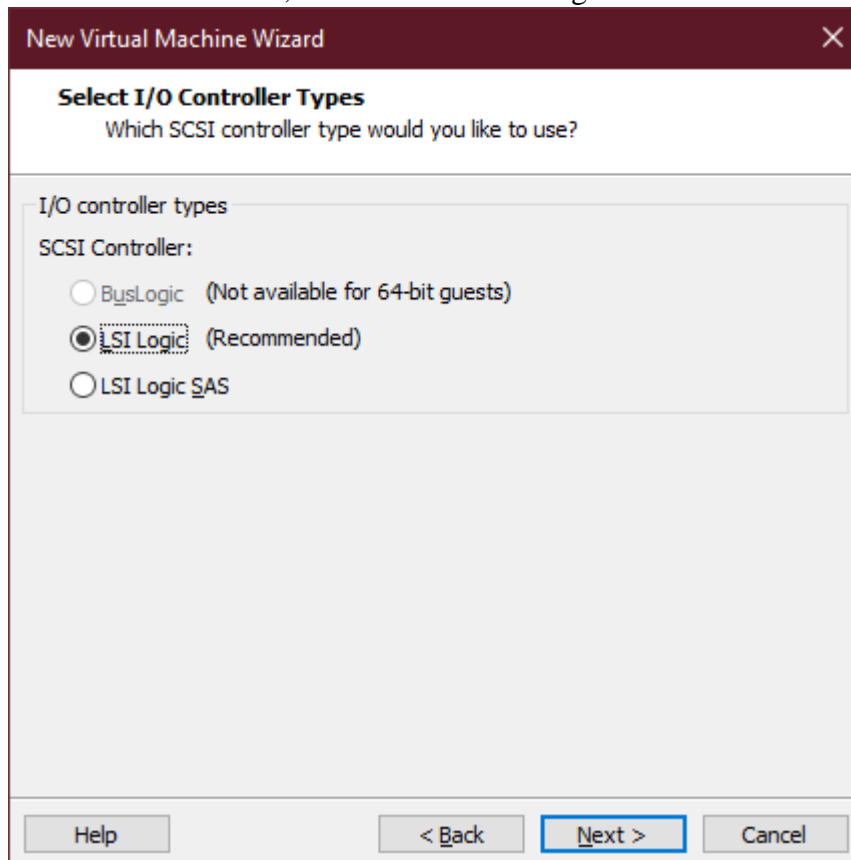
8. Pilih ukuran memory / RAM untuk vm sesuai kebutuhan,lalu next

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Memory for the Virtual Machine' step. The title bar reads 'New Virtual Machine Wizard'. The main heading is 'Memory for the Virtual Machine' with the subtitle 'How much memory would you like to use for this virtual machine?'. Below this, a text box states: 'Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.' On the left, a vertical slider lists memory options from 4 MB to 64 GB. A blue arrow points to the 1 GB mark. To the right of the slider, the text 'Memory for this virtual machine:' is followed by a text box containing '1024' and a unit dropdown set to 'MB'. Further right, three memory recommendations are listed: 'Maximum recommended memory: 2 GB' (blue square), 'Recommended memory: 2 GB' (green square), and 'Guest OS recommended minimum: 1 GB' (yellow square). At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

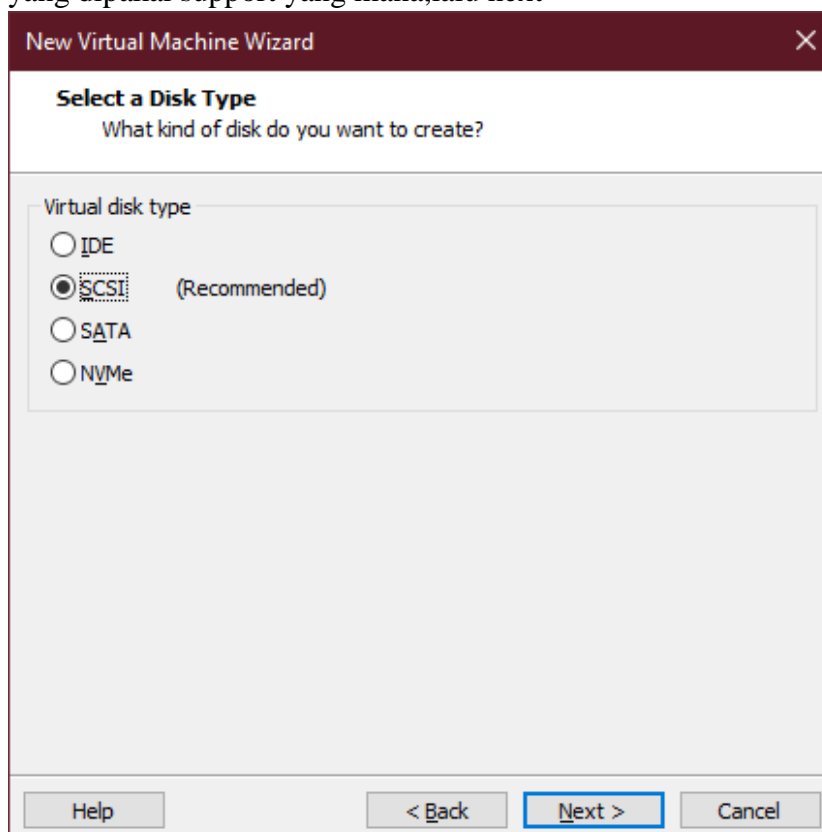
9. Pilih network connection sesuai kebutuhan,klik next

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Network Type' step. The title bar reads 'New Virtual Machine Wizard'. The main heading is 'Network Type' with the subtitle 'What type of network do you want to add?'. Below this, a section titled 'Network connection' contains four radio button options. The first option is 'Use bridged networking' with the description 'Give the guest operating system direct access to an external Ethernet network. The guest must have its own IP address on the external network.' The second option, 'Use network address translation (NAT)', is selected with a blue dot and has a dotted border around its text; its description is 'Give the guest operating system access to the host computer's dial-up or external Ethernet network connection using the host's IP address.' The third option is 'Use host-only networking' with the description 'Connect the guest operating system to a private virtual network on the host computer.' The fourth option is 'Do not use a network connection'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

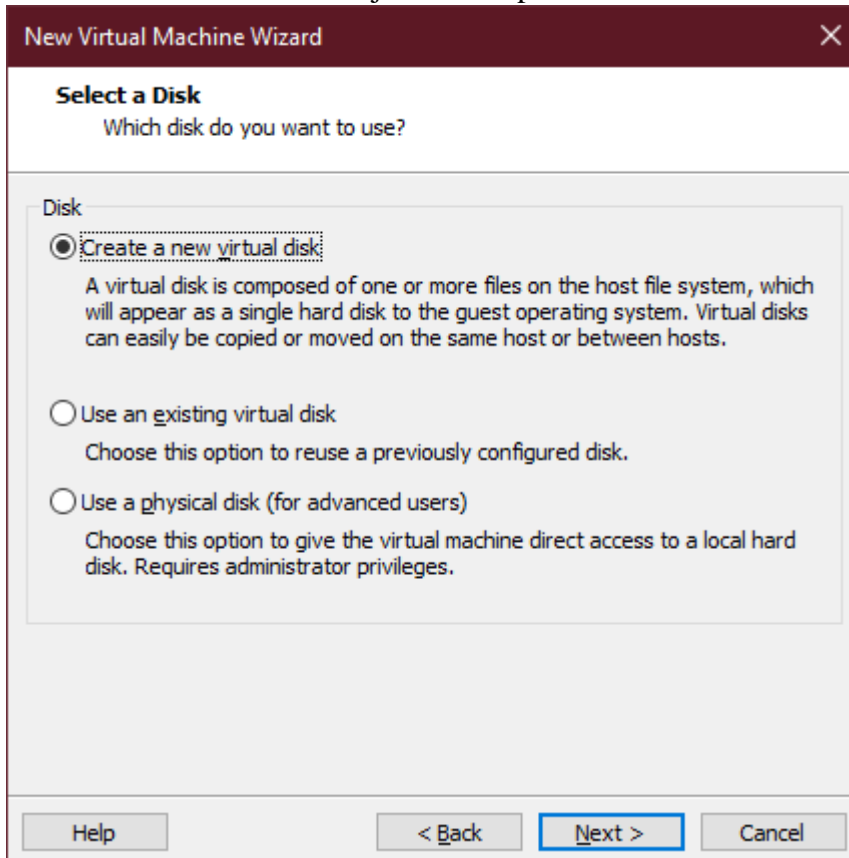
10. Pilih SCSI Controller, rekomendasi : LSI Logic



11. Pilih SCSI untuk rekomendasi, namun bisa memilih yang lain tergantung komputer yang dipakai support yang mana, lalu next



12. Pilih create new virtual disk jika belum pernah install vm



The screenshot shows the 'New Virtual Machine Wizard' window with the title bar 'New Virtual Machine Wizard' and a close button. The main heading is 'Select a Disk' with the subtitle 'Which disk do you want to use?'. Under the 'Disk' section, there are three radio button options: 'Create a new virtual disk' (selected), 'Use an existing virtual disk', and 'Use a physical disk (for advanced users)'. Each option has a descriptive paragraph below it. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

**New Virtual Machine Wizard**

**Select a Disk**  
Which disk do you want to use?

**Disk**

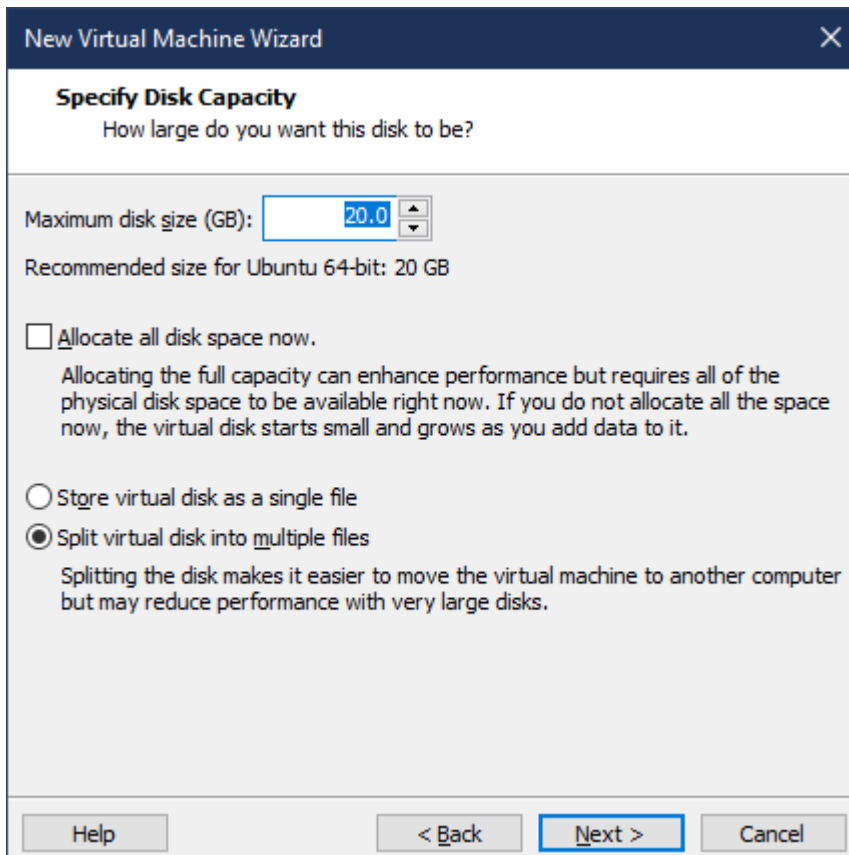
☒ **Create a new virtual disk**  
A virtual disk is composed of one or more files on the host file system, which will appear as a single hard disk to the guest operating system. Virtual disks can easily be copied or moved on the same host or between hosts.

☐ **Use an existing virtual disk**  
Choose this option to reuse a previously configured disk.

☐ **Use a physical disk (for advanced users)**  
Choose this option to give the virtual machine direct access to a local hard disk. Requires administrator privileges.

**Help** **< Back** **Next >** **Cancel**

13. Pilih maksimum disk untuk vm



The screenshot shows the 'New Virtual Machine Wizard' window with the title bar 'New Virtual Machine Wizard' and a close button. The main heading is 'Specify Disk Capacity' with the subtitle 'How large do you want this disk to be?'. It features a text input field for 'Maximum disk size (GB)' with the value '20.0' and a spinner control. Below this is the text 'Recommended size for Ubuntu 64-bit: 20 GB'. There are three radio button options: 'Allocate all disk space now.', 'Store virtual disk as a single file', and 'Split virtual disk into multiple files' (selected). Each option has a descriptive paragraph below it. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

**New Virtual Machine Wizard**

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

Maximum disk size (GB):

Recommended size for Ubuntu 64-bit: 20 GB

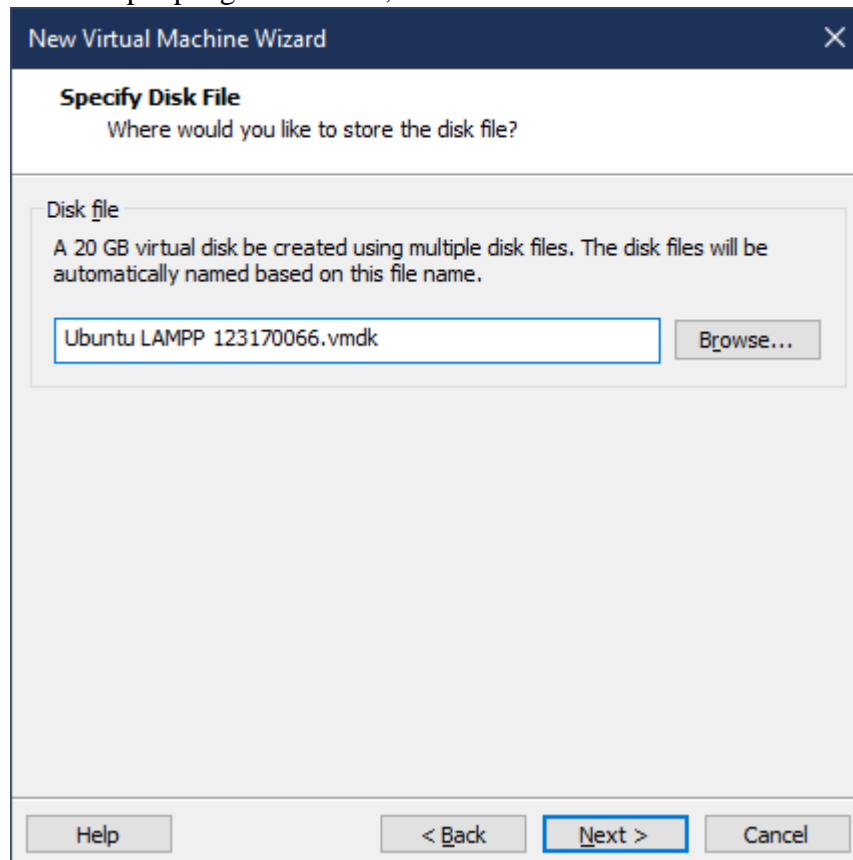
☐ **Allocate all disk space now.**  
Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.

☐ **Store virtual disk as a single file**

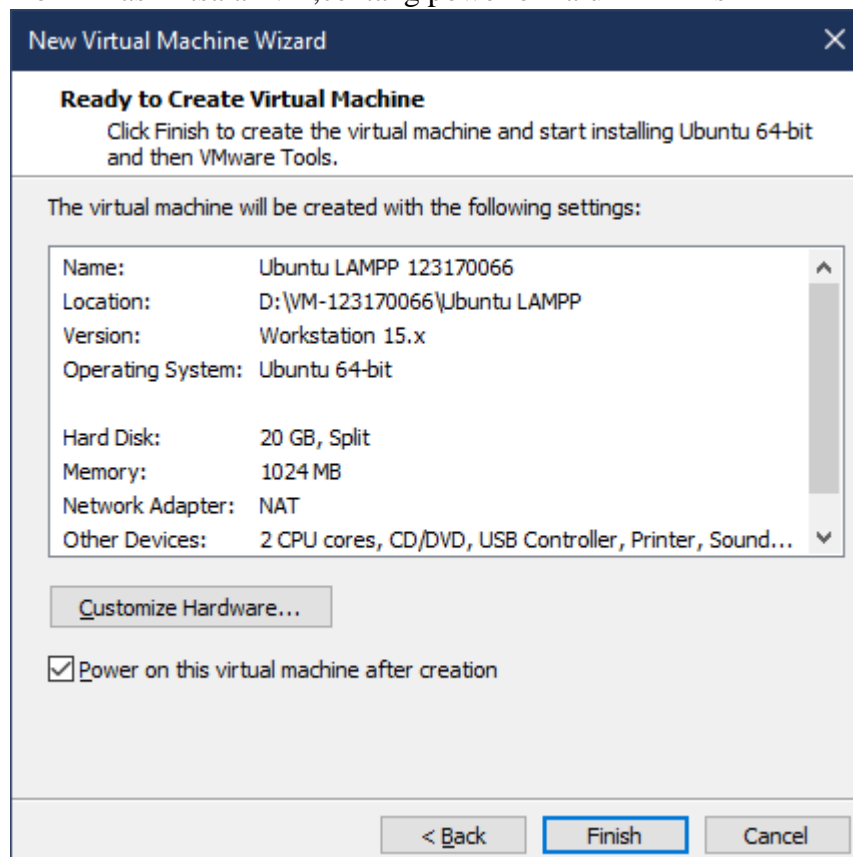
☒ **Split virtual disk into multiple files**  
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

**Help** **< Back** **Next >** **Cancel**

14. Pilih tempat penginstalan vm,lalu next



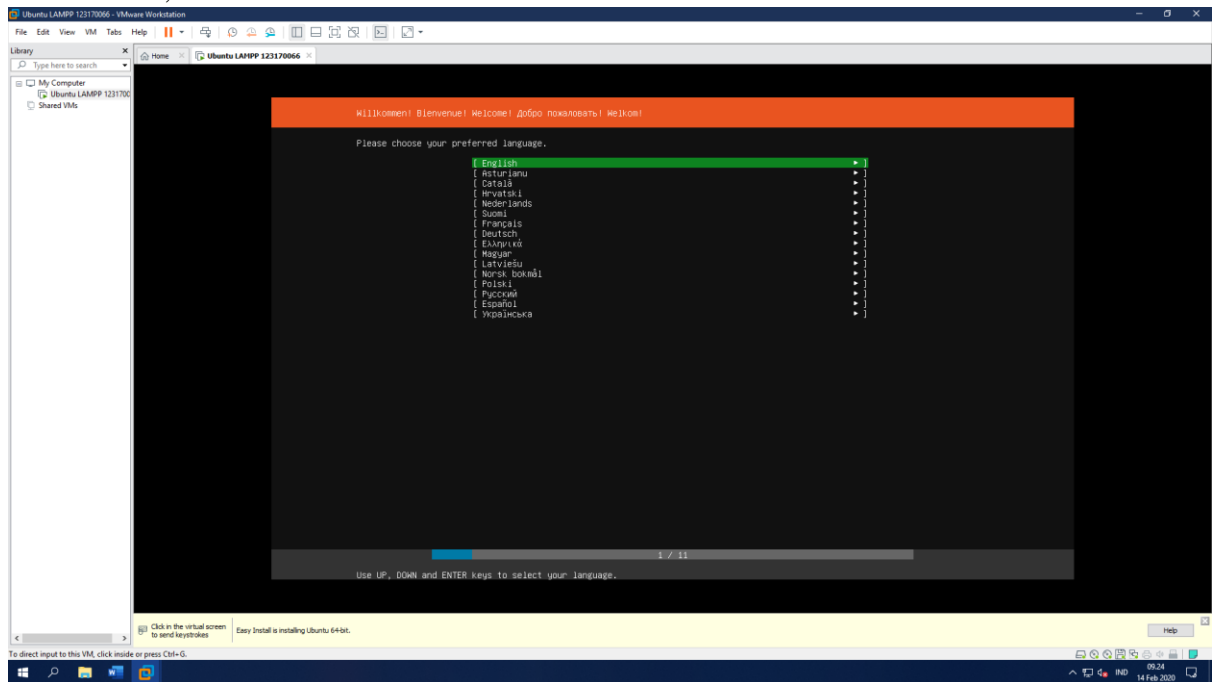
15. Konfirmasi intsalan vm,centang power on lalu klik finish



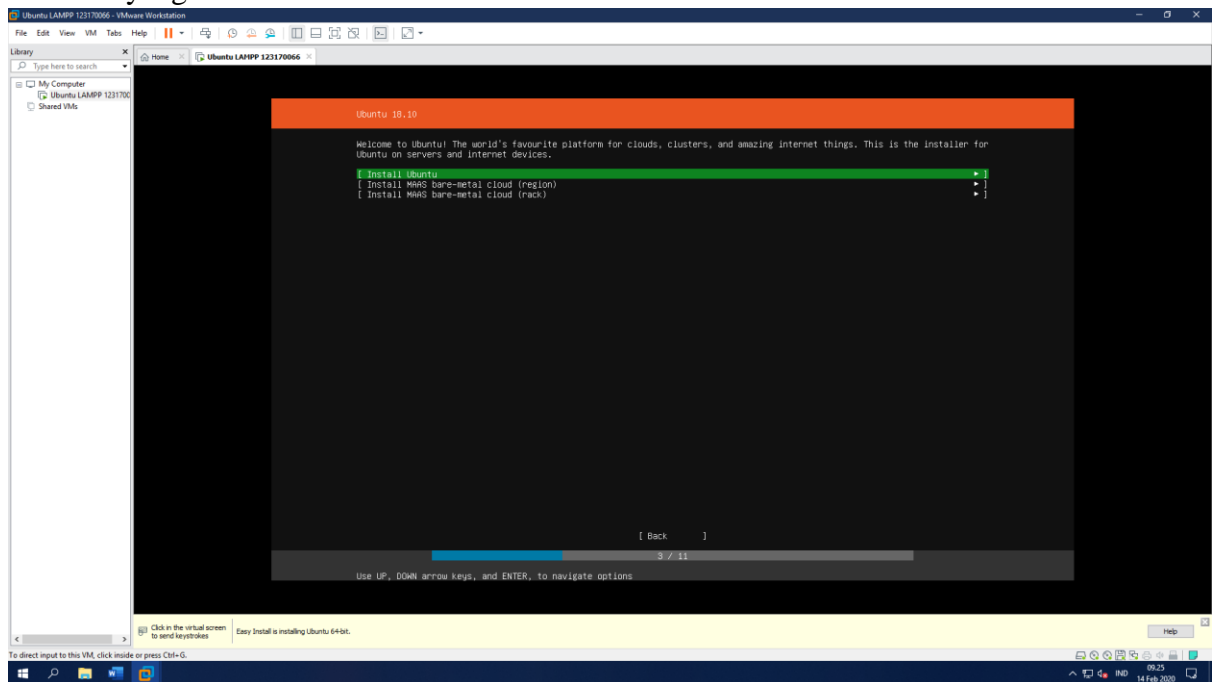


## Tahapan instalasi OS di vm

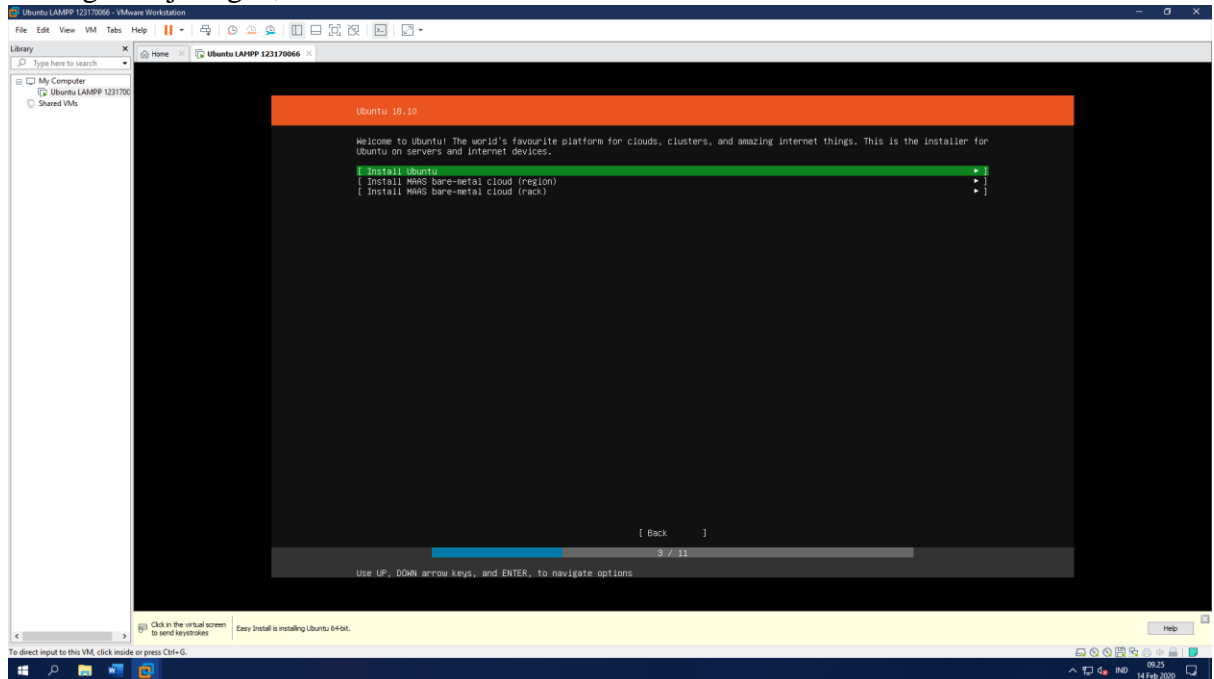
### 1. Pilih bahasa,lalu next



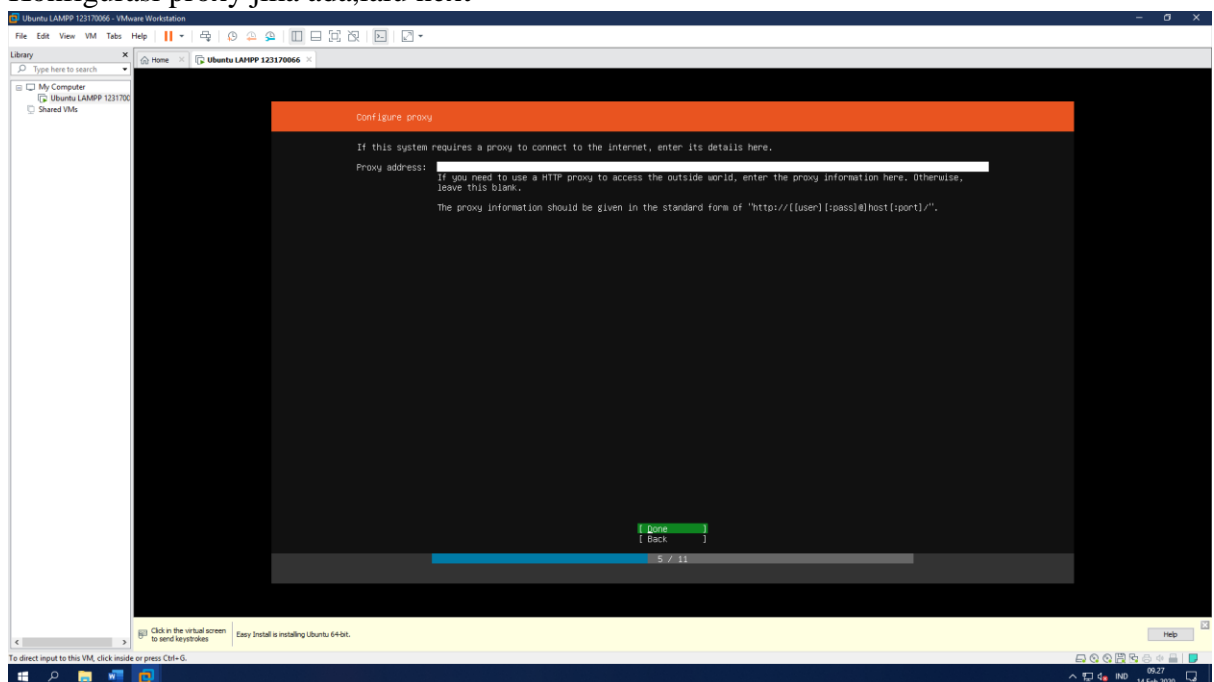
### 2. Pilih OS yang akan diinstal



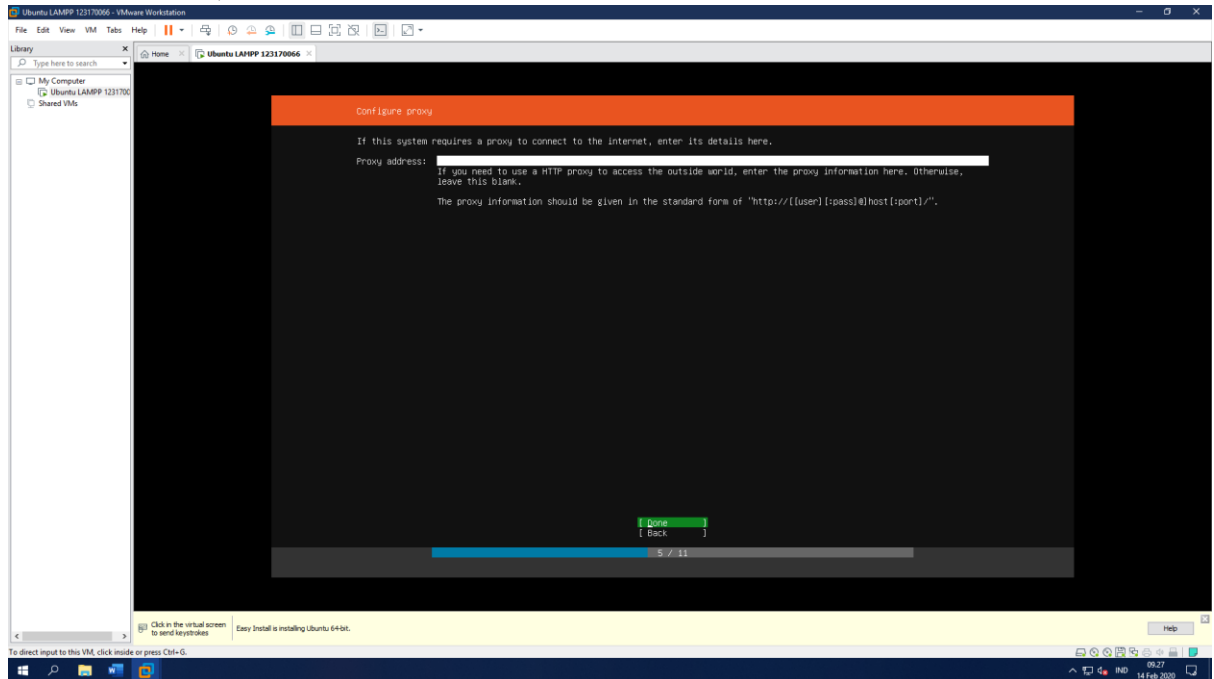
### 3. Konfigurasi jaringan,lalu next



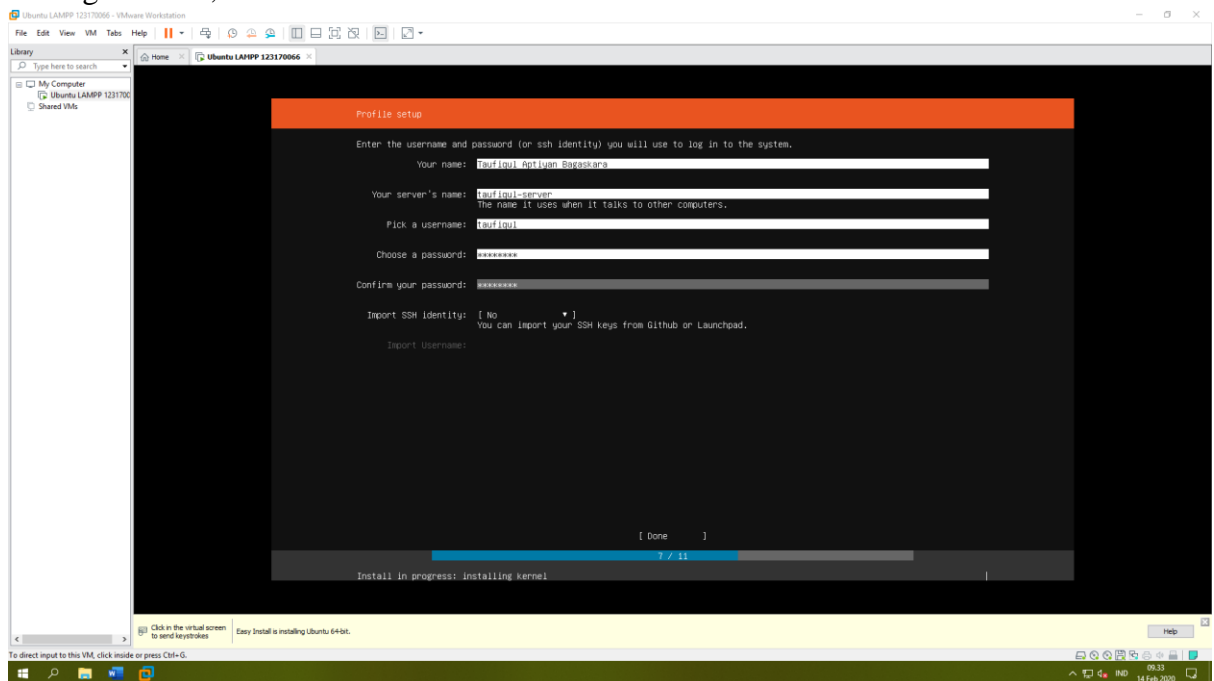
### 4. Konfigurasi proxy jika ada,lalu next



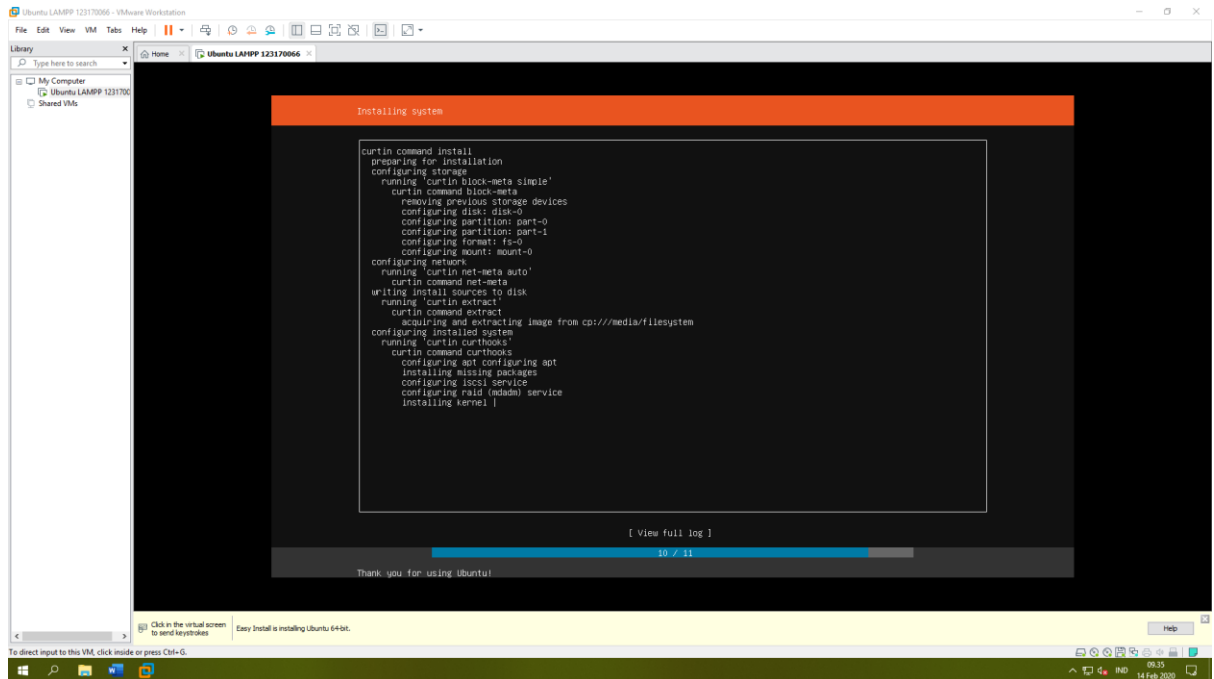
## 5. Pilih Entire disk,lalu next



## 6. Konfigurasi vm,lalu next



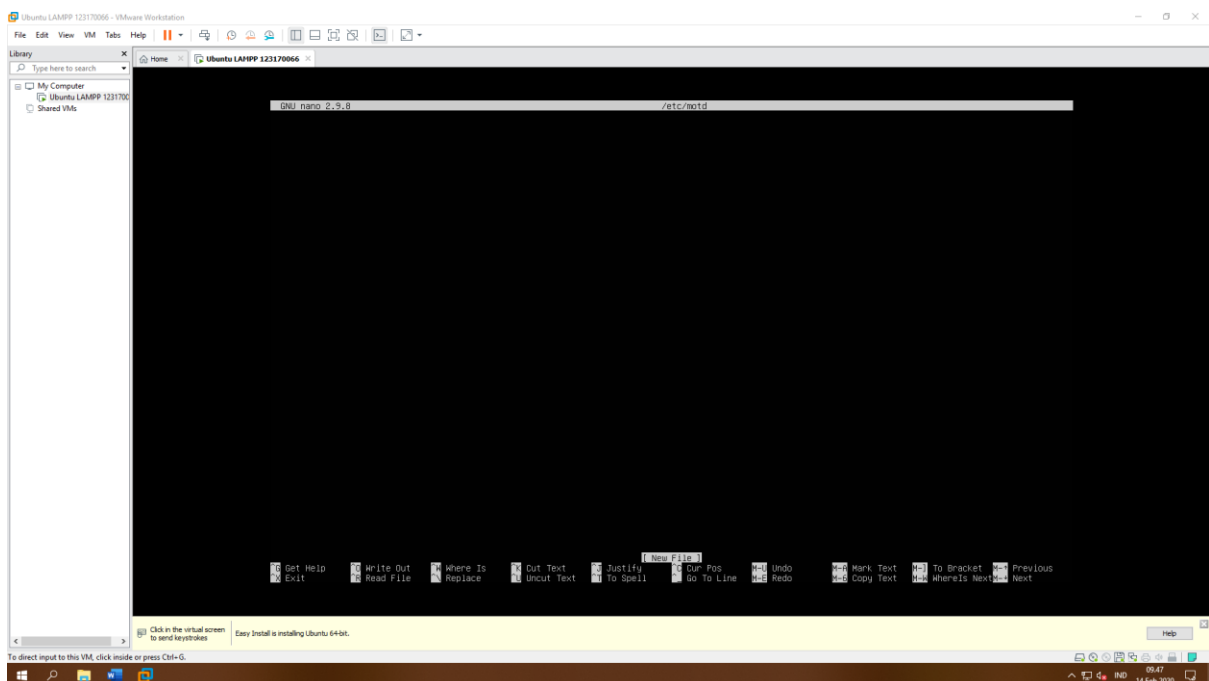
## 7. Proses instalasi OS di vm



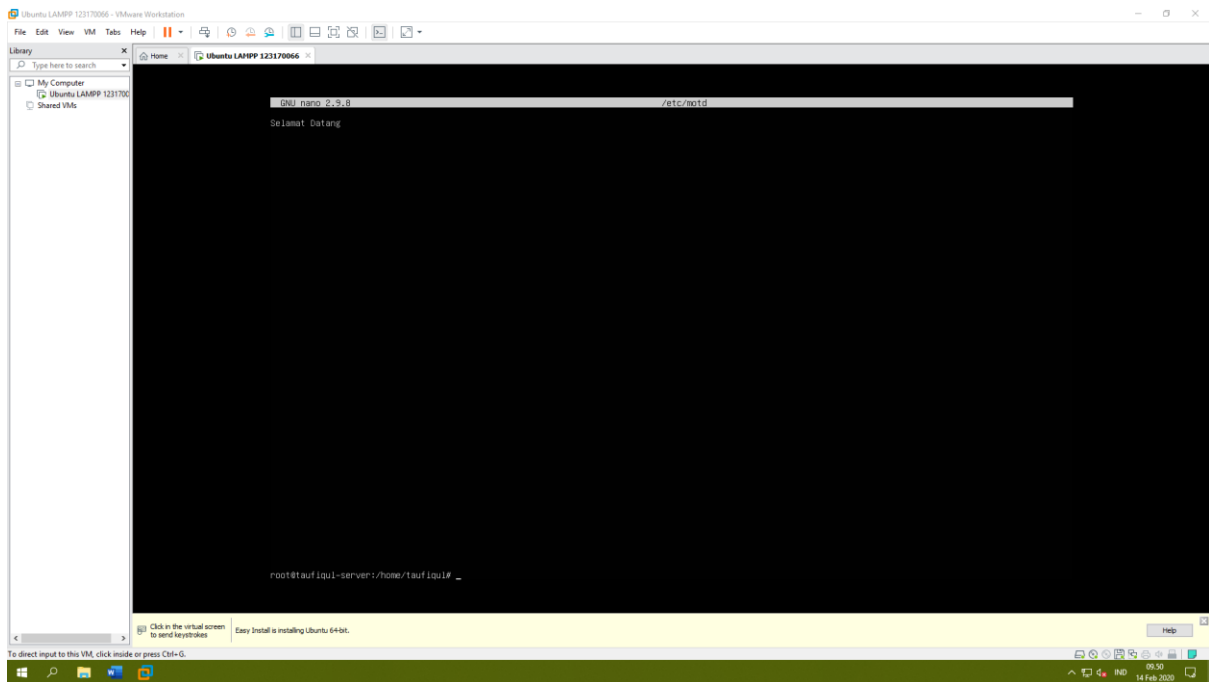
Mengganti welcome screen di OS

Masuk ke mode root, ketik : sudo su , masukkan username dan password

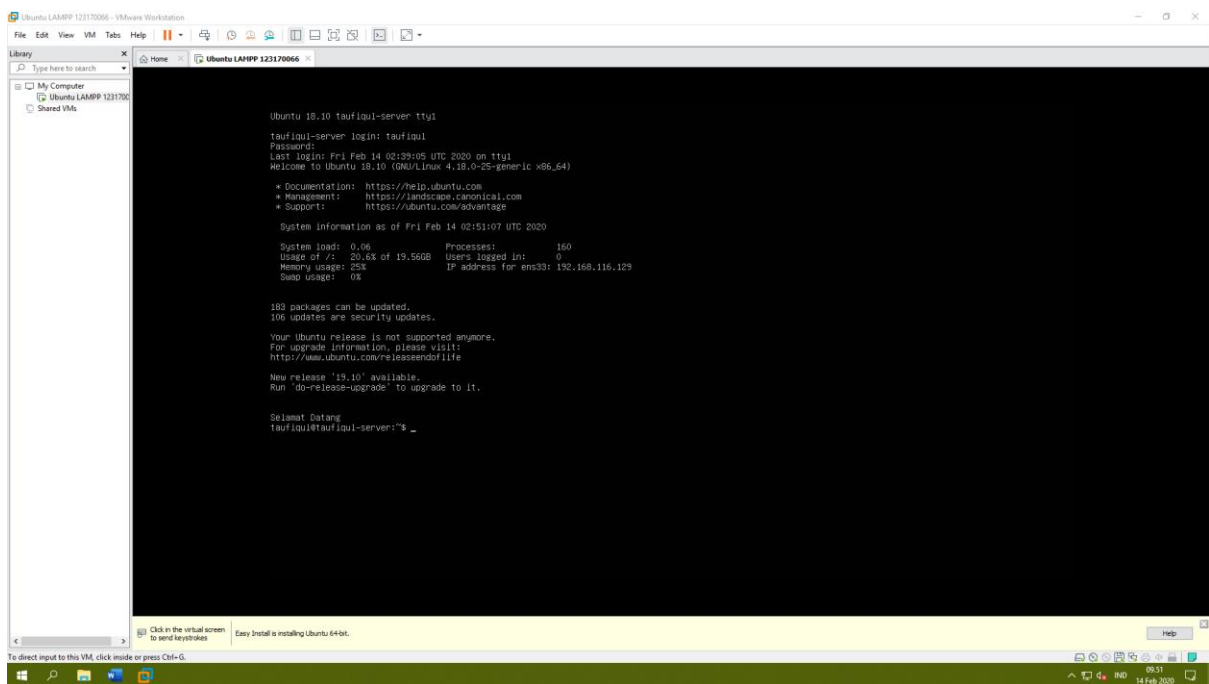
Ketikkan nano /etc/motd lalu enter dan ketikkan kata untuk dijadikan welcome screen



Lalu pencet ctrl + o untuk save,lalu enter



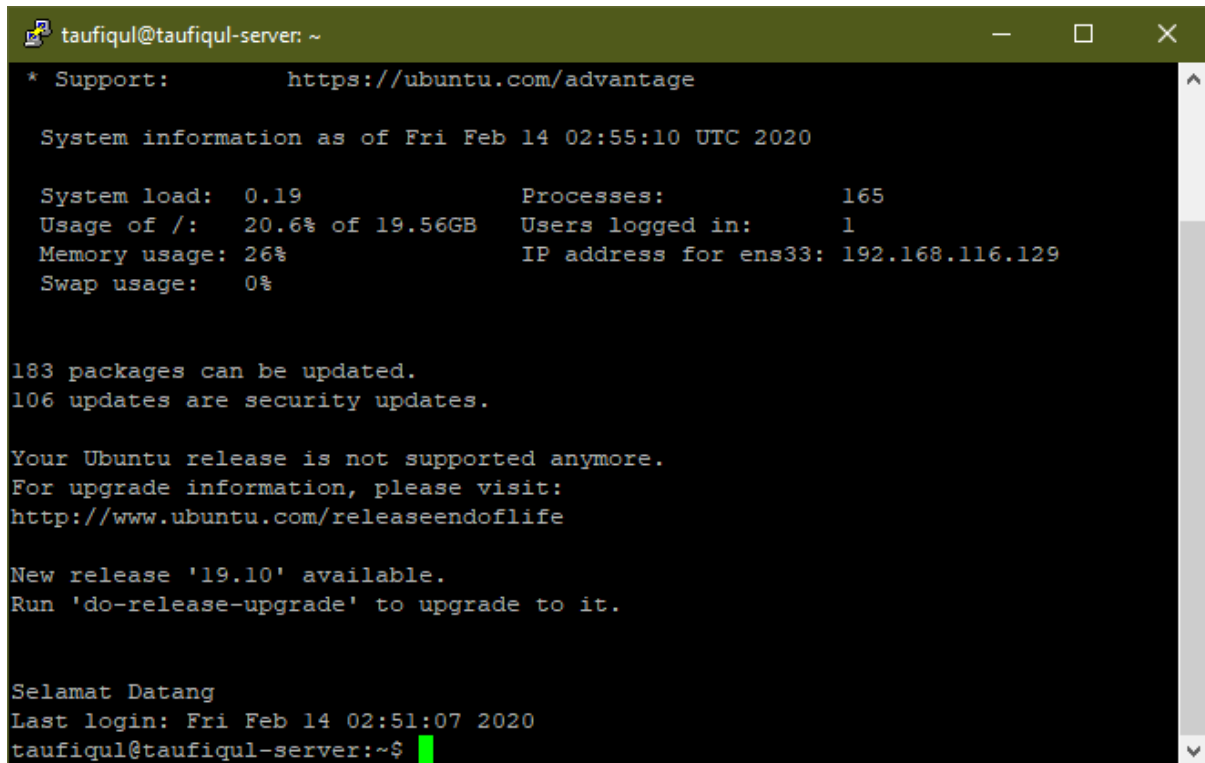
Lalu coba exit dan login kembali,maka tampilan sudah berganti



Konfigurasi remote untuk server

Cari IP di welcome screen (pada ens33) atau ketik ifconfig

Buka aplikasi Putty dan ketikan di Host ip yang di server vm,lalu login di Putty



```
taufiqul@taufiqul-server: ~
* Support:      https://ubuntu.com/advantage

System information as of Fri Feb 14 02:55:10 UTC 2020

System load:  0.19           Processes:           165
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.

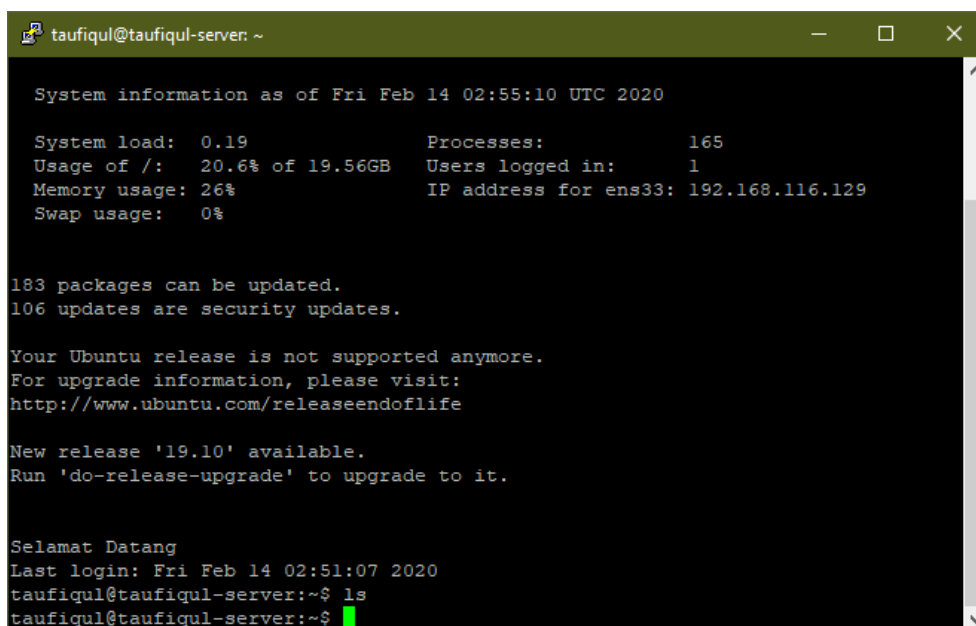
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

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

Selamat Datang
Last login: Fri Feb 14 02:51:07 2020
taufiqul@taufiqul-server:~$
```

Ekplorasi command di Putty

1.Ketik ls



```
taufiqul@taufiqul-server: ~
System information as of Fri Feb 14 02:55:10 UTC 2020

System load:  0.19           Processes:           165
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.

Selamat Datang
Last login: Fri Feb 14 02:51:07 2020
taufiqul@taufiqul-server:~$ ls
taufiqul@taufiqul-server:~$
```

## 2. Ketik mkdir pertemuan-2 (membuat direktori pertemuan 2)

```
taufiqul@taufiqul-server: ~  
System information as of Fri Feb 14 02:55:10 UTC 2020  
  
System load: 0.19          Processes:          165  
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.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:07 2020  
taufiqul@taufiqul-server:~$ ls  
taufiqul@taufiqul-server:~$ mkdir pertemuan-2  
taufiqul@taufiqul-server:~$
```

## 3. Ketik ls -l

```
taufiqul@taufiqul-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.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:07 2020  
taufiqul@taufiqul-server:~$ ls  
taufiqul@taufiqul-server:~$ mkdir pertemuan-2  
taufiqul@taufiqul-server:~$ ls -l  
ls-l: command not found  
taufiqul@taufiqul-server:~$ ls -l  
total 4  
drwxrwxr-x 2 taufiqul taufiqul 4096 Feb 14 02:59 pertemuan-2  
taufiqul@taufiqul-server:~$
```

#### 4. Ketik `cp -r pertemuan-2 pertemuan-1`

```
taufiqul@taufiqul-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.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:07 2020  
taufiqul@taufiqul-server:~$ ls  
taufiqul@taufiqul-server:~$ mkdir pertemuan-2  
taufiqul@taufiqul-server:~$ ls-l  
ls-l: command not found  
taufiqul@taufiqul-server:~$ ls -l  
total 4  
drwxrwxr-x 2taufiqultaufiqul4096Feb 14 02:59 pertemuan-2  
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1  
taufiqul@taufiqul-server:~$
```

#### 5. Ketik `ls`

```
taufiqul@taufiqul-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.  
  
Selamat Datang  
Last login: Fri Feb 14 02:51:07 2020  
taufiqul@taufiqul-server:~$ ls  
taufiqul@taufiqul-server:~$ mkdir pertemuan-2  
taufiqul@taufiqul-server:~$ ls-l  
ls-l: command not found  
taufiqul@taufiqul-server:~$ ls -l  
total 4  
drwxrwxr-x 2taufiqultaufiqul4096Feb 14 02:59 pertemuan-2  
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1  
taufiqul@taufiqul-server:~$ ls  
pertemuan-1 pertemuan-2  
taufiqul@taufiqul-server:~$
```



6. Ketik mv pertemuan-2 “pertemuan 2 LAMPP” lalu enter (memindahkan pertemuan 2)

```
taufiqul@taufiqul-server: ~
New release '19.10' available.
Run 'do-release-upgrade' to upgrade to it.

Selamat Datang
Last login: Fri Feb 14 02:51:07 2020
taufiqul@taufiqul-server:~$ ls
taufiqul@taufiqul-server:~$ mkdir pertemuan-2
taufiqul@taufiqul-server:~$ ls-l
ls-l: command not found
taufiqul@taufiqul-server:~$ ls -l
total 4
drwxrwxr-x 2 taufiqul taufiqul 4096 Feb 14 02:59 pertemuan-2
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1
taufiqul@taufiqul-server:~$ ls
pertemuan-1  pertemuan-2
taufiqul@taufiqul-server:~$ cd "pertemuan 2
> nano biodata.txt
> 123170066
>
> exit
> ^C
taufiqul@taufiqul-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
taufiqul@taufiqul-server:~$
```

7. Ketik ls lalu cd “pertemuan 2 lalu tab dan enter dan ketik nano biodata.txt

```
taufiqul@taufiqul-server: ~/pertemuan 2 LAMPP
Selamat Datang
Last login: Fri Feb 14 02:51:07 2020
taufiqul@taufiqul-server:~$ ls
taufiqul@taufiqul-server:~$ mkdir pertemuan-2
taufiqul@taufiqul-server:~$ ls-l
ls-l: command not found
taufiqul@taufiqul-server:~$ ls -l
total 4
drwxrwxr-x 2 taufiqul taufiqul 4096 Feb 14 02:59 pertemuan-2
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1
taufiqul@taufiqul-server:~$ ls
pertemuan-1  pertemuan-2
taufiqul@taufiqul-server:~$ cd "pertemuan 2
> nano biodata.txt
> 123170066
>
> exit
> ^C
taufiqul@taufiqul-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
taufiqul@taufiqul-server:~$ ls
pertemuan-1  'pertemuan 2 LAMPP'
taufiqul@taufiqul-server:~$ cd "pertemuan 2 LAMPP"/
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ nano biodata.txt
```

8. Tulis NIM lalu save (ctrl o lalu exit ctrl x)

```
taufiqul@taufiqul-server: ~/pertemuan 2 LAMPP
Selamat Datang
Last login: Fri Feb 14 02:51:07 2020
taufiqul@taufiqul-server:~$ ls
taufiqul@taufiqul-server:~$ mkdir pertemuan-2
taufiqul@taufiqul-server:~$ ls-l
ls-l: command not found
taufiqul@taufiqul-server:~$ ls -l
total 4
drwxrwxr-x 2taufiqultaufiqul4096Feb 14 02:59 pertemuan-2
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1
taufiqul@taufiqul-server:~$ ls
pertemuan-1 pertemuan-2
taufiqul@taufiqul-server:~$ cd "pertemuan 2
> nano biodata.txt
> 123170066
>
> exit
> ^C
taufiqul@taufiqul-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
taufiqul@taufiqul-server:~$ ls
pertemuan-1 'pertemuan 2 LAMPP'
taufiqul@taufiqul-server:~$ cd "pertemuan 2 LAMPP"/
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ nano biodata.txt
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$
```

9. Ketik ls-l

```
taufiqul@taufiqul-server: ~/pertemuan 2 LAMPP
taufiqul@taufiqul-server:~$ mkdir pertemuan-2
taufiqul@taufiqul-server:~$ ls-l
ls-l: command not found
taufiqul@taufiqul-server:~$ ls -l
total 4
drwxrwxr-x 2taufiqultaufiqul4096Feb 14 02:59 pertemuan-2
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1
taufiqul@taufiqul-server:~$ ls
pertemuan-1 pertemuan-2
taufiqul@taufiqul-server:~$ cd "pertemuan 2
> nano biodata.txt
> 123170066
>
> exit
> ^C
taufiqul@taufiqul-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
taufiqul@taufiqul-server:~$ ls
pertemuan-1 'pertemuan 2 LAMPP'
taufiqul@taufiqul-server:~$ cd "pertemuan 2 LAMPP"/
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ nano biodata.txt
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ ls -l
total 4
-rw-rw-r-- 1taufiqultaufiqul10Feb 14 03:15 biodata.txt
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$
```

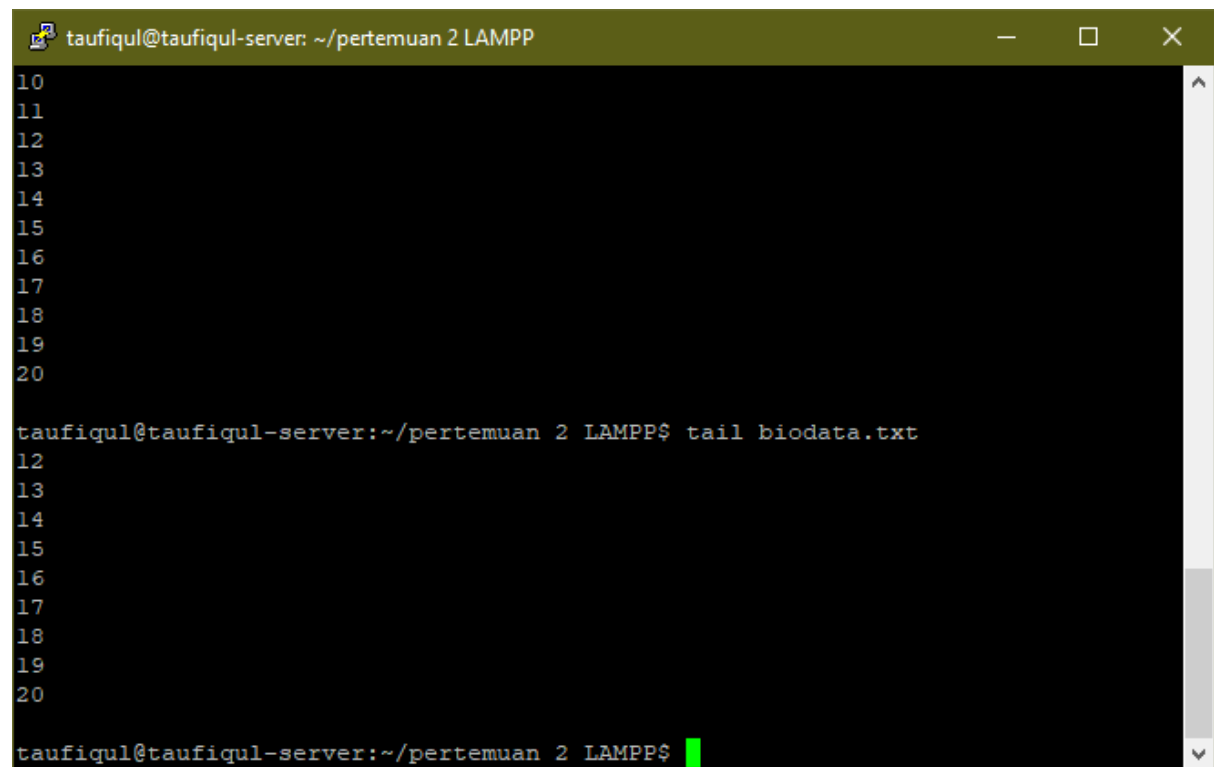
10. Ketik cat biodata.txt dan enter lalu ke nano biodata.txt lalu masukkan perintah seperti menuliskan 1,2,3,4,5,6,7

```
taufiqul@taufiqul-server: ~/pertemuan 2 LAMPP
ls-l: command not found
taufiqul@taufiqul-server:~$ ls -l
total 4
drwxrwxr-x 2taufiqultaufiqul4096Feb 14 02:59 pertemuan-2
taufiqul@taufiqul-server:~$ cp -r pertemuan-2 pertemuan-1
taufiqul@taufiqul-server:~$ ls
pertemuan-1 pertemuan-2
taufiqul@taufiqul-server:~$ cd "pertemuan 2
> nano biodata.txt
> 123170066
>
> exit
> ^C
taufiqul@taufiqul-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
taufiqul@taufiqul-server:~$ ls
pertemuan-1 'pertemuan 2 LAMPP'
taufiqul@taufiqul-server:~$ cd "pertemuan 2 LAMPP"/
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ nano biodata.txt
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ ls -l
total 4
-rw-rw-r-- 1taufiqultaufiqul10Feb 14 03:15 biodata.txt
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170066
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ nano biodata.txt
```

11. Ketik cat biodata.txt untuk menampilkan semua data biodata.txt

```
taufiqul@taufiqul-server: ~/pertemuan 2 LAMPP
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170066
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$
```

12. Ketik `tail biodata.txt` untuk menampilkan data tail dari `biodata.txt`



```
taufiqul@taufiqul-server: ~/pertemuan 2 LAMPP
10
11
12
13
14
15
16
17
18
19
20

taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$ tail biodata.txt
12
13
14
15
16
17
18
19
20

taufiqul@taufiqul-server:~/pertemuan 2 LAMPP$
```