

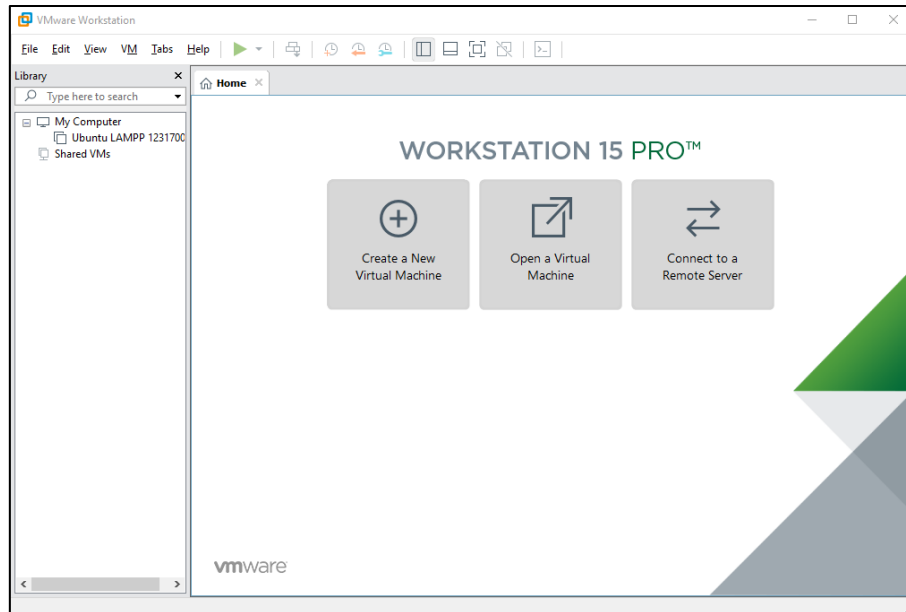
Materi: Pengenalan VMware Workstation dan Linux OS

NIM : 123170029

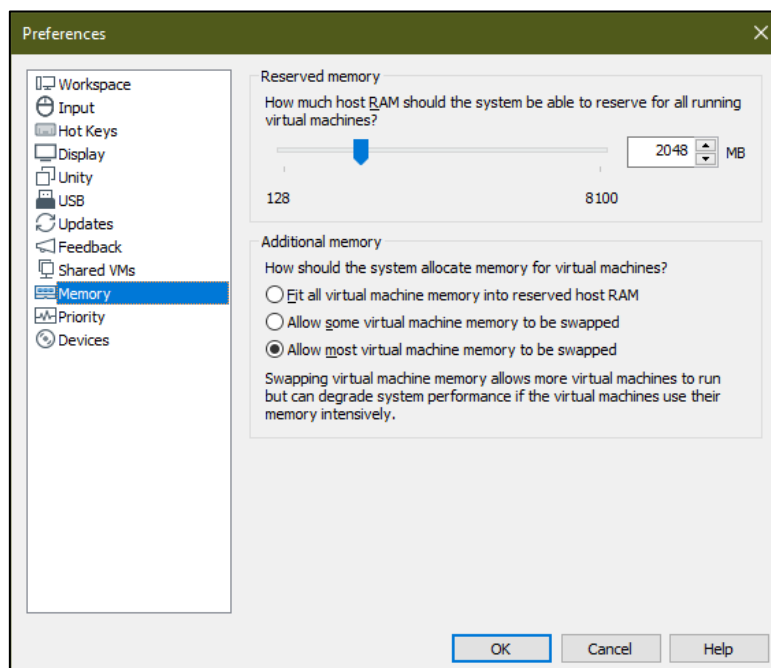
Nama : Jundi Hafizhul Haqqi

Membuat sebuah layanan yang berbasis Private Cloud. Yang diperlukan adalah Apache PHP, Mysql, PHPmyadmin.

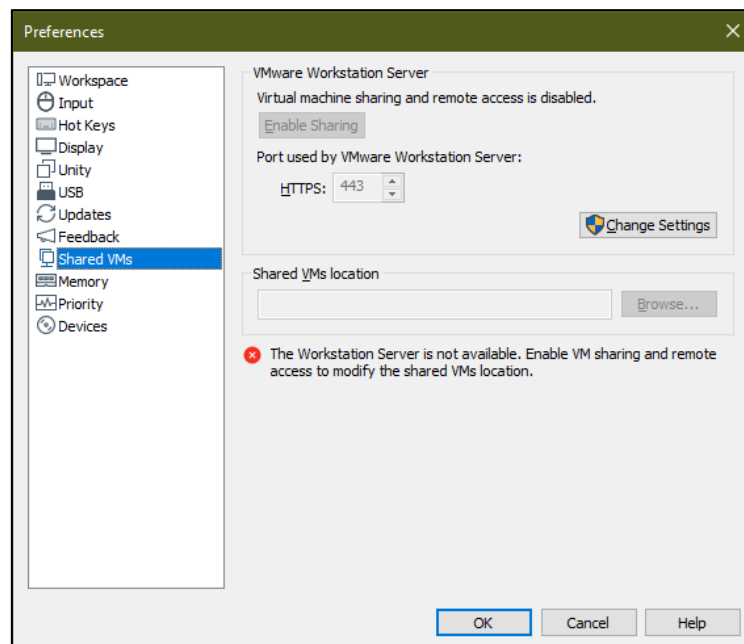
VMware



Swapping, manajemen RAM

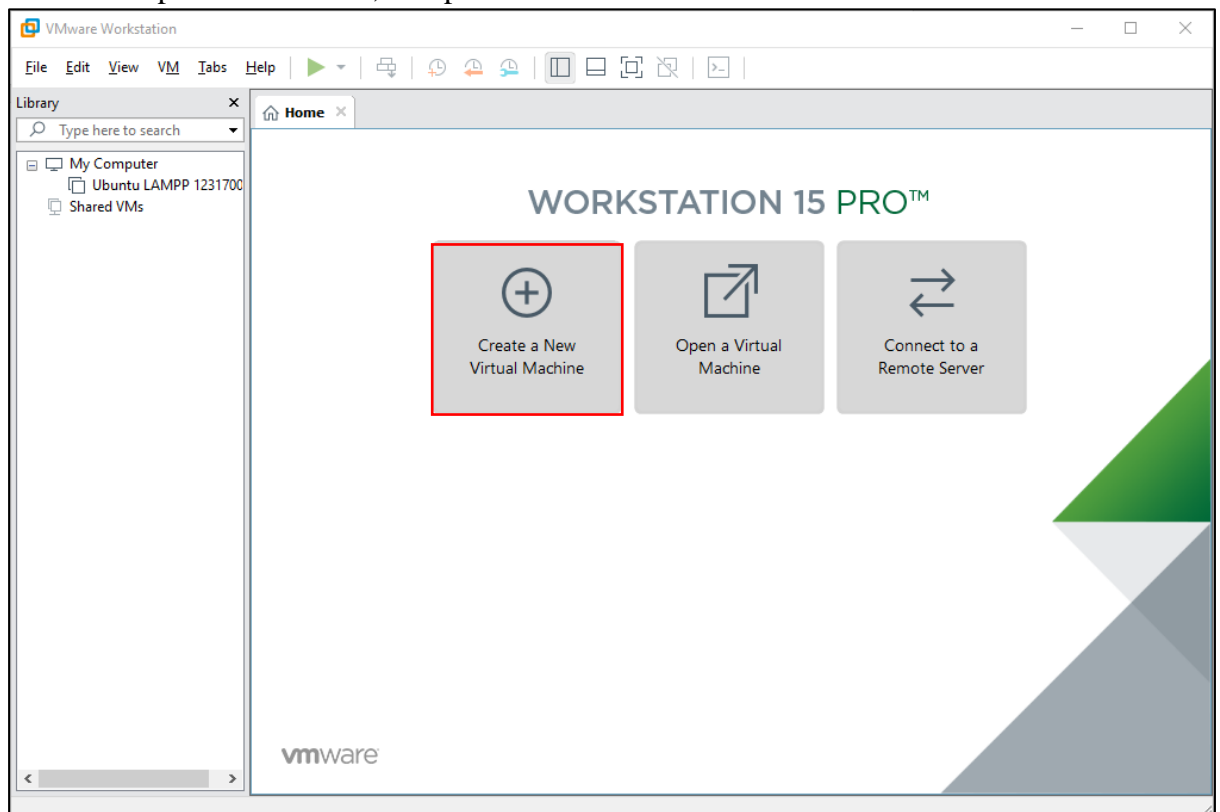


Port trouble VMware



Tahadap Instalasi

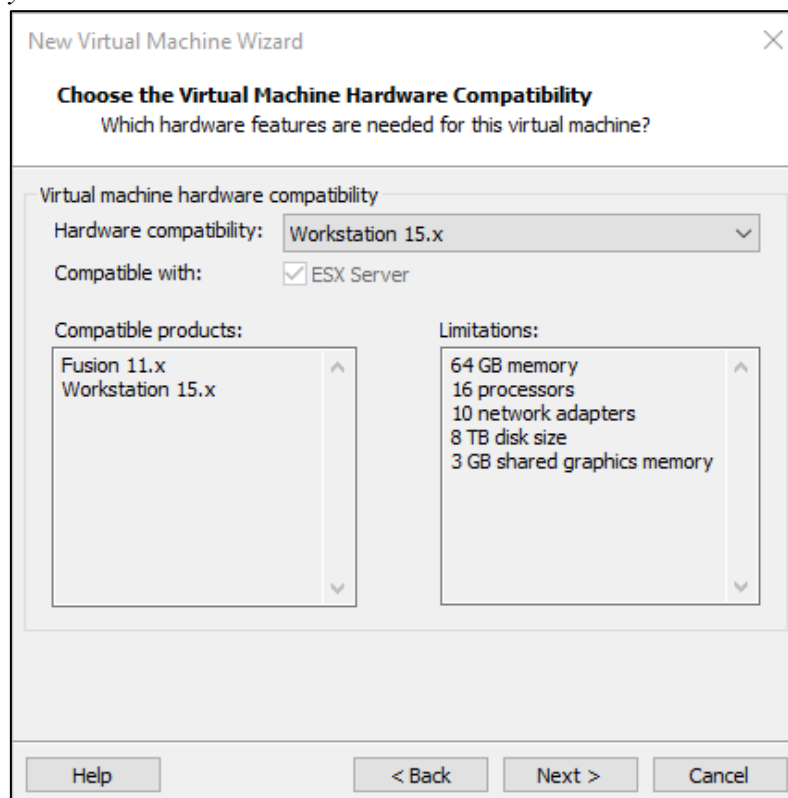
1. Membuka aplikasi WMware, lalu pilih *Create New Virtual Machine*



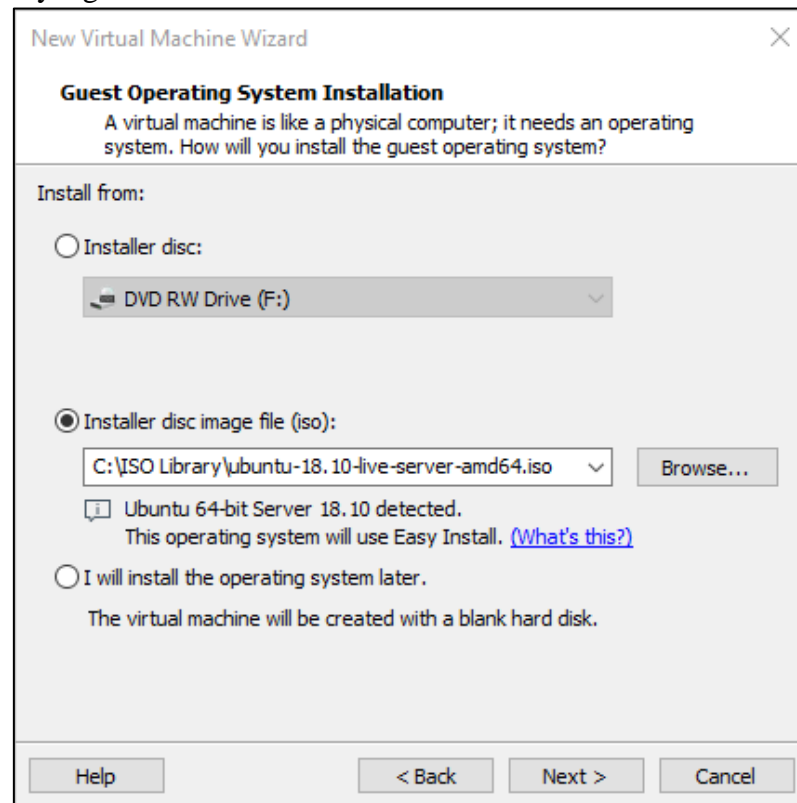
2. Pilih mode *custom*, lalu klik *next*



3. Memilih *compatibility*, disesuaikan dengan versi OS, jika OS sudah jadul *compatibility* diturunkan



4. Memilih ISO yang akan diinstall



The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Guest Operating System Installation' step. The window title is 'New Virtual Machine Wizard' with a close button (X) in the top right corner. Below the title bar, the section is 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 labeled 'Install from:' and contains three radio button options. The first option is 'Installer disc:', with a dropdown menu showing 'DVD RW Drive (F:)'. The second option is selected: 'Installer disc image file (iso):', with a dropdown menu showing 'C:\ISO Library\ubuntu-18.10-live-server-amd64.iso' and a 'Browse...' button. Below this, an information icon (i) is followed by the text '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'.

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:

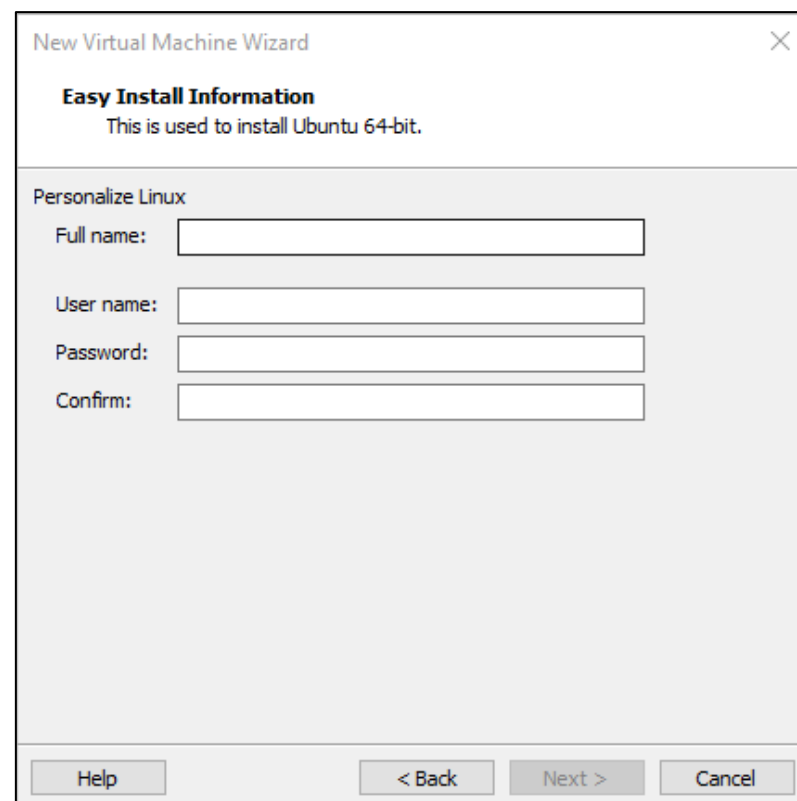
☐ Installer disc:
DVD RW Drive (F:)

☒ 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

5. Memasukkan data



The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Easy Install Information' step. The window title is 'New Virtual Machine Wizard' with a close button (X) in the top right corner. Below the title bar, the section is titled 'Easy Install Information' with a subtitle: 'This is used to install Ubuntu 64-bit.' The main area is labeled 'Personalize Linux' and contains four text input fields: 'Full name:', 'User name:', 'Password:', and 'Confirm:'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

New Virtual Machine Wizard

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

Personalize Linux

Full name:

User name:

Password:

Confirm:

Help < Back Next > Cancel

6. Simpan di lokasi yang diinginkan

The screenshot shows the 'New Virtual Machine Wizard' dialog box, specifically the 'Name the Virtual Machine' step. The title bar reads 'New Virtual Machine Wizard' with a close button. The main heading is 'Name the Virtual Machine' with the instruction 'What name would you like to use for this virtual machine?'. There are two input fields: 'Virtual machine name:' containing 'Ubuntu LAMPP 123170029' and 'Location:' containing 'D:\VM-123170029\Ubuntu LAMPP'. A 'Browse...' button is next to the location field. A note states 'The default location can be changed at Edit > Preferences.' At the bottom are buttons for '< Back', 'Next >', and 'Cancel'.

New Virtual Machine Wizard

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

Virtual machine name:
Ubuntu LAMPP 123170029

Location:
D:\VM-123170029\Ubuntu LAMPP Browse...

The default location can be changed at Edit > Preferences.

< Back Next > Cancel

7. Melakukan konfigurasi penggunaan processor

The screenshot shows the 'New Virtual Machine Wizard' dialog box, specifically the 'Processor Configuration' step. The title bar reads 'New Virtual Machine Wizard' with a close button. The main heading is 'Processor Configuration' with the instruction 'Specify the number of processors for this virtual machine.' There are two dropdown menus: 'Number of processors:' set to '2' and 'Number of cores per processor:' set to '1'. Below these, it shows 'Total processor cores: 2'. At the bottom are buttons for 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

New Virtual Machine Wizard

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

Processors

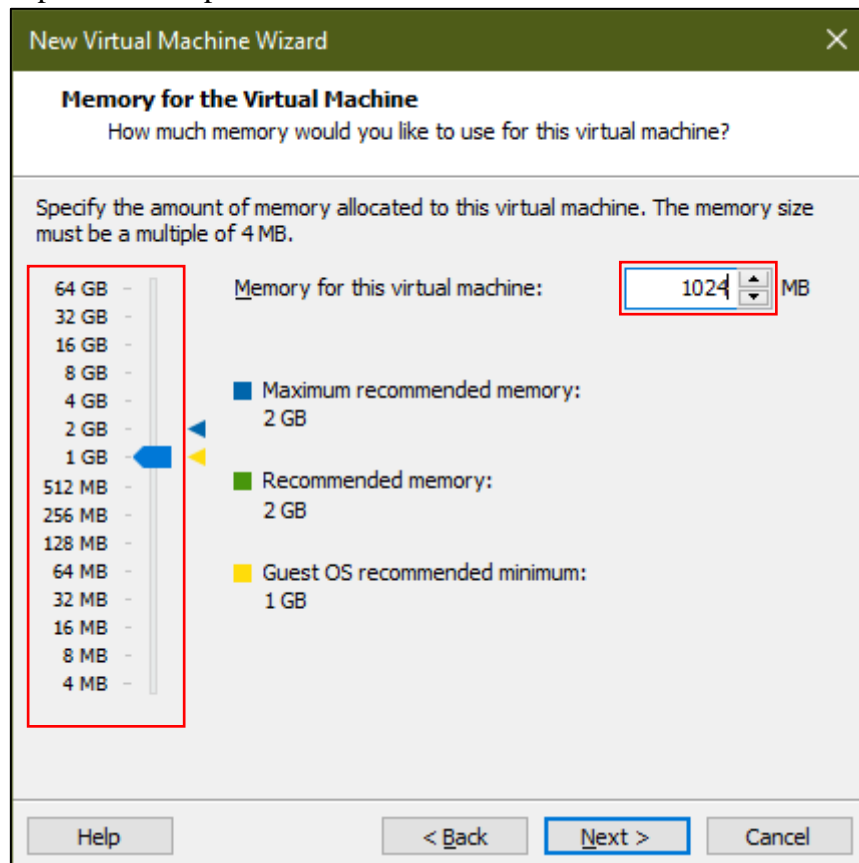
Number of processors: 2

Number of cores per processor: 1

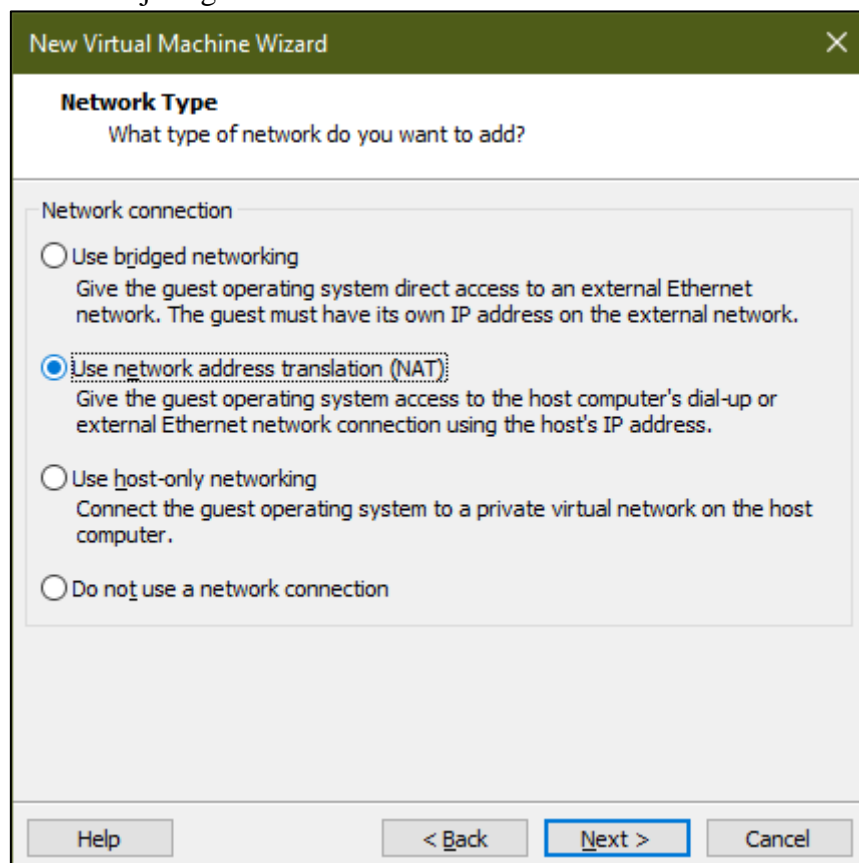
Total processor cores: 2

Help < Back Next > Cancel

8. Melakukan pemilihan kapasitas RAM



9. Menentukan model jaringan



10. Memilih *I/O Controller Type*, *LSI logic*

The screenshot shows the 'New Virtual Machine Wizard' dialog box. The title bar is green with a close button. The main title is 'Select I/O Controller Types' and the subtitle is 'Which SCSI controller type would you like to use?'. The 'I/O controller types' section is expanded, showing 'SCSI Controller:' with three radio button options: 'BusLogic (Not available for 64-bit guests)', 'LSI Logic (Recommended)' (which is selected), and 'LSI Logic SAS'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

11. Memilih *Disc type*

The screenshot shows the 'New Virtual Machine Wizard' dialog box. The title bar is green with a close button. The main title is 'Select a Disk Type' and the subtitle is 'What kind of disk do you want to create?'. The 'Virtual disk type' section is expanded, showing four radio button options: 'IDE', 'SCSI (Recommended)' (which is selected), 'SATA', and 'NVMe'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

12. Memilih penggunaan *Disk, create new*

The screenshot shows the 'New Virtual Machine Wizard' dialog box 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?'. Below this, there is a section titled 'Disk' containing three radio button options: 'Create a new virtual disk' (which is 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 of the dialog, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), 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. Mengalokasikan ukuran hardisk, dan memilih mode split

The screenshot shows the 'New Virtual Machine Wizard' dialog box 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?'. Below this, there is a text input field for 'Maximum disk size (GB)' with the value '20.0' and a spinner control. Below the input field, it says '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' (which is selected). Each option has a descriptive paragraph below it. At the bottom of the dialog, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

New Virtual Machine Wizard

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

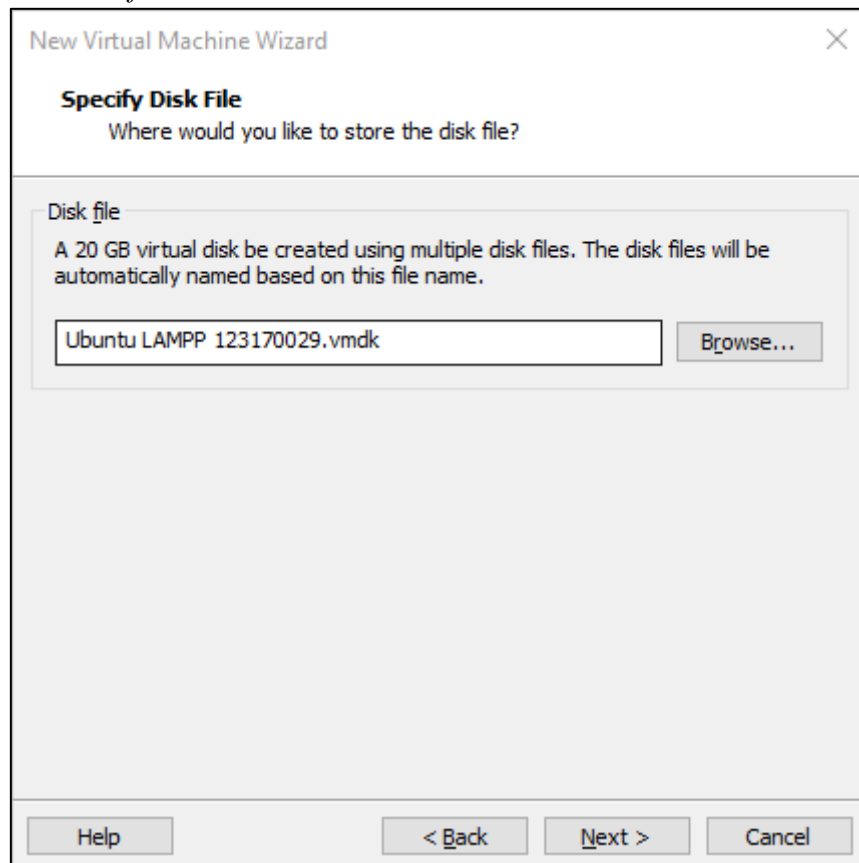
Maximum disk size (GB):

Recommended size for Ubuntu 64-bit: 20 GB

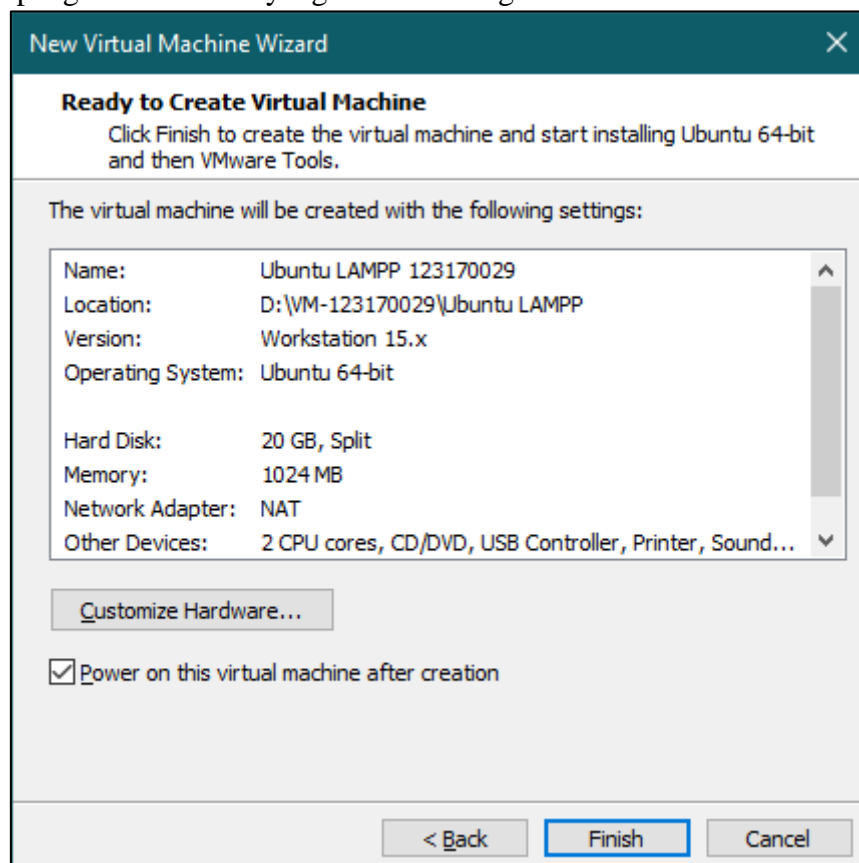
- ☐ **Allocate all disk space now.**
Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.
- ☐ **Store virtual disk as a single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

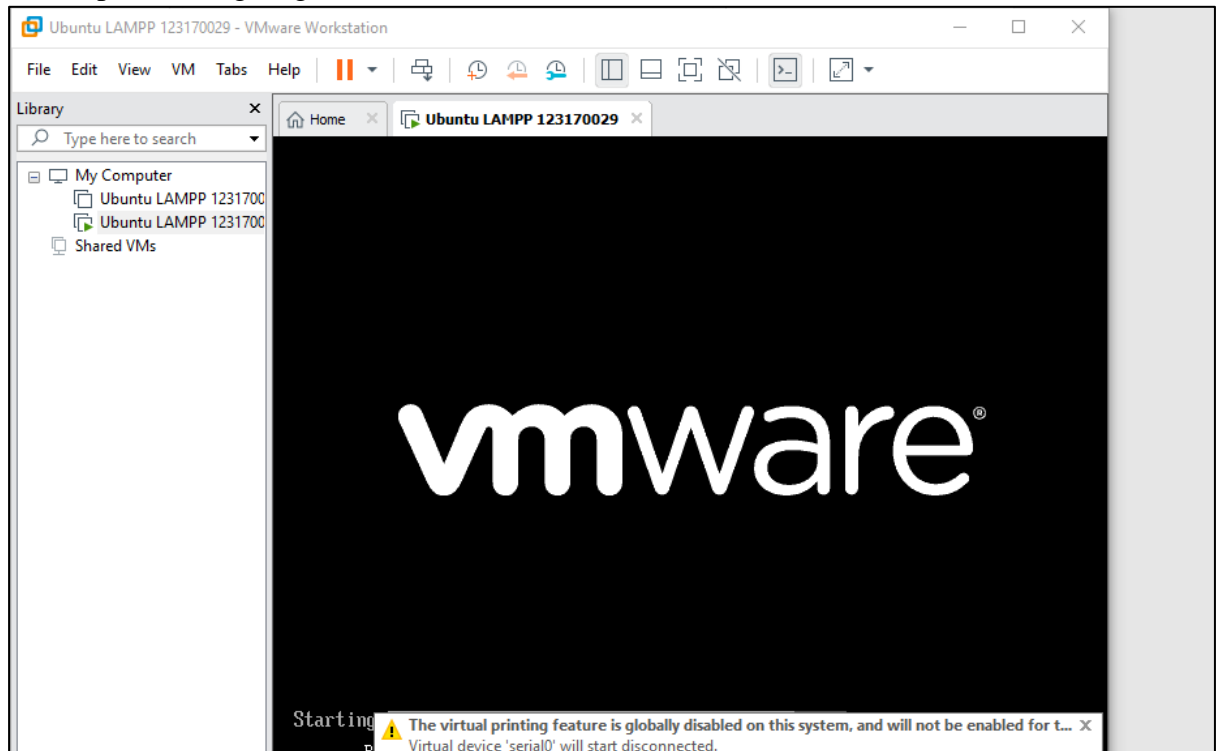
14. Menampilkan *disk file*



15. Finalisasi pengecekan sistem yang telah dikonfigurasi



16. Proses pun berlangsung

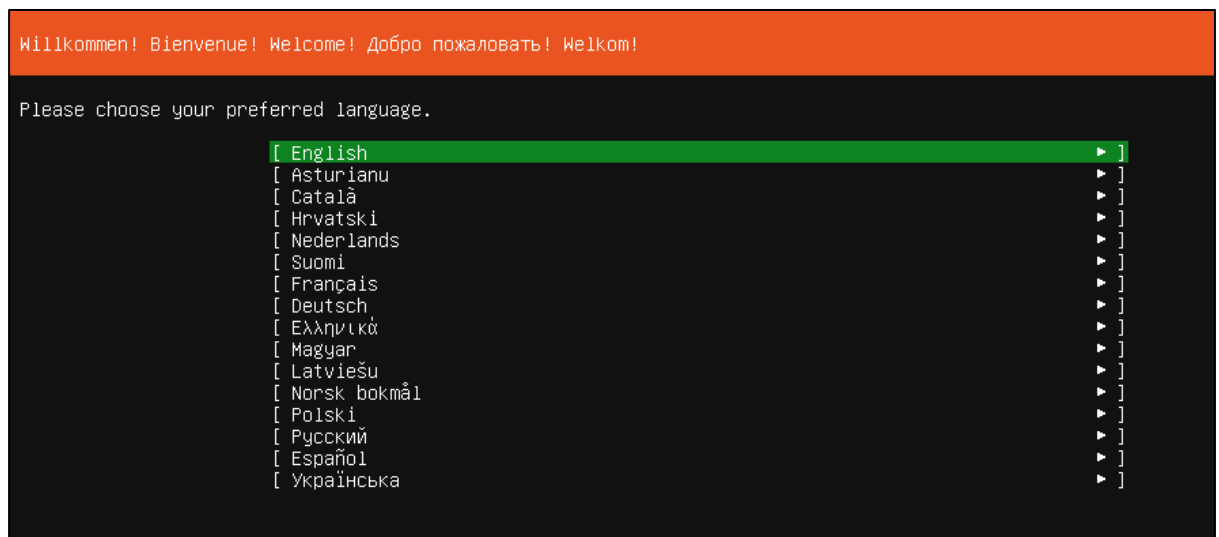


PROSES INSTALASI

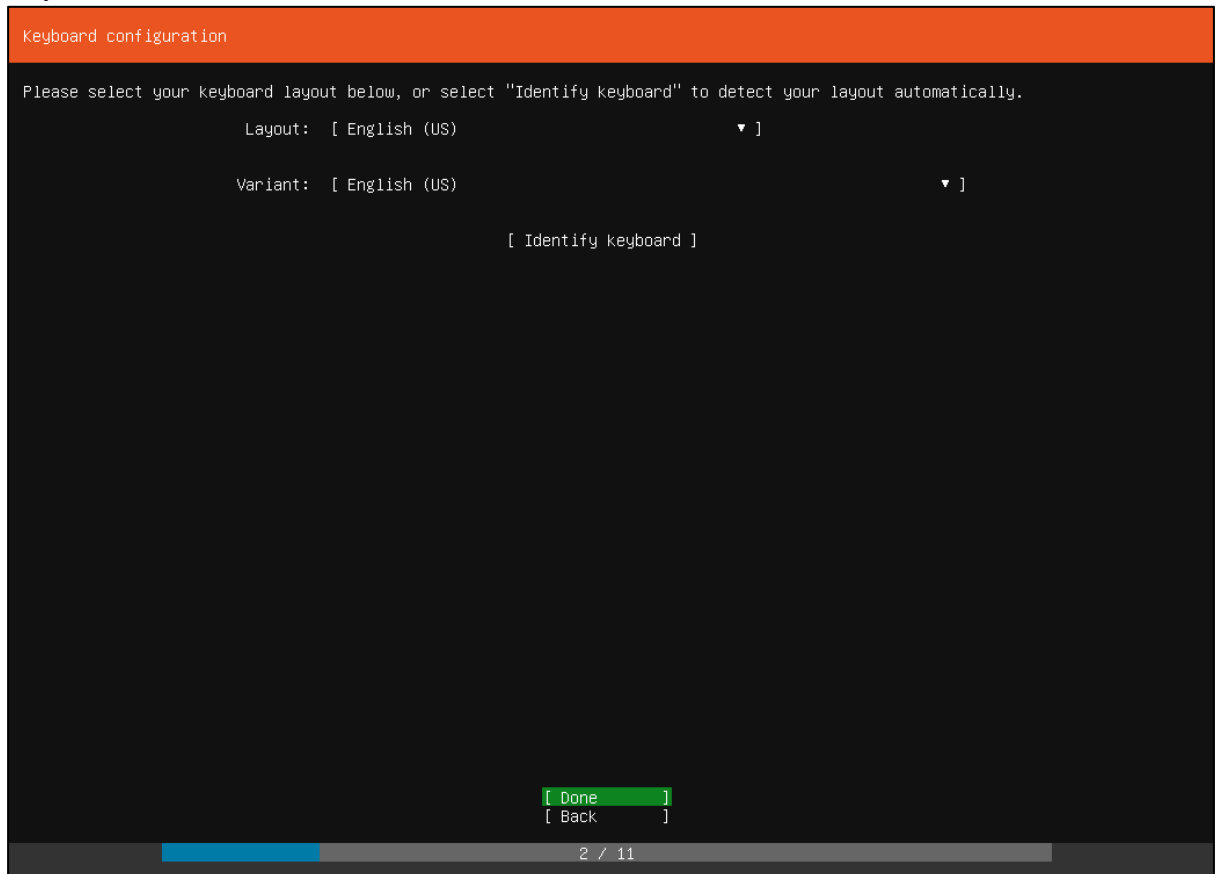
Beberapa shortcut yang akan diperlukan adalah *CTRL + ALT* yang digunakan untuk keluar dari mode *virtual OS*

Tahapan tahapan

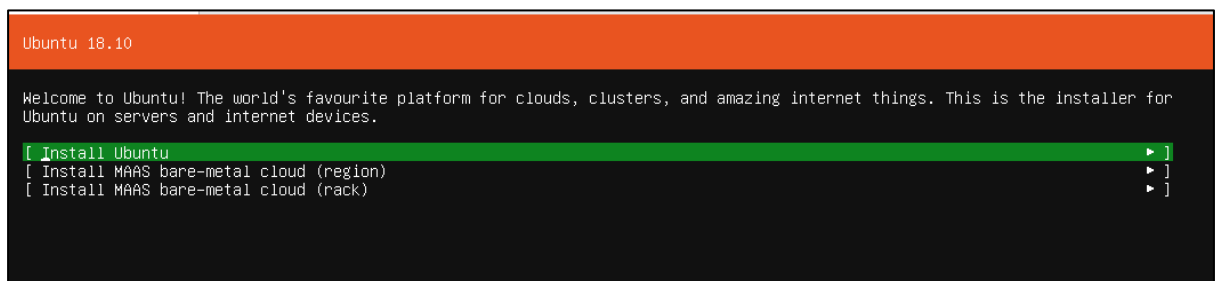
1. Pemilihan Bahasa



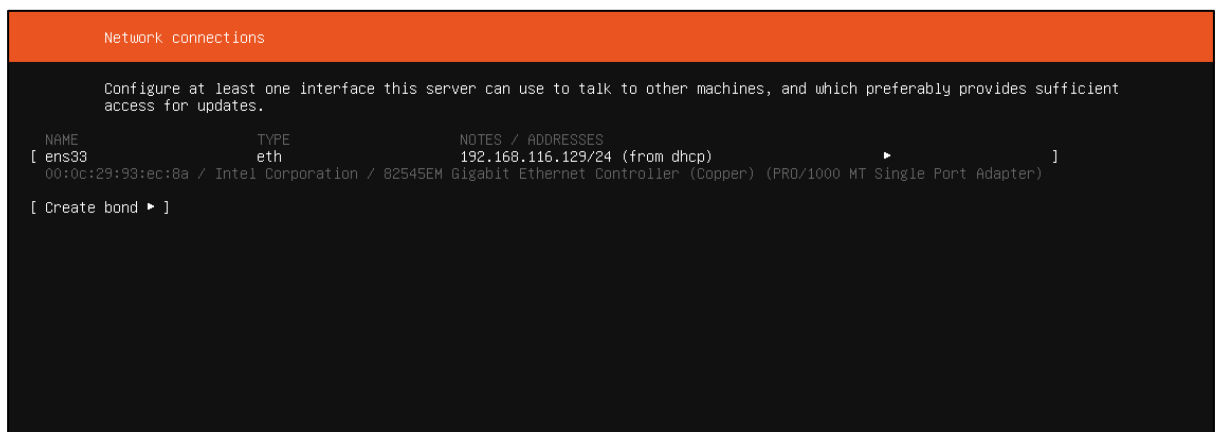
2. Keyboard arsitektur



3. Pemilihan mode OS



4. Cek koneksi



5. Tambahkan proxy jika diperlukan

Configure proxy

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]/]".

6. Jika memiliki alternatif mirror, maka masukkan

Configure Ubuntu archive mirror

If you use an alternative mirror for Ubuntu, enter its details here.

Mirror address:

You may provide an archive mirror that will be used instead of the default 'http://archive.ubuntu.com/ubuntu'

7. Pemilihan mode instalasi

Filesystem setup

The installer can guide you through partitioning an entire disk either directly or using LVM, or, if you prefer, you can do it manually.

If you choose to partition an entire disk you will still have a chance to review and modify the results.

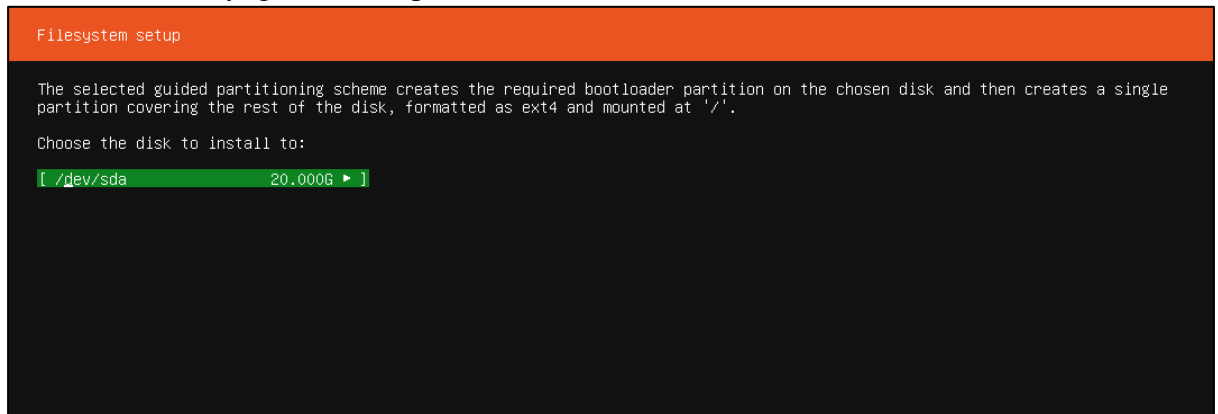
[Use An Entire Disk]

[Use An Entire Disk And Set Up LVM]

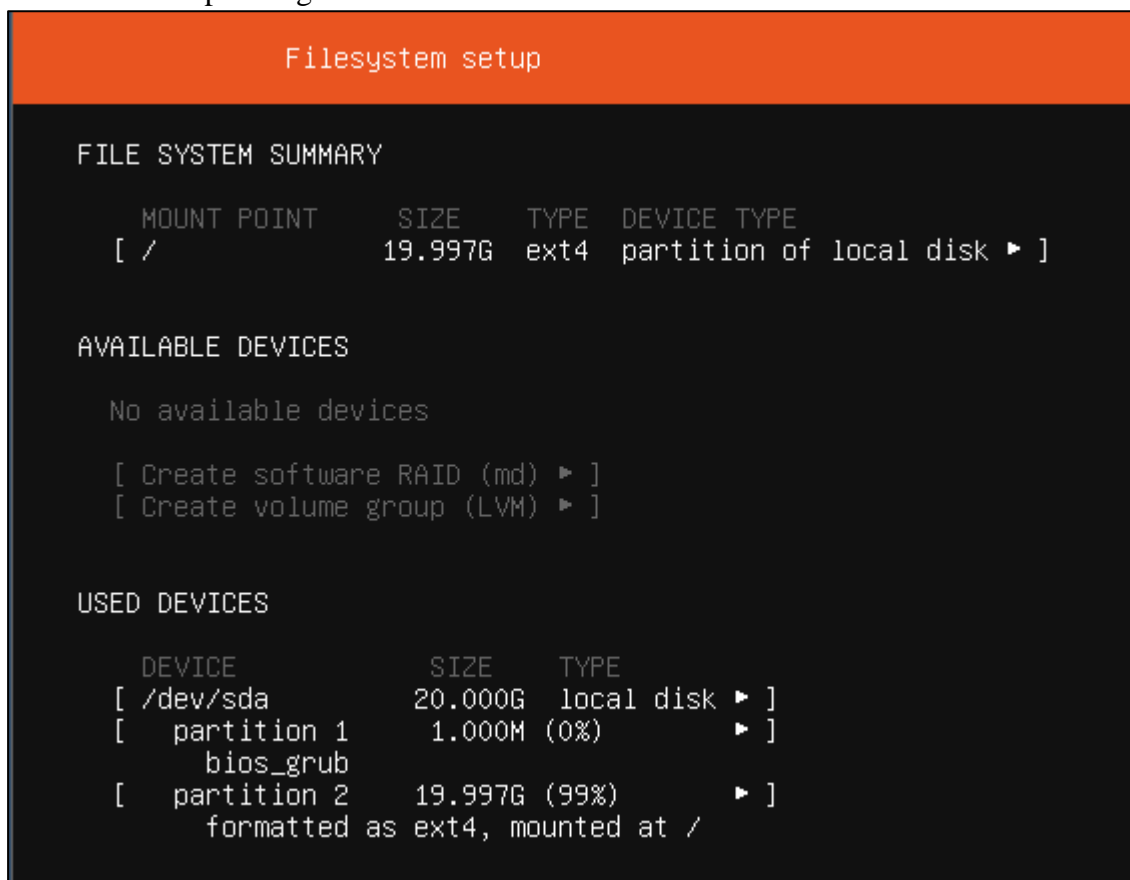
[Manual]

[Back]

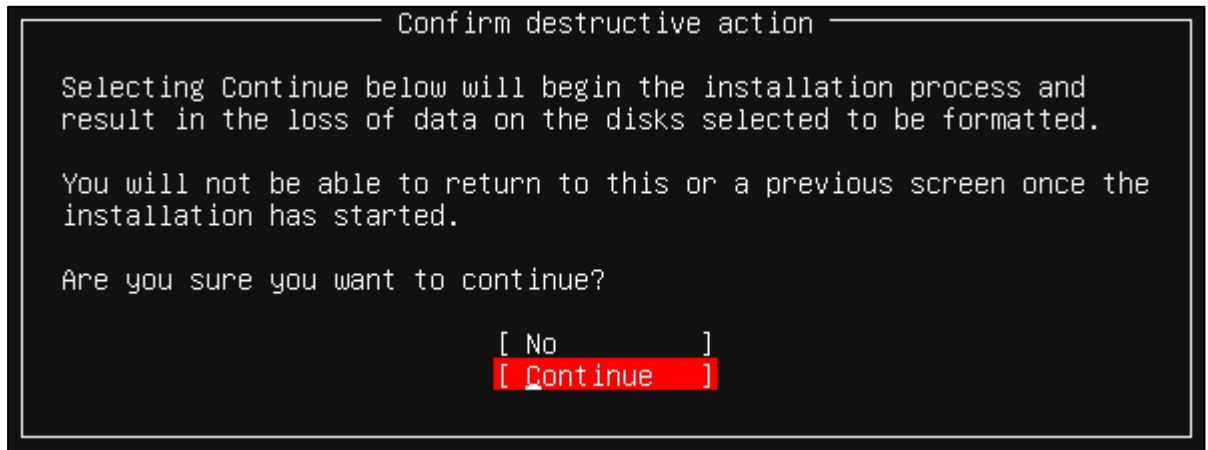
8. Memilih hardisk yng telah disiapkan



9. Review terhadap konfigurasi



10. Pilih *continue*



11. Melakukan konfigurasi akun *virtual OS*

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:

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

13. Proses instalasi berlangsung

```
Installing system

curtin command install
  preparing for installation
  configuring storage
    running 'curtin block-meta simple'
    curtin command block-meta
      removing previous storage devices
      configuring disk: disk-0
      configuring partition: part-0
      configuring partition: part-1
      configuring format: fs-0
      configuring mount: mount-0
  configuring network
    running 'curtin net-meta auto'
    curtin command net-meta
  writing install sources to disk
  running 'curtin extract'
  curtin command extract
    acquiring and extracting image from cp:///media/filesystem
  configuring installed system
  running 'curtin curthooks'
  curtin command curthooks
    configuring apt configuring apt
    installing missing packages
    configuring iscsi service
    configuring raid (mdadm) service
    installing kernel /
```

14. Tunggu hingga proses instalasi selesai

Tahap Pengoperasian

Beberapa operasi yang dilakukan, antara lain:

1. Melakukan *login* terhadap *virtual OS*

```
Ubuntu 18.10 jundi-server tty1

jundi-server login: jundi
Password: _
```

2. Tampilan saat setelah *login*

```
Last login: Thu Feb 13 07:36:12 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 07:37:43 UTC 2020

System load:  0.18               Processes:            198
Usage of /:   20.6% of 19.56GB   Users logged in:     0
Memory usage: 25%               IP address for ens33: 192.168.116.130
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.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
```

3. Menggunakan perintah `sudo su`, untuk pindah ke mode *super user* atau *administrator*

```
jundi@jundi-server:~$ sudo su
jundi[sudo] password for jundi:
```

4. Melakukan perubahan terhadap tampilan saat login, dengan perintah `nano /etc/motd`. Dan ketikkan pesan yang diinginkan

```
#####
#####
#####
#####
#####
#####
#####
```

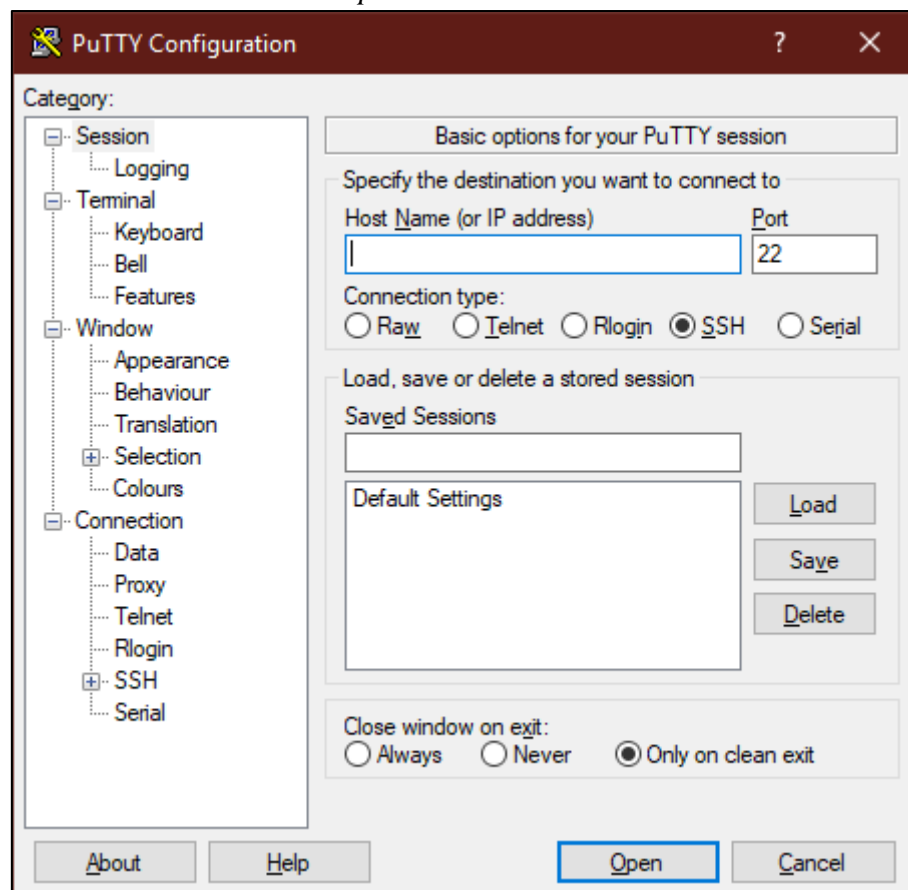

5. Melakukan cek *ip* pada *virtual OS*

```
jundi@jundi-server:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.116.130 netmask 255.255.255.0 broadcast 192.168.116.255
    inet6 fe80::20c:29ff:fe93:ec8a prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:93:ec:8a txqueuelen 1000 (Ethernet)
    RX packets 643 bytes 619457 (619.4 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 240 bytes 26947 (26.9 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

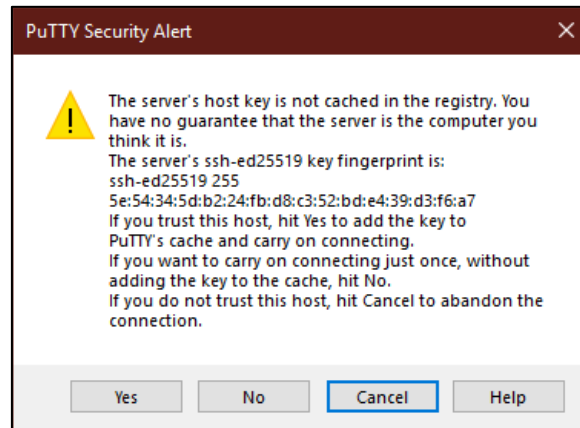
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 219 bytes 17254 (17.2 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 219 bytes 17254 (17.2 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

jundi@jundi-server:~$ _
```

6. Melakukan remote terhadap *virtual OS* menggunakan aplikasi *PuTTY* pada *OS Windows*. Masukkan IP lalu klik *Open*.



7. Pilih *Yes*



8. Lalu masukkan *username* dan *password* untuk *login*

```
jundi@jundi-server: ~  
login as: jundi  
jundi@192.168.116.130'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 07:53:30 UTC 2020  
  
System load:  0.06               Processes:            162  
Usage of /:   20.6% of 19.56GB   Users logged in:     1  
Memory usage: 26%               IP address for ens33: 192.168.116.130  
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.
```

DOKUMENTASI

1. `ls`
2. `mkdir pertemuan-2`
3. `ls -l`

```
jundi@jundi-server: ~  
jundi@jundi-server:~$ ls  
jundi@jundi-server:~$ mkdir pertemuan-2  
jundi@jundi-server:~$ ls -l  
total 4  
drwxrwxr-x 2 jundi jundi 4096 Feb 13 07:58 pertemuan-2  
jundi@jundi-server:~$
```

4. `cp -r pertemuan-2 pertemuan-1`
5. `ls`

```
jundi@jundi-server: ~  
jundi@jundi-server:~$ ls  
jundi@jundi-server:~$ mkdir pertemuan-2  
jundi@jundi-server:~$ ls -l  
total 4  
drwxrwxr-x 2 jundi jundi 4096 Feb 13 07:58 pertemuan-2  
jundi@jundi-server:~$ cp -r pertemuan-2 pertemuan-1  
jundi@jundi-server:~$ ls  
pertemuan-1  pertemuan-2  
jundi@jundi-server:~$
```

6. `mv pertemuan-2 "pertemuan 2 LAMPP"`
7. `ls`

```
jundi@jundi-server: ~  
jundi@jundi-server:~$ ls  
jundi@jundi-server:~$ mkdir pertemuan-2  
jundi@jundi-server:~$ ls -l  
total 4  
drwxrwxr-x 2 jundi jundi 4096 Feb 13 07:58 pertemuan-2  
jundi@jundi-server:~$ cp -r pertemuan-2 pertemuan-1  
jundi@jundi-server:~$ ls  
pertemuan-1  pertemuan-2  
jundi@jundi-server:~$ mv pertemuan-  
pertemuan-1/ pertemuan-2/  
jundi@jundi-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"  
jundi@jundi-server:~$ ls  
pertemuan-1  'pertemuan 2 LAMPP'  
jundi@jundi-server:~$
```

8. `cd "pertemuan 2 (lalu tab lalu enter)`

```
jundi@jundi-server: ~  
jundi@jundi-server:~$ cd "pertemuan 2 LAMPP"/
```

```
jundi@jundi-server: ~/pertemuan 2 LAMPP  
jundi@jundi-server:~$ cd "pertemuan 2 LAMPP"/  
jundi@jundi-server:~/pertemuan 2 LAMPP$
```

9. nano biodata.txt

```
GNU nano 2.9.8 biodata.txt
123170029
```

10. ls -l

```
jundi@jundi-server:~/pertemuan 2 LAMPP$ ls -l
total 0
-rw-rw-r-- 1 jundi jundi 0 Feb 13 08:03 biodata.txt
jundi@jundi-server:~/pertemuan 2 LAMPP$
```

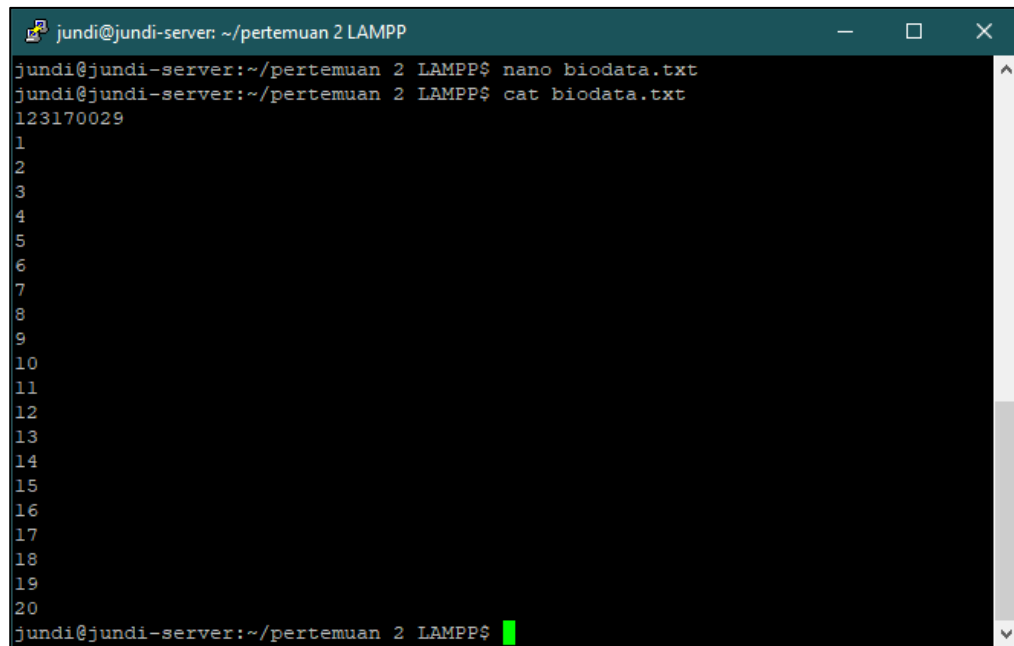
11. cat biodata.txt

```
jundi@jundi-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170029
jundi@jundi-server:~/pertemuan 2 LAMPP$
```

12. nano biodata.txt

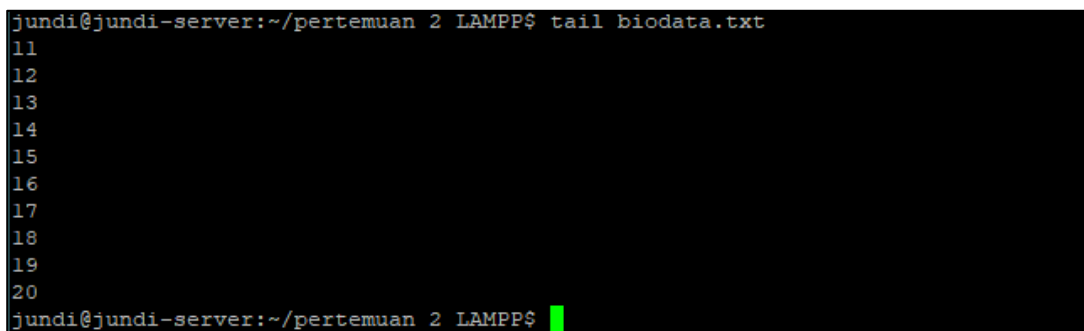
```
jundi@jundi-server: ~/pertemuan 2 LAMPP
GNU nano 2.9.8 biodata.txt
1 123170029
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
[ Read 21 lines ]
^G Get Help  ^O Write Out ^W Where Is  ^K Cut Text  ^J Justify   ^C Cur Pos
^X Exit      ^R Read File ^\ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line
```

13. cat biodata.txt

A terminal window titled 'jundi@jundi-server: ~/pertemuan 2 LAMPP'. The user has executed 'nano biodata.txt' and 'cat biodata.txt'. The output shows the first 20 lines of the file, which are numbers 1 through 20. The cursor is on the 21st line, ready for input.

```
jundi@jundi-server: ~/pertemuan 2 LAMPP
jundi@jundi-server:~/pertemuan 2 LAMPP$ nano biodata.txt
jundi@jundi-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170029
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
jundi@jundi-server:~/pertemuan 2 LAMPP$
```

14. tail biodata.txt

A terminal window showing the output of the 'tail biodata.txt' command. It displays the last 10 lines of the file, which are numbers 11 through 20. The cursor is on the 21st line, ready for input.

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

- ls = menampilkan isi pada sebuah folder
- mkdir = membuat direktori
- ls -l = menampilkan isi dengan tampilan list
- cp = melakukan copy
- mv = mengubah nama file/folder
- cd = mengubah posisi direktori
- nano = editor file di linux
- cat = menampilkan tulisan yang ada dalam file
- tail = menampilkan bagian akhir dari file