

LAPORAN INSTAL DEBIAN 9.6 dan SETTING IP ADDRESS



Disusun Oleh :

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NIS/No Absen : 21658/08

Kelas : XI TJKT 2

JURUSAN TEKNIK JARINGAN KOMPUTER DAN TELEKOMUNIKASI

SEKOLAH MENENGAH KEJURUAN NEGERI 2 PENGASIH

D.I.YOGYAKARTA

2024/2025

A. Tujuan

1. Siswa dapat menginstal Debian 9.6 berbasis linux menggunakan VMware
2. Siswa dapat melakukan setting IP Address server dan client
3. Siswa dapat menguji IP Address server, client, dan OS lainnya

B. Landasan Teori

VMware adalah sebuah perusahaan teknologi yang spesialis dalam bidang virtualisasi dan cloud computing. Didirikan pada tahun 1998, VMware menawarkan solusi perangkat lunak yang memungkinkan pengguna untuk menjalankan beberapa sistem operasi pada satu perangkat keras fisik melalui konsep virtualisasi.

Debian 9.6, juga dikenal dengan nama kode "Stretch," adalah versi pembaruan dari distribusi Linux Debian yang dirilis pada 10 November 2018. Versi ini merupakan bagian dari siklus rilis Debian 9 yang dimulai pada Juni 2017. Debian 9.6 mencakup berbagai pembaruan dan perbaikan keamanan untuk paket-paket yang ada dalam repositori Debian. Sejak dirilis, Debian 9.6 telah menerima pembaruan keamanan dan pemeliharaan hingga Juli 2020, ketika dukungan jangka panjangnya berakhir. Setelah itu, pengguna dianjurkan untuk melakukan upgrade ke versi yang lebih baru, yaitu Debian 10 "Buster" atau versi yang lebih baru. Debian 9.6 tetap menjadi pilihan yang baik untuk pengguna yang memerlukan sistem operasi yang stabil dan dapat diandalkan, terutama dalam lingkungan server dan pengembangan perangkat lunak.

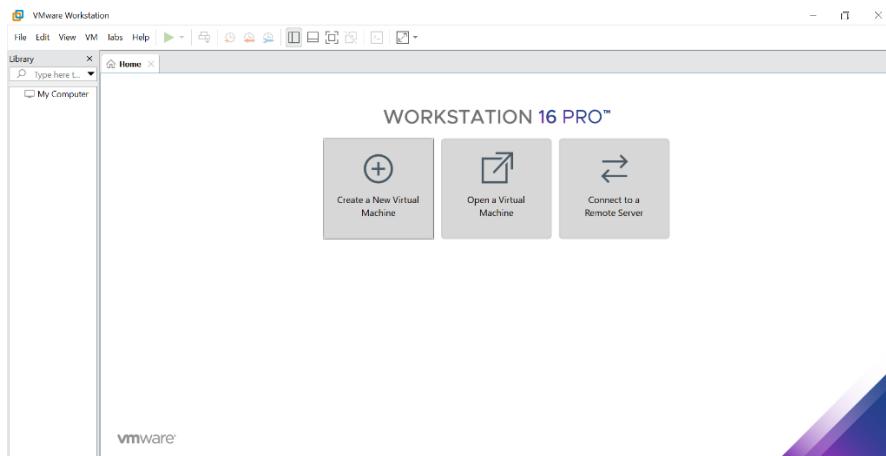
IP Address adalah serangkaian angka unik yang digunakan untuk mengidentifikasi dan membedakan setiap perangkat yang terhubung ke jaringan komputer, baik jaringan internet maupun local

C. Alat dan Bahan

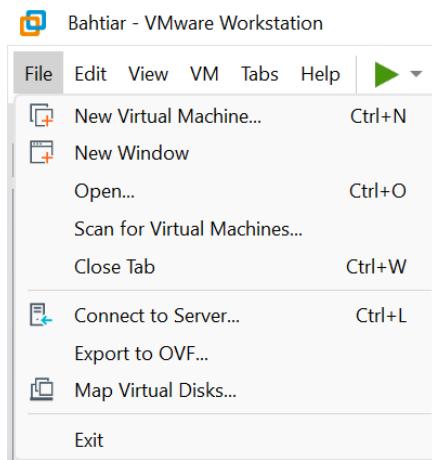
1. Komputer/Laptop
2. VMware Workstation Pro
3. File ISO Debian 9.6
4. Control Panel

D. Langkah Langkah Membuat Virtual Machine Server di VMware Workstation Pro

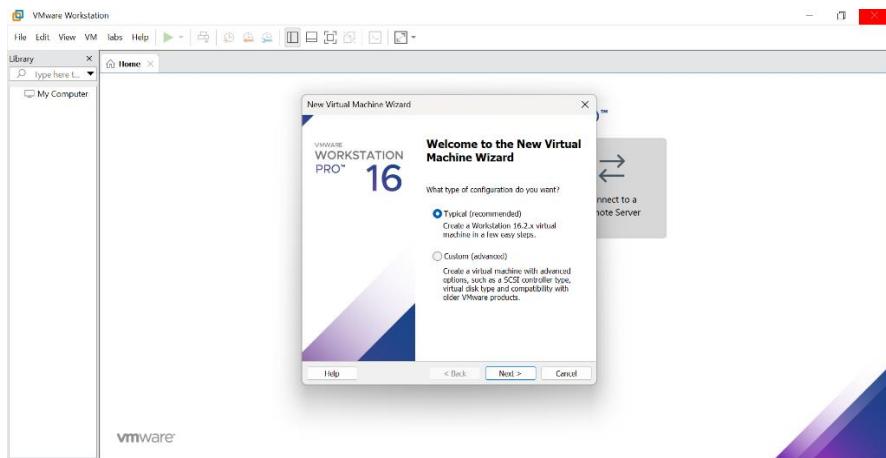
1. Buka VMware Workstation Pro



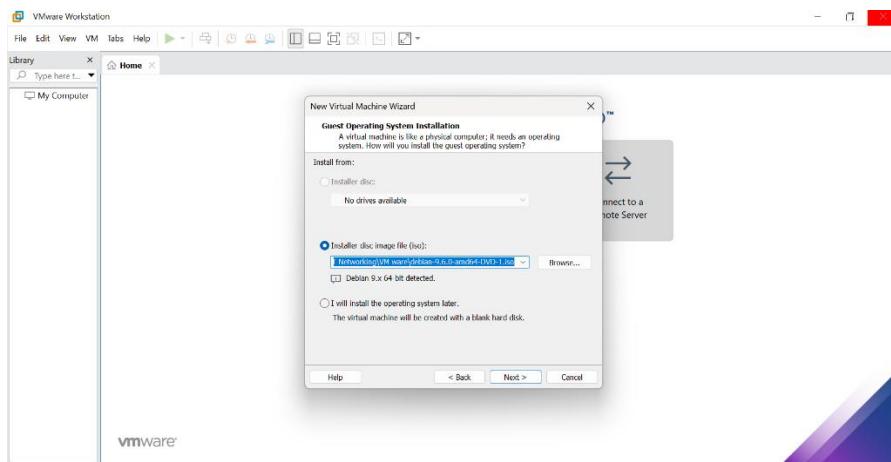
2. Klik New Virtual Machine atau Ctrl+N untuk membuat virtual machine baru



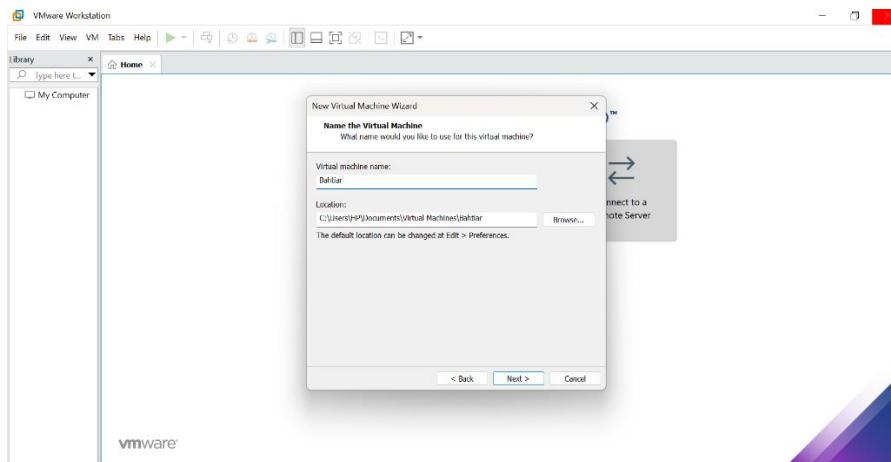
3. Pilihlah Typical lalu klik next



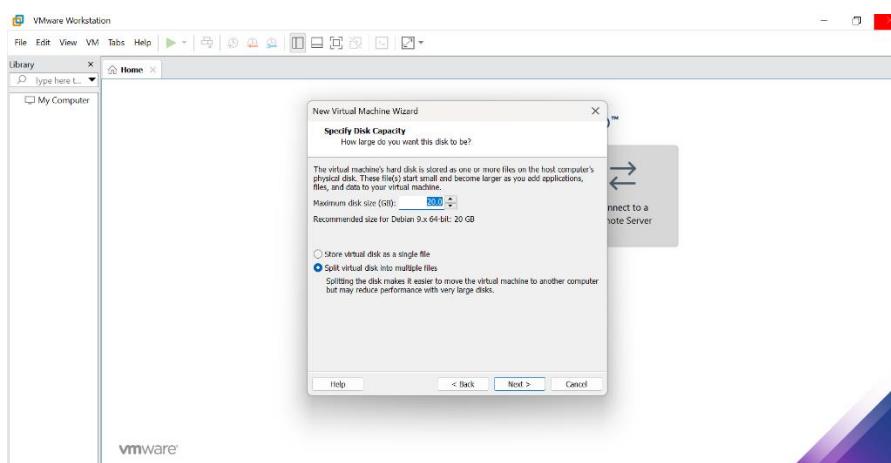
4. Pilih file Debian 9.6 lalu klik next



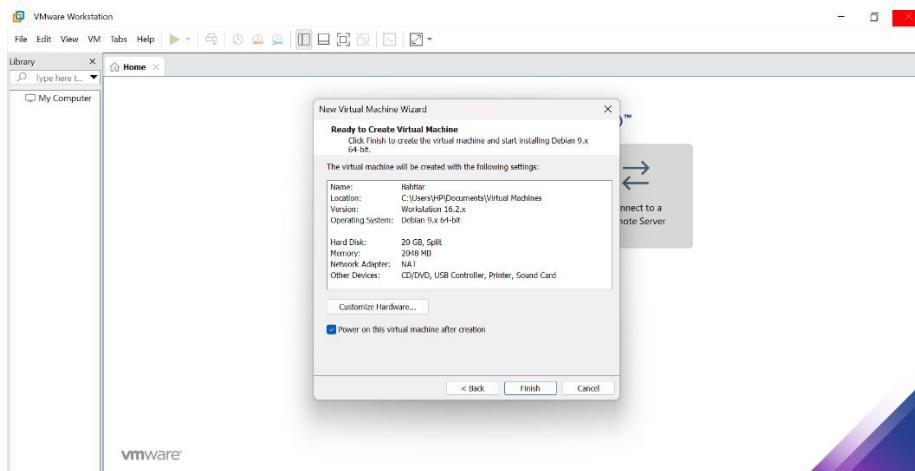
5. Beri nama virtual machine dan pilih lokasi untuk menyimpan lalu klik next



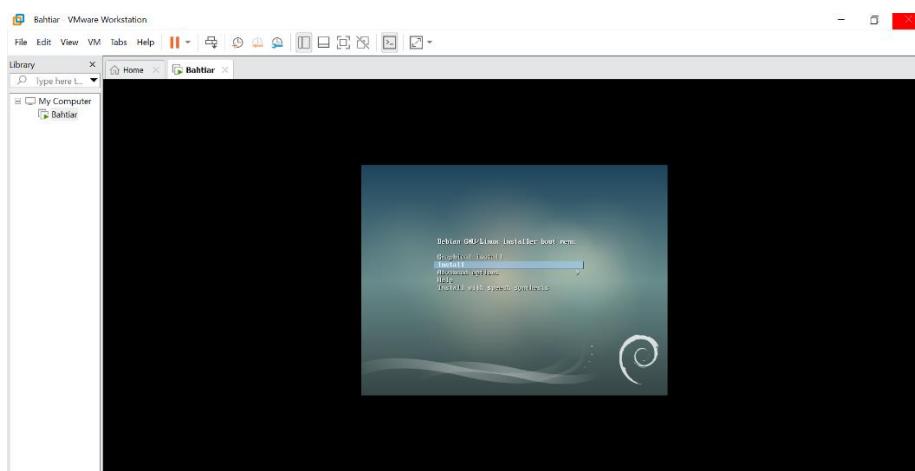
6. Isi maximum disk size sesuai yang dibutuhkan dan split virtual disk into multiple files lalu klik next



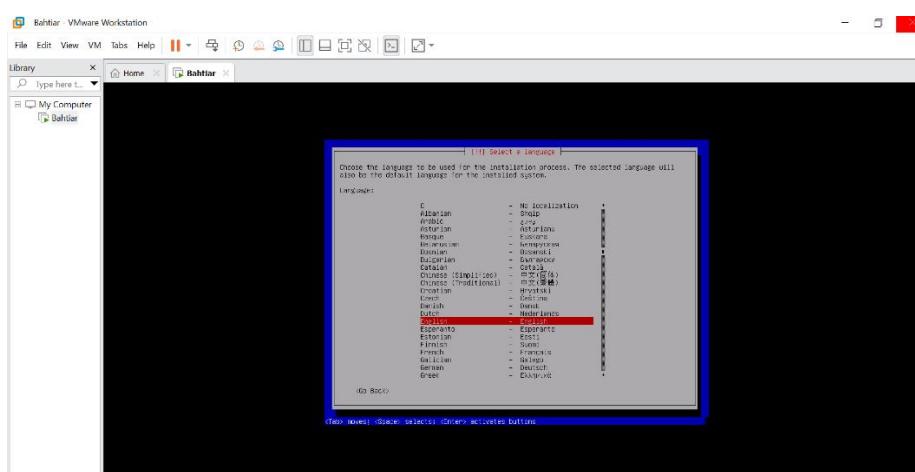
7. Membuat virtual machine sudah selesai lalu klik finish



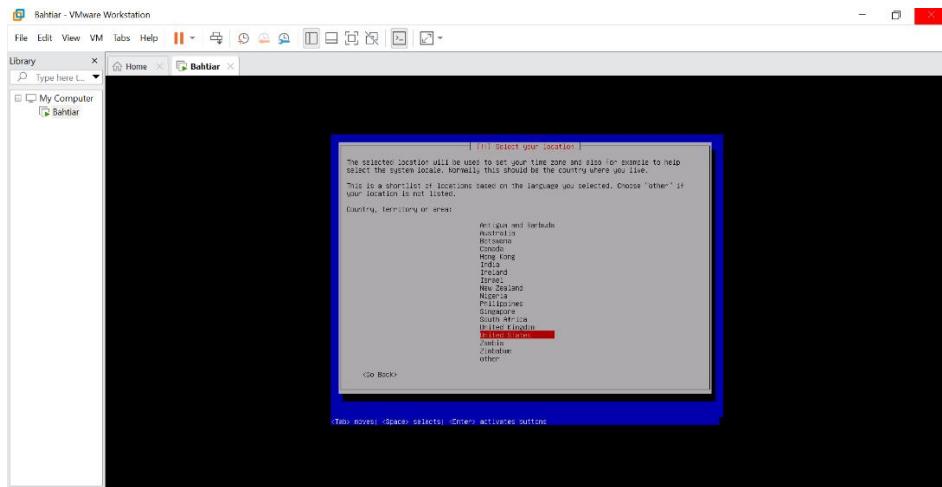
- Setelah itu nyalakan virtual machine, pilih instal untuk virtual machine server (CLI) lalu enter



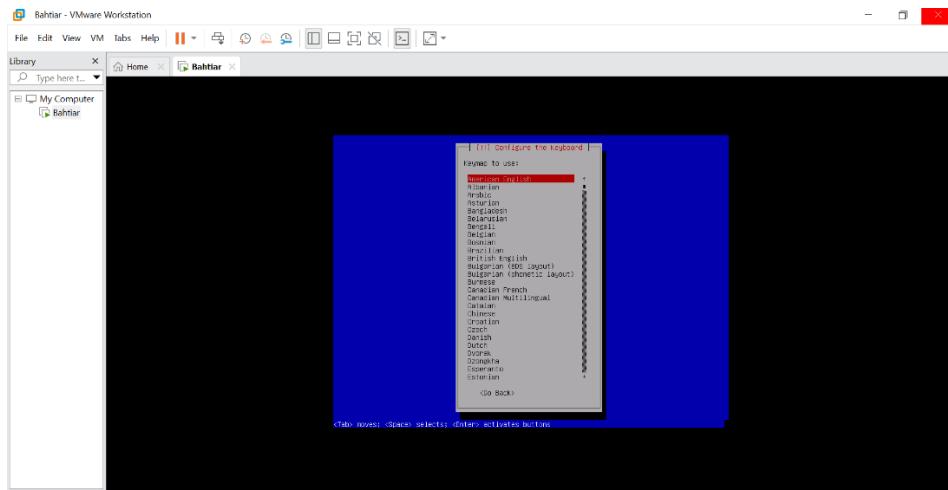
9. Pilihlah bahasa yang ingin digunakan untuk menginstal lalu enter



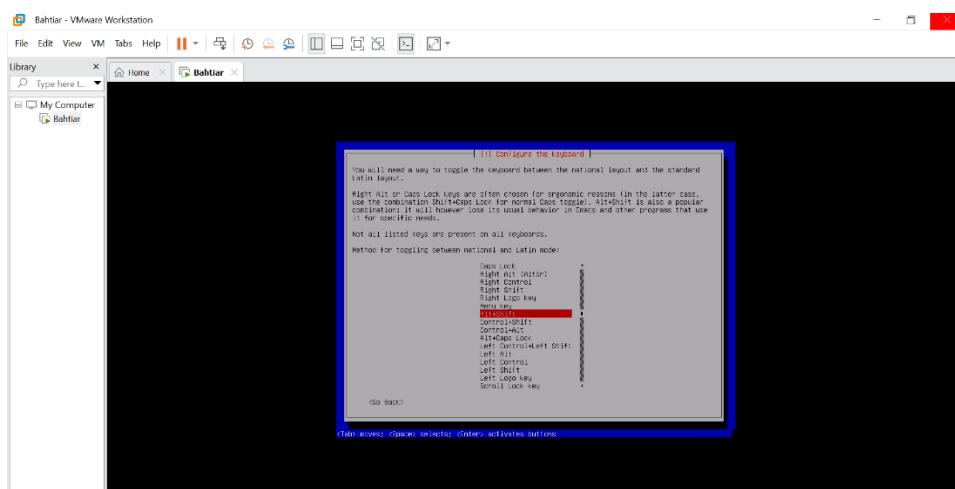
10. Pilih lokasi di karenakan tidak ada Indonesia maka pilih United States lalu enter



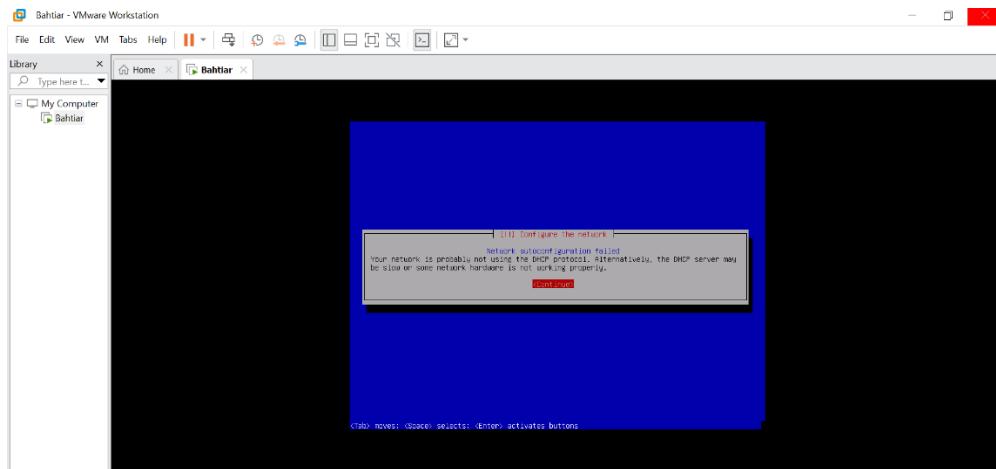
11. Pilih konfigurasi untuk keyboard, pilih American English lalu enter



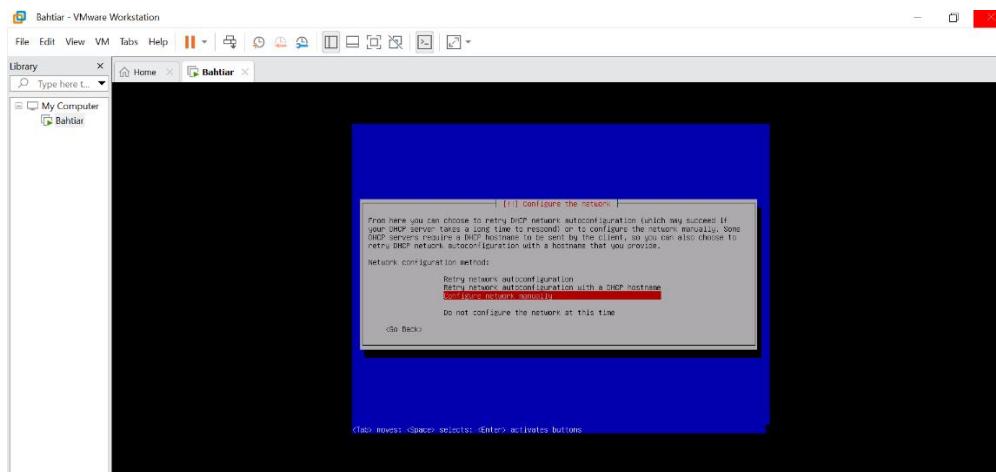
12. Pilih Alt+Shift lalu enter



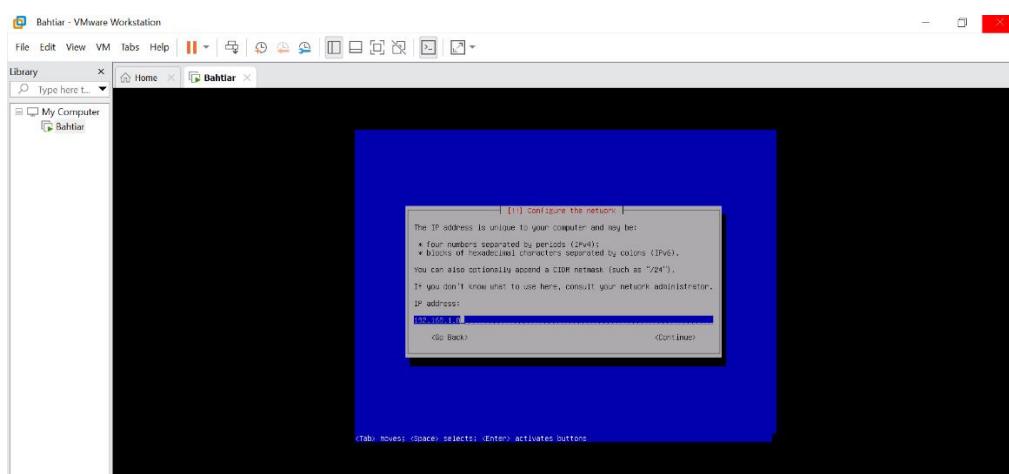
13. Jika Network autoconfiguration failed kita langsung continue saja dengan cara enter



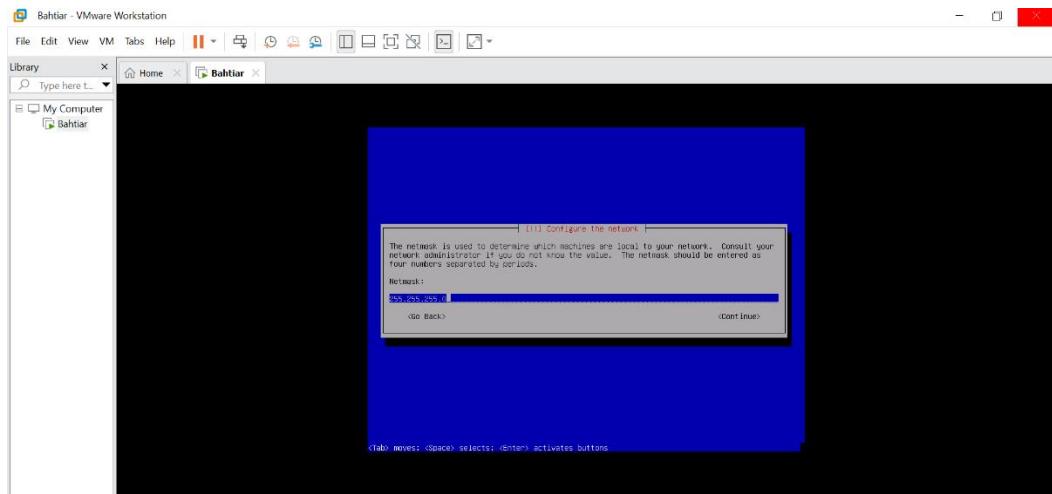
14. Pilih Configure network manually lalu enter



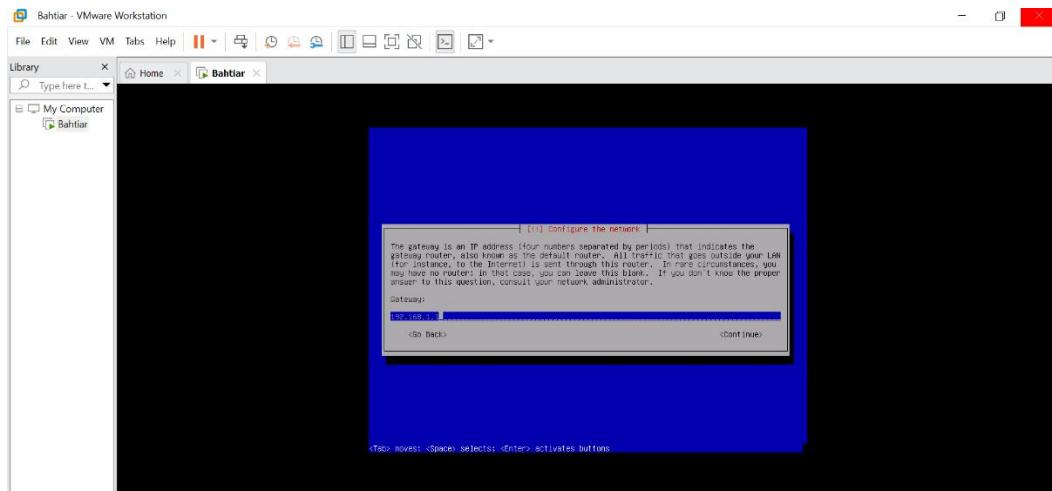
15. Isi IP address dengan host sesuai absen lalu enter



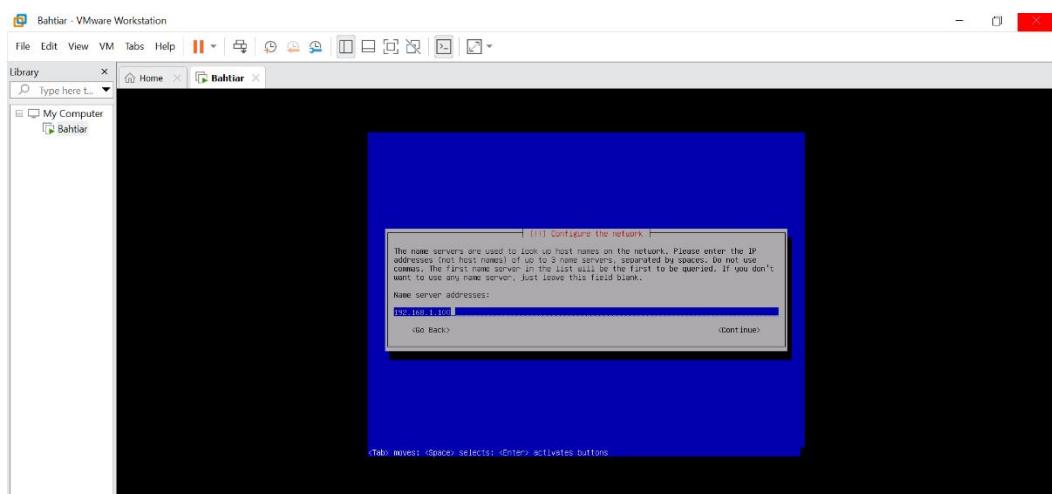
16. Isi netmask sesuai dengan subnetting ip lalu enter



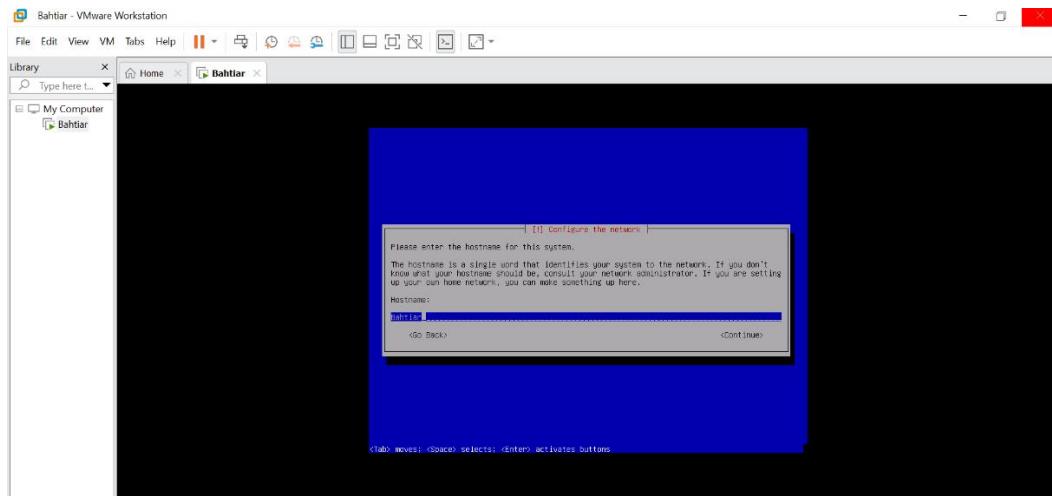
17. Isi gateway secara default lalu enter



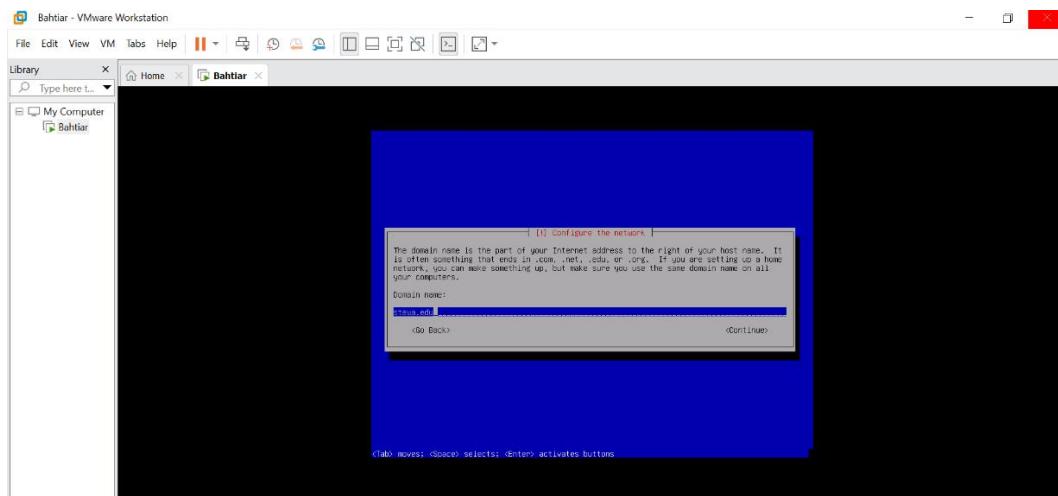
18. Name server addresses di isi dengan IP 192.168.1.100 lalu enter



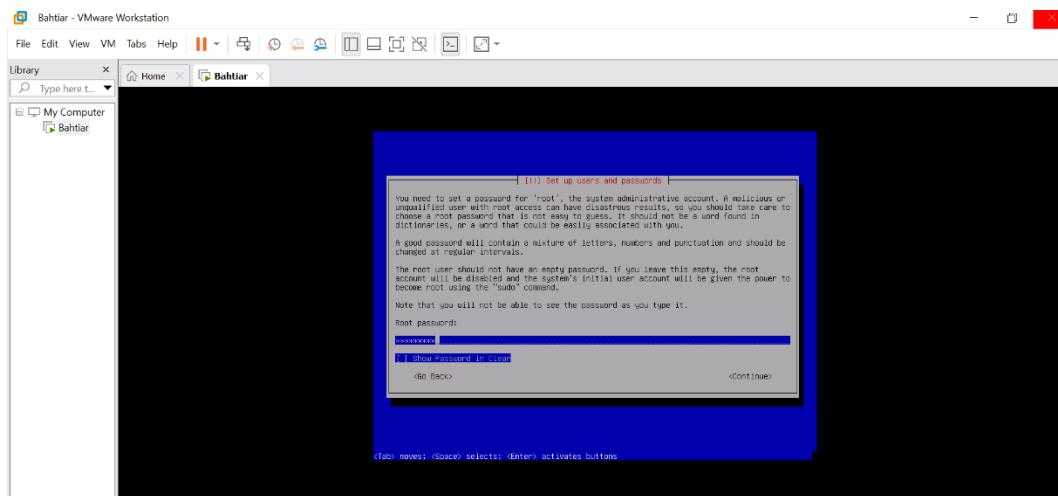
19. Isi hostname dengan nama kalian lalu enter



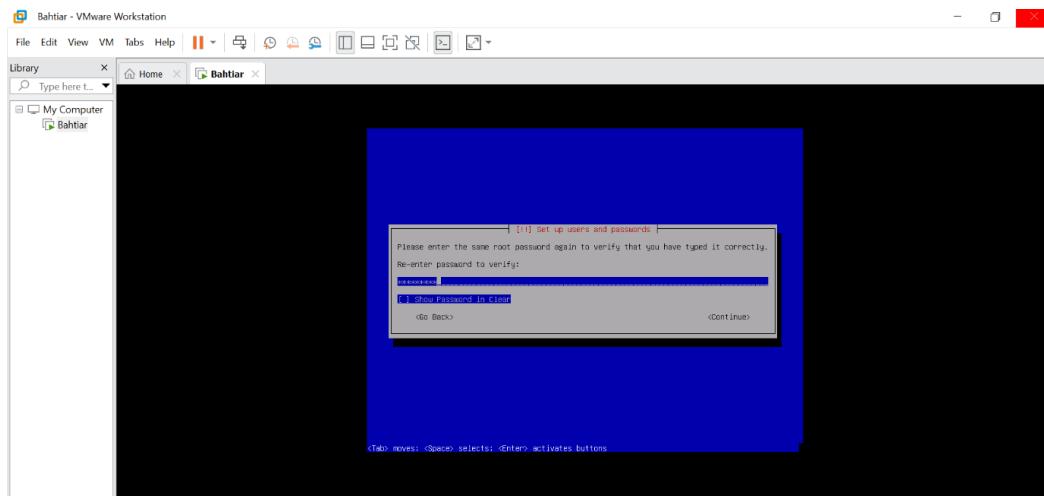
20. Domain name di isi dengan stewa.edu lalu enter



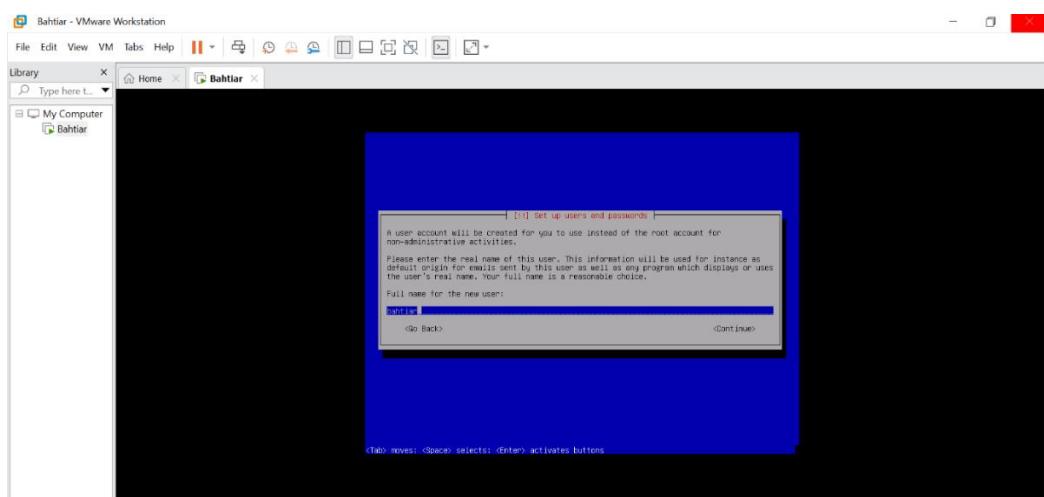
21. Set up Root password dengan kombinasi huruf besar kecil, angka, dan karakter lalu enter



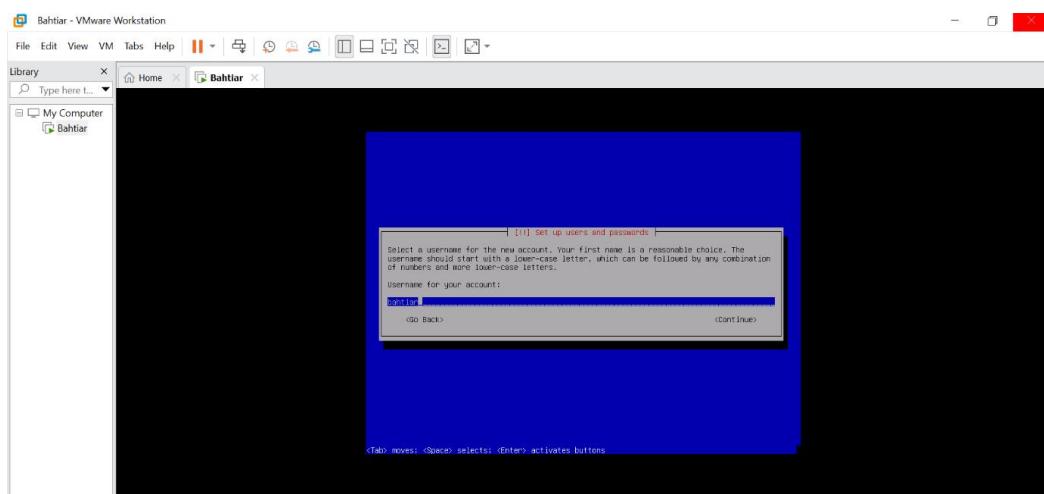
22. Ulangi password untuk memastikan password sesuai dengan password yang dibuat sebelumnya lalu enter



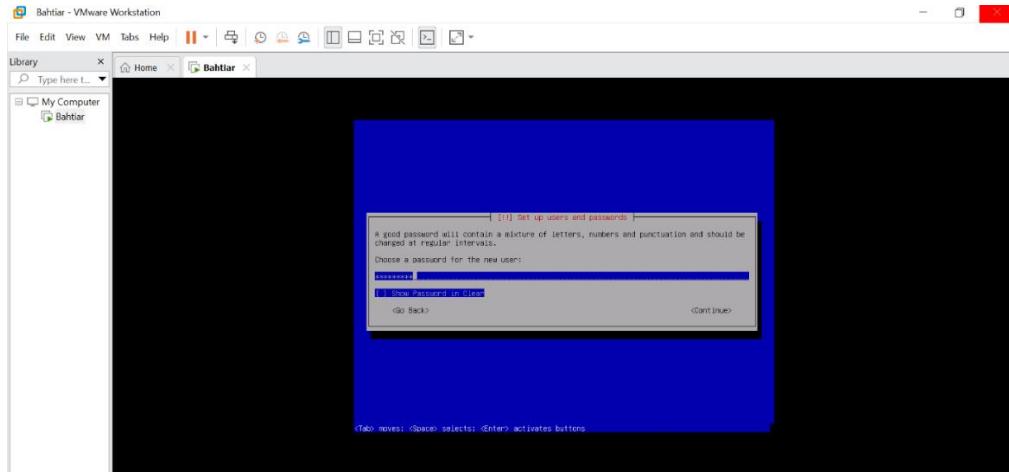
23. Selanjutnya isi lah full name for the new user dengan nama kalian lalu enter



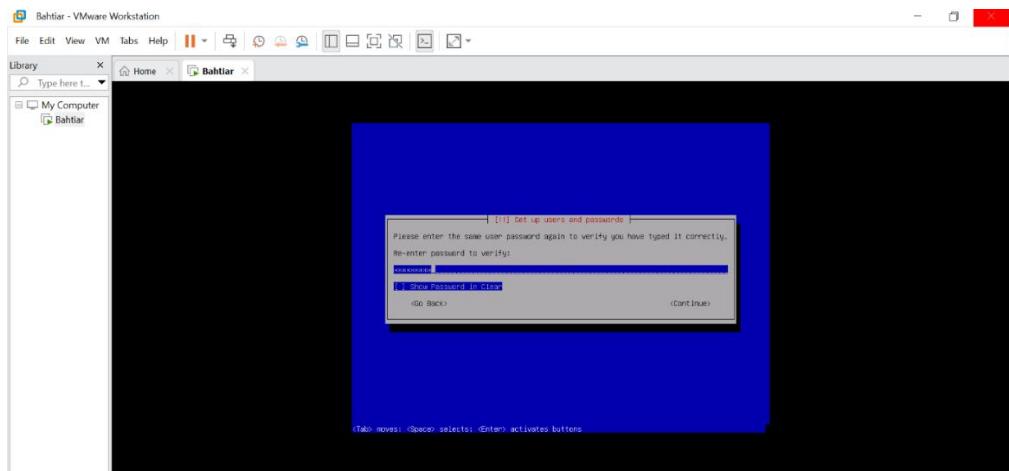
24. Isi username for your account sesuai selera atau nama kalian lalu enter



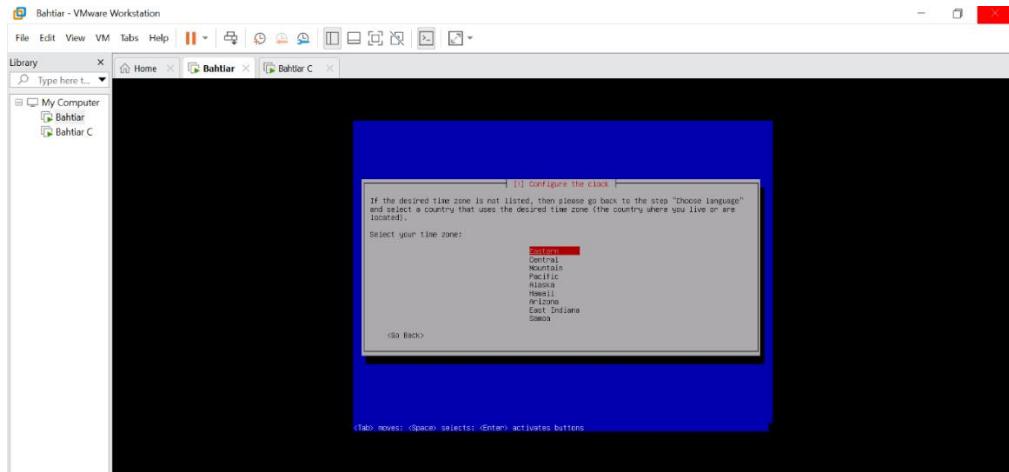
25. Isi choose a password for the new user dengan kombinasi huruf besar kecil, angka, dan karakter lalu enter



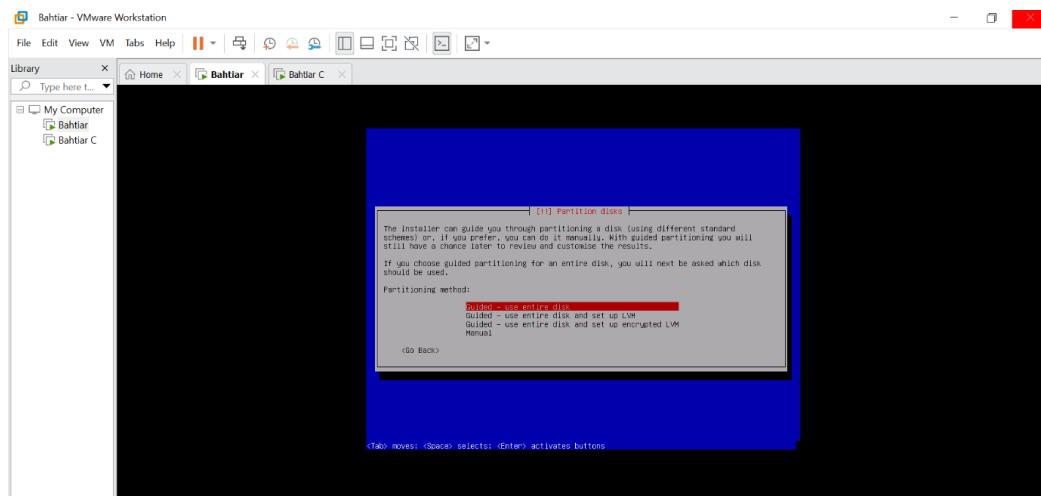
26. Ulangi password untuk memastikan password sesuai dengan password sebelumnya lalu enter



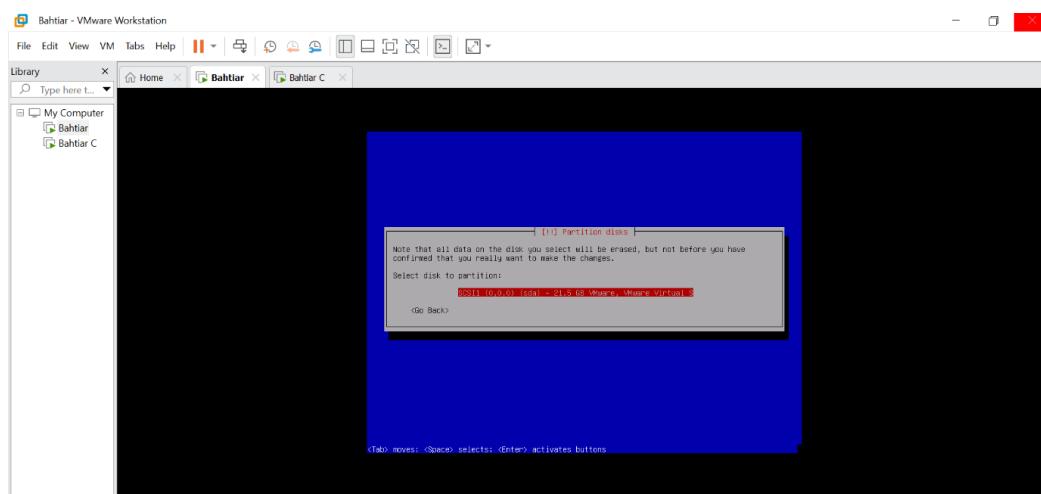
27. Pilih Eastren untuk konfigurasi time zone lalu enter



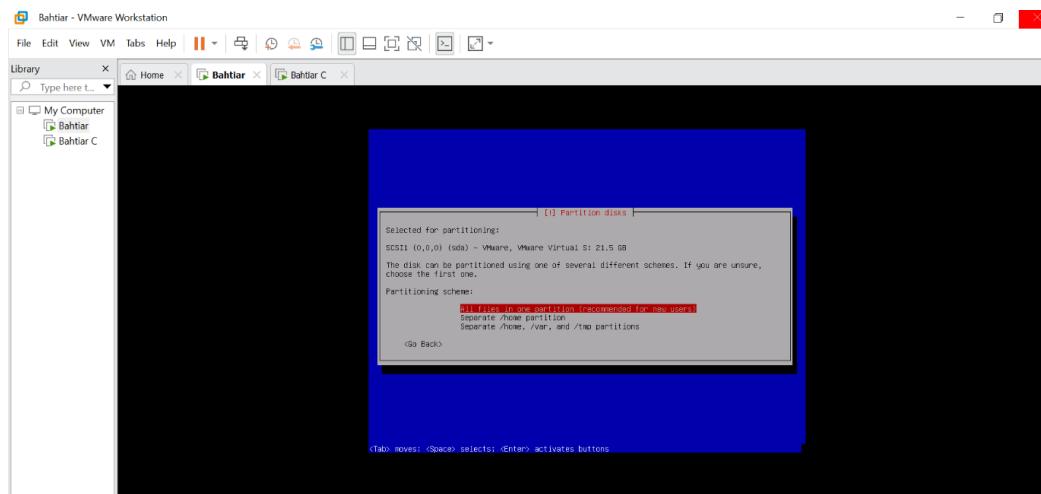
28. Pilih Partition disk Guided – use entire disk lalu enter



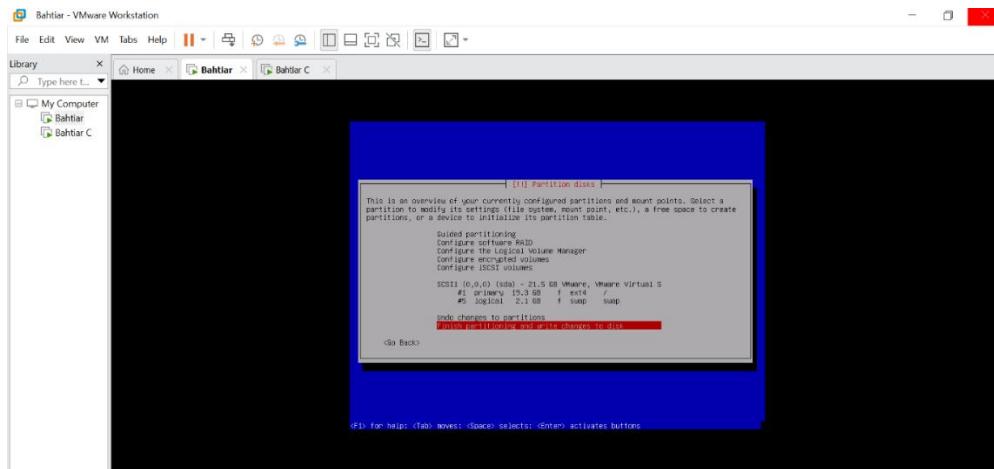
29. Select disk to partition SCSI1 (0,0,0) (sda) – 21,5 GB VMware , VMware Virtual S lalu enter



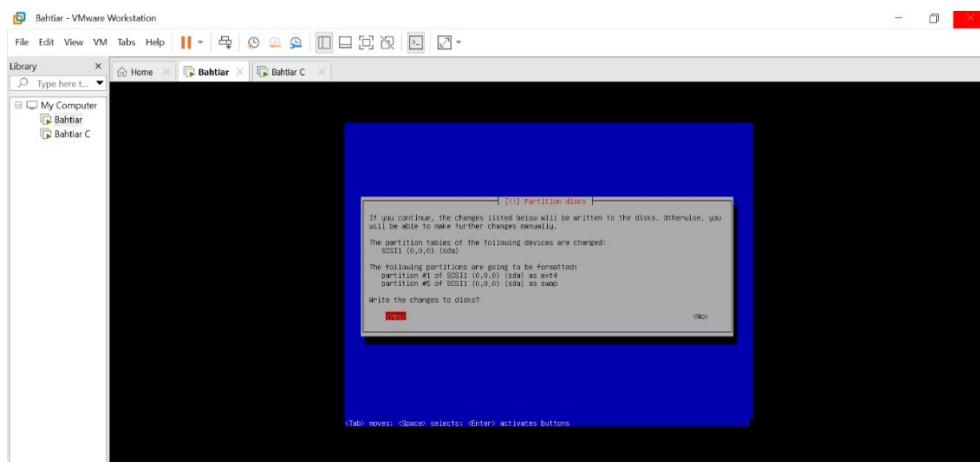
30. Pilih Partitioning schema all files in one partition (recommended for new user) lalu enter



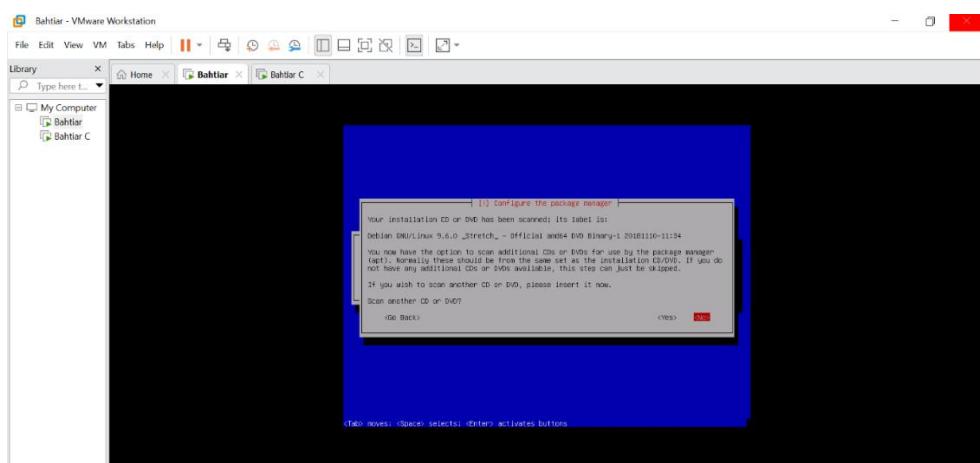
31. Setting sudah selesai, pilihlah Finish partitioning and write changes to disk lalu enter



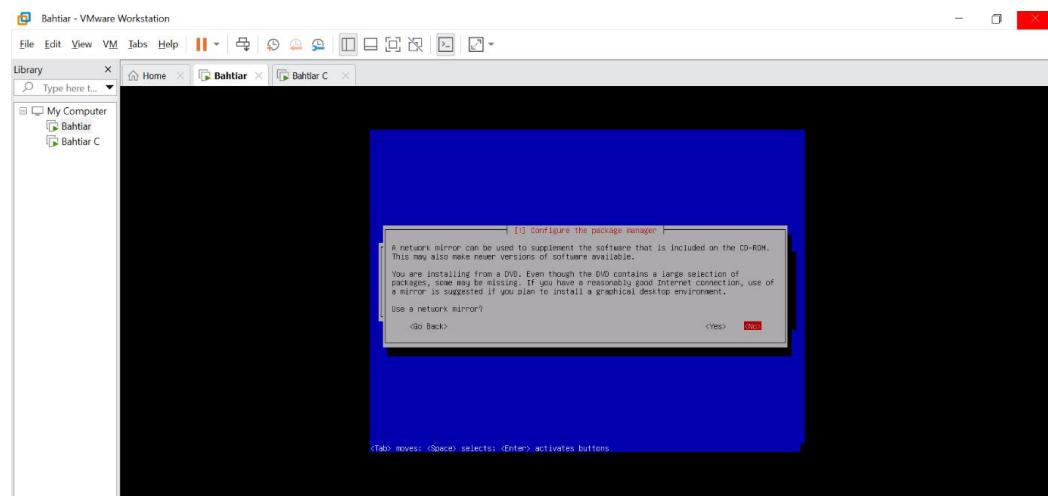
32. Lalu pilih “YES” pada write changes to disks lalu enter



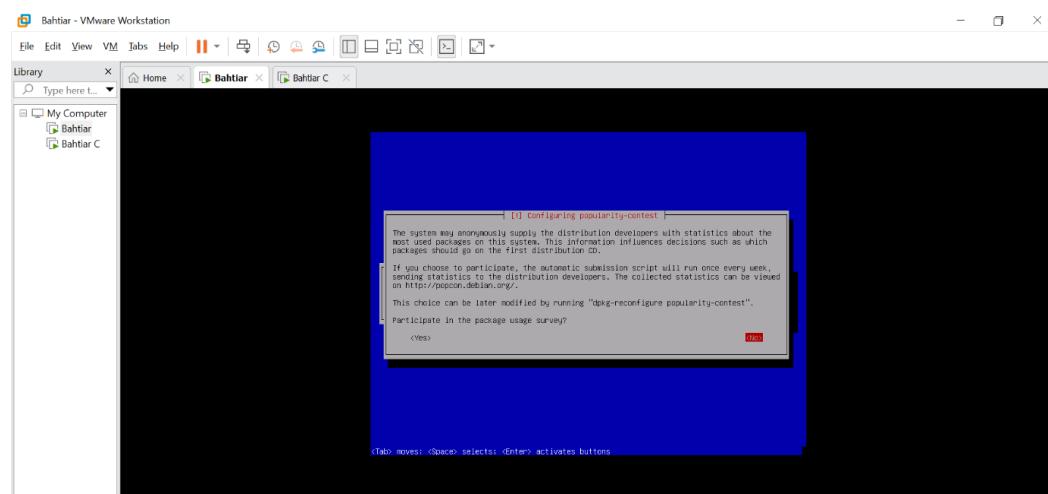
33. Pilih “NO” saat scan another CD or DVD lalu enter



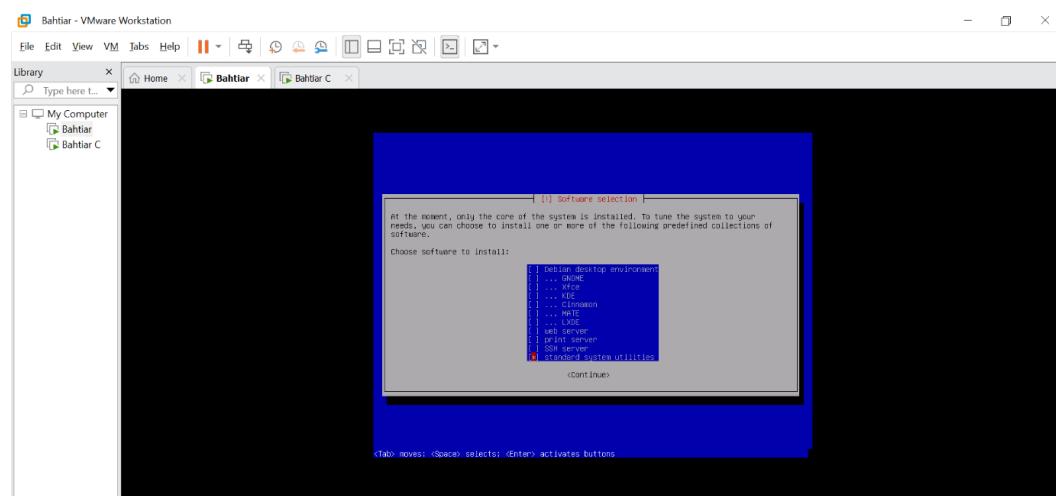
34. Pada saat use a network mirror pilih “NO” lalu enter



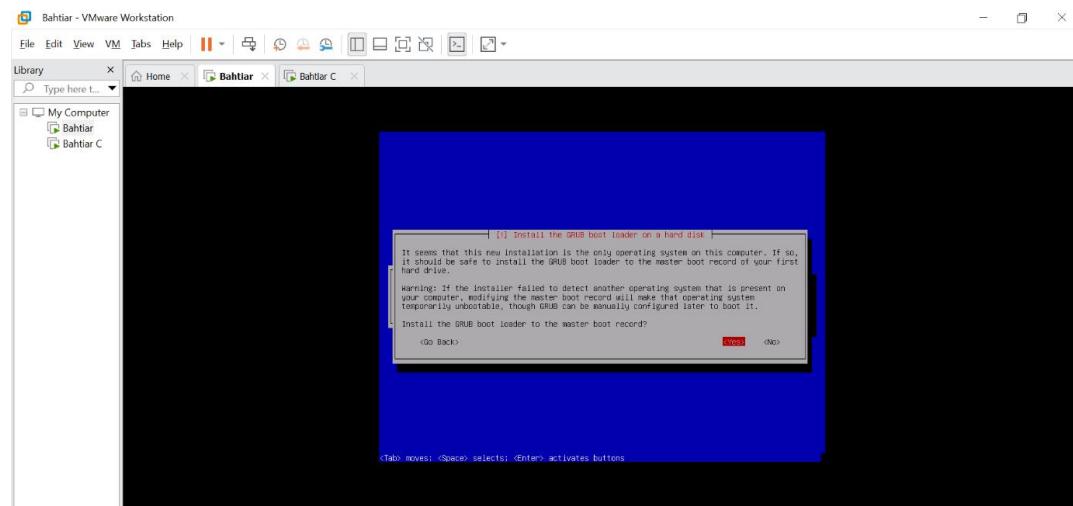
35. Pilih “NO” saat configuring popularity-comtest lalu enter



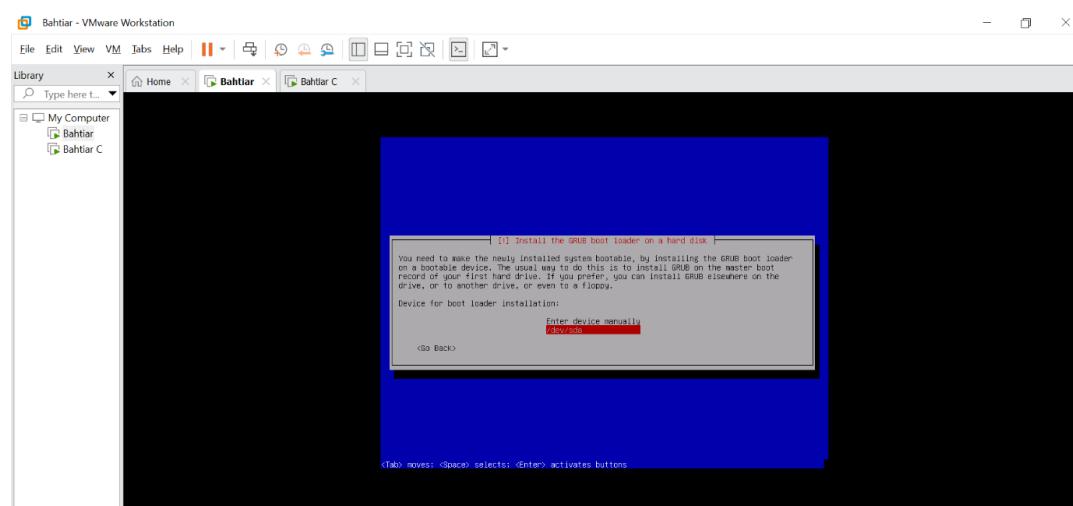
36. Saat instal server kita hanya memilih standard system utilities lalu enter



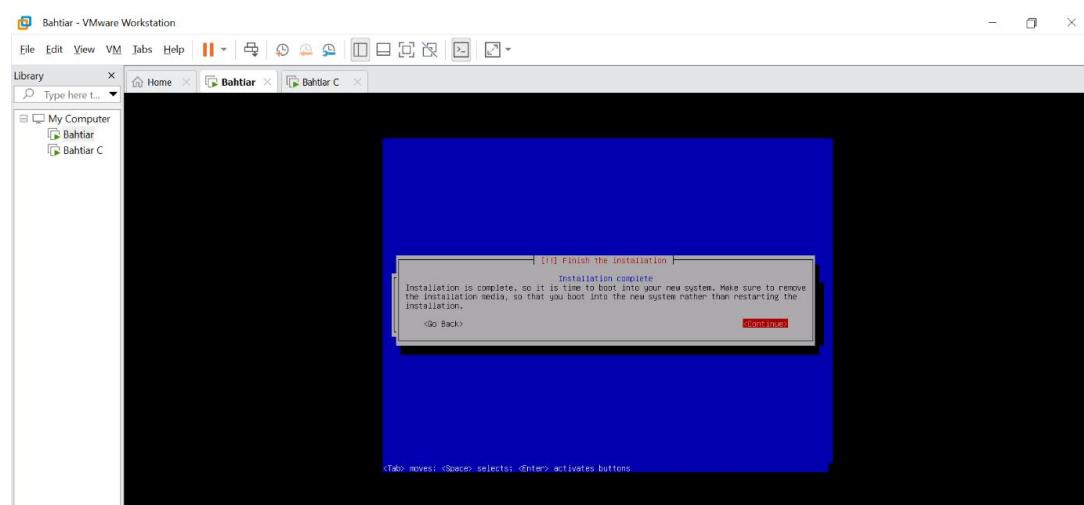
37. Pilih “YES” saat Instal the GRUB boot loader on a hard disk lalu enter



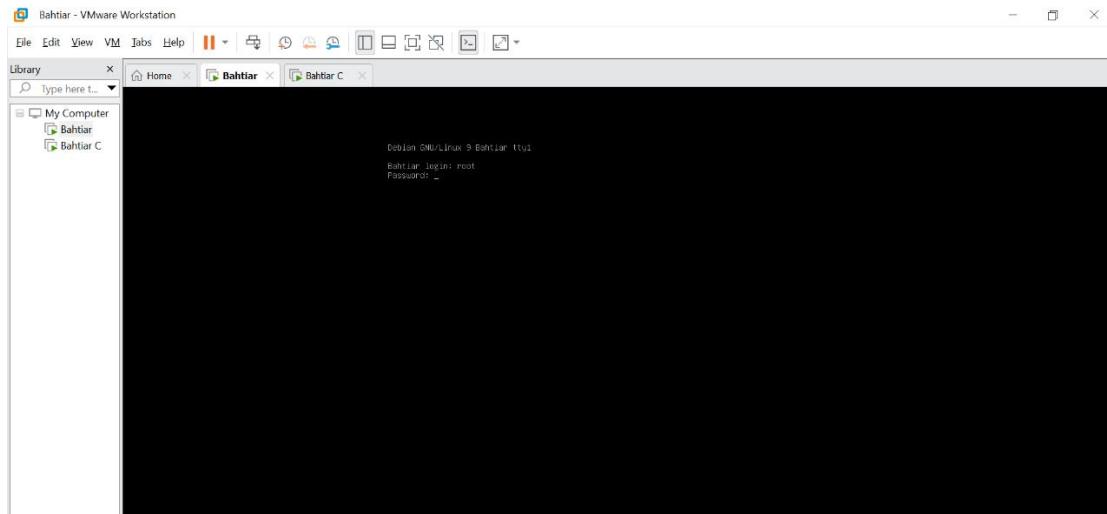
38. Pilih /dev/sde saat device for boot loader installation lalu enter



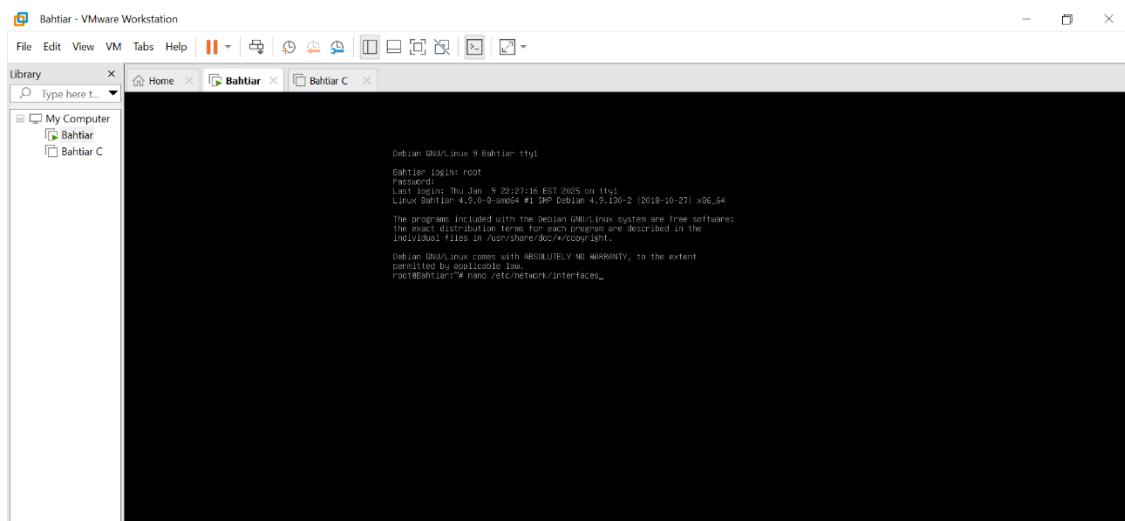
39. Instalasi sudah selesai



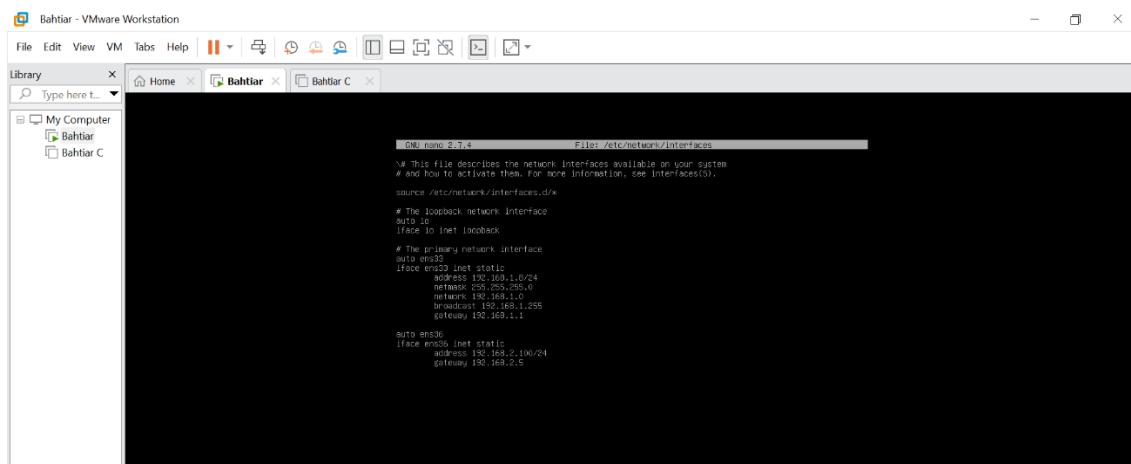
40. Login ke Virtual Machine Server, dengan mengetikan root dan memasukkan password yang sudah dibuat sebelumnya lalu enter



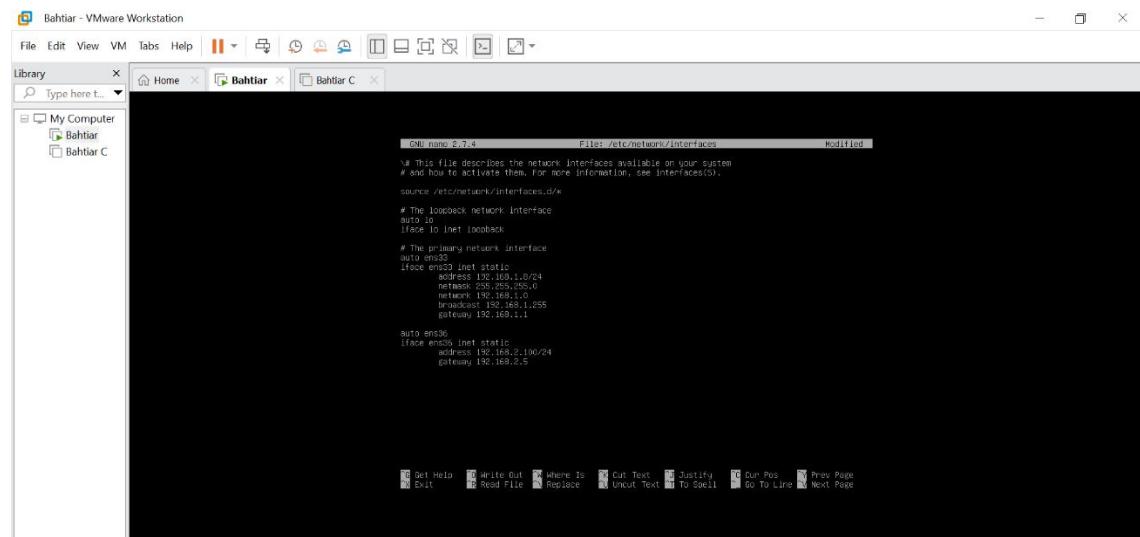
41. Setelah itu ketikkan nano /etc/network/interfaces lalu enter



42. Lalu setting IP Address sesuai dengan kelasnya lalu enter



43. Ctrl+X untuk melanjutkan



```
GNU nano 2.7.4  File: /etc/network/interfaces  Modified.

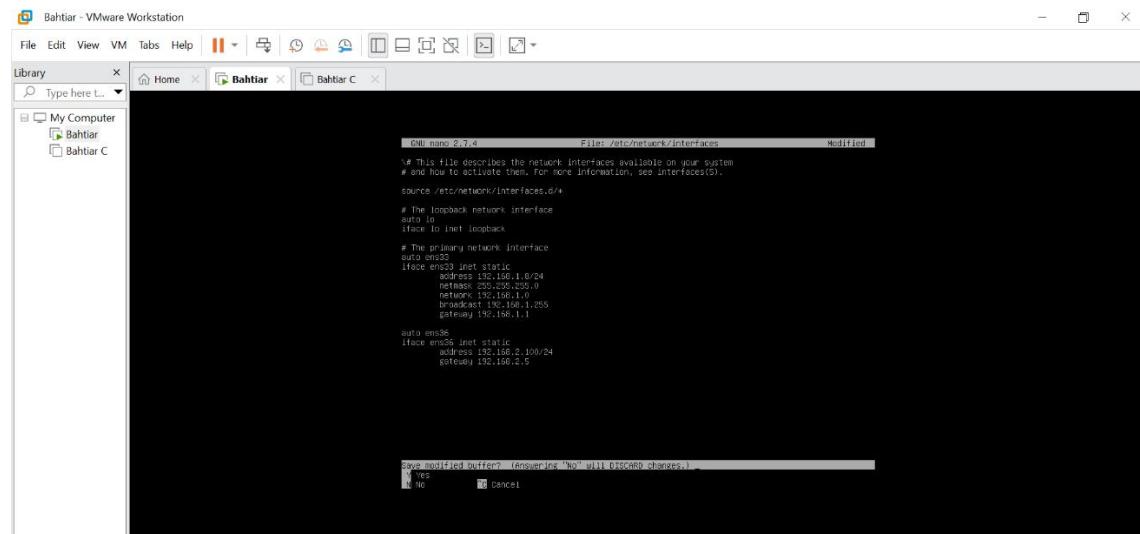
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).
source /etc/network/interfaces.d/*
# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto ens3
iface ens3 inet static
    address 192.168.1.0/24
    netmask 255.255.255.0
    broadcast 192.168.1.255
    gateway 192.168.1.1

auto ens36
iface ens36 inet static
    address 192.168.2.100/24
    gateway 192.168.2.5

Get Help  Write Out  Where Is  Cut Text  Justify  Cut Pos  Go To Line  Prev Page
Exit  Read File  Replace  Uncut Text  To Spell  Go To Line  Next Page
```

44. Setelah itu klik huruf “ Y ” di keyboard



```
GNU nano 2.7.4  File: /etc/network/interfaces  Modified.

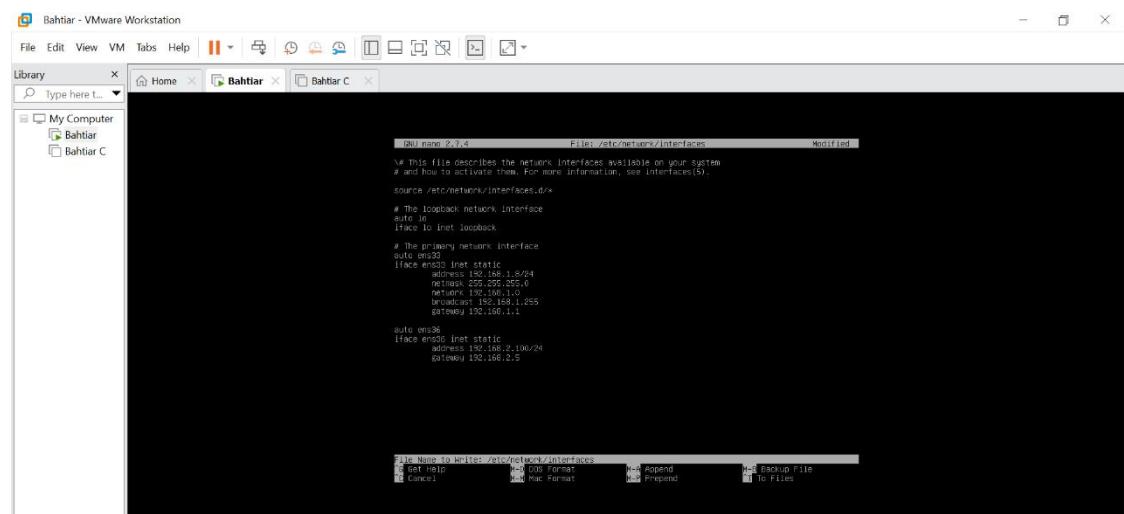
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).
source /etc/network/interfaces.d/*
# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto ens3
iface ens3 inet static
    address 192.168.1.0/24
    netmask 255.255.255.0
    broadcast 192.168.1.255
    gateway 192.168.1.1

auto ens36
iface ens36 inet static
    address 192.168.2.100/24
    gateway 192.168.2.5

Save modified buffer? (Answering "No" will DISCARD changes.)
  Yes  No  Cancel
```

45. Selanjutnya langsung enter



```
GNU nano 2.7.4  File: /etc/network/interfaces  Modified.

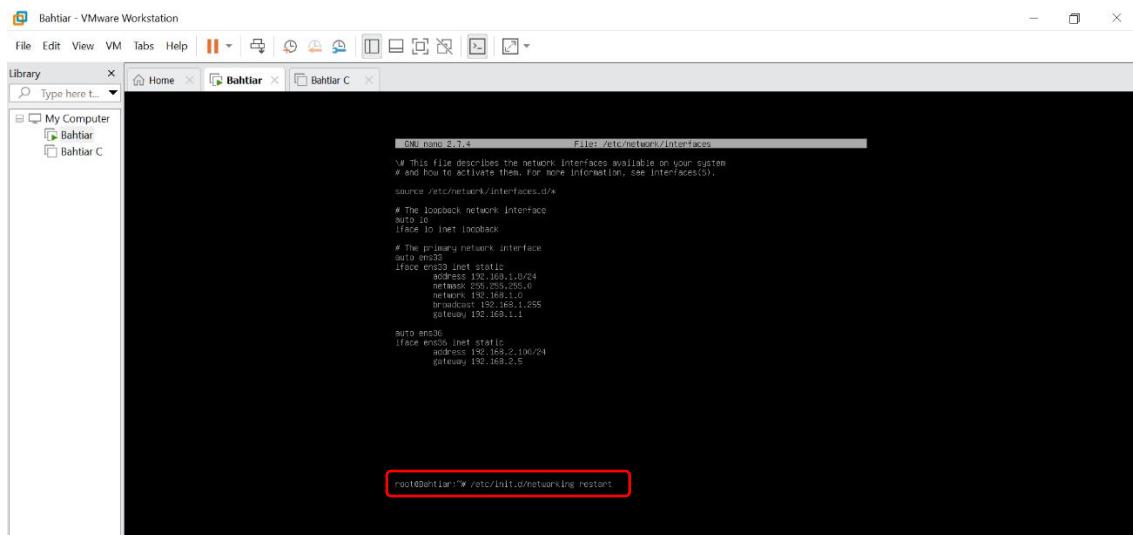
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).
source /etc/network/interfaces.d/*
# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto ens3
iface ens3 inet static
    address 192.168.1.0/24
    netmask 255.255.255.0
    broadcast 192.168.1.255
    gateway 192.168.1.1

auto ens36
iface ens36 inet static
    address 192.168.2.100/24
    gateway 192.168.2.5

File Name to Write: /etc/network/interfaces
  Get Help  Save File  Mac Format  Backup File
  Cancel  Print
```

46. Setelah setting IP Address ketikan “ /etc/init.d/networking restart ” untuk merestart



```
GNU nano 2.7.4      File: /etc/network/interfaces
This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*
# The loopback network interface
auto lo
iface lo inet loopback

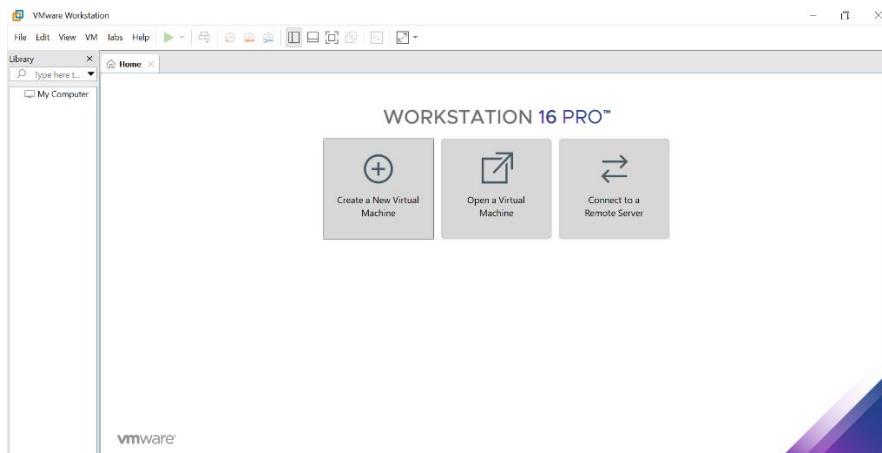
# The primary network interface
auto ens3
iface ens3 inet static
    address 192.168.1.6/24
    netmask 255.255.255.0
    network 192.168.1.0
    broadcast 192.168.1.255
    gateway 192.168.1.1

auto ens36
iface ens36 inet static
    address 192.168.2.100/24
    gateway 192.168.2.5

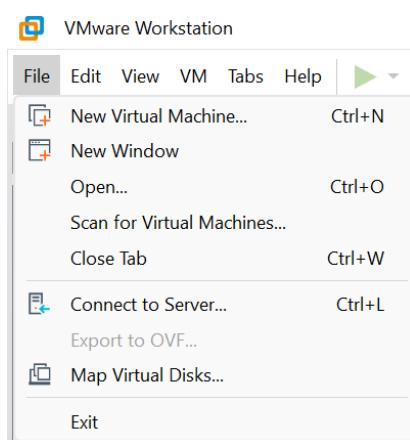
root@Bantian:~# /etc/init.d/networking restart
```

E. Langkah Langkah Membuat Virtual Machine Client di VMware Workstation Pro

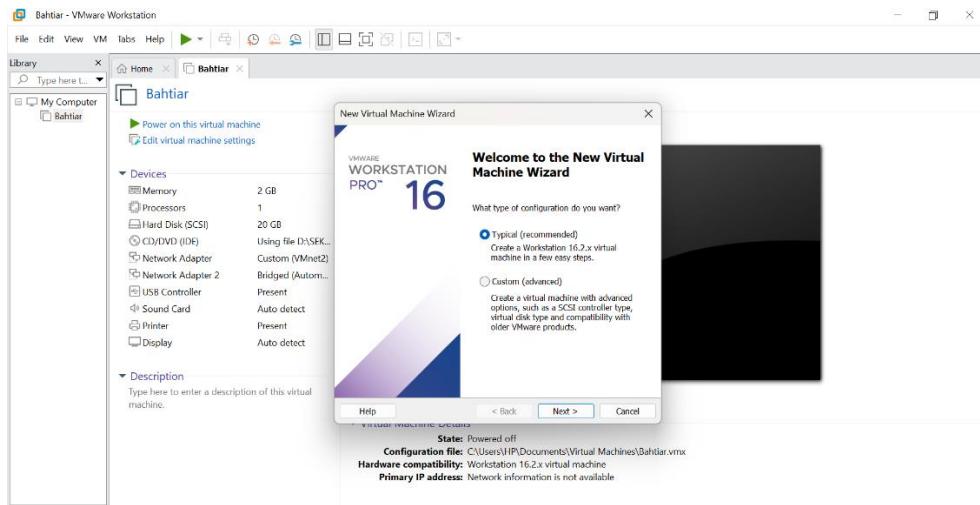
1. Buka VMware Workstation Pro



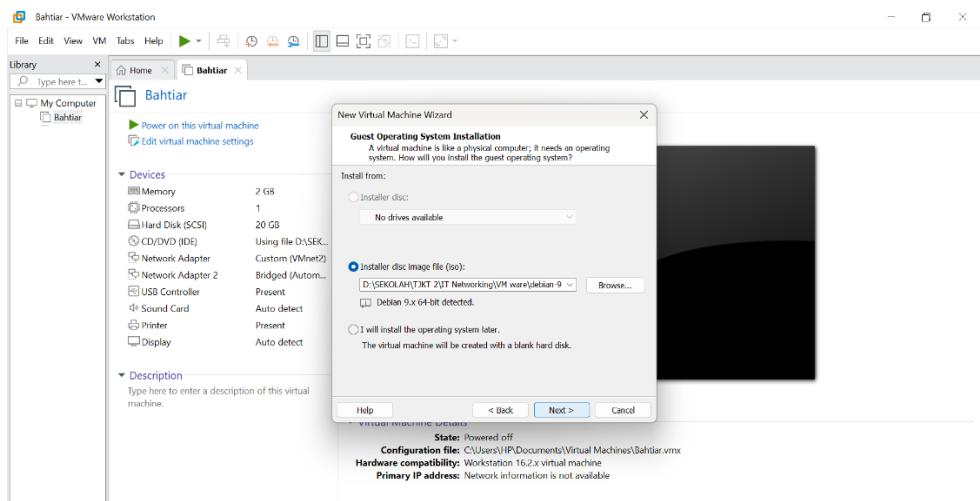
2. Klik New Virtual Machine atau Ctrl+N untuk membuat virtual machine baru



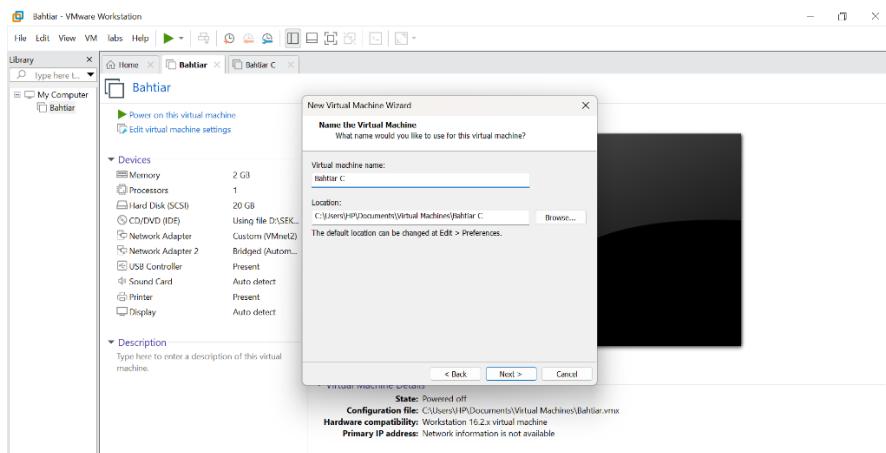
3. Pilihlah Typical lalu klik next



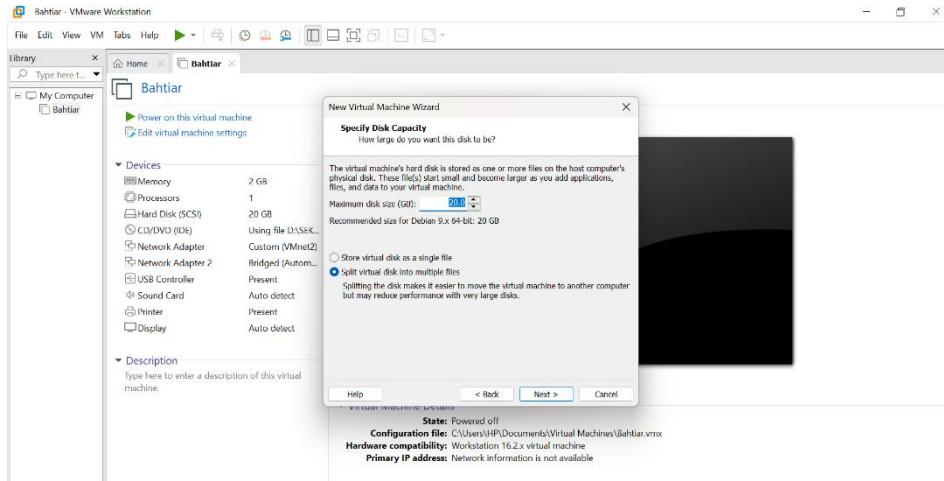
4. Pilih file Debian 9.6 lalu klik next



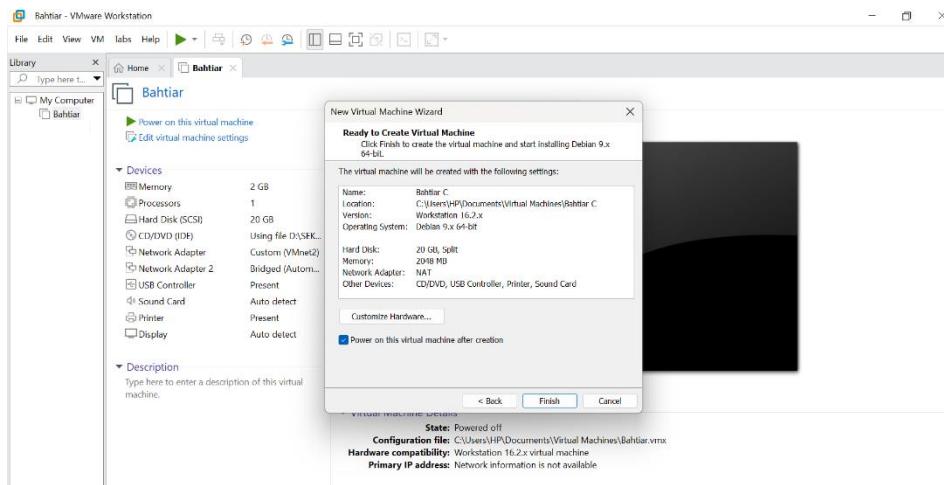
5. Beri nama virtual machine dan pilih lokasi untuk menyimpan lalu klik next



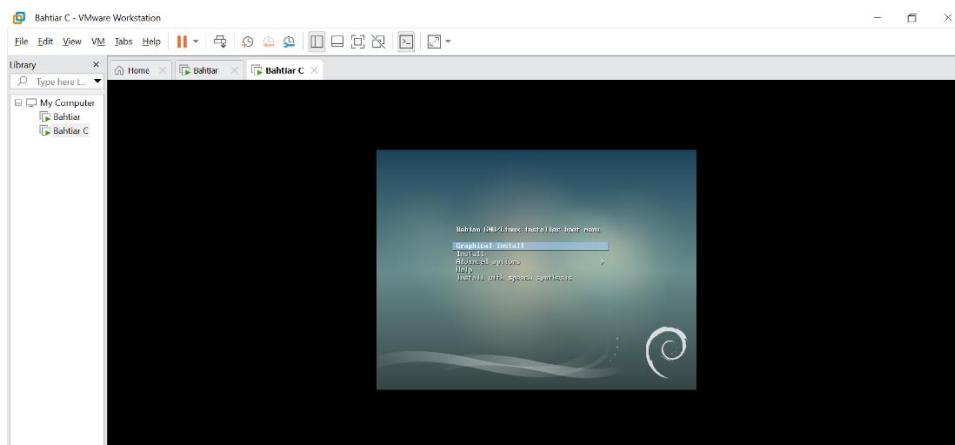
6. Isi maximum disk size sesuai yang dibutuhkan dan split virtual disk into multiple files lalu klik next



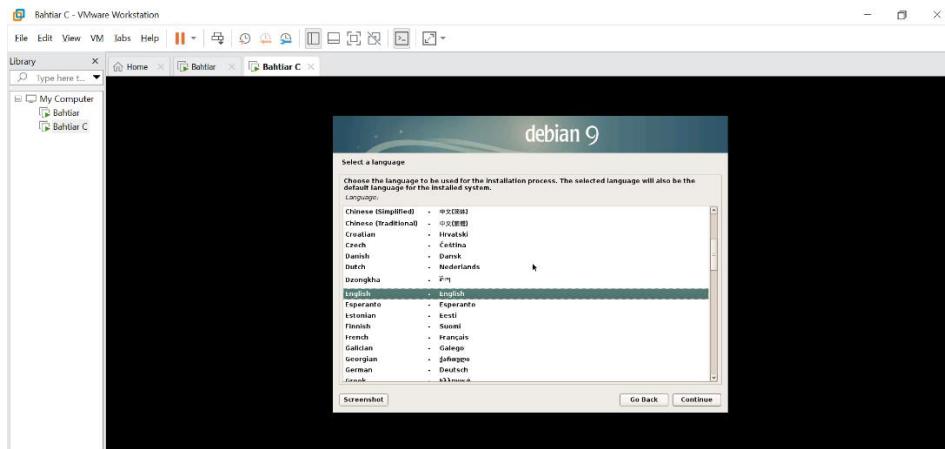
7. Membuat virtual machine sudah selesai lalu klik finish



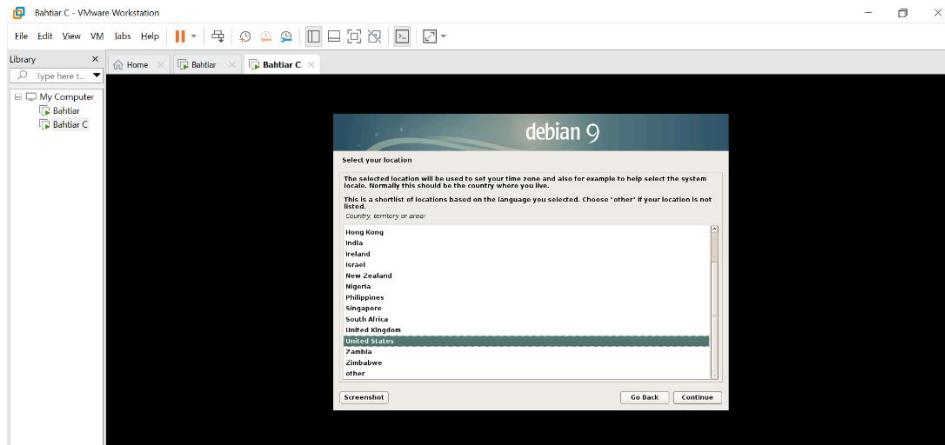
8. Lalu pilih Grapical Install untuk virtual machine client (GUI) lalu enter



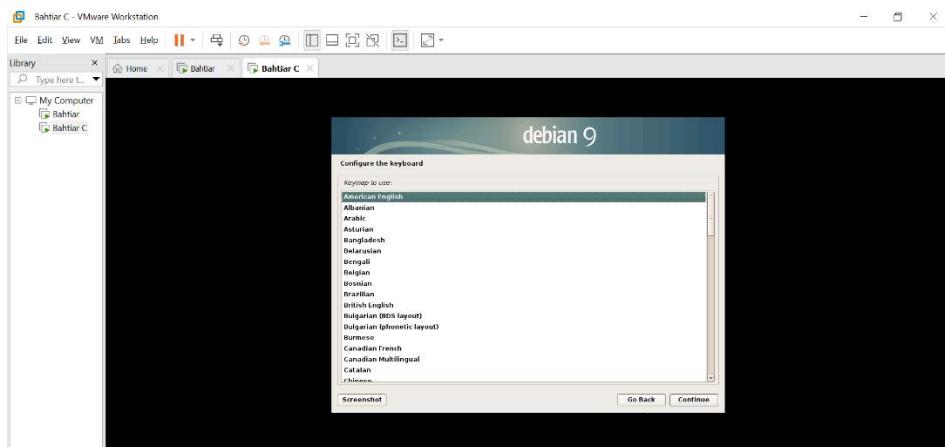
9. Pilih bahasa untuk penginstalan lalu klik continue



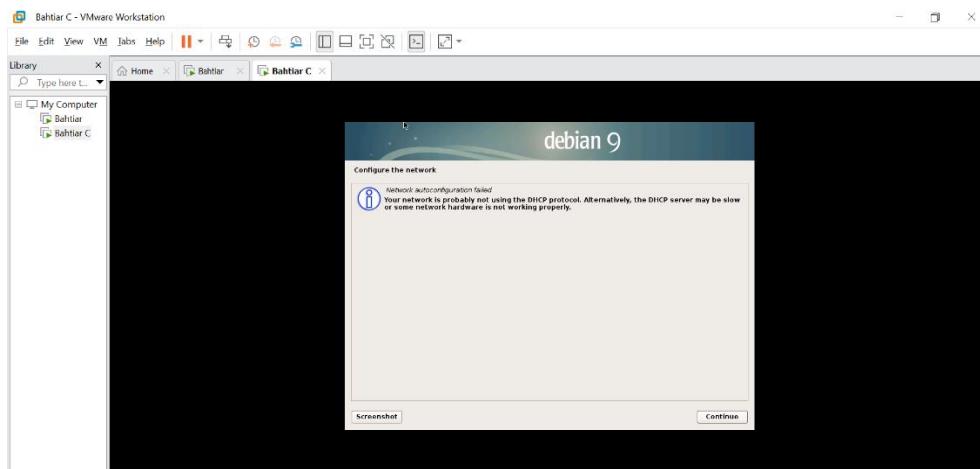
10. Setelah itu pilih lokasi dikarenakan Indonesia tidak ada maka kita pilih united states lalu klik continue



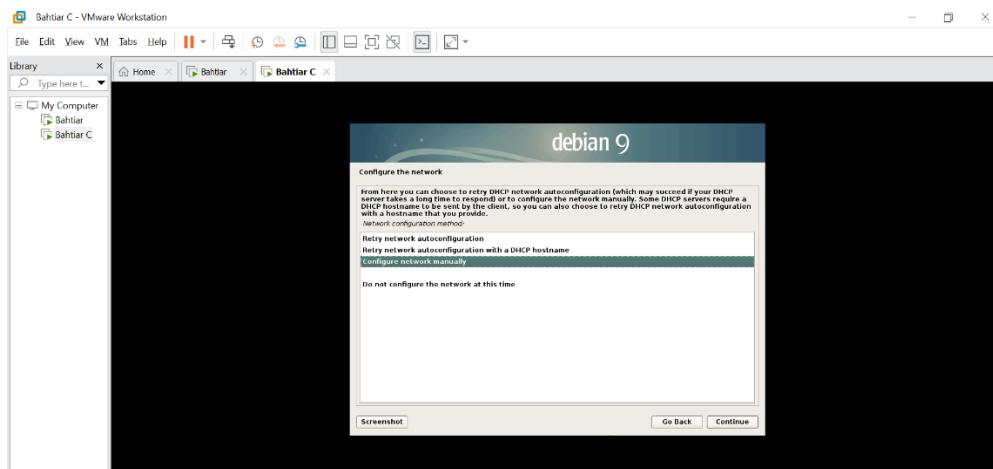
11. Konfigurasi keyboard yang akan digunakan yaitu American English lalu klik continue



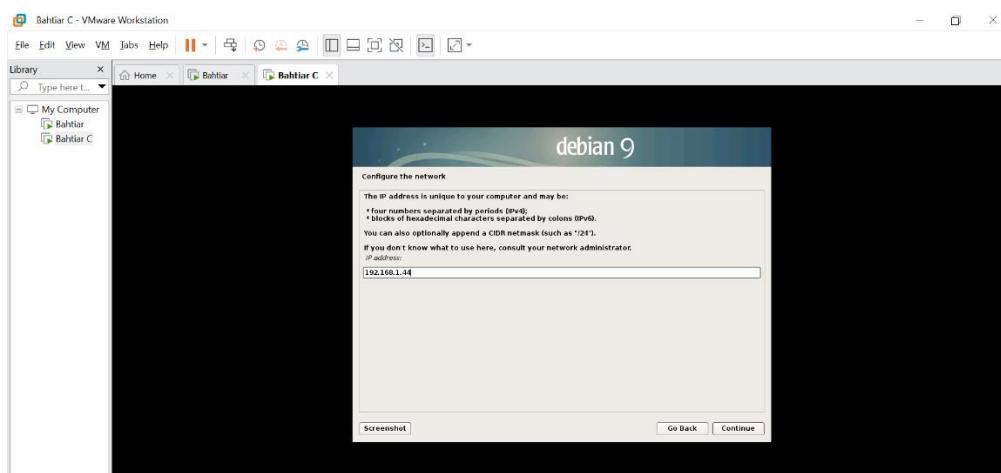
12. Jika Network autoconfiguration failed maka klik continue saja



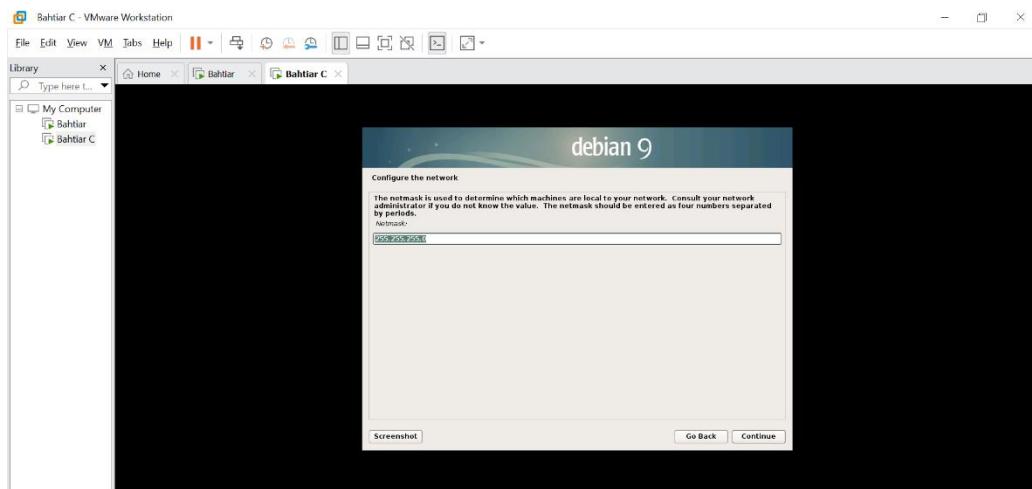
13. Pilih Configure network manually lalu klik continue



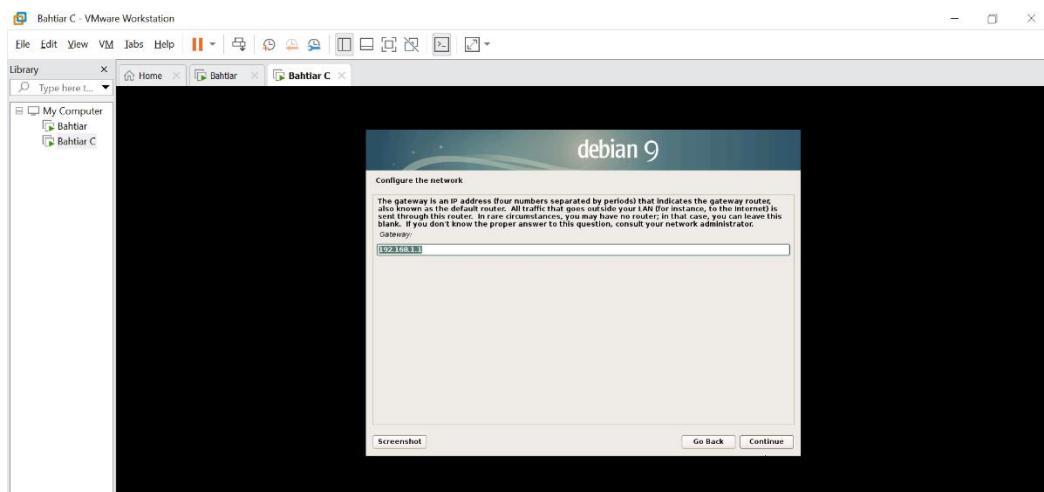
14. Setelah itu isi IP Address dengan host 36 + absen lalu klik continue



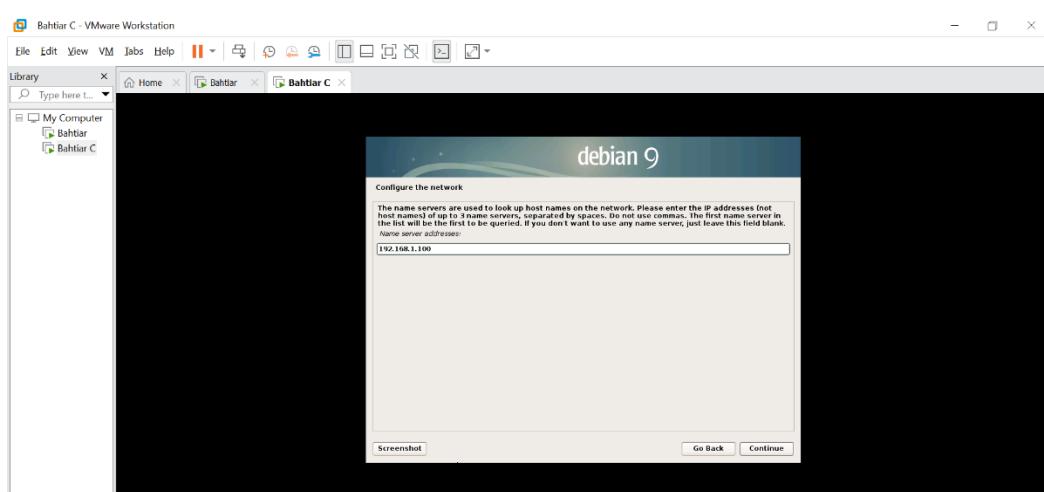
15. Isi netmask sesuai dengan subnetting ip lalu klik continue



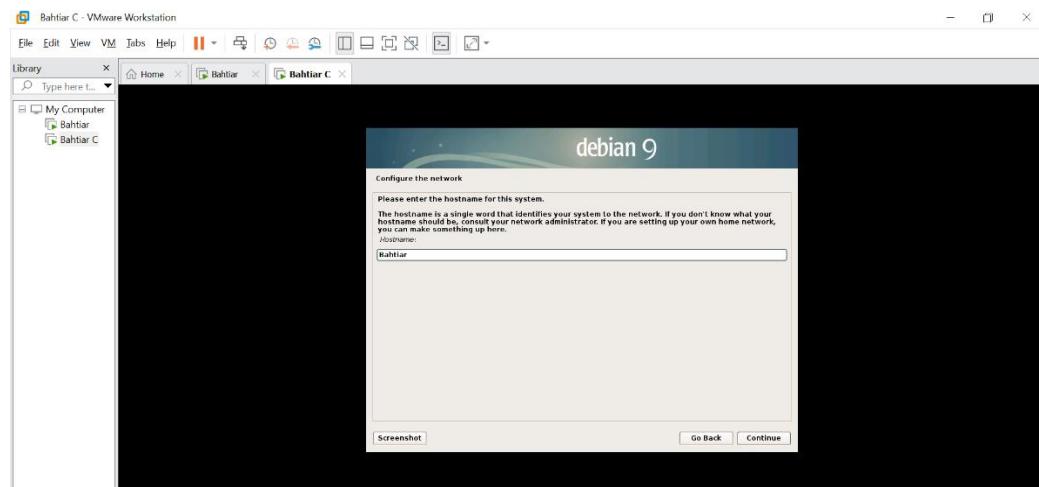
16. Isi gateway secara default lalu klik continue



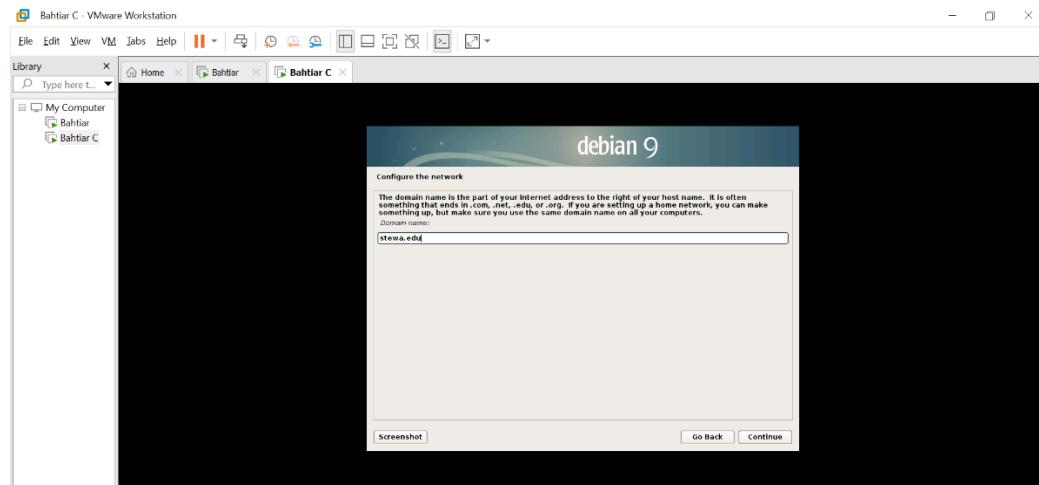
17. Lalu isi Name server addresses dengan IP 192.168.1.100 lalu klik continue



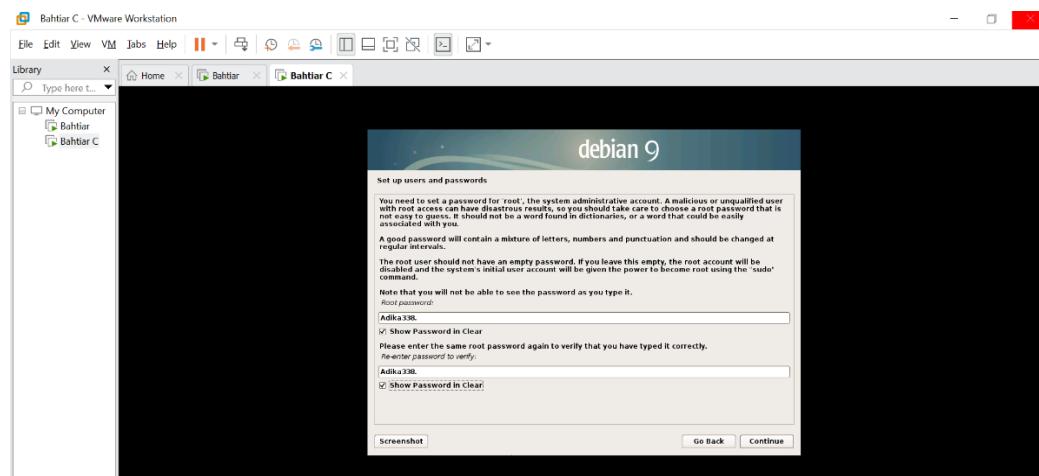
18. Isi hostname dengan nama kalian lalu klik continue



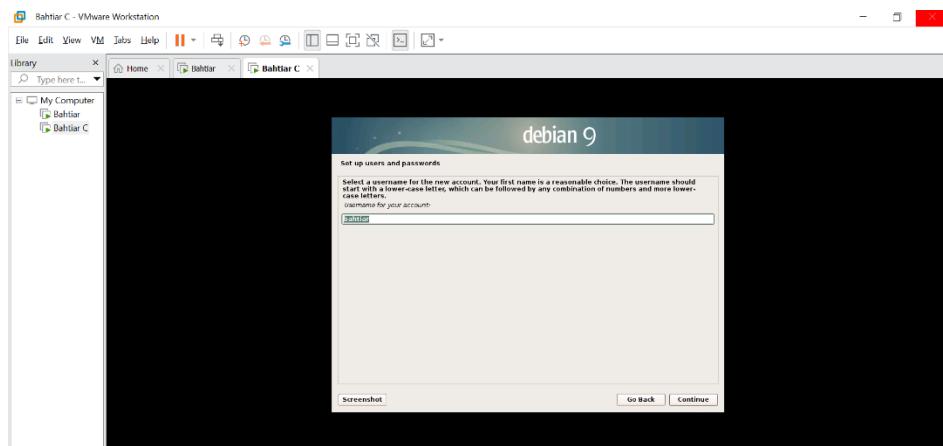
19. Selanjutnya isi domain name dengan stews.edu



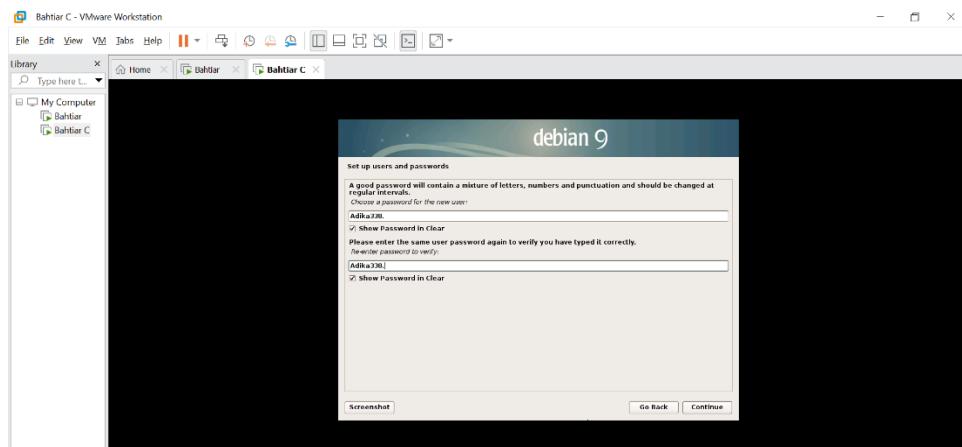
20. Buat password yang mudah di ingat dengan kombinasi huruf besar kecil, angka, dan karakter lalu klik continue



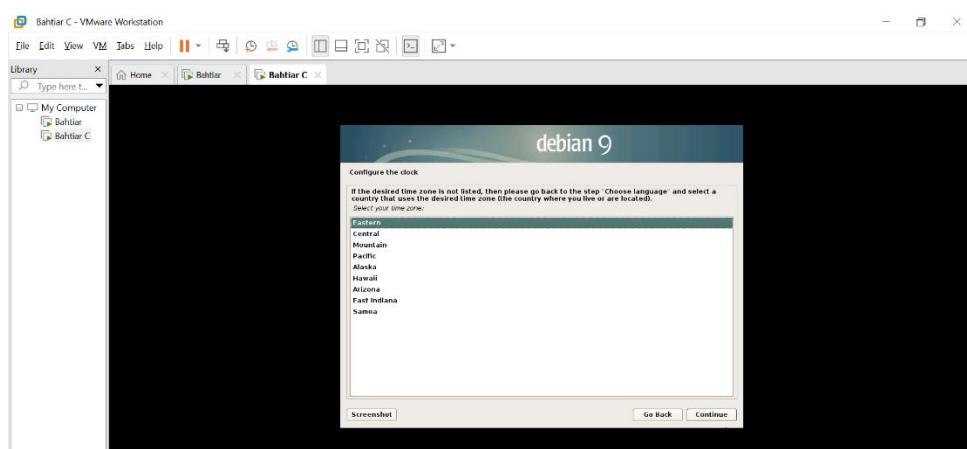
21. Isi username for your account dengan nama kalian lalu klik continue



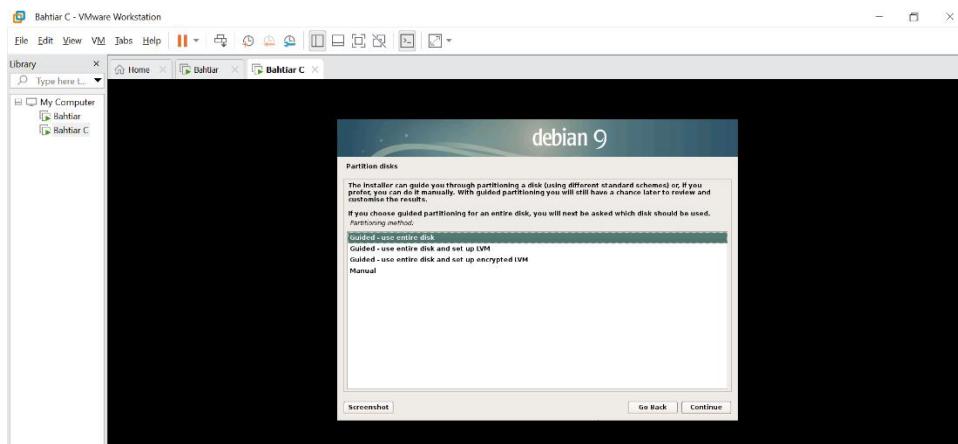
22. Buat password untuk new user dengan kombinasi huruf kecil besar, angka, dan karakter lalu klik continue



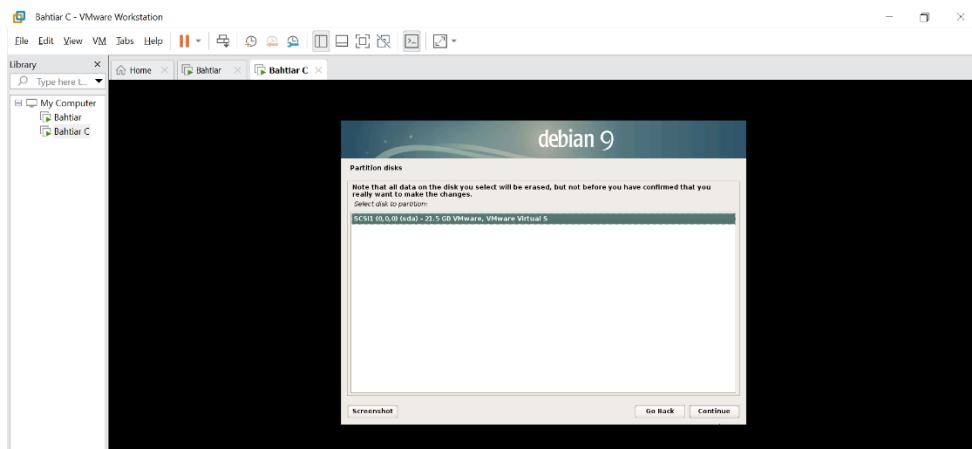
23. Konfigurasi jam dengan mimilih Eastern lalu klik continue



24. Pilih Partition disk Guided – use entire disk lalu klik continue



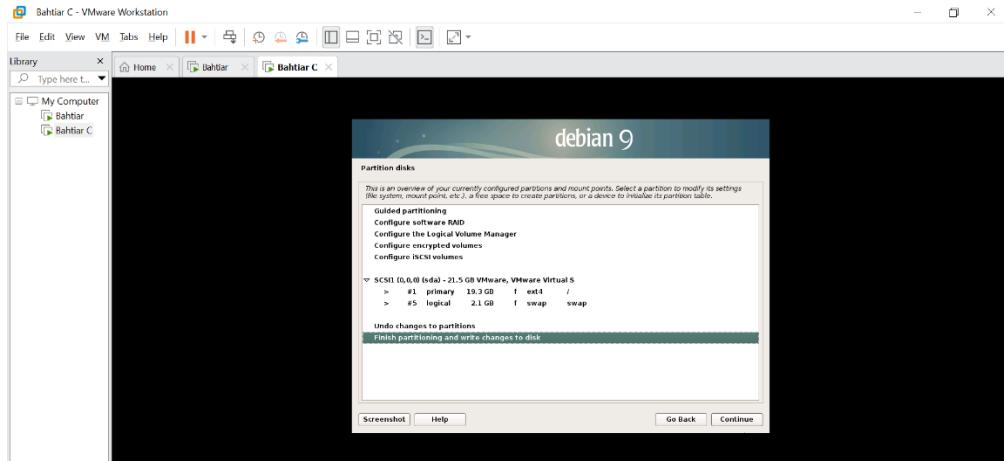
25. Select disk to partition SCSI1 (0,0,0) (sda) – 21,5 GB VMware , VMware Virtual S lalu klik continue



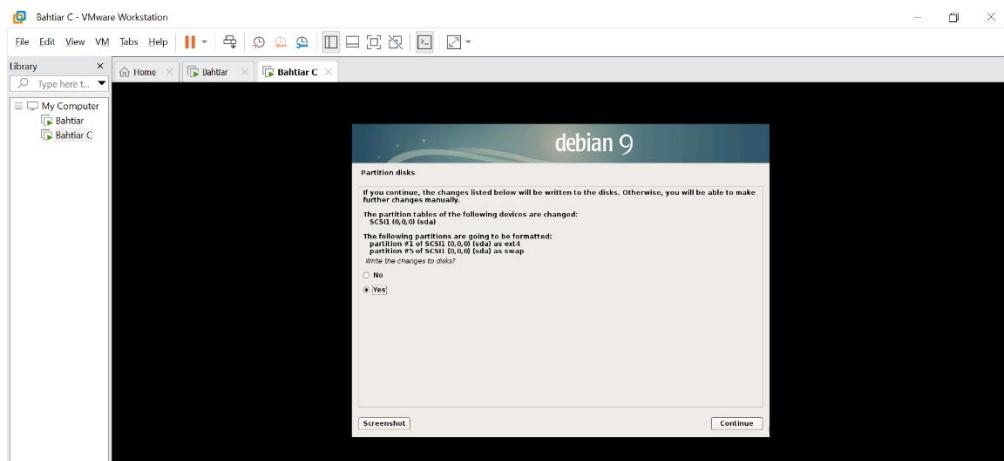
26. Pilih Partitioning schema all files in one partition (recommended for new user) lalu klik continue



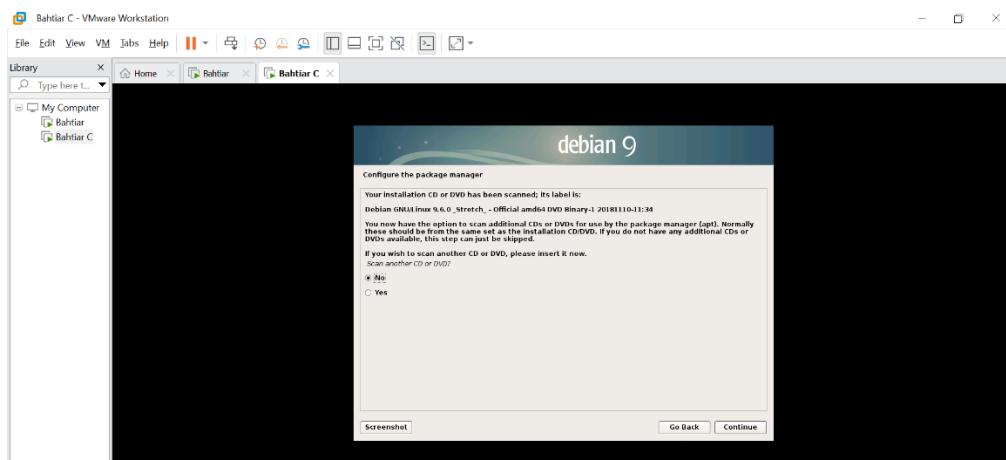
27. Setting sudah selesai, pilihlah Finish partitioning and write changes to disk lalu klik continue



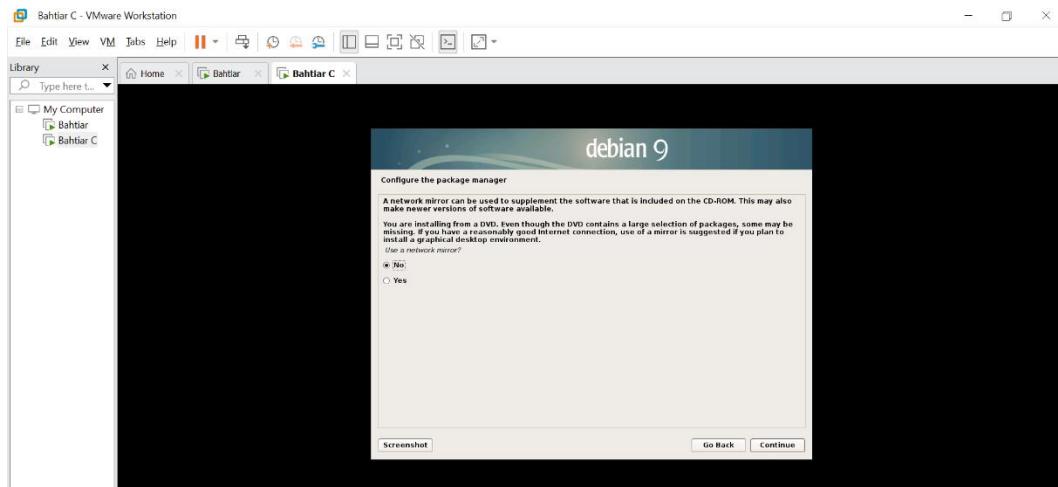
28. Lalu pilih “YES” pada write changes to disks lalu klik continue



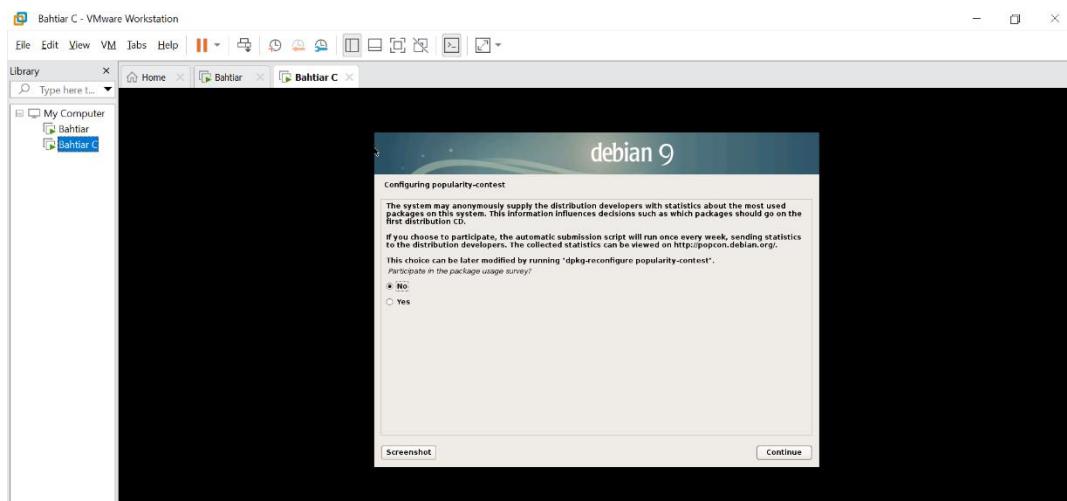
29. Pilih “NO” saat scan another CD or DVD lalu klik continue



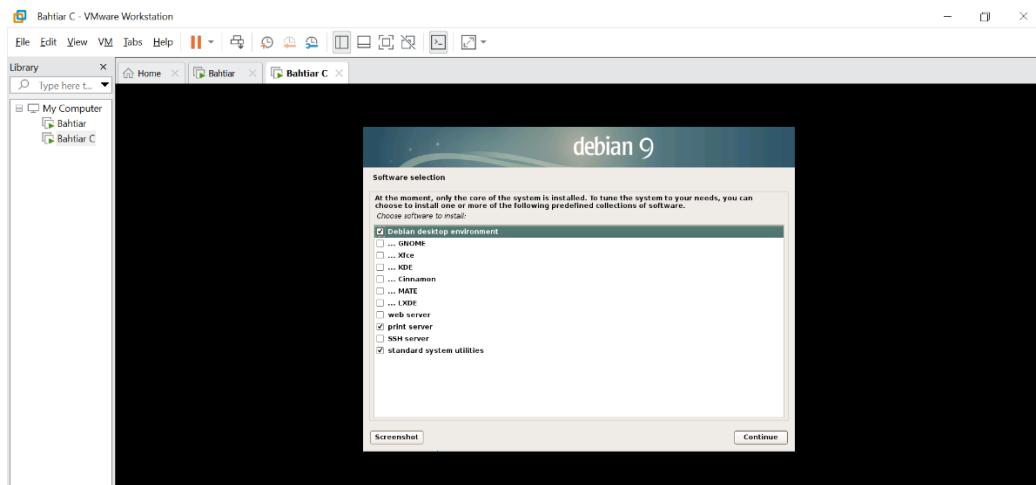
30. Lalu pada saat use a network mirror pilih “NO” lalu klik continue



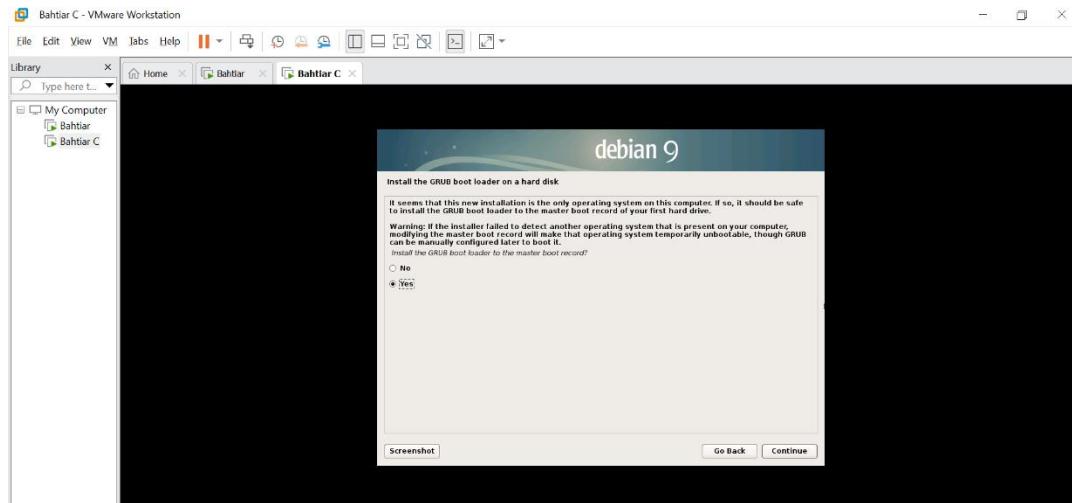
31. Pilih “NO” saat configuring popularity-comtest lalu klik continue



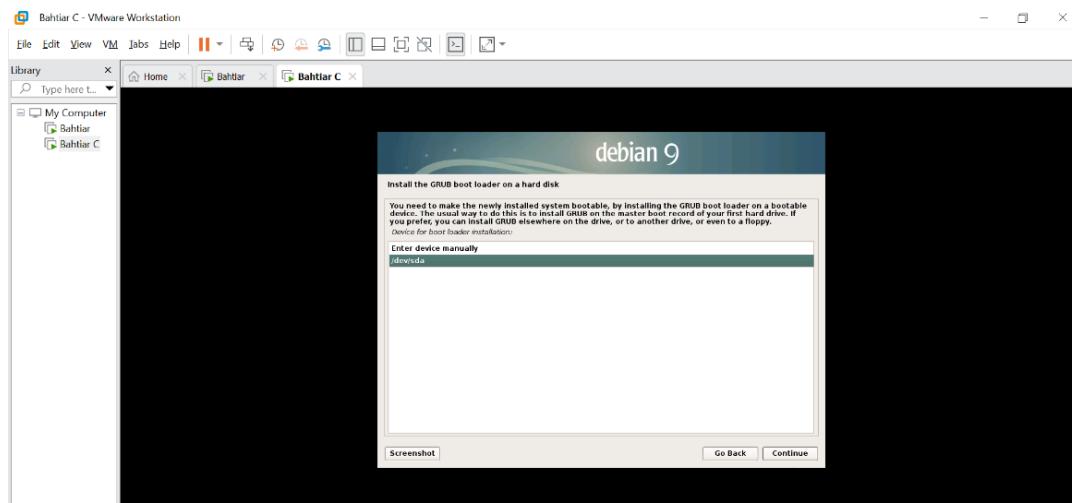
32. Saat instal client kita pilih Debian desktop environment, print server, dan standard system utilities lalu klik continue



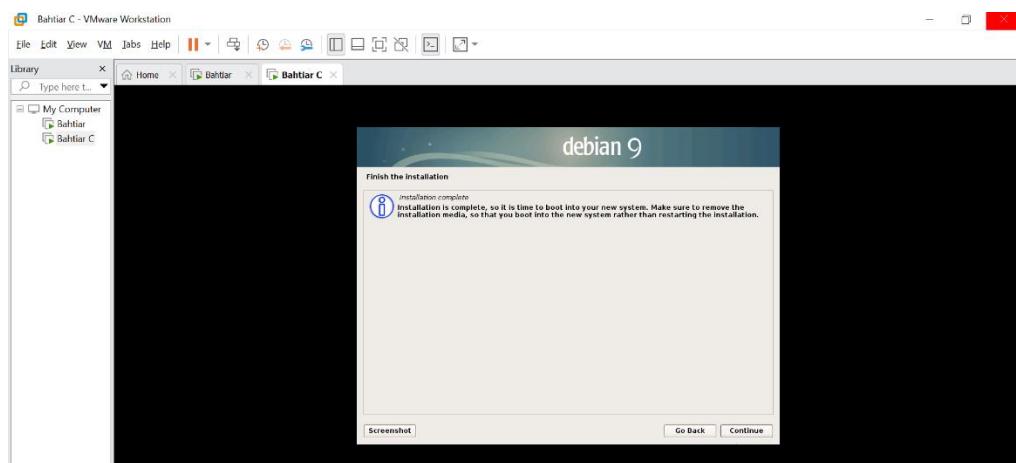
33. Pilih “YES” saat Instal the GRUB boot loader on a hard disk lalu klik continue



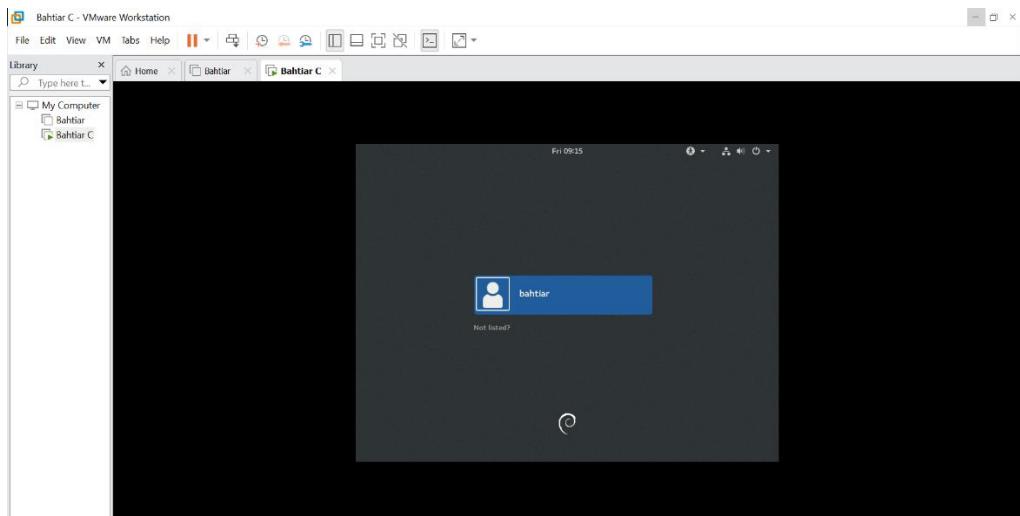
34. Pilih /dev/sde saat device for boot loader installation lalu klik continue



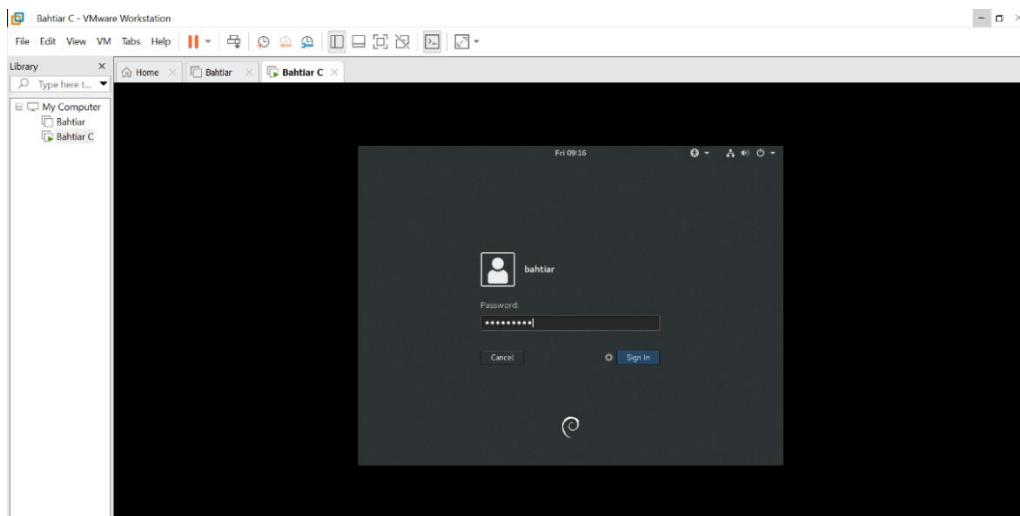
35. Instalasi sudah selesai



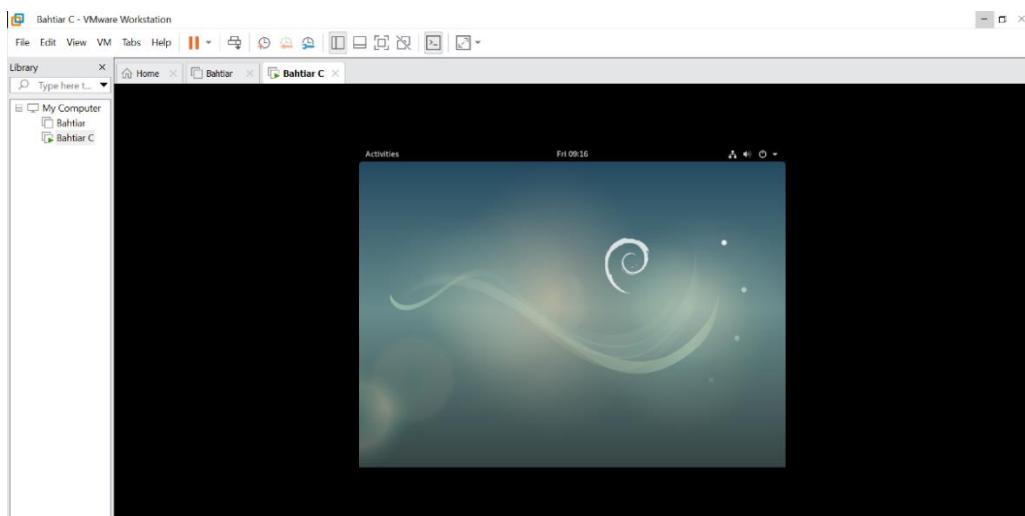
36. Lalu login ke computer client yang sudah dibuat



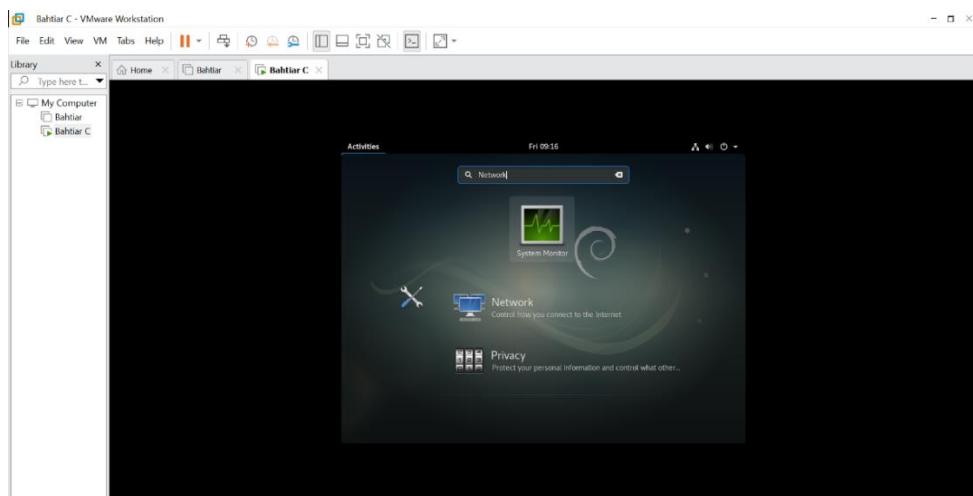
37. Isi password yang sebelumnya sudah di buat lalu sign In



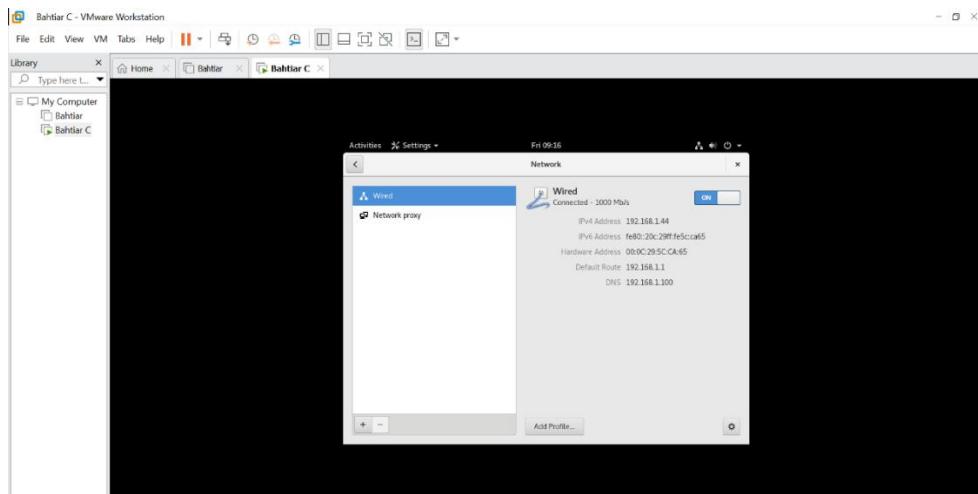
38. Setting IP Address computer client dengan cara masuk ke Activities



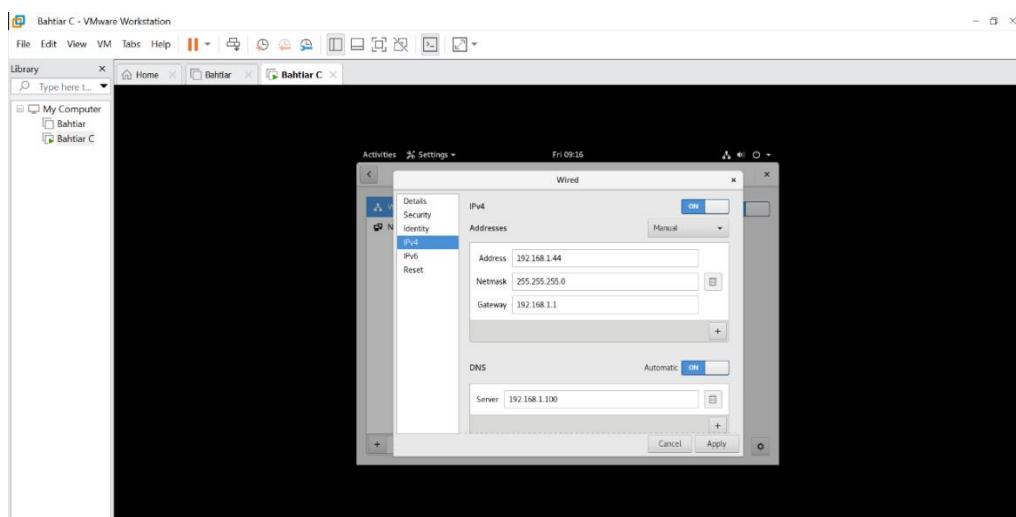
39. Lalu search “ Network” lalu klik



40. Setelah itu edit dengan klik icon setting di pojok kanan bawah

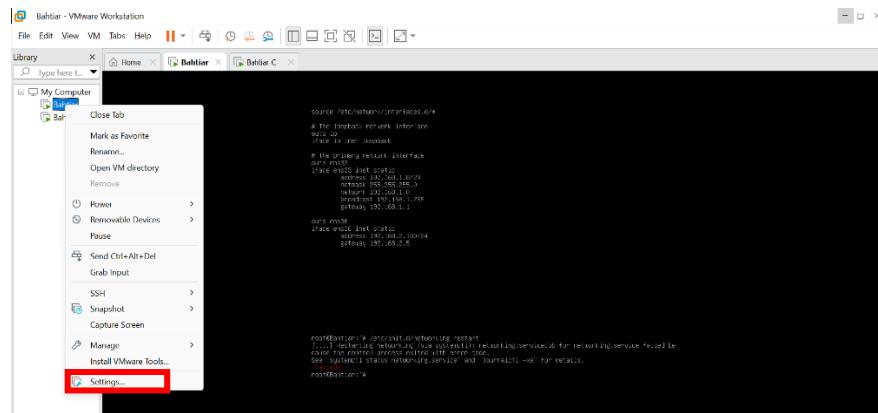


41. Lalu isi IP Address dengan host 36 + Address lalu klik Apply

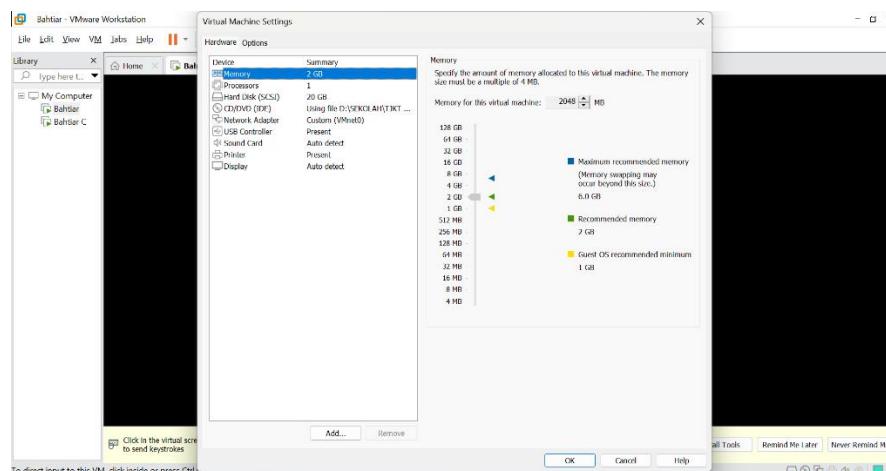


F. Pengujian Virtual Machine Server dengan Virtual Machine Client

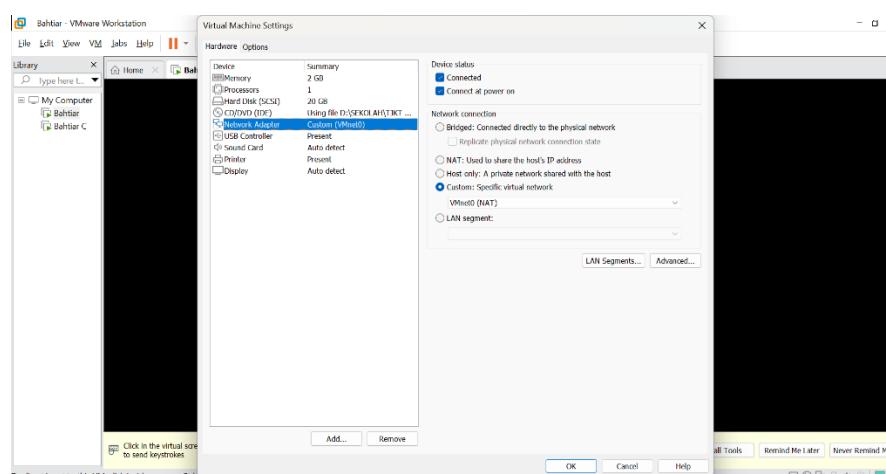
- Pertama kita setting network adapter virtual machine server dengan klik kanan bagian nama server lalu masuk ke setting



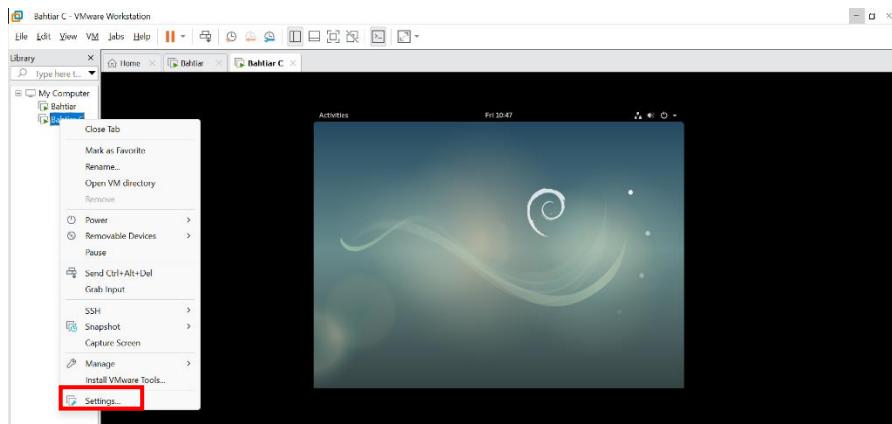
- Setelah itu pilih “ Network Adapter ”



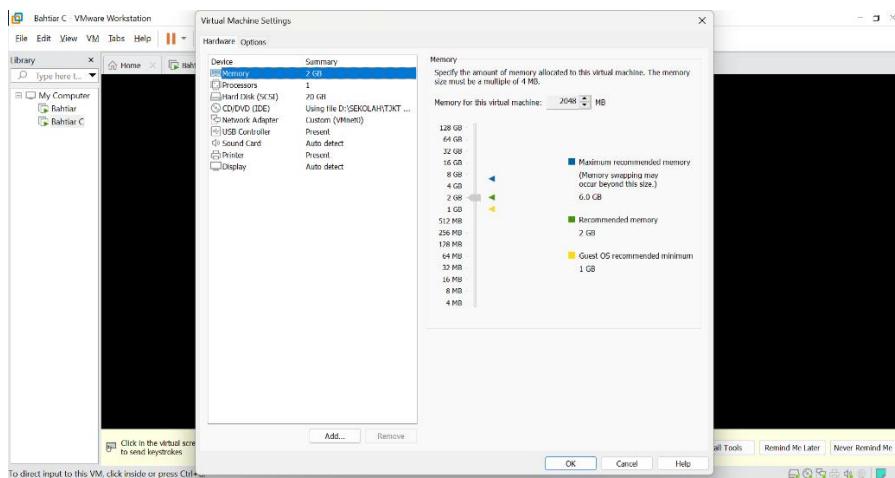
- Lalu custom : Specific virtual network ke VMnet0 (NAT)



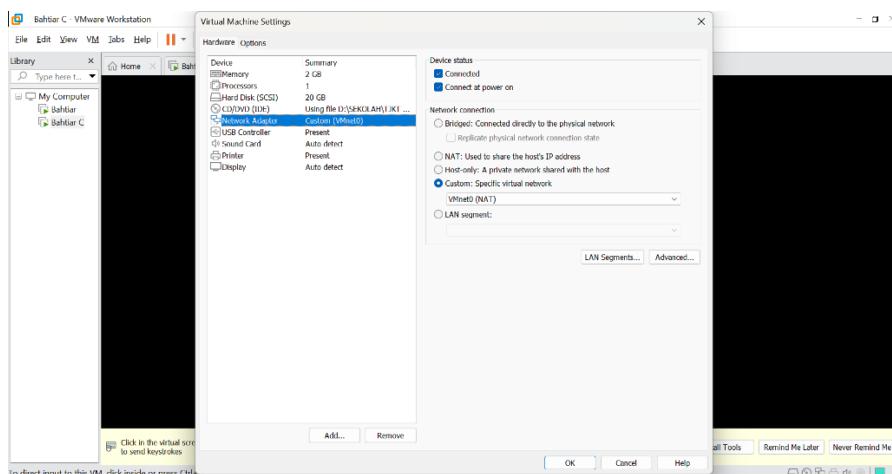
4. Setelah selesai setting network adapter virtual machine server maka kita setting juga network adapter virtual machine client, dengan klik kanan pada nama client lalu masuk setting



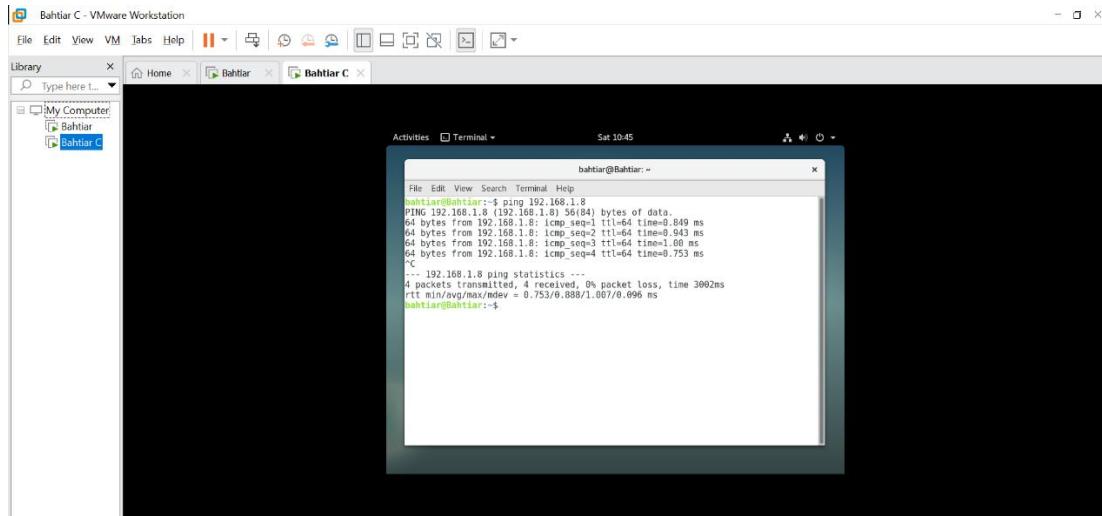
5. Lalu pilih “ Network Adapter ”



6. Setelah itu Custom : Specific virtual network sama dengan virtual machine server

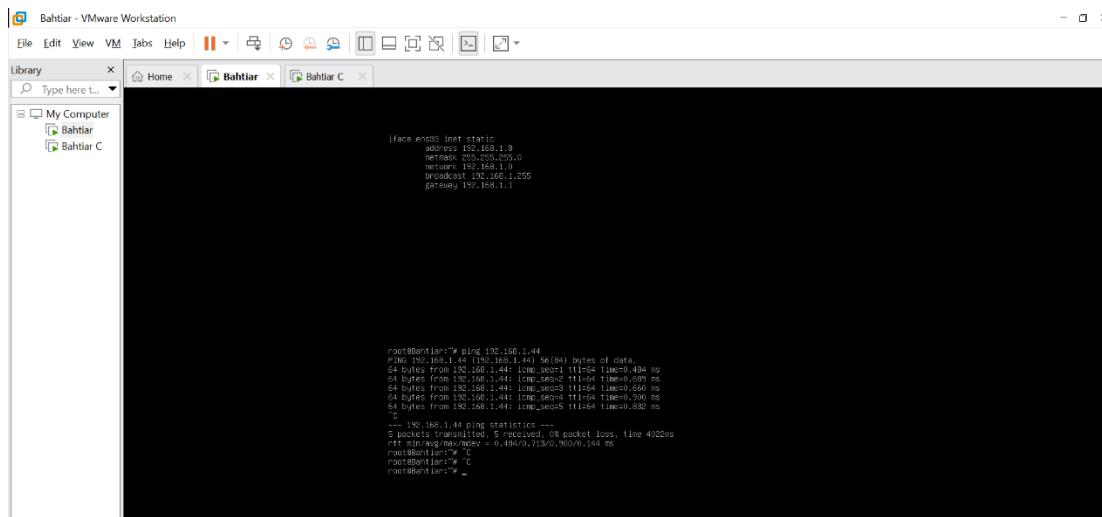


7. Lakukan pengujian server dari client dengan cara “ ping + ip server ” seperti hasil dibawah ini



```
File Edit View VM Tabs Help ||| Library Home Bahtiar Bahtiar C Activities Terminal Sat 10:45
File Edit View Search Terminal Help
root@BahtiarC:~$ ping 192.168.1.8
PING 192.168.1.8 (192.168.1.8) 56(84) bytes of data.
64 bytes from 192.168.1.8: icmp_seq=1 ttl=64 time=0.849 ms
64 bytes from 192.168.1.8: icmp_seq=2 ttl=64 time=0.943 ms
64 bytes from 192.168.1.8: icmp_seq=3 ttl=64 time=1.00 ms
64 bytes from 192.168.1.8: icmp_seq=4 ttl=64 time=0.753 ms
...
--> 192.168.1.8 ping statistics --
4 packets transmitted, 4 received, 0% packet loss, time 3002ms
rtt min/avg/max/mdev = 0.753/0.889/1.087/0.096 ms
root@BahtiarC:~$
```

8. Lakukan sebaliknya dari server menguji client dengan cara “ping + ip client” seperti hasil dibawah ini

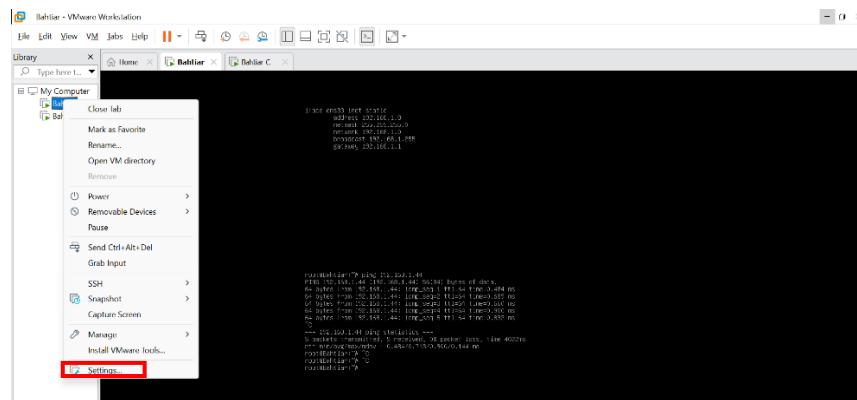


```
File Edit View VM Tabs Help ||| Library Home Bahtiar Bahtiar C Activities Terminal
File Edit View Search Terminal Help
iface ens3 inet static
    address 192.168.1.8
    netmask 255.255.255.0
    broadcast 192.168.1.255
    gateway 192.168.1.1

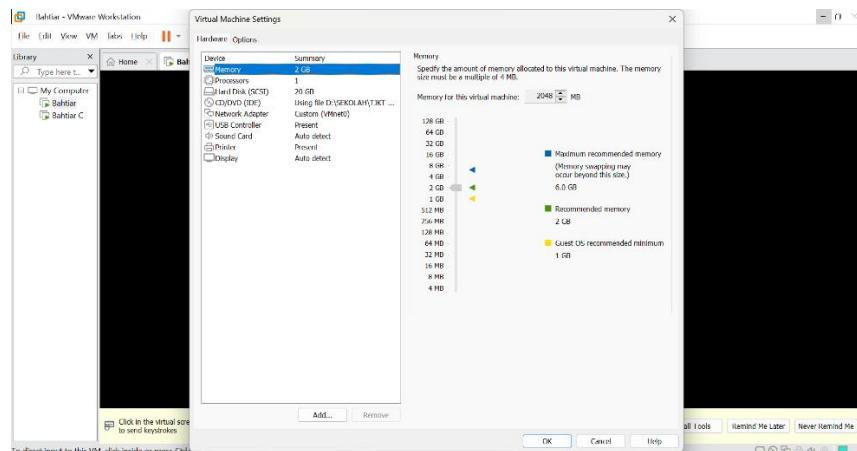
root@Bahtiar:~# ping 192.168.1.44
PING 192.168.1.44 (192.168.1.44) 56(84) bytes of data.
64 bytes from 192.168.1.44: icmp_seq=1 ttl=64 time=0.594 ms
64 bytes from 192.168.1.44: icmp_seq=2 ttl=64 time=0.591 ms
64 bytes from 192.168.1.44: icmp_seq=3 ttl=64 time=0.550 ms
64 bytes from 192.168.1.44: icmp_seq=4 ttl=64 time=0.590 ms
64 bytes from 192.168.1.44: icmp_seq=5 ttl=64 time=0.592 ms
...
--> 192.168.1.44 ping statistics --
5 packets transmitted, 5 received, 0% packet loss, time 4022ms
rtt min/avg/max/mdev = 0.480/0.713/0.909/0.144 ms
root@Bahtiar:~#
```

G. Pengujian Virtual Machine Server dengan Laptop Desktop Windows

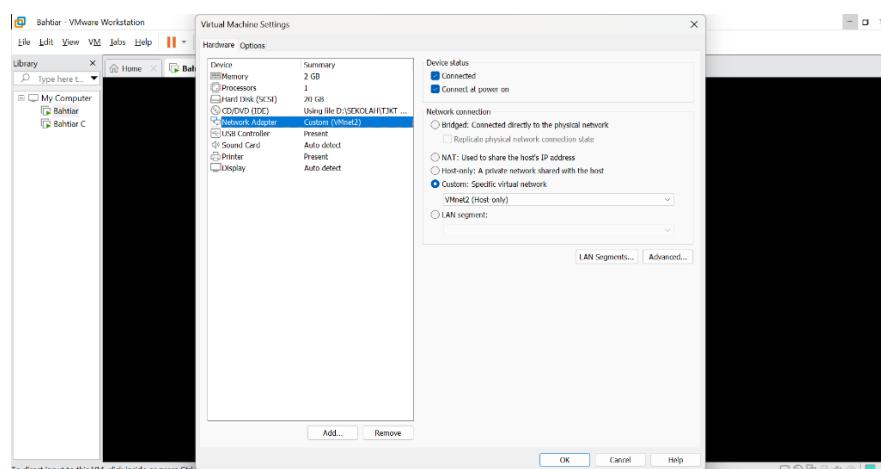
- Pertama tama kita setting network adapter di virtual machine server dengan klik kanan pada nama server lalu masuk bagian setting



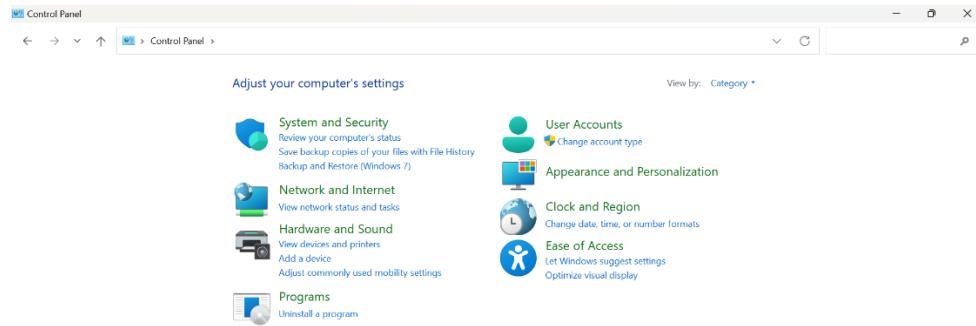
- Lalu masuk ke “ Network Adapter ”



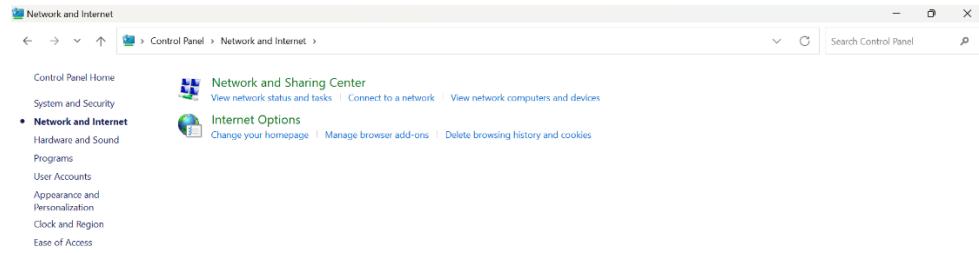
- Setelah itu Custom : Specific virtual network kita pilih VMnet 2 (Host-Only), pilih yang ada host-only nya



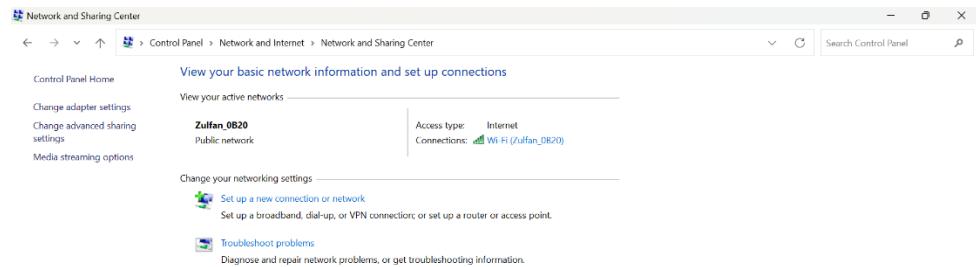
4. Setelah itu kita setting di OS windows, masuk control panel lalu pilih “ Network and Internet ”



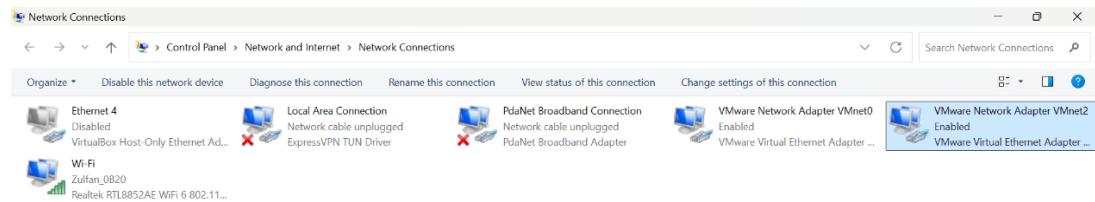
5. Lalu pilih Network and Sharing Center



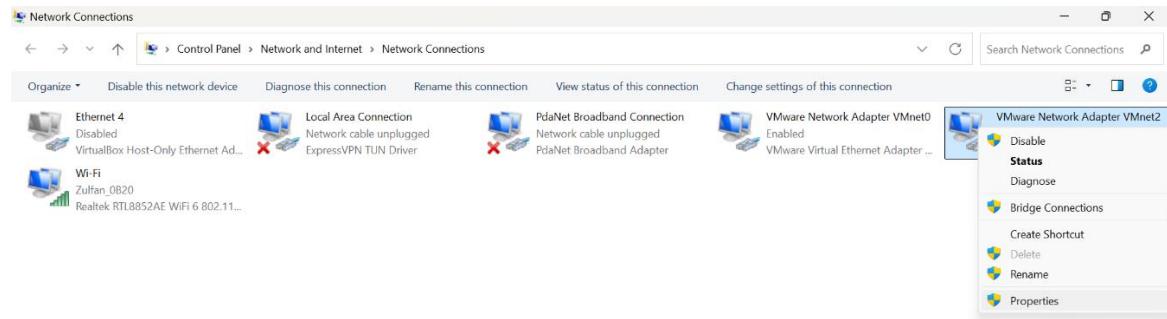
6. Setelah itu masuk ke “ Change adapter settings ”



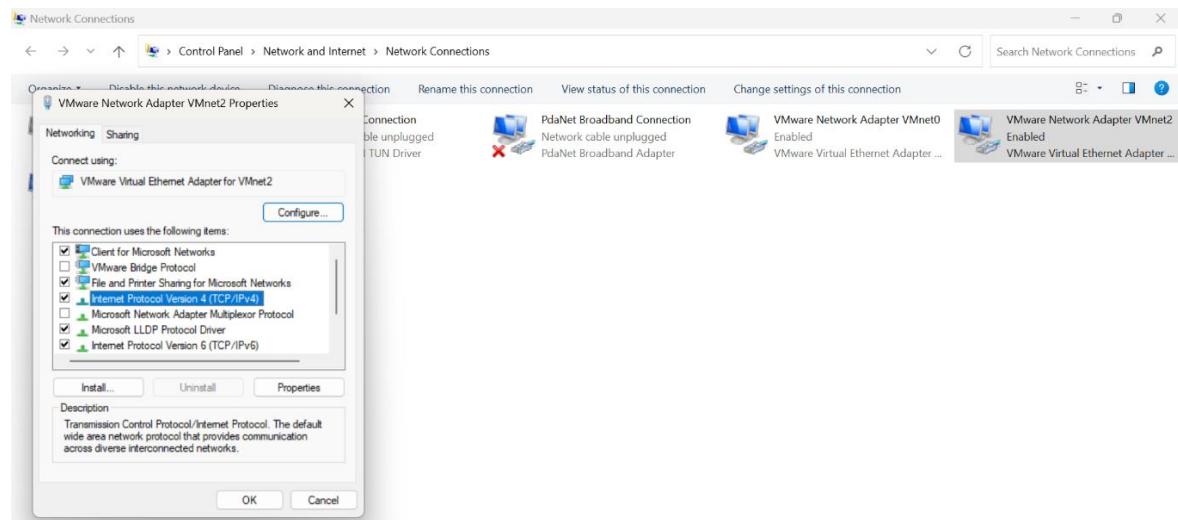
7. Klik pada “ VMware Network Adapter VMnet2 ” sesuai yang kita pilih saat setting network adapter virtual machine server



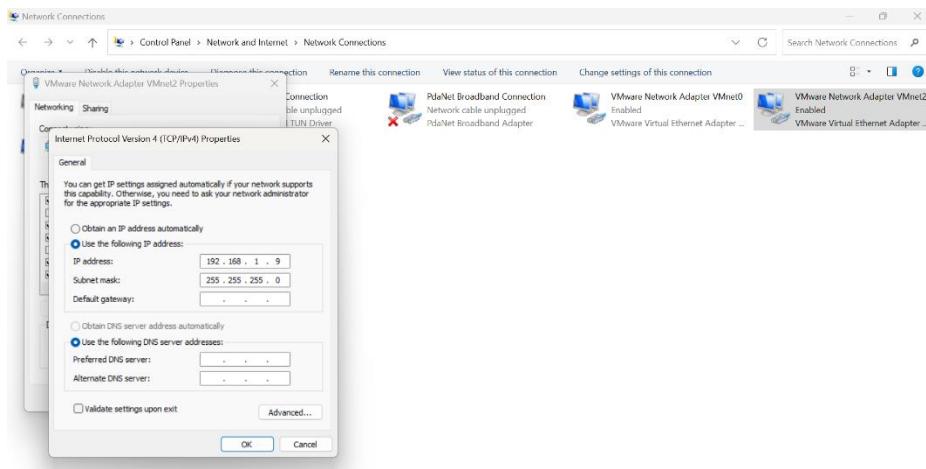
8. Lalu pilih “ Properties ”



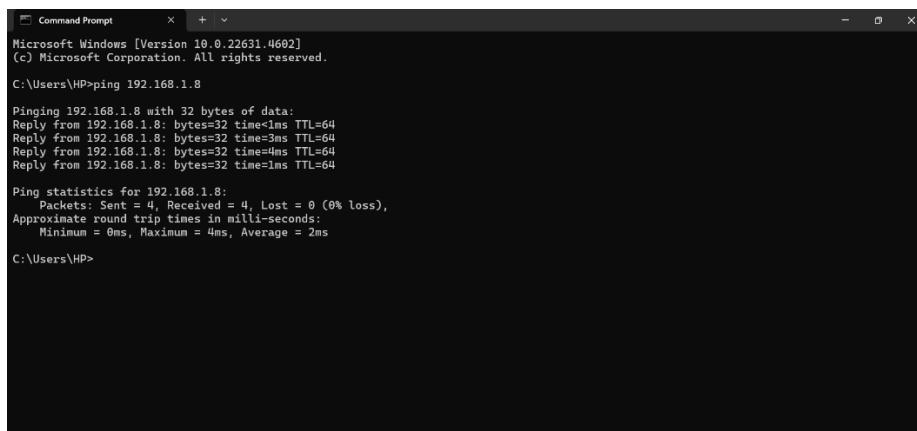
9. Setelah itu setting IPv4 dengan cara pilih “ Internet Protocol Version 4 (TCP/IPv4) ” lalu klik properties



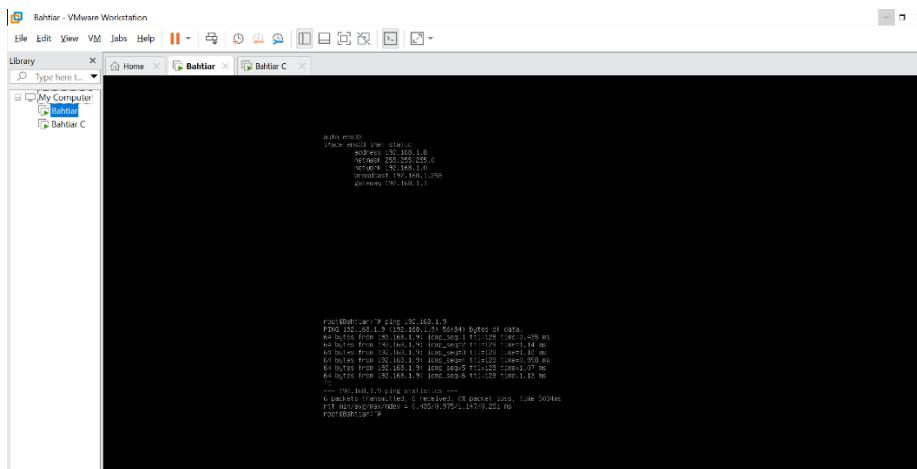
10. Lalu pilih “ Use the following IP address ” dan isi IP dengan benar



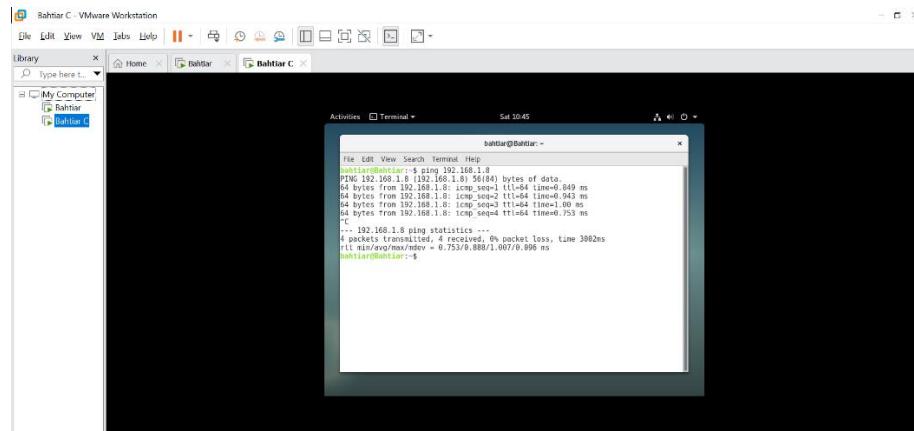
11. Lakukan pengujian dari windows ke virtual machine server dengan cara “ ping + ip virtual machine server ” seperti dibawah ini



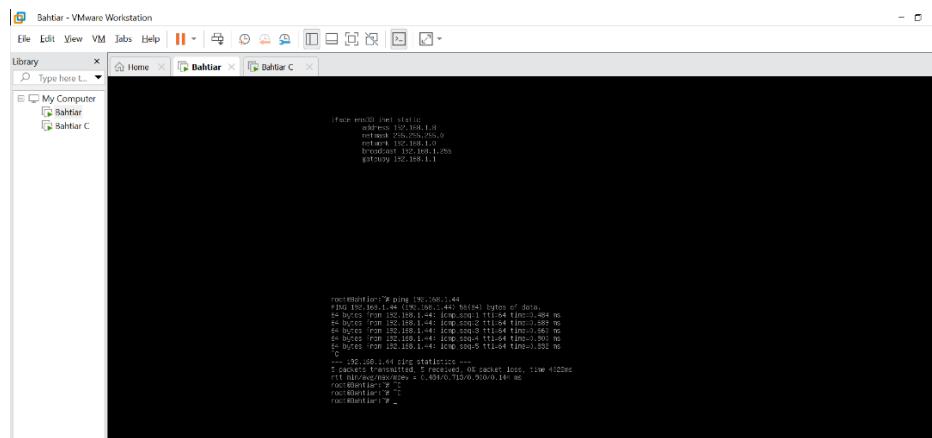
12. Lakukan pengujian dari windows ke virtual machine server dengan cara “ ping + ip virtual machine server ” seperti dibawah ini



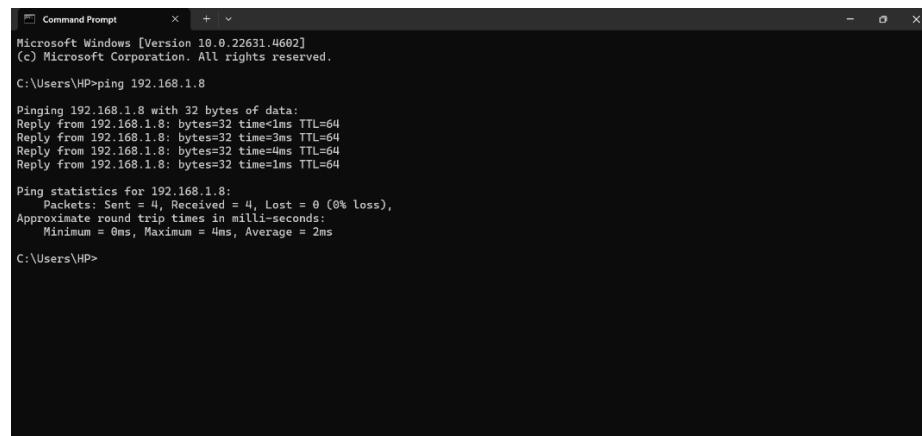
H. Hasil Pengujian



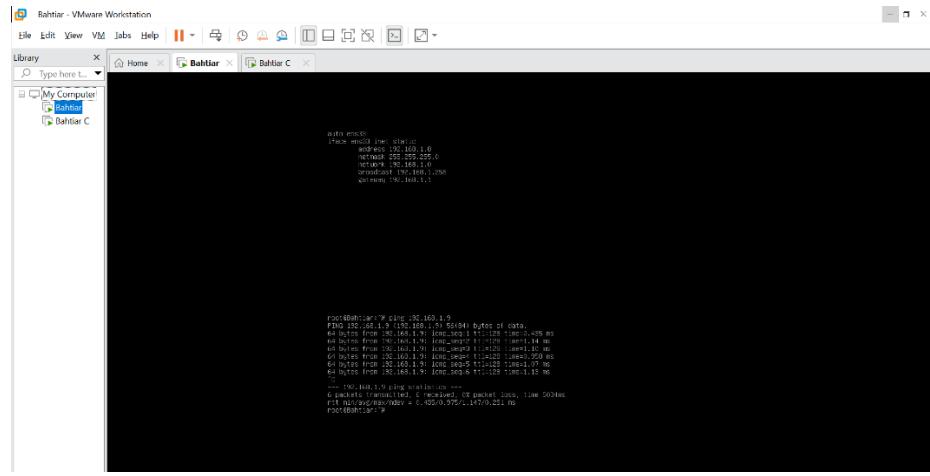
Client ke Server



Server ke Client



Windows ke Server



Server ke Windows

I. Kesimpulan

Dalam menginstal Debian 9.6 tidak terlalu sulit hanya saja kita perlu ketelitian untuk menginstalnya terutama pada bagian yang memilih yes atau no. Pada opsi yang di instal antara server dengan client berbeda pada saat kita menginstal server yang kita instal hanya standard system utilities, sementara untuk client kita menginstal debian desktop environment, print server, dan standard system utilities.

Pada saat setting IP Address kita juga harus menghafal bahasa pemrograman yang dimiliki oleh virtual machine server. Jika kita salah dalam memasukan bahasa pemrograman kita tidak dapat mengkonfigurasi IP Addresss. Kita juga harus menselaraskan network adapter yang dimiliki masing masing device agar saling terhubung. Untuk menguji antar server, client, dan OS lainnya kita perlu memperhatikan network adapter dan IP Address agar saling terhubung satu sama lain.