

## Pertemuan 2 TCC

### Pengenalan VMWare Workstation dan Linux OS

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#### 1. Pengantar

Membuat Layanan Hosting (Saas) Private Cloud

- a. Apache
- b. MySQL
- c. PHP
- d. PHPmyadmin

#### 2. Pengenalan VMWare

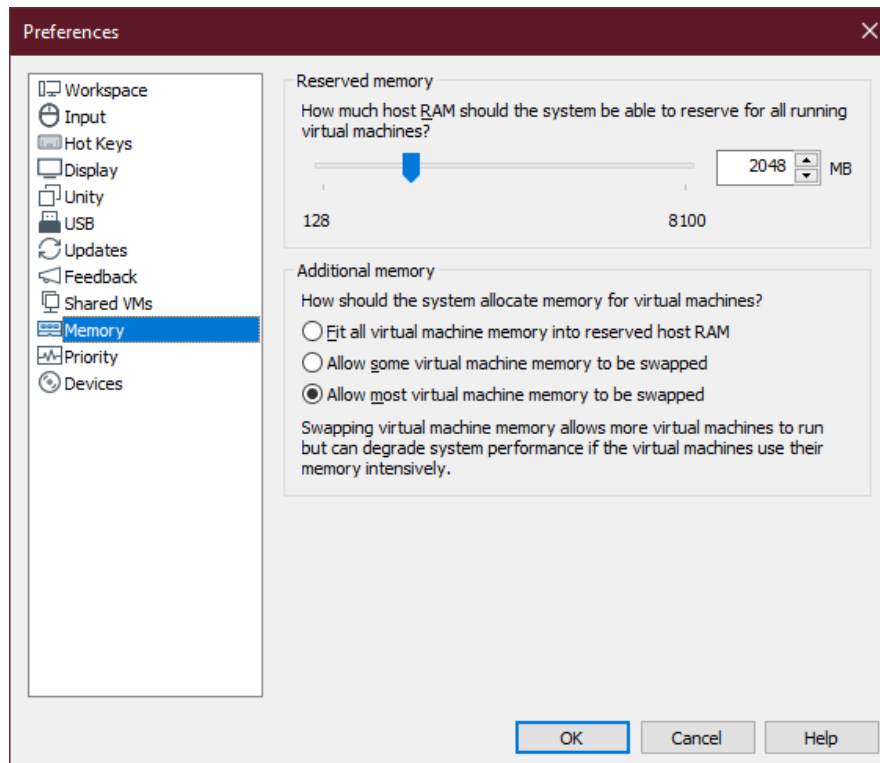
VMware digunakan untuk virtualisasi sistem operasi. Virtualisasi = kegiatan untuk menciptakan versi maya(virtual) dari sesuatu, misal hardware, storage, dan resource dari komputer.

Conceptual :

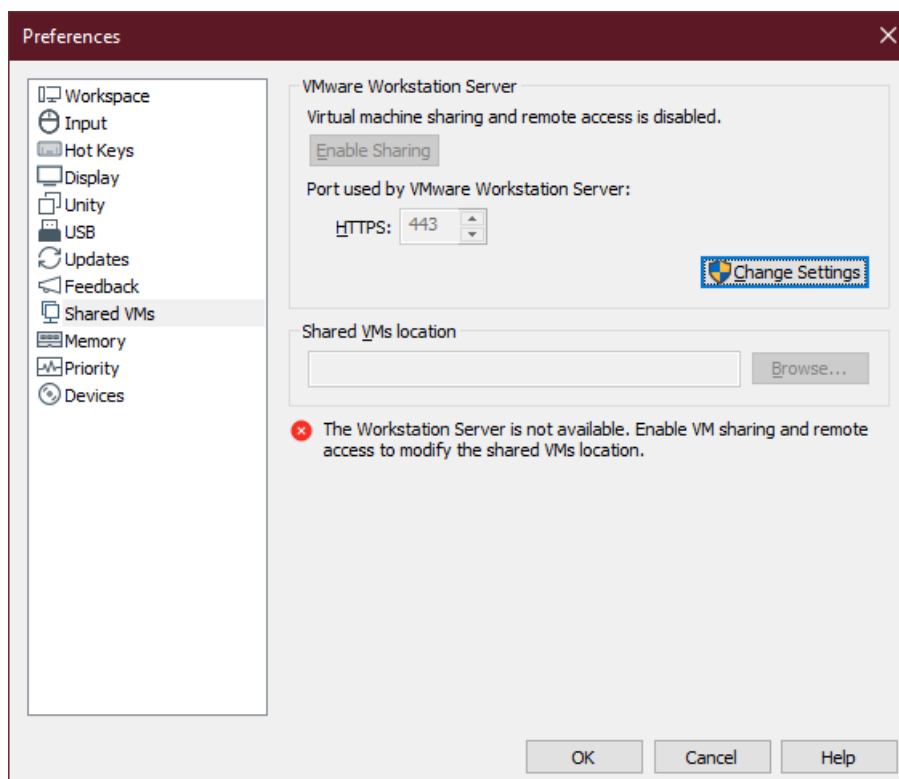
- a. Hardware Fisik
- b. OS Pada Komputer
- c. Aplikasi VMware
- d. Virtual OS

#### Swapping

Bila komputer memiliki memory terbatas, maka perlu dilakukan swapping. Misal host memiliki 4 GB RAM, dan diperlukan 8GB RAM untuk instalasi. Maka dengan dilakukan swapping. Caranya dengan Edit → Preferences → Memory



Untuk instalasi dengan default setting, dapat berpengaruh pada aplikasi xampp yang sama-sama memakai port 443, untuk memecahkan masalah tersebut dengan Edit→Preferences→Shared VM's kemudian disable.

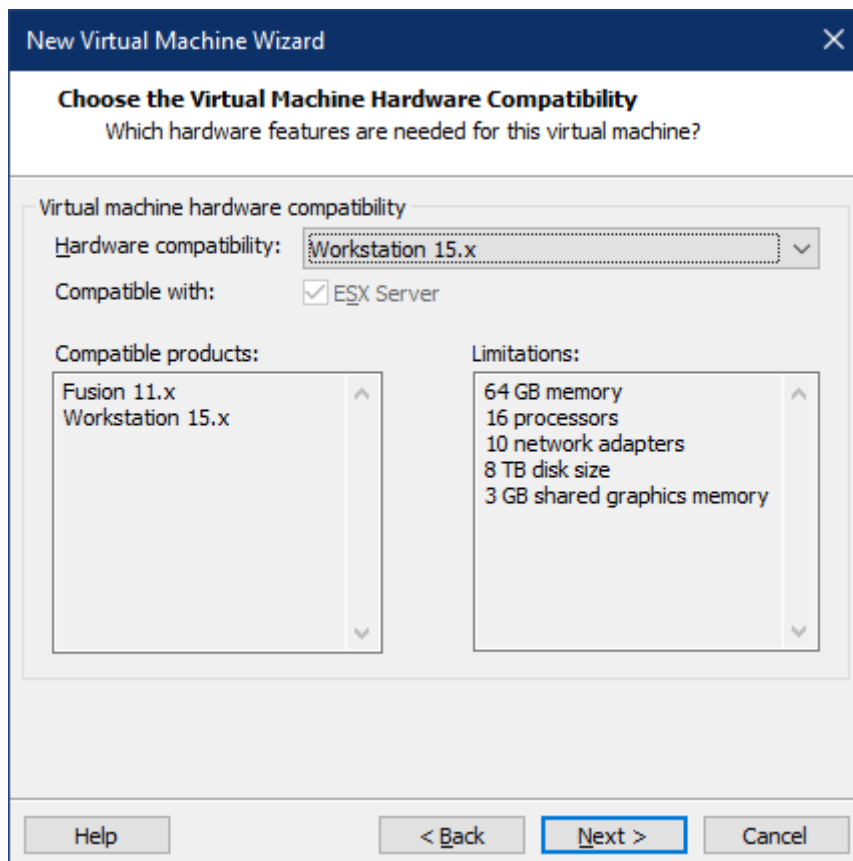


3. Linux OS (Ubuntu)
  - a. Persiapan Kebutuhan Instalasi

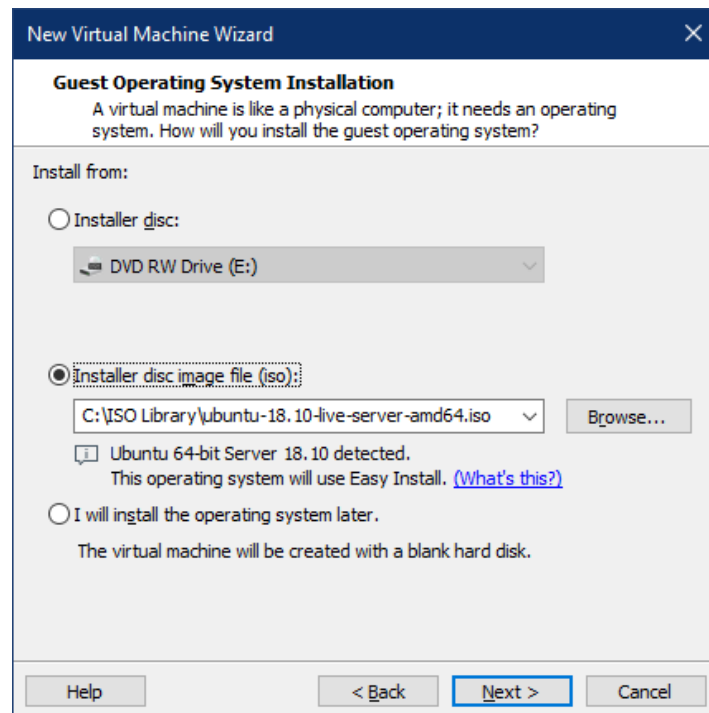
Iso : Ubuntu18.10
  - b. Tahapan Instalasi Virtual OS Ubuntu
    1. Create New ➔ Custom



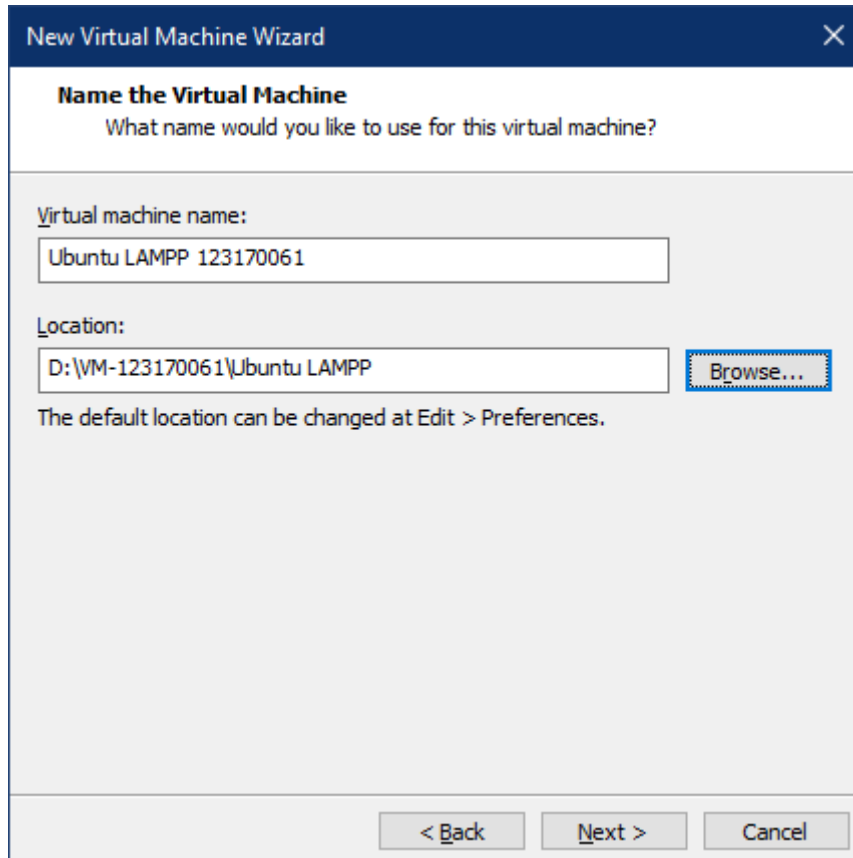
2. Melakukan compability antara VM dan OS yang akan kita install



3. Kemudian pilih file.iso dari OS ubuntu dalam PC dengan klik browse.  
Easy install = pengintalan



4. Kemudian isi nama, dan password. Lalu buat virtual machine sesuai dengan ketentuan.



5. Pemakaian Processor : 2, core : 1

The screenshot shows the 'New Virtual Machine Wizard' window, specifically the 'Processor Configuration' step. The title bar reads 'New Virtual Machine Wizard' with a close button. Below the title bar, the section is titled 'Processor Configuration' with the instruction 'Specify the number of processors for this virtual machine.' The main area contains a 'Processors' section with three labels and corresponding dropdown menus: 'Number of processors:' set to '2', 'Number of cores per processor:' set to '1', and 'Total processor cores:' showing '2'. At the bottom, there are four buttons: '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

6. Memakai RAM 1 GB

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' with a close button. Below the title bar, the section is titled 'Memory for the Virtual Machine' with the instruction 'How much memory would you like to use for this virtual machine?'. The main area contains a text box stating 'Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.' Below this, there is a vertical slider on the left with memory values ranging from 4 MB to 64 GB. A blue arrow points to the '1 GB' mark on the slider. To the right of the slider, there is a text box labeled 'Memory for this virtual machine:' with a value of '1024' and 'MB'. Below this, there are three lines of text with colored squares: a blue square for 'Maximum recommended memory: 2 GB', a green square for 'Recommended memory: 2 GB', and a yellow square for 'Guest OS recommended minimum: 1 GB'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

New Virtual Machine Wizard

**Memory for the Virtual Machine**  
How much memory would you like to use for this virtual machine?

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: 1024 MB

Maximum recommended memory: 2 GB

Recommended memory: 2 GB

Guest OS recommended minimum: 1 GB

Help < Back Next > Cancel

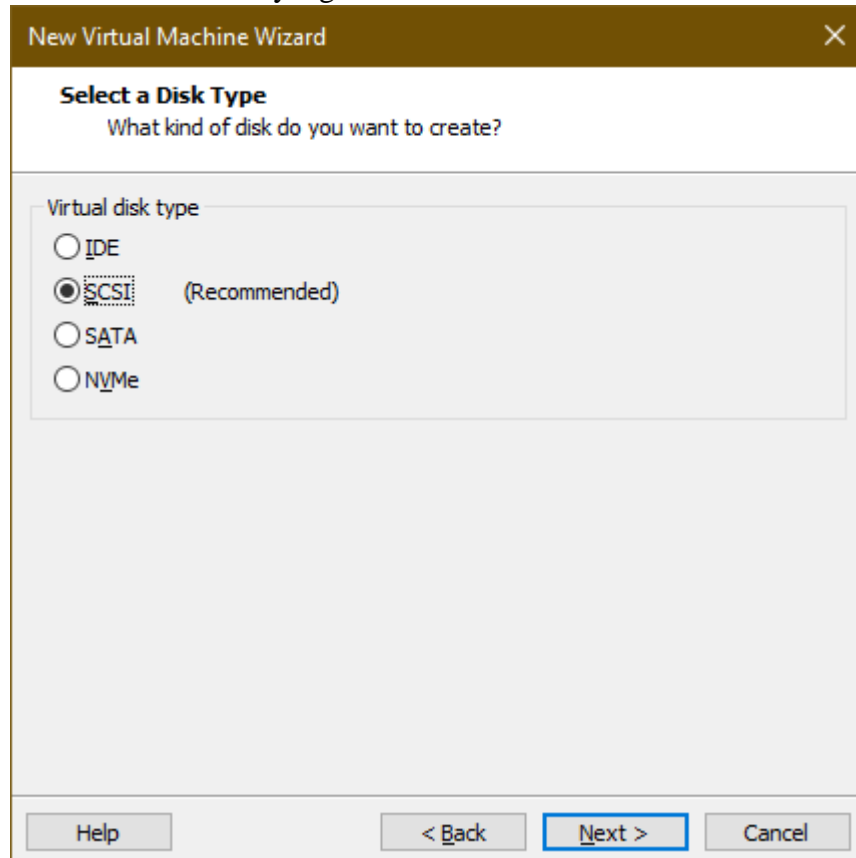
7. Memakai jaringan NAT, dapat diakses oleh host

The screenshot shows the 'New Virtual Machine Wizard' dialog box, specifically the 'Network Type' step. The title bar reads 'New Virtual Machine Wizard' with a close button. The main heading is 'Network Type' with the subtitle 'What type of network do you want to add?'. Below this, there is a section titled 'Network connection' containing four radio button options: 'Use bridged networking' (with a description about direct access to an external Ethernet network), 'Use network address translation (NAT)' (which is selected and has a description about using the host's IP address), 'Use host-only networking' (with a description about a private virtual network), and 'Do not use a network connection'. At the bottom, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

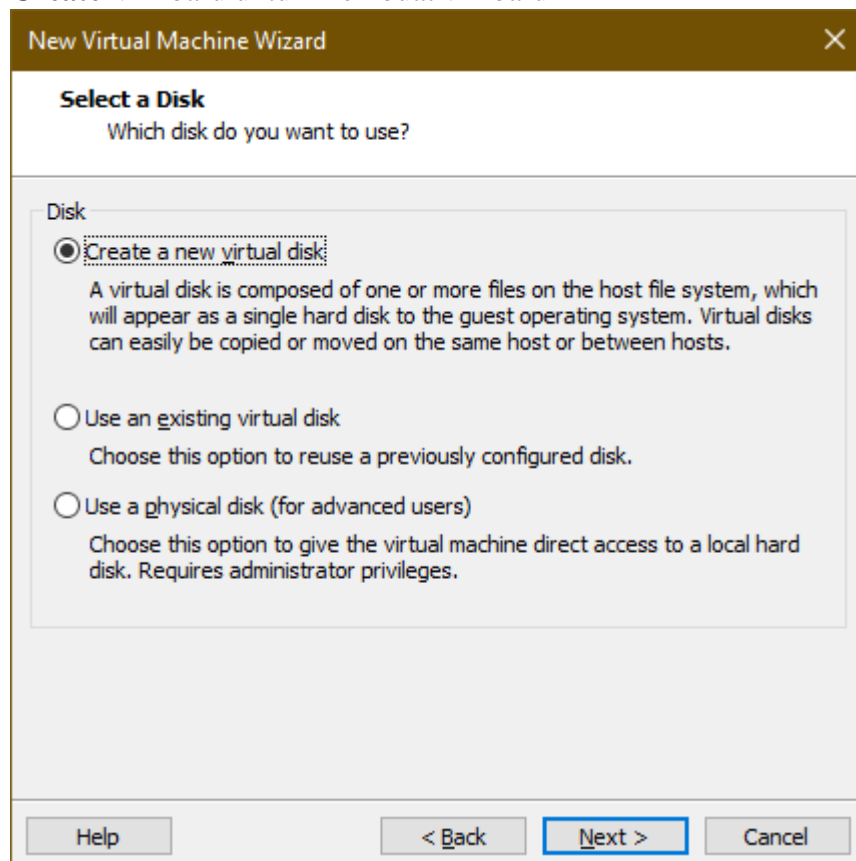
8. LSA Logic untuk inpput output

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

9. SCSI untuk versi os yang terbaru dan universal



10. Create VM baru untuk membuat vm baru



11. Menentukan banyaknya disk dan memilih cara store datanya

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

## 12. Mengkonfirmasi Hardisk

New Virtual Machine Wizard

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

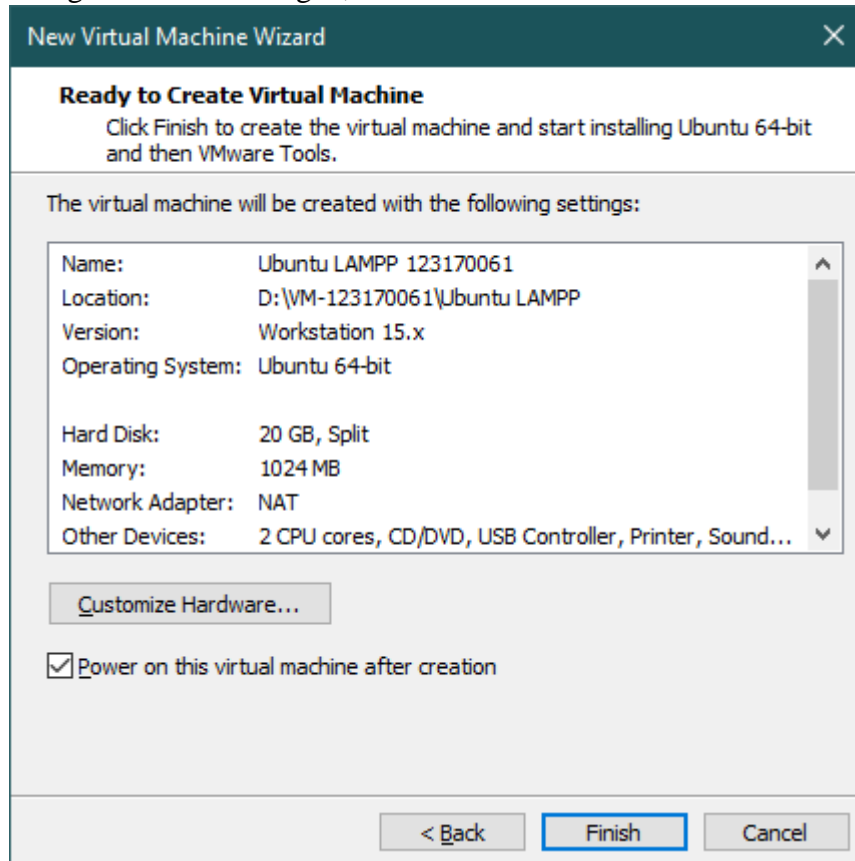
Disk file  
A 20 GB virtual disk be created using multiple disk files. The disk files will be automatically named based on this file name.

Browse...

Help < Back Next > Cancel

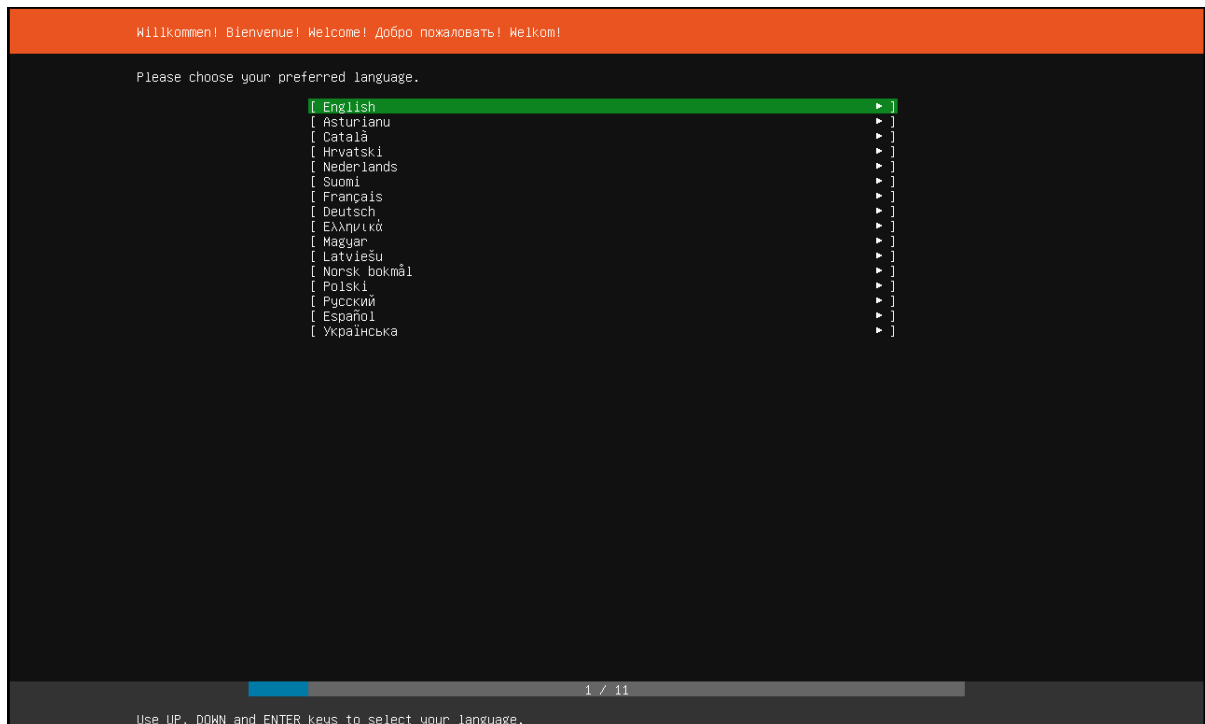


### 13. Mengkonfirmasi Setingan, kemudian klik finish

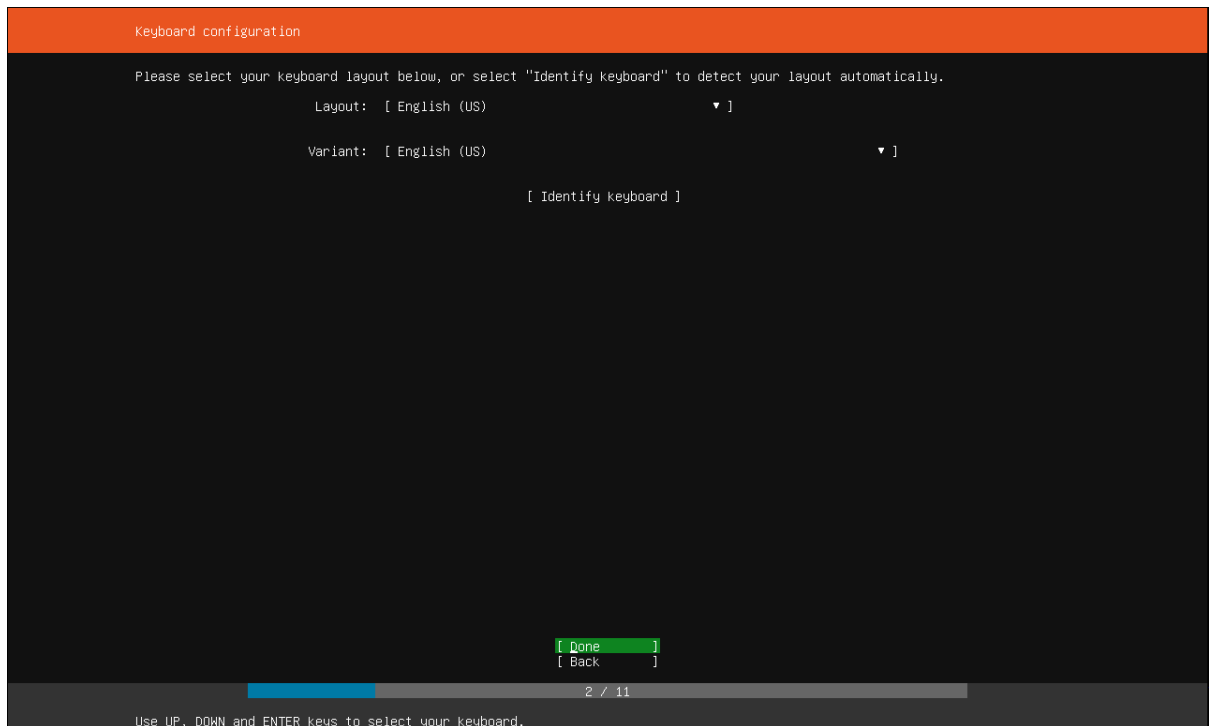


### c. Tahapan Instalasi Virtual OS Ubuntu

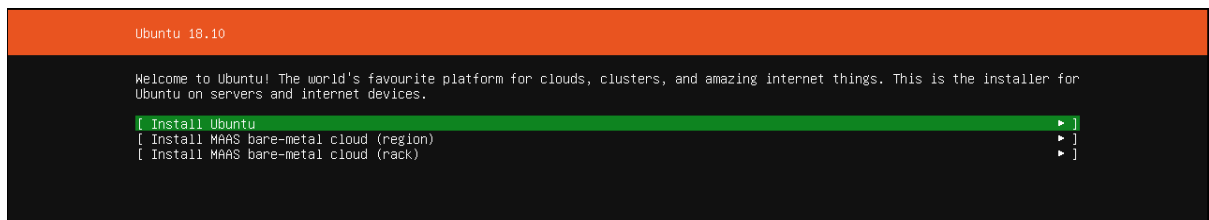
#### 1. Pilih Bahasa



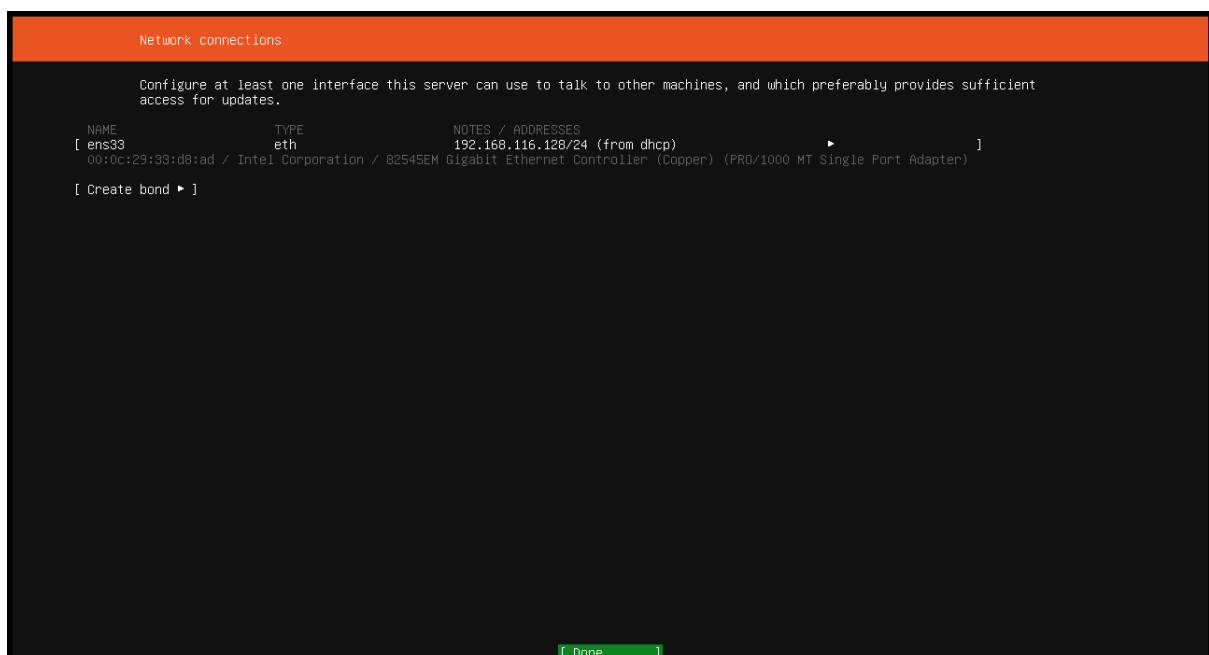
#### 2. Pilih Keyboard



### 3. Pilih Install Ubuntu



### 4. NAT memunculkan IP



## 5. Settingan sesuai jaringan, kalau tidak perlu dikosongi

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. Menampilkan repo ubuntu default, langsung next

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. S

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 letak instalasi

Filesystem setup

The selected guided partitioning scheme creates the required bootloader partition on the chosen disk and then creates a single partition covering the rest of the disk, formatted as ext4 and mounted at '/'.  
Choose the disk to install to:

[ /dev/sda 20,000G ▶ ]

## 9. Konfirmasi instalasi setup

```
Filesystem setup

FILE SYSTEM SUMMARY

MOUNT POINT      SIZE  TYPE  DEVICE TYPE
[ /              19.997G  ext4  partition of local disk ► ]

AVAILABLE DEVICES

No available devices

[ Create software RAID (md) ► ]
[ Create volume group (LVM) ► ]

USED DEVICES

DEVICE           SIZE  TYPE
[ /dev/sda       20.000G  local disk ► ]
[ partition 1    1.000M  (0%) ► ]
  bios_grub
[ partition 2    19.997G  (99%) ► ]
  formatted as ext4, mounted at /
```

10. Input nama, nama server, username, dan password untuk os yang akan kita buat.

Profile setup

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

Your name: Arif Suryanto\_

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

Pick a username: arif

Choose a password: \*\*\*

Confirm your password: \*\*\*

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

Import Username:

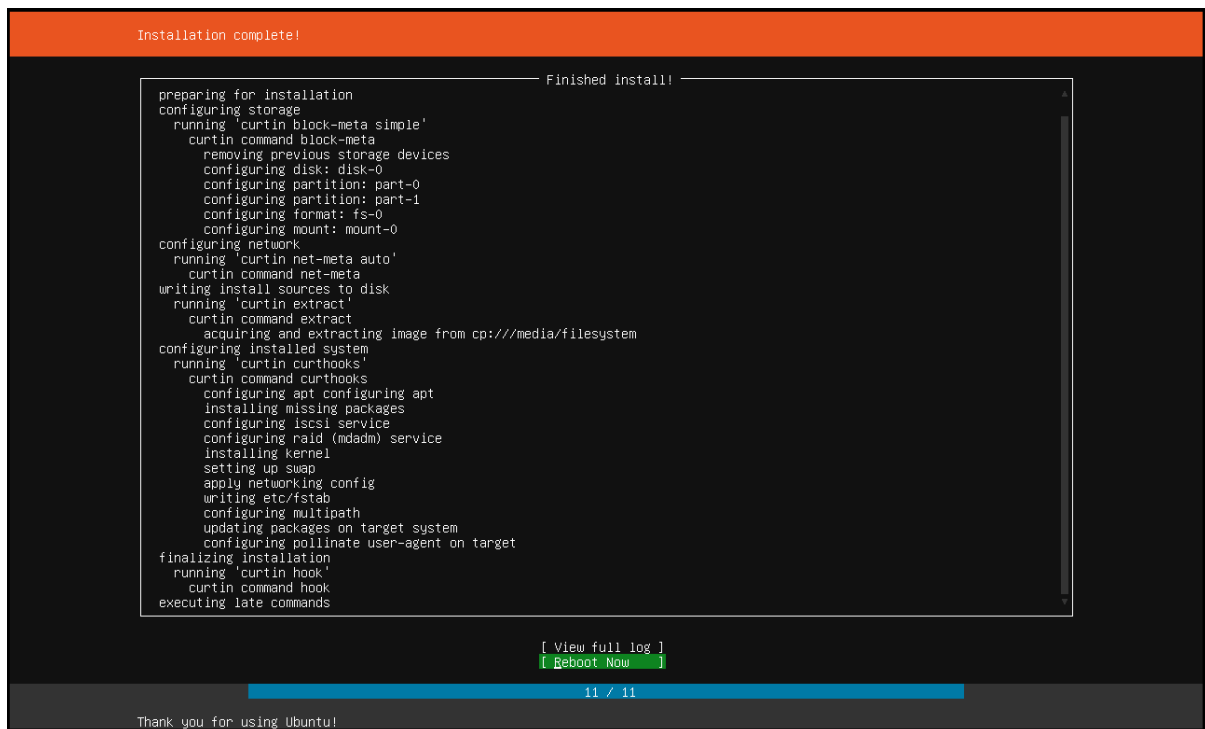
11. Pemilihan tambahan aplikasi baru

## 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-livepatch	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	snappcrafters	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.

## 12. Menunggu instalasi



## 13. Setelah selesai installing, reboot. Kemudian input user dan password

```

Ubuntu 18.10 arif-server tty1
arif-server login: arif
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 07:33:59 UTC 2020

System load:  0.42           Processes:            200
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.

arif@arif-server:~$ _

```

#### d. Penggunaan OS

1. Sudo su , berpindah akun menjadi root. Kemudian untuk kembali ketikkan exit.

```

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

```

2. Mnegedit pesan awal dengan nano

```

root@arif-server:/home/arif# nano /etc/motd_

```

3. Kemudian save dengan CTRL-O dan quit dengan CTRL-X

```

May your day always sparkle
arif@arif-server:~$ _

```

4. Untuk cek ip dari ens ketika login dan ketikkan ifconfig

```

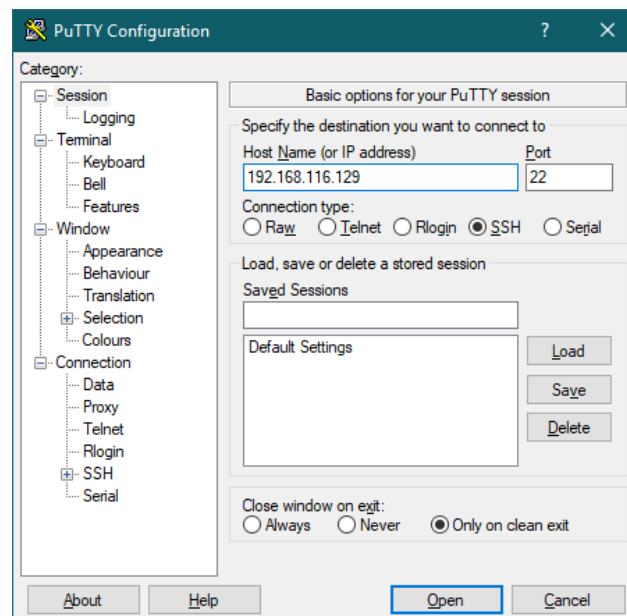
root@arif-server:/home/arif# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.116.129 netmask 255.255.255.0 broadcast 192.168.116.255
    inet6 fe80::20c:29ff:fe33:d8ad prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:33:d8:ad txqueuelen 1000 (Ethernet)
    RX packets 297 bytes 69392 (69.3 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 134 bytes 19347 (19.3 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 224 bytes 17568 (17.5 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 224 bytes 17568 (17.5 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

root@arif-server:/home/arif# _

```

5. Kemudian untuk akses dapat dilakukan dengan aplikasi putty, isi hostname sesuai dengan alamat ip di VMware tadi



6. Login sesuai username password tadi

```

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

System information as of Thu Feb 13 07:51:37 UTC 2020

System load:  0.0          Processes:      164
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.

May your day always sparkle
Last login: Thu Feb 13 07:46:06 2020
arif@arif-server:~$

```

# EVALUASI

1. Ls = menampilkan folder dalam direktori terpilih

```
arif@arif-server:~$ ls
arif@arif-server:~$
```

2. Mkdir pertemuan-2 = membuat direktori / folder pertemuan-2

```
arif@arif-server: ~
arif@arif-server:~$ mkdir pertemuan-2
arif@arif-server:~$
```

3. Ls -l = menampilkan semua file dan folder dalam direktori terpilih secara detail beserta hak akses file/folder tersebut

```
arif@arif-server: ~
arif@arif-server:~$ ls -l
total 4
drwxrwxr-x 2 arif arif 4096 Feb 13 07:56 pertemuan-2
arif@arif-server:~$
```

4. cp -r pertemuan-2 pertemuan-1 = melakukan copy folder dari pertemuan-2 menjadi pertemuan-1, -r untuk membuat folder bila belum ada

```
arif@arif-server: ~
arif@arif-server:~$ cp -r pertemuan-2 pertemuan-1
arif@arif-server:~$
```

5. ls : menampilkan folder yang ada.

```
arif@arif-server:~$ ls
pertemuan-1  pertemuan-2
arif@arif-server:~$
```

6. mv pertemuan-2 "pertemuan 2 LAMPP"

Untuk memindahkan / mengganti folder pertemuan-2 ke pertemuan 2 lampp

```
arif@arif-server:~$ mv pertemuan-2 "pertemuan 2 LAMPP"
arif@arif-server:~$
```



7. ls = menampilkan folder yang di direktori terpilih, dan dapat terlihat fungsi mv tadi

```
arif@arif-server:~$ ls
pertemuan-1  'pertemuan 2 LAMPP'
arif@arif-server:~$
```

8. Cd “pertemuan 2” tab enter

Fungsi cd untuk berpindah direktori / folder, tab untuk melakukan auto complete

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

9. Nano biodata.txt

Berfungsi untuk membuat file biodata.txt dan langsung masuk ke text editor nano

```
arif@arif-server:~/pertemuan 2 LAMPP$ nano biodata.txt
```

10. Ls -l

Menampilkan semua file dan folder dalam direktori terpilih secara detail beserta hak akses file/folder tersebut. Dapat dilihat biodata.txt ditampilkan detailnya

```
arif@arif-server:~/pertemuan 2 LAMPP$ ls -l
total 4
-rw-rw-r-- 1 arif arif 10 Feb 13 08:06 biodata.txt
arif@arif-server:~/pertemuan 2 LAMPP$
```

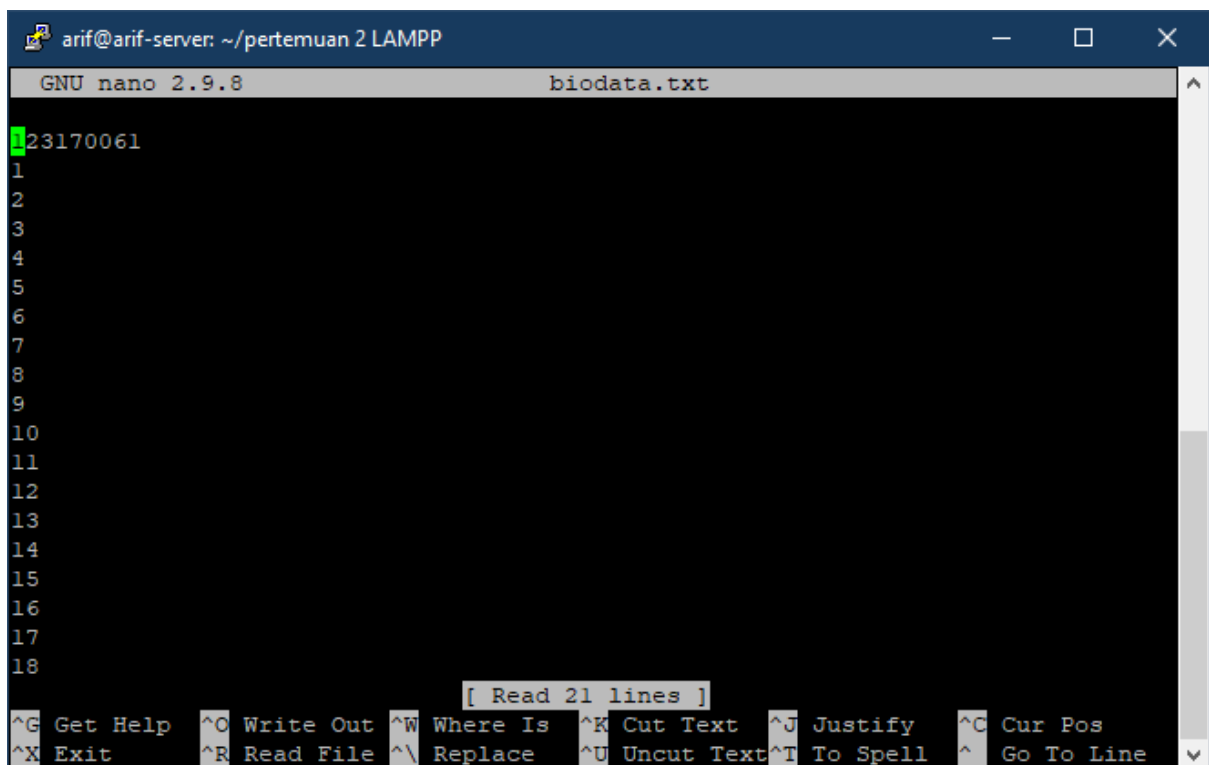
11. Cat biodata.txt

Menampilkan isi dari file biodata.txt

```
arif@arif-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170061
arif@arif-server:~/pertemuan 2 LAMPP$
```

## 12. Nano biodata.txt

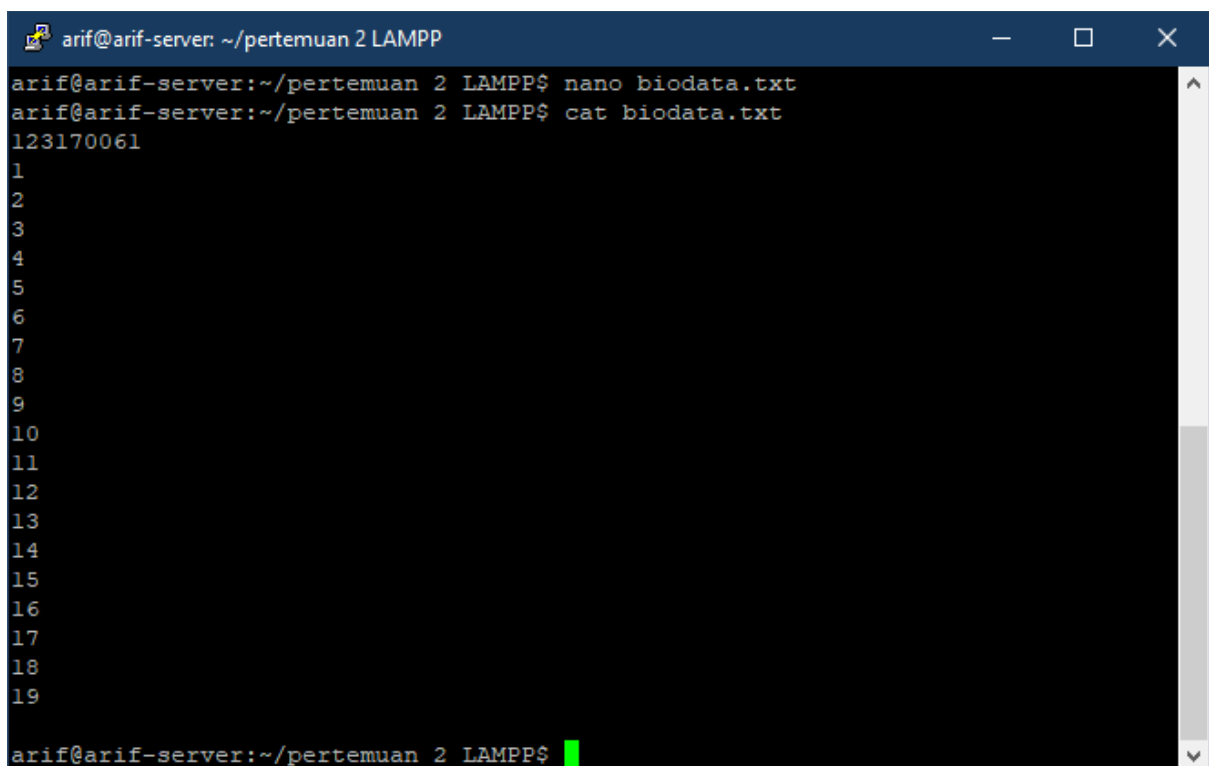
Berfungsi untuk mengedit file biodata.txt dan langsung masuk ke text editor nano



```
arif@arif-server: ~/pertemuan 2 LAMPP
GNU nano 2.9.8 biodata.txt
123170061
1
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

Menampilkan isi dari file biodata.txt



```
arif@arif-server: ~/pertemuan 2 LAMPP
arif@arif-server:~/pertemuan 2 LAMPP$ nano biodata.txt
arif@arif-server:~/pertemuan 2 LAMPP$ cat biodata.txt
123170061
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
arif@arif-server:~/pertemuan 2 LAMPP$
```

#### 14. Tail biodata.txt

Menampilkan segmen data biodata.txt dari paling bawah.

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

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