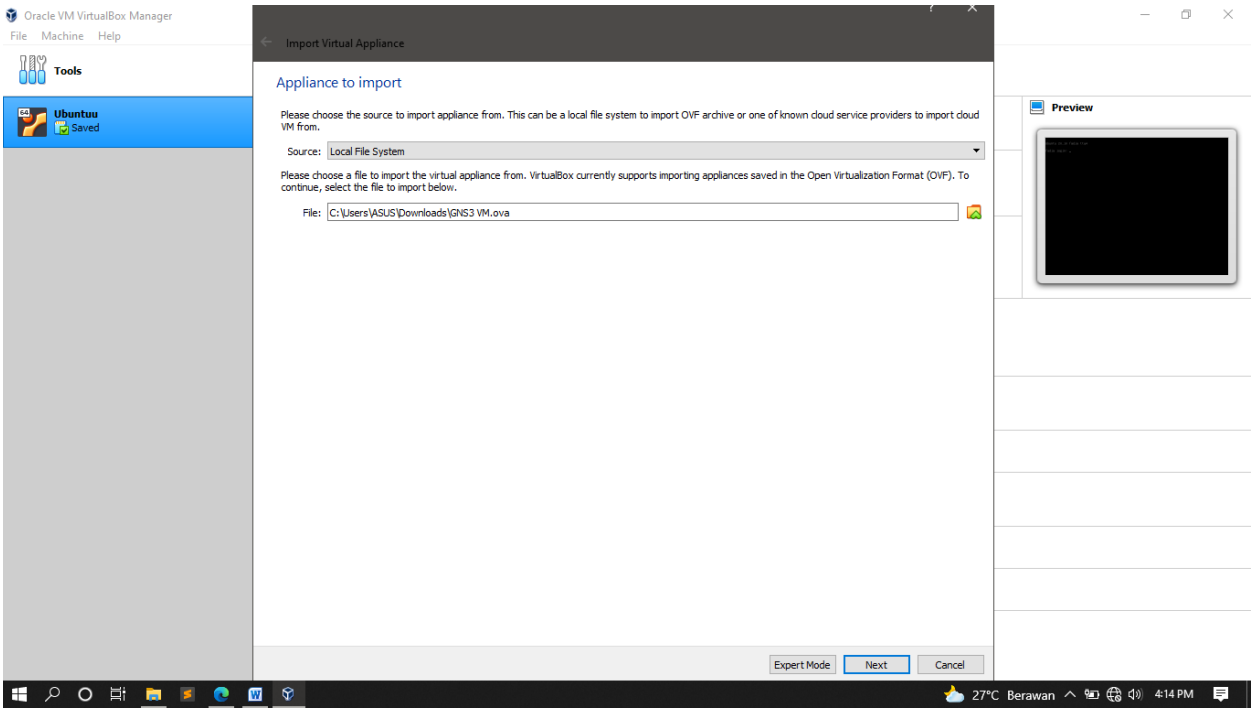
Nama : Sity Fadia Al Haya Maswin

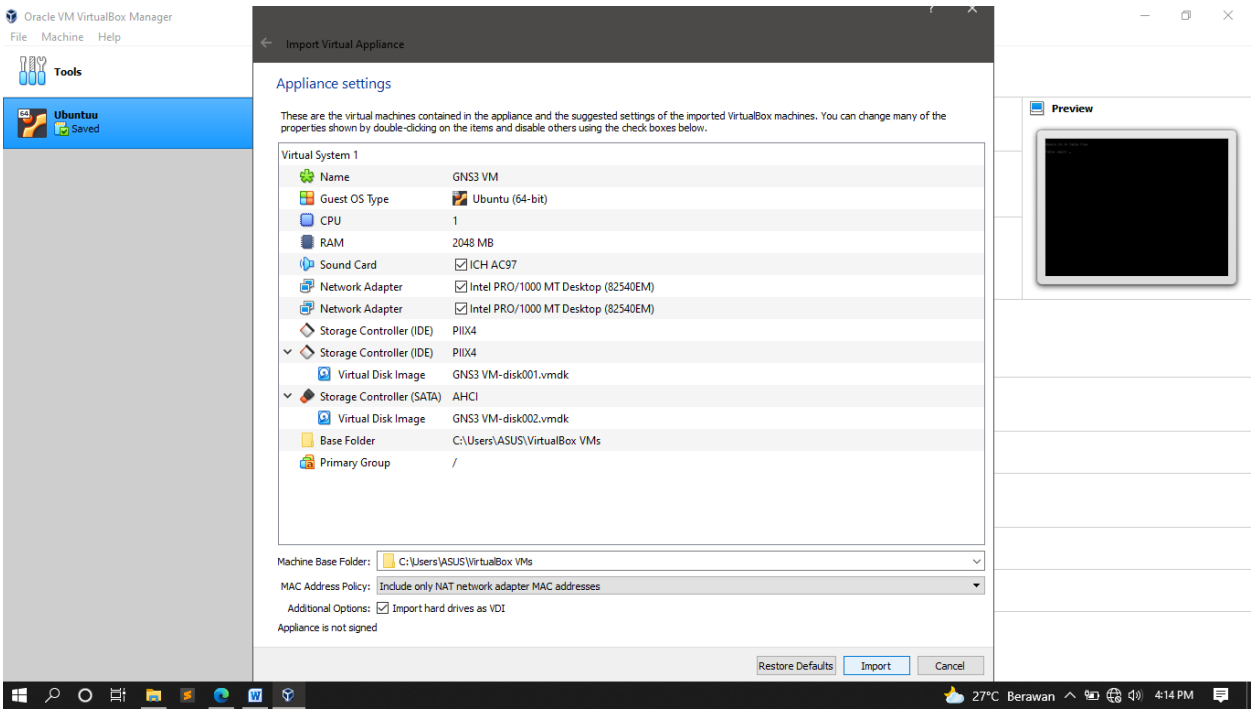
NIM : 191402102

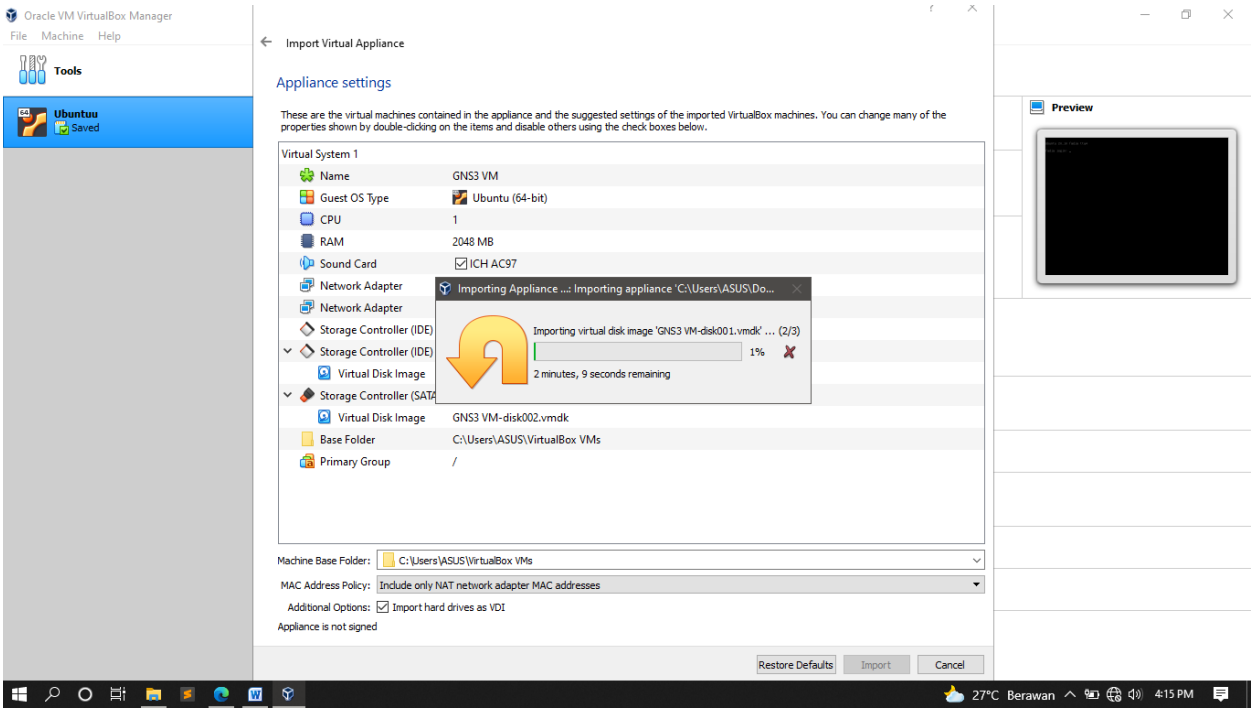
KOM C

Administrasi dan Desain Jaringan – Ujian Tengah Semester

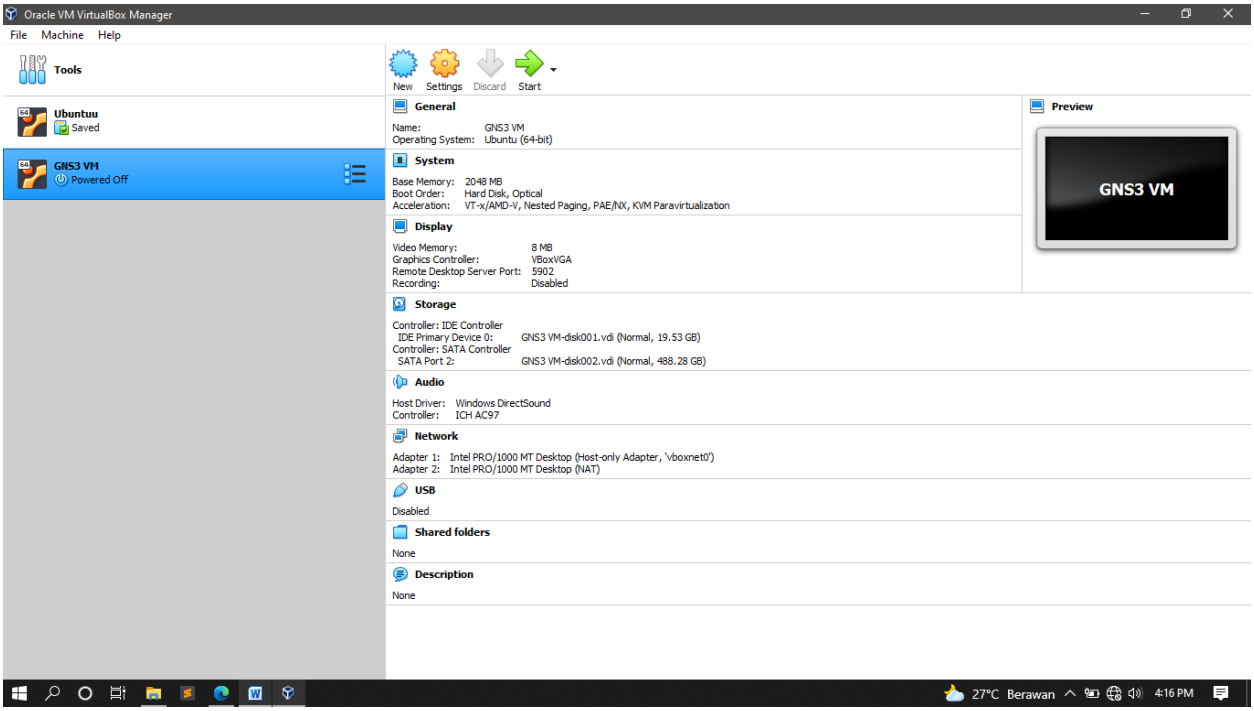
Import GNS3.VM.VIRTUALBOX ke VirtualBox.



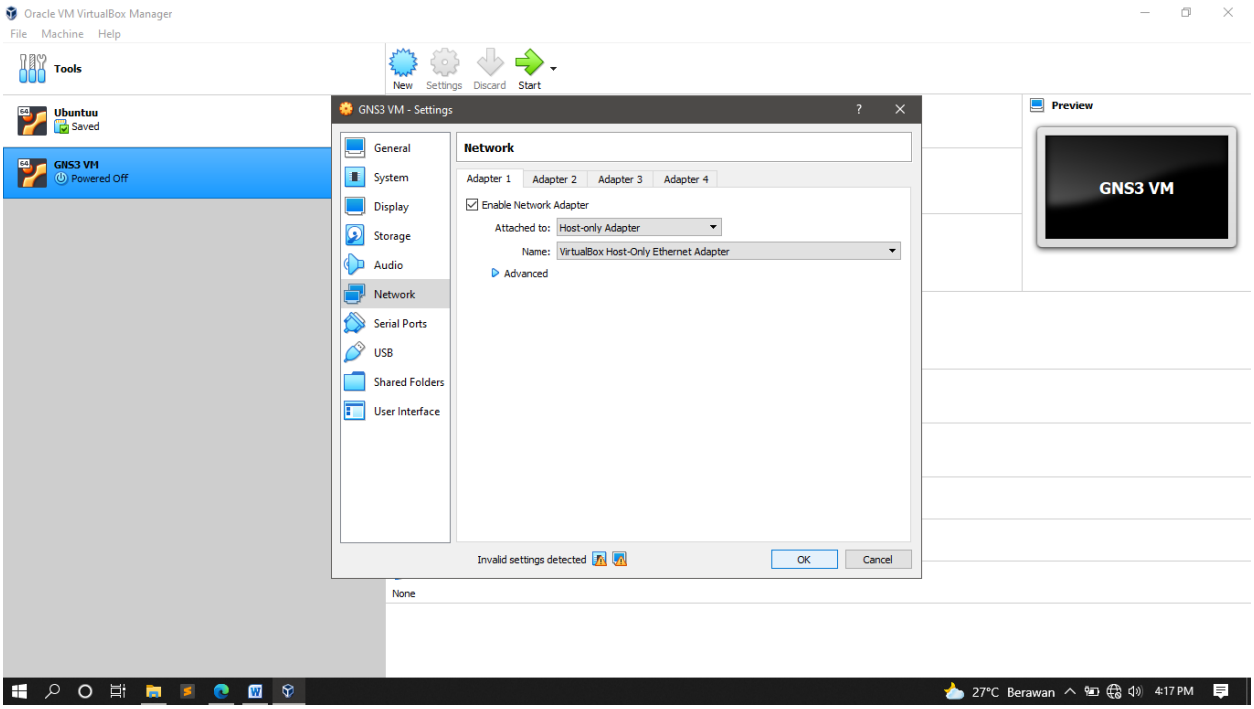

Oracle VM VirtualBox Manager
File Machine Help
Tools
Ubuntuu
Saved
Import Virtual Appliance
Appliance settings
These are the virtual machines contained in the appliance and the suggested settings of the imported VirtualBox machines. You can change many of the properties shown by double-clicking on the items and disable others using the check boxes below.
Virtual System 1
Name GNS3 VM
Guest OS Type Ubuntu (64-bit)
CPU 1
RAM 2048 MB
Sound Card ICH AC97
Network Adapter Intel PRO/1000 MT Desktop (82540EM)
Network Adapter Intel PRO/1000 MT Desktop (82540EM)
Storage Controller (IDE) PIIX4
Storage Controller (IDE) PIIX4
Virtual Disk Image GNS3 VM-disk001.vmdk
Storage Controller (SATA) AHCI
Virtual Disk Image GNS3 VM-disk002.vmdk
Base Folder C:\Users\ASUS\VirtualBox VMs
Primary Group /
Machine Base Folder: C:\Users\ASUS\VirtualBox VMs
MAC Address Policy: Include only NAT network adapter MAC addresses
Additional Options: Import hard drives as VDI
Appliance is not signed
Restore Defaults
Import
Cancel
Preview
27°C Berawan
4:14 PM


Oracle VM VirtualBox Manager
File Machine Help
Tools
Ubuntuu
Saved
Import Virtual Appliance
Appliance settings
These are the virtual machines contained in the appliance and the suggested settings of the imported VirtualBox machines. You can change many of the properties shown by double-clicking on the items and disable others using the check boxes below.
Virtual System 1
Name GNS3 VM
Guest OS Type Ubuntu (64-bit)
CPU 1
RAM 2048 MB
Sound Card ICH AC97
Network Adapter
Network Adapter
Storage Controller (IDE)
Storage Controller (IDE)
Virtual Disk Image
Storage Controller (SATA)
Virtual Disk Image GNS3 VM-disk002.vmdk
Base Folder C:\Users\ASUS\VirtualBox VMs
Primary Group /
Importing Appliance ...: Importing appliance 'C:\Users\ASUS\Do...
Importing virtual disk image 'GNS3 VM-disk001.vmdk' ... (2/3)
1%
2 minutes, 9 seconds remaining
Machine Base Folder: C:\Users\ASUS\VirtualBox VMs
MAC Address Policy: Include only NAT network adapter MAC addresses
Additional Options: Import hard drives as VDI
Appliance is not signed
Restore Defaults
Import
Cancel
Preview
27°C Berawan
4:15 PM

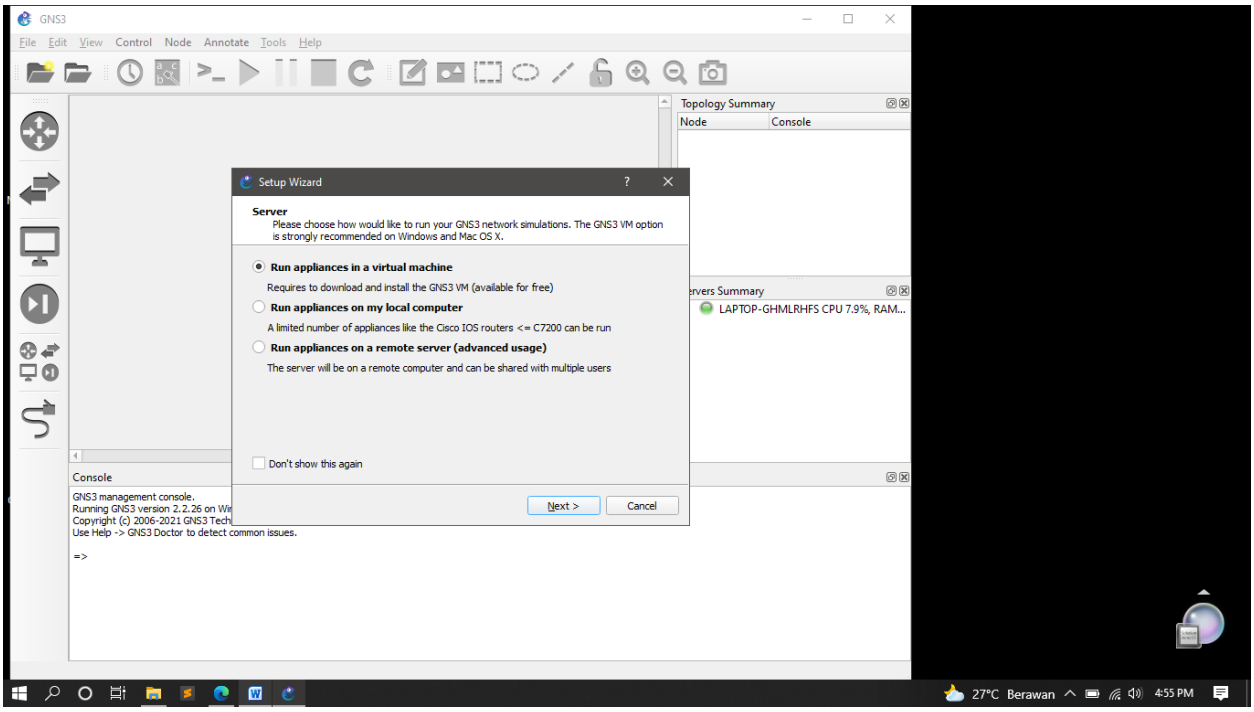
Tampilan setelah selesai di-import.

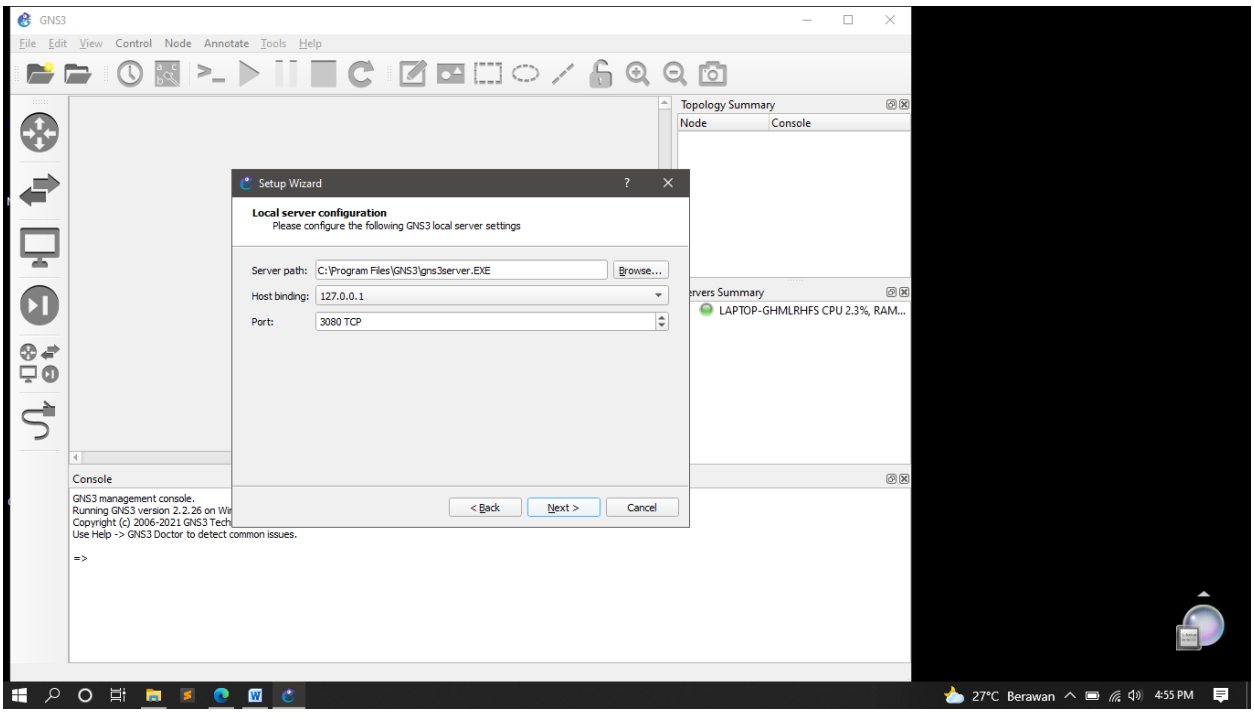


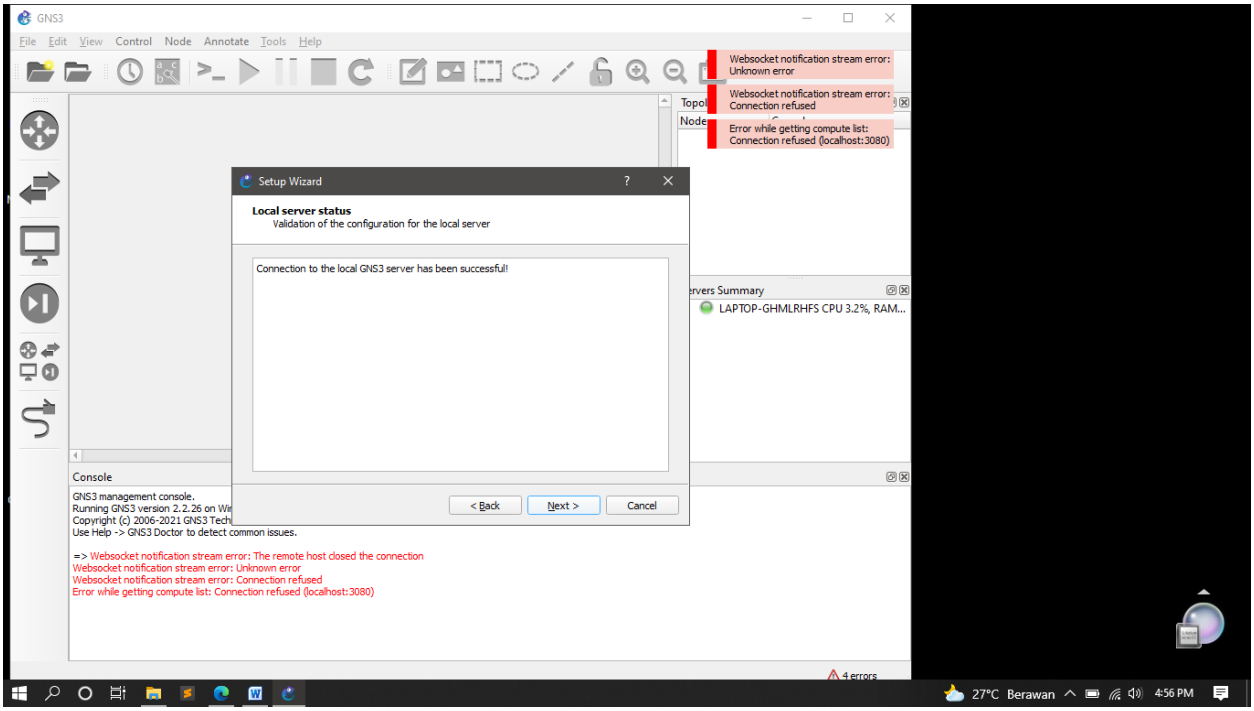
Pada bagian Network di Settings, pilih Host-only Adapter Attached to di Adapter 1.

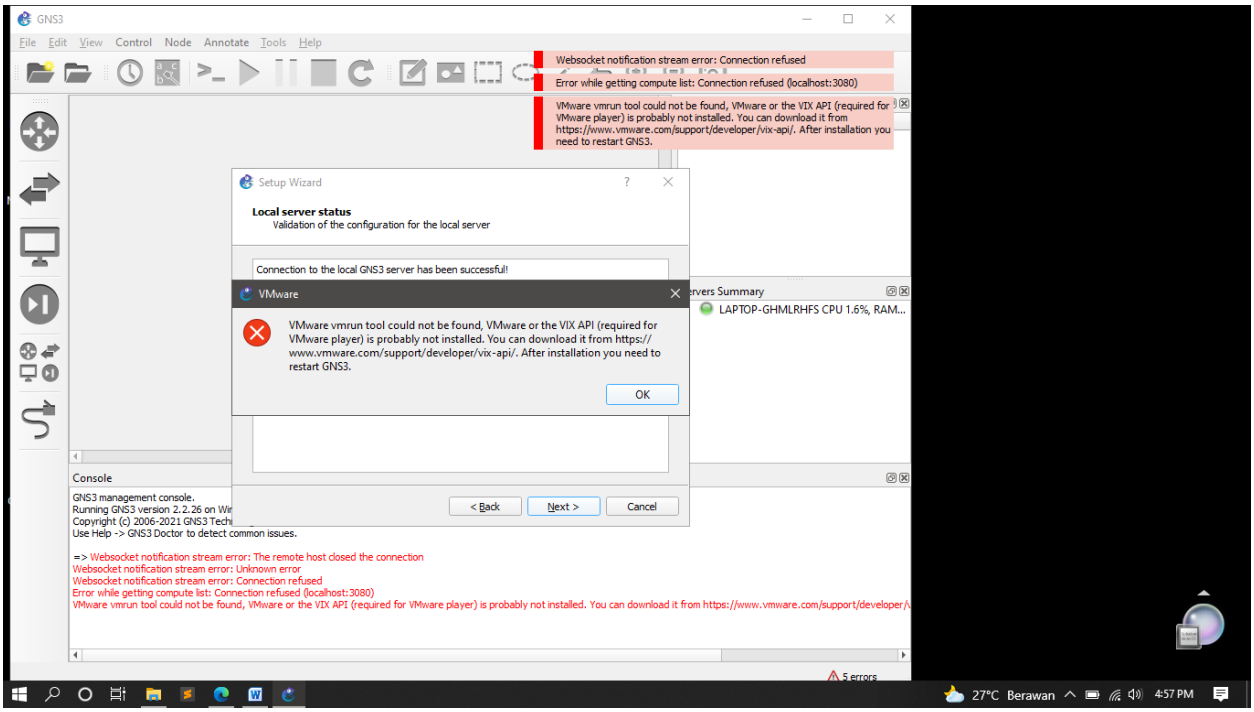


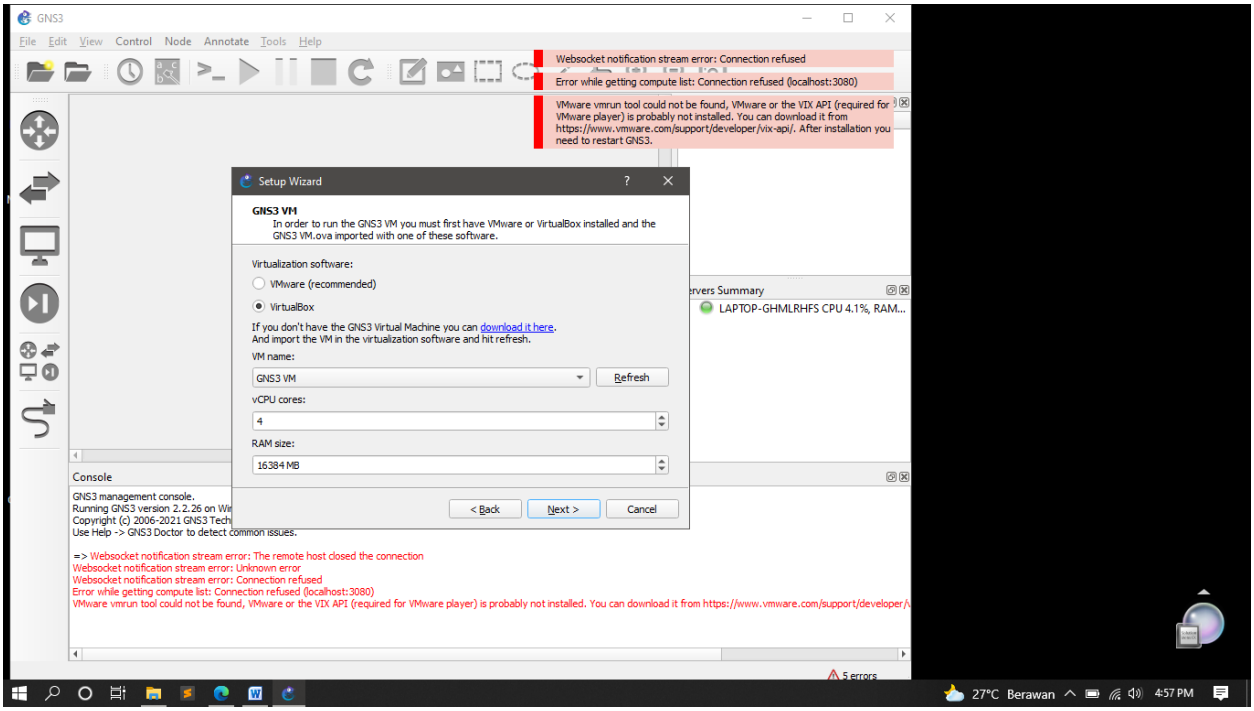
Setelah selesai instal GNS3, lakukan setup wizard seperti berikut ini.

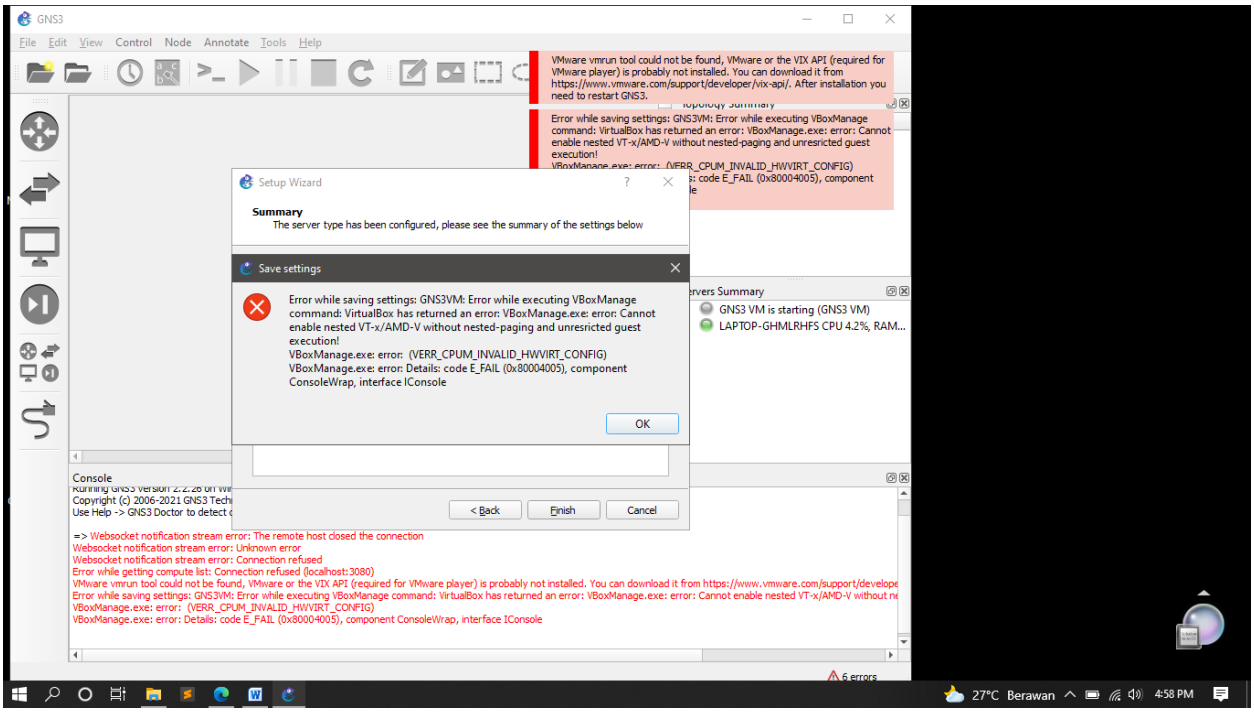




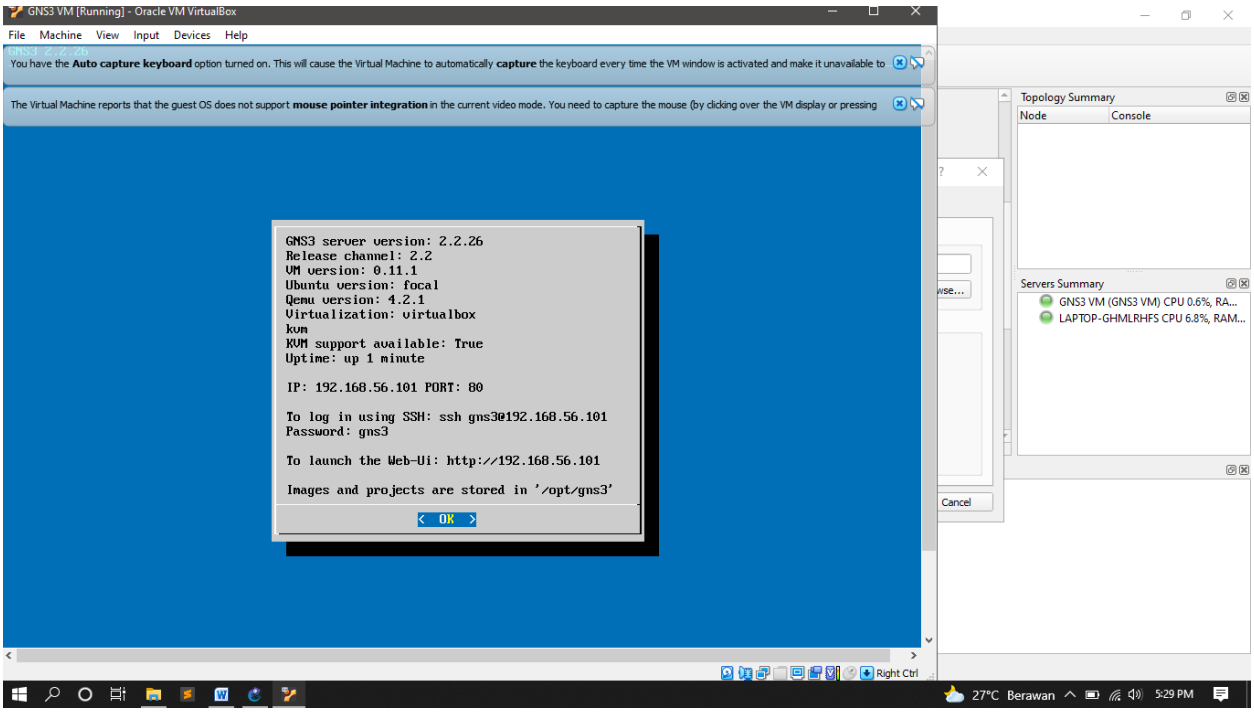

GNS3
File Edit View Control Node Annotate Tools Help
Websocket notification stream error: Unknown error
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
Setup Wizard
Local server status
Validation of the configuration for the local server
Connection to the local GNS3 server has been successful!
< Back
Next >
Cancel
LAPTOP-GHMLRHFS CPU 3.2%, RAM...
Console
GNS3 management console.
Use Help -> GNS3 Doctor to detect common issues.
=> Websocket notification stream error: The remote host closed the connection
Websocket notification stream error: Unknown error
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
4 errors
27°C Berawan
4:56 PM


GNS3
File Edit View Control Node Annotate Tools Help
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/developer/vix-api/. After installation you need to restart GNS3.
Setup Wizard
Local server status
Validation of the configuration for the local server
Connection to the local GNS3 server has been successful!
VMware
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/developer/vix-api/. After installation you need to restart GNS3.
OK
< Back
Next >
Cancel
LAPTOP-GHMLRHFS CPU 1.6%, RAM...
Console
GNS3 management console.
Use Help -> GNS3 Doctor to detect common issues.
=> Websocket notification stream error: The remote host closed the connection
Websocket notification stream error: Unknown error
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/developer/
5 errors
27°C Berawan
4:57 PM

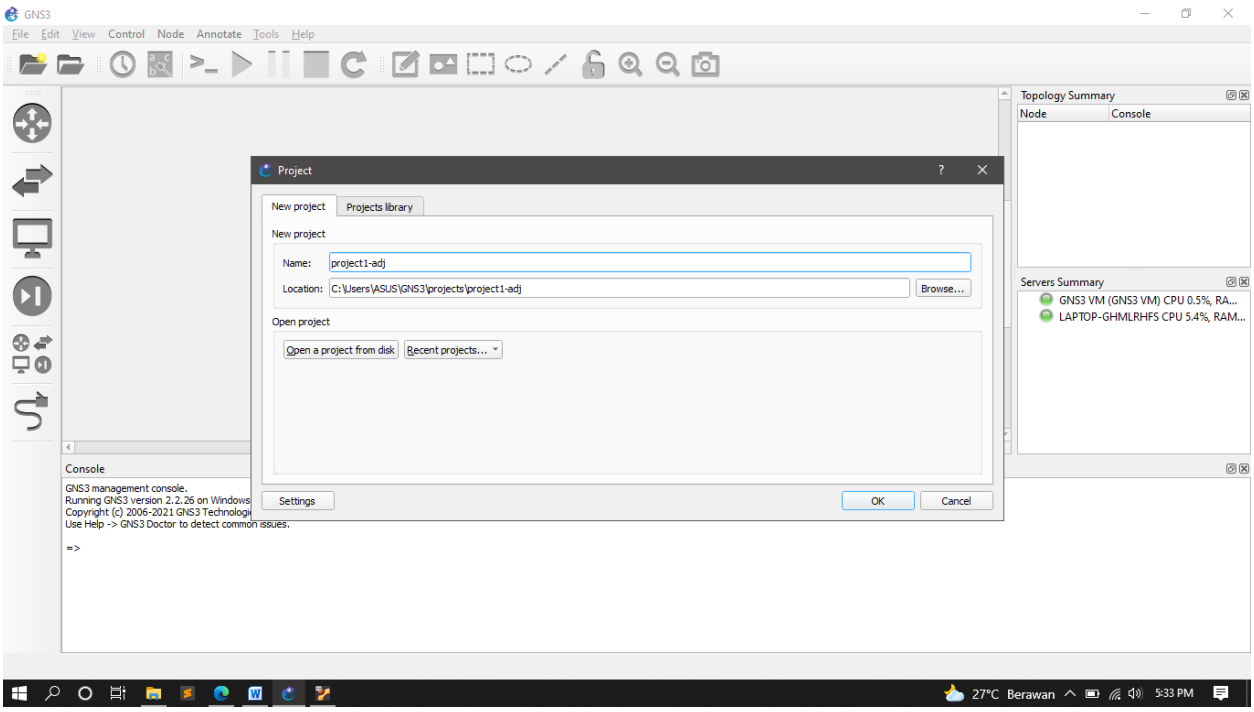

GNS3
File Edit View Control Node Annotate Tools Help
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/developer/vix-api/. After installation you need to restart GNS3.
Setup Wizard
GNS3 VM
In order to run the GNS3 VM you must first have VMware or VirtualBox installed and the GNS3 VM.ova imported with one of these software.
Virtualization software:
VMware (recommended)
VirtualBox
If you don't have the GNS3 Virtual Machine you can download it here.
And import the VM in the virtualization software and hit refresh.
VM name:
GNS3 VM
Refresh
vCPU cores:
4
RAM size:
16384 MB
< Back
Next >
Cancel
Servers Summary
LAPTOP-GHMLRHFS CPU 4.1%, RAM...
Console
GNS3 management console.
Running GNS3 version 2.2.26 on Wi
Copyright (c) 2006-2021 GNS3 Tech
Use Help -> GNS3 Doctor to detect common issues.
=> Websocket notification stream error: The remote host closed the connection
Websocket notification stream error: Unknown error
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/developer/
5 errors
27°C Berawan
4:57 PM


GNS3
File Edit View Control Node Annotate Tools Help
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/developer/vix-api/. After installation you need to restart GNS3.
Error while saving settings: GNS3VM: Error while executing VBoxManage command: VirtualBox has returned an error: VBoxManage.exe: error: Cannot enable nested VT-x/AMD-V without nested-paging and unrestricted guest execution!
Setup Wizard
Summary
The server type has been configured, please see the summary of the settings below
Save settings
Error while saving settings: GNS3VM: Error while executing VBoxManage command: VirtualBox has returned an error: VBoxManage.exe: error: Cannot enable nested VT-x/AMD-V without nested-paging and unrestricted guest execution!
VBoxManage.exe: error: (VERR_CPUM_INVALID_HWVIRT_CONFIG)
VBoxManage.exe: error: Details: code E_FAIL (0x80004005), component ConsoleWrap, interface IConsole
OK
Servers Summary
GNS3 VM is starting (GNS3 VM)
LAPTOP-GHMLRHFS CPU 4.2%, RAM...
Console
Copyright (c) 2006-2021 GNS3 Tech
Use Help -> GNS3 Doctor to detect
< Back
Finish
Cancel
=> Websocket notification stream error: The remote host closed the connection
Websocket notification stream error: Unknown error
Websocket notification stream error: Connection refused
Error while getting compute list: Connection refused (localhost:3080)
VMware vmrun tool could not be found, VMware or the VIX API (required for VMware player) is probably not installed. You can download it from https://www.vmware.com/support/develope
Error while saving settings: GNS3VM: Error while executing VBoxManage command: VirtualBox has returned an error: VBoxManage.exe: error: Cannot enable nested VT-x/AMD-V without n
VBoxManage.exe: error: (VERR_CPUM_INVALID_HWVIRT_CONFIG)
VBoxManage.exe: error: Details: code E_FAIL (0x80004005), component ConsoleWrap, interface IConsole
6 errors
27°C Berawan
4:58 PM

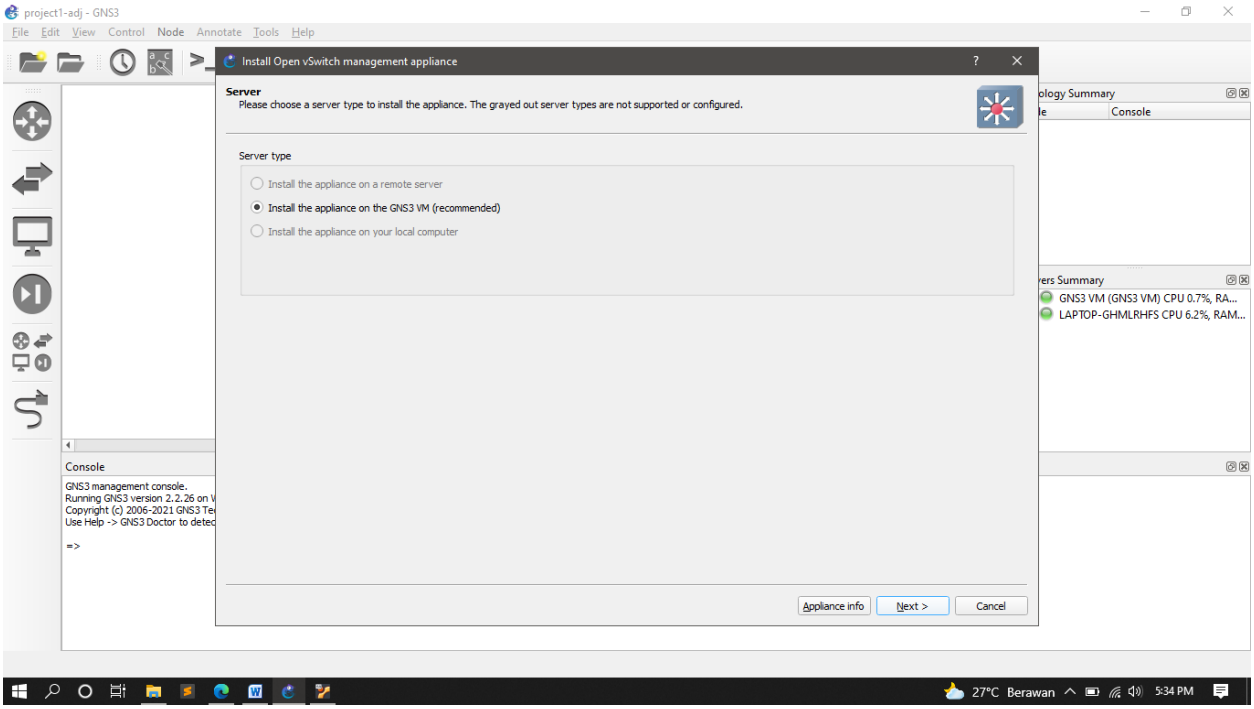
Dikarenakan adanya error dari sistem. Saya memukan solusi dan berakhir memperbaiki error dan setelah itu langsung terhubung ke GNS3 VM virtual box.

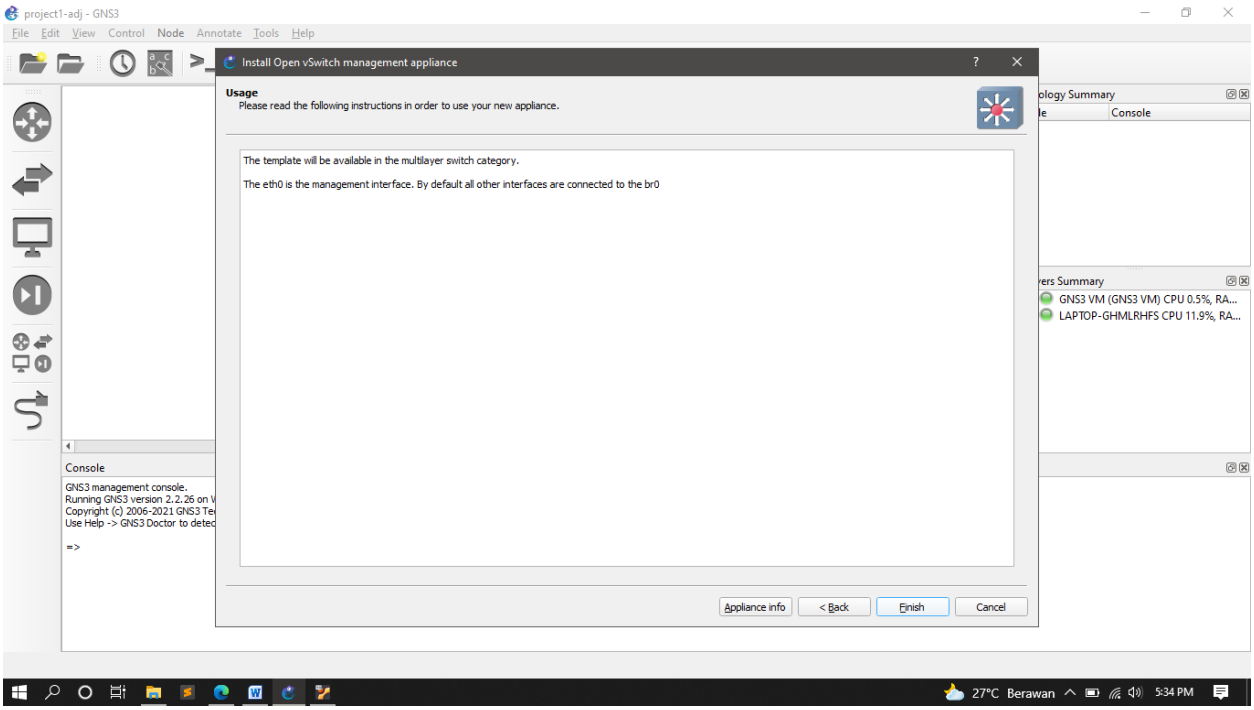


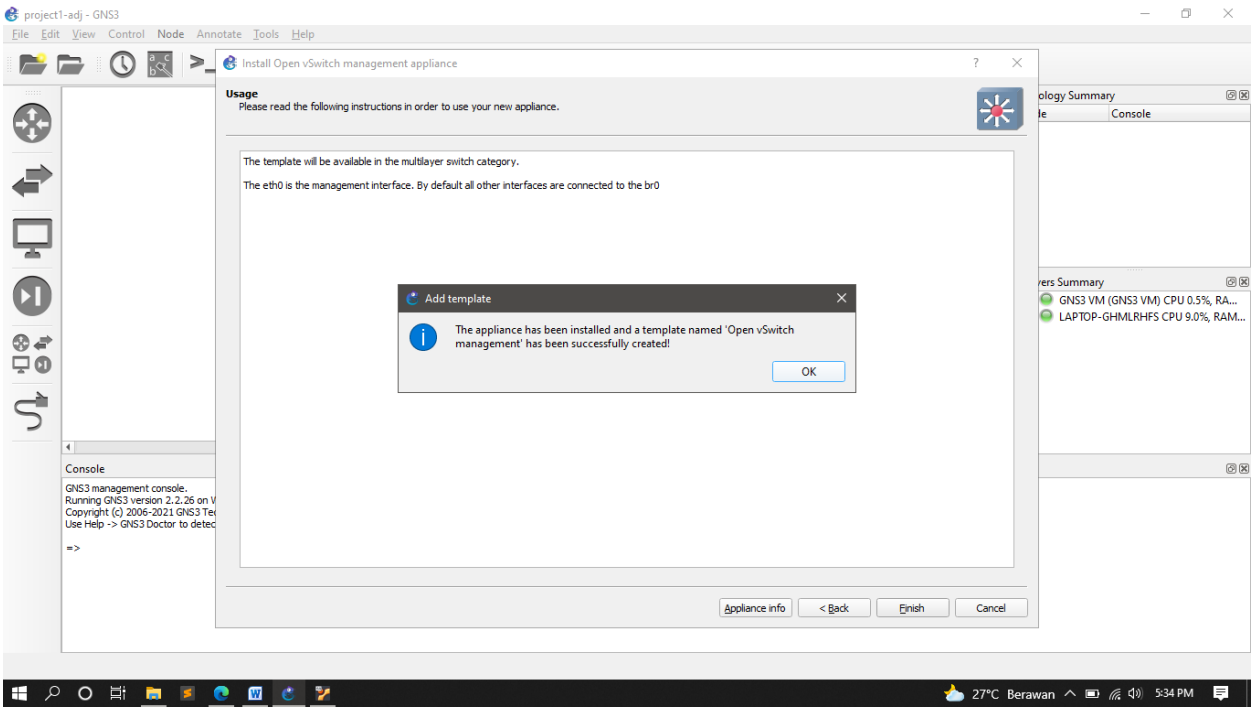
Membuat project baru.



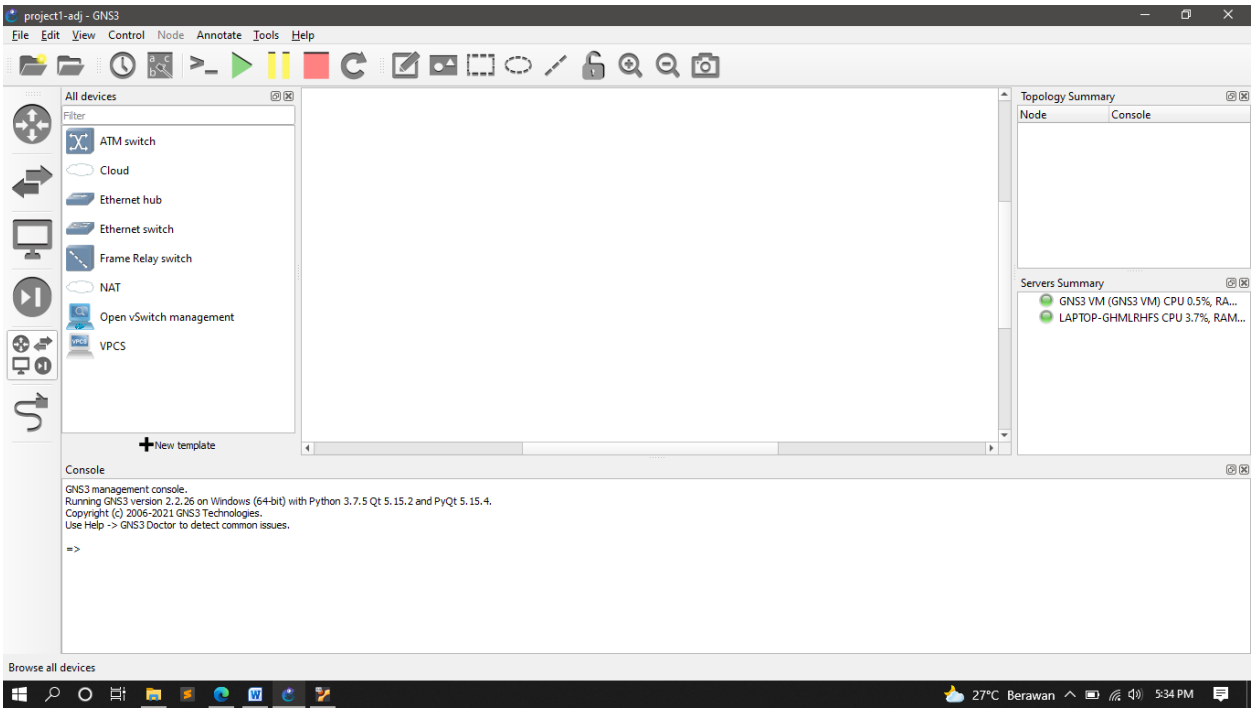
Import Open vSwitch.



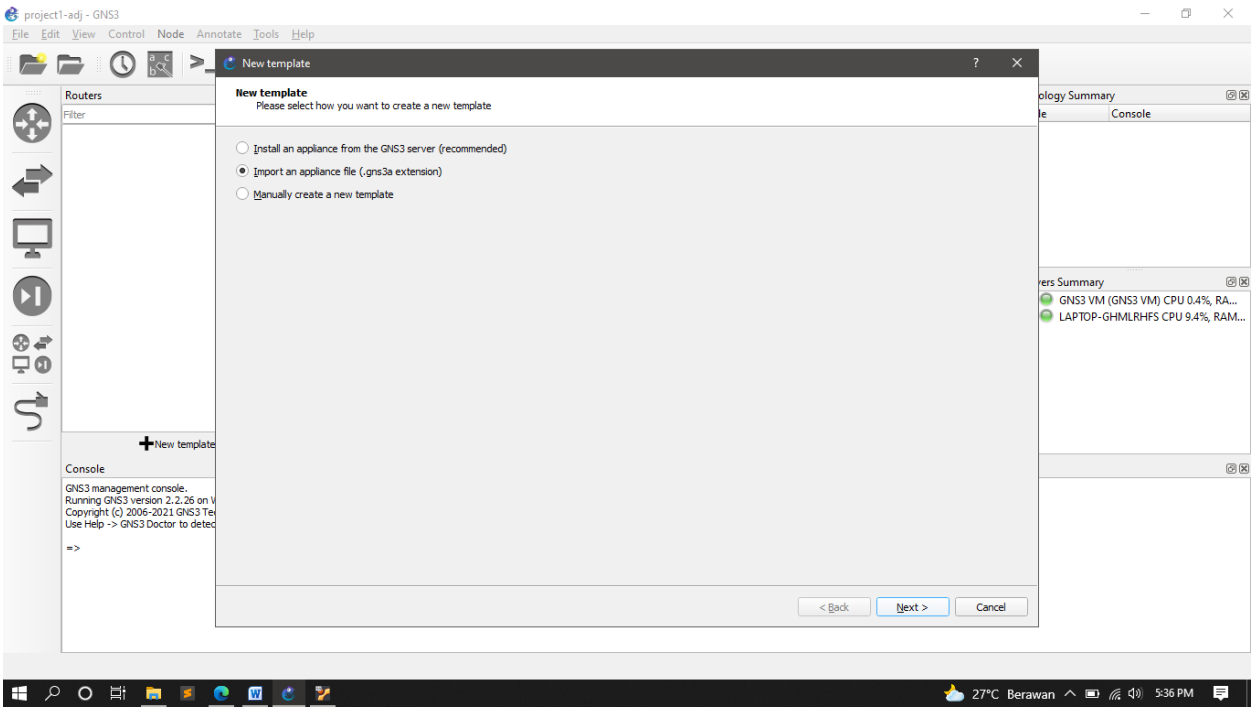


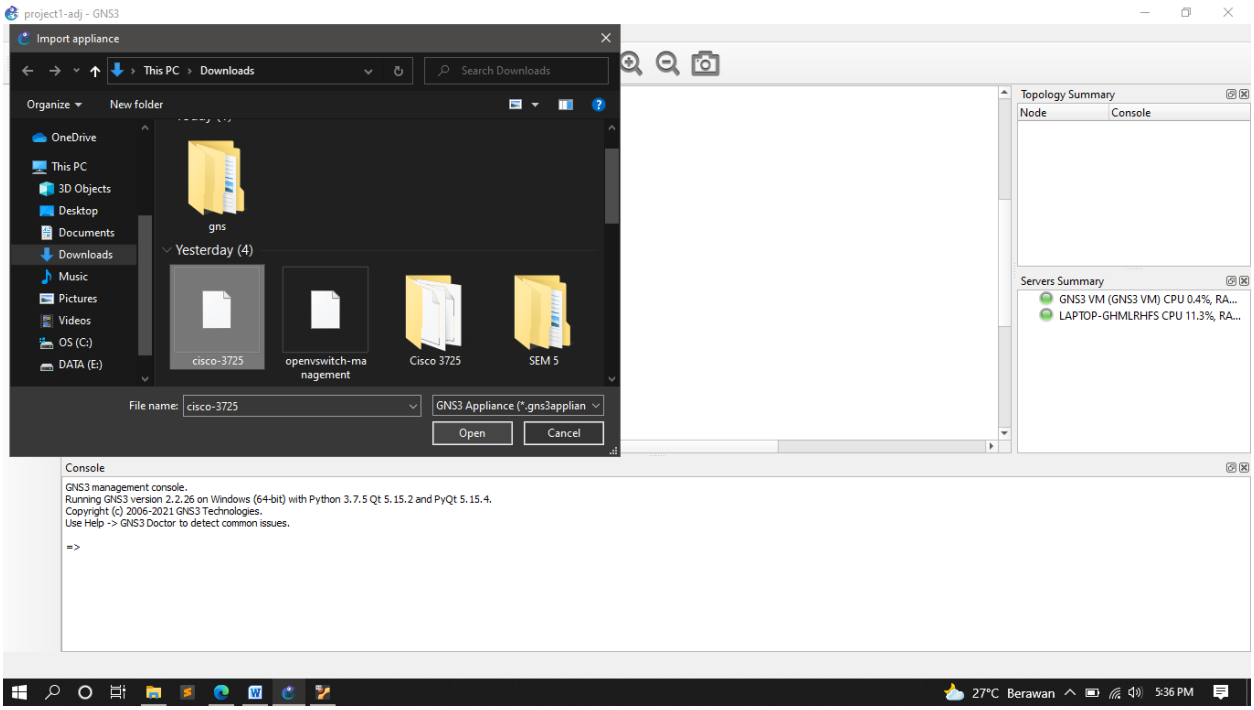


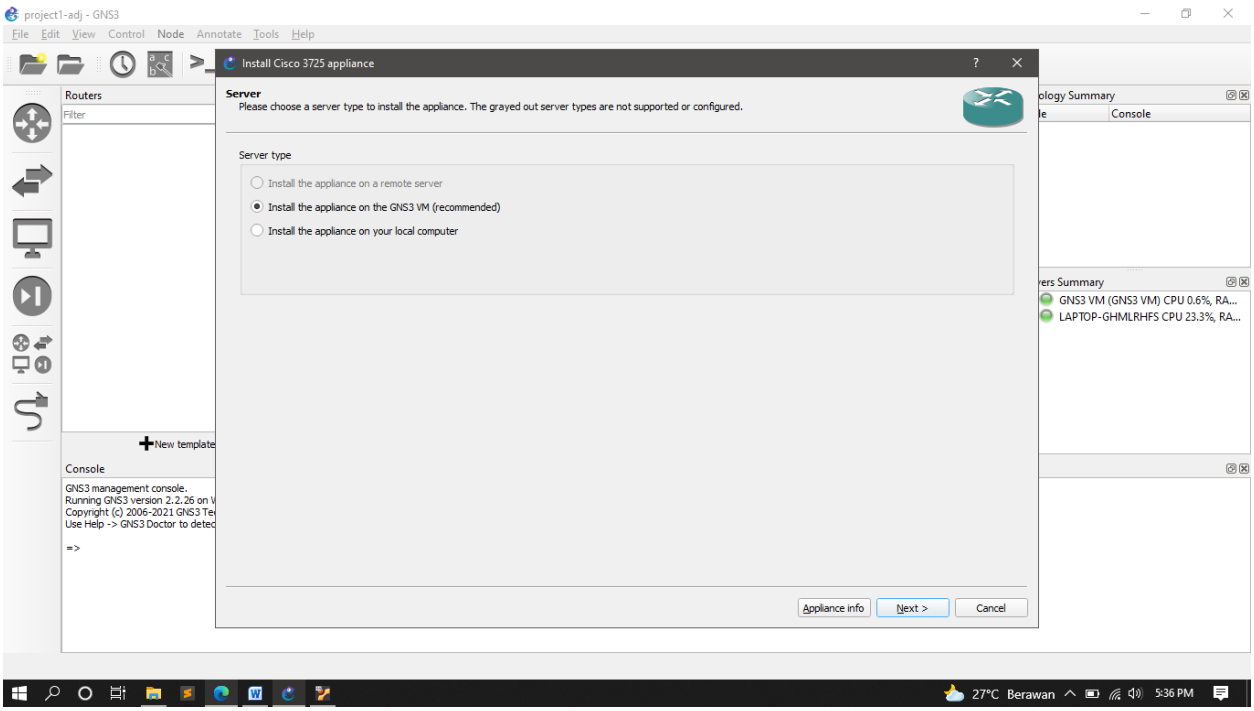
Open vSwitch management telah berhasil di-import.

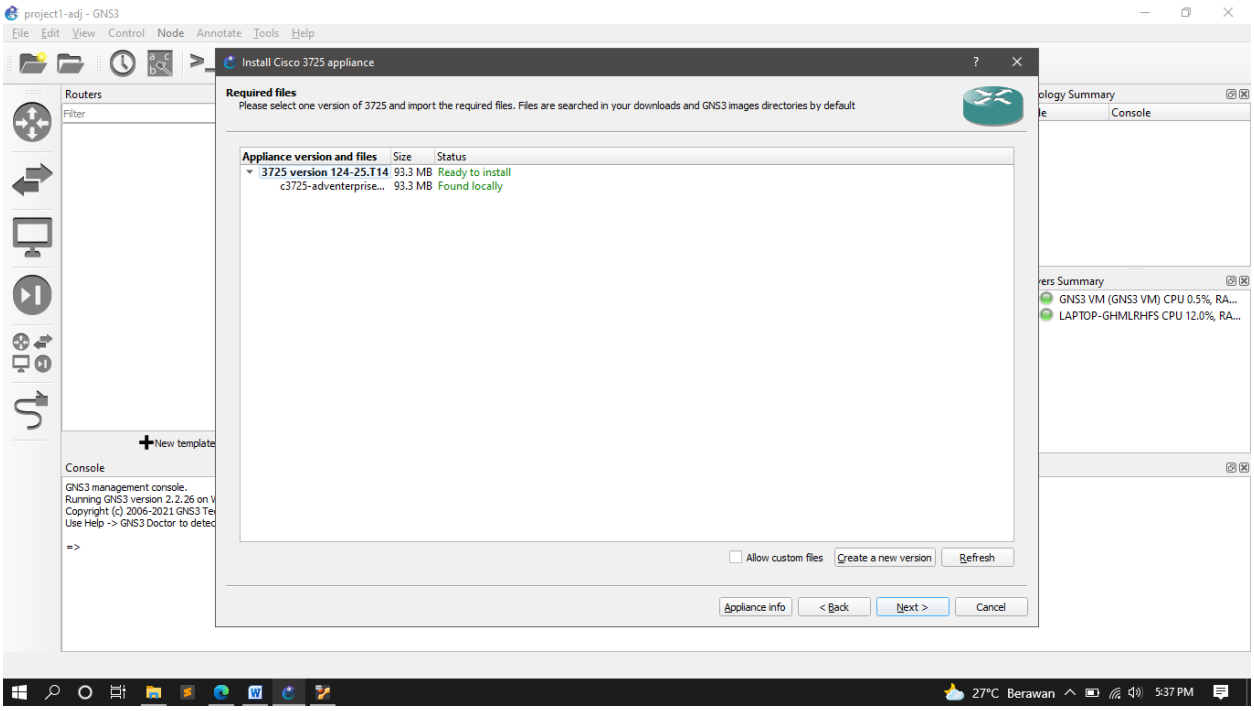


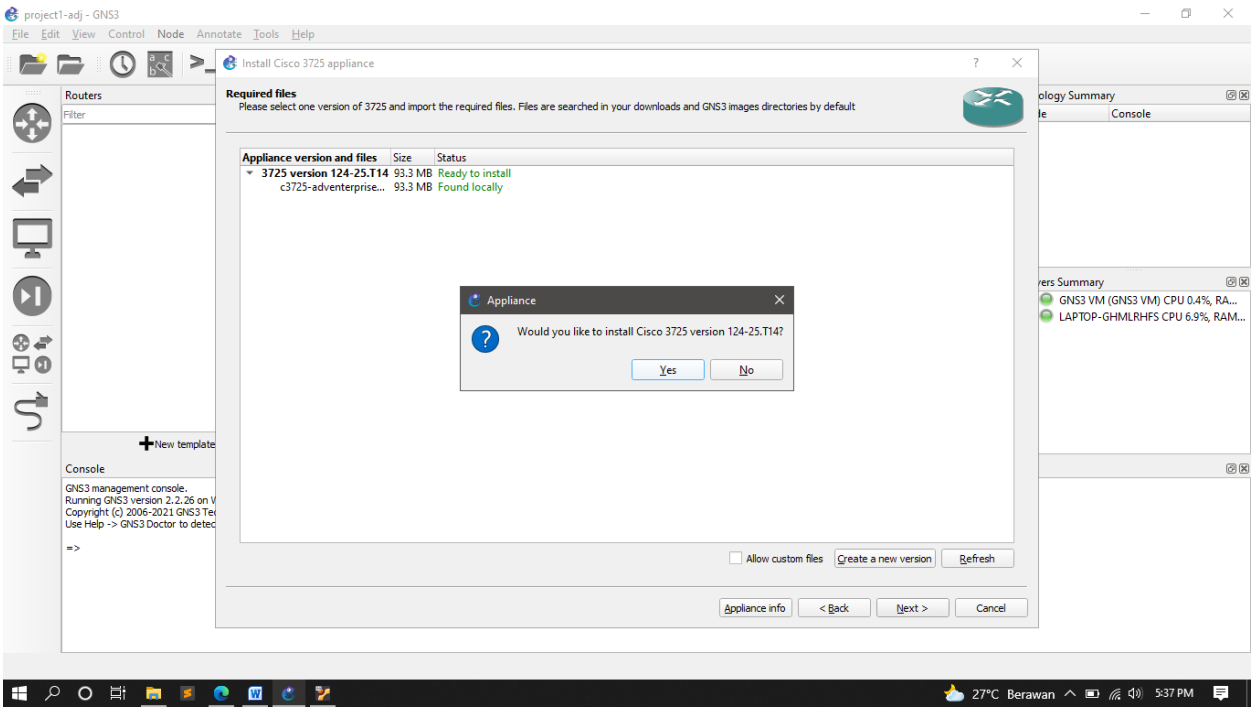
Membuat template baru dan meng-import cisco 3725.



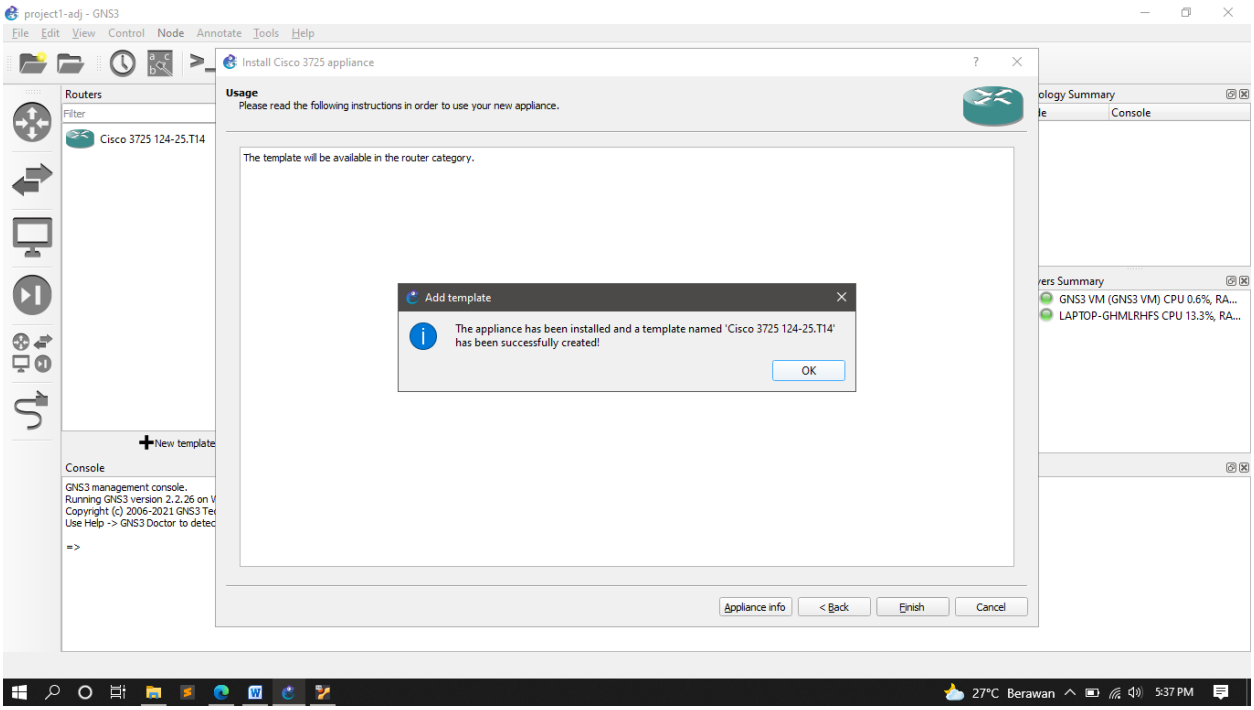


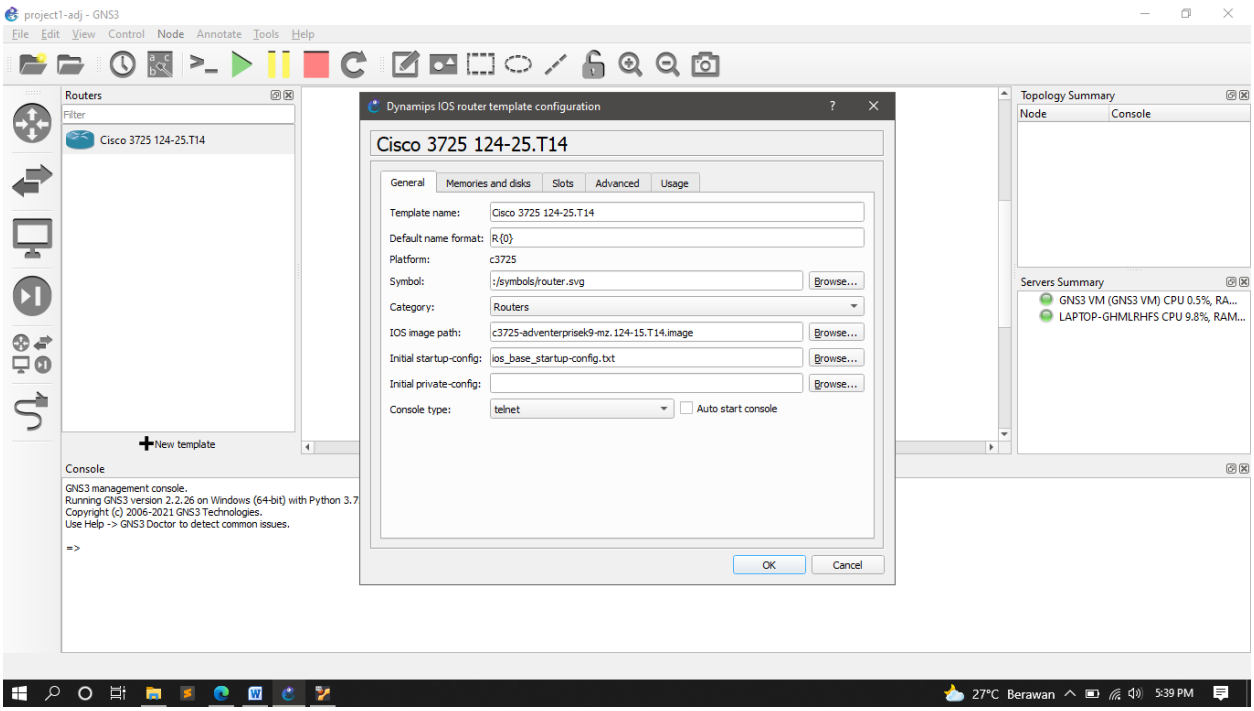

project1-adj - GNS3
File Edit View Control Node Annotate Tools Help
Install Cisco 3725 appliance
Server
Please choose a server type to install the appliance. The grayed out server types are not supported or configured.
Server type
Install the appliance on a remote server
Install the appliance on the GNS3 VM (recommended)
Install the appliance on your local computer
Appliance info
Next >
Cancel
Routers
Filter
New template
Console
GNS3 management console.
Running GNS3 version 2.2.26 on W
Copyright (c) 2006-2021 GNS3 Te
Use Help -> GNS3 Doctor to detec
=>
ology Summary
Console
ers Summary
GNS3 VM (GNS3 VM) CPU 0.6%, RA...
LAPTOP-GHMLRHFS CPU 23.3%, RA...
27°C Berawan
5:36 PM


project1-adj - GNS3
File Edit View Control Node Annotate Tools Help
Install Cisco 3725 appliance
Required files
Please select one version of 3725 and import the required files. Files are searched in your downloads and GNS3 images directories by default
Appliance version and files
Size
Status
3725 version 124-25.T14
93.3 MB
Ready to install
c3725-adventerprise...
93.3 MB
Found locally
Allow custom files
Create a new version
Refresh
Appliance info
< Back
Next >
Cancel
Routers
Filter
New template
Console
GNS3 management console.
Running GNS3 version 2.2.26 on W
Copyright (c) 2006-2021 GNS3 Te
Use Help -> GNS3 Doctor to detec
=>
ology Summary
Console
ers Summary
GNS3 VM (GNS3 VM) CPU 0.5%, RA...
LAPTOP-GHMLRHFS CPU 12.0%, RA...
27°C Berawan
5:37 PM



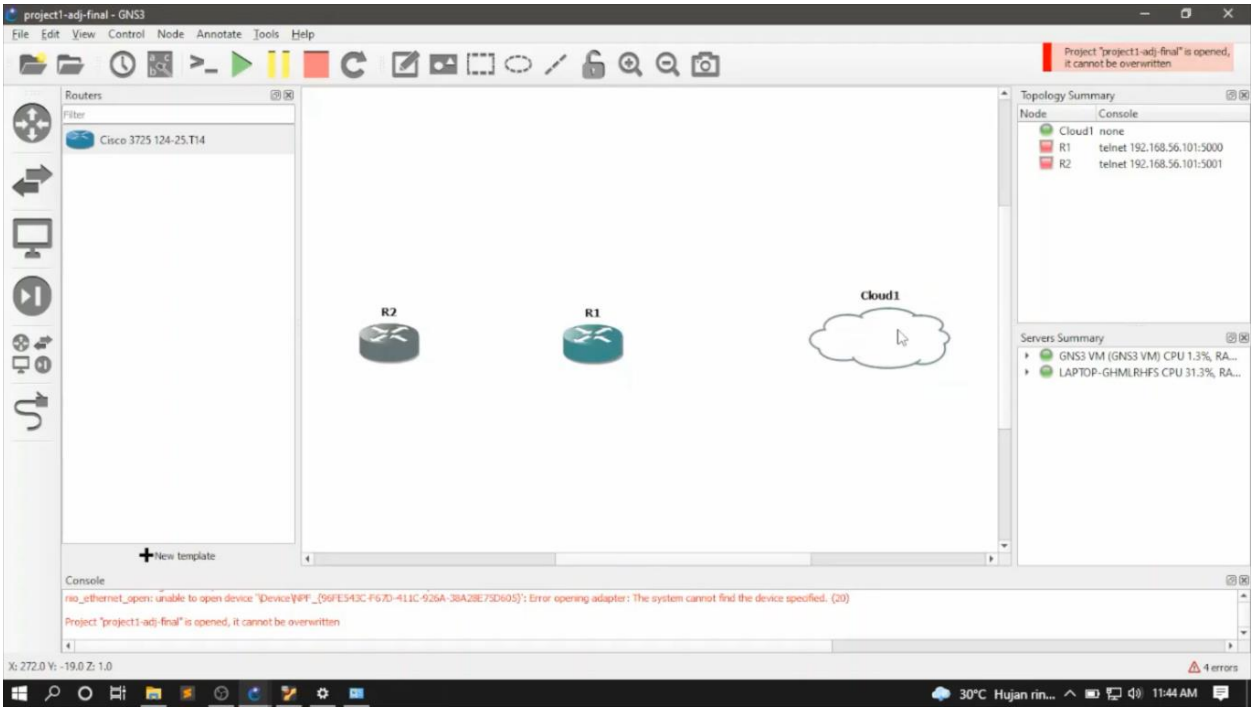
Cisco 3725 telah berhasil di-import.



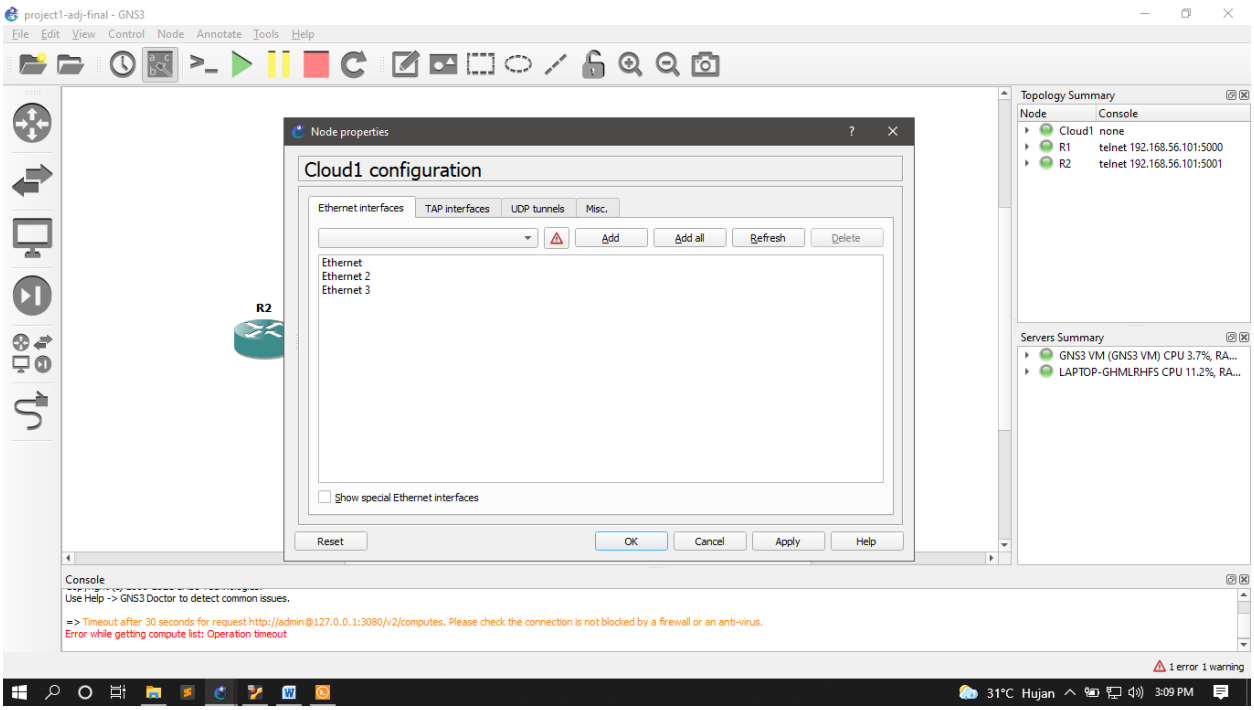

project1-adj - GNS3
File Edit View Control Node Annotate Tools Help
Routers
Filter
Cisco 3725 124-25.T14
New template
Dynamips IOS router template configuration
Cisco 3725 124-25.T14
General
Memories and disks
Slots
Advanced
Usage
Template name:
Cisco 3725 124-25.T14
Default name format:
R{0}
Platform:
c3725
Symbol:
:/symbols/router.svg
Browse...
Category:
Routers
IOS image path:
c3725-adventerprisek9-mz. 124-15.T14.image
Initial startup-config:
ios_base_startup-config.txt
Initial private-config:
Console type:
telnet
Auto start console
OK
Cancel
Topology Summary
Node
Console
Servers Summary
GNS3 VM (GNS3 VM) CPU 0.5%, RA...
LAPTOP-GHMLRHFS CPU 9.8%, RAM...
Console
GNS3 management console.
Running GNS3 version 2.2.26 on Windows (64-bit) with Python 3.7
Copyright (c) 2006-2021 GNS3 Technologies.
Use Help -> GNS3 Doctor to detect common issues.
=>
27°C Berawan
5:39 PM

CONNECT GNS3 TO THE INTERNET (LOCAL SERVER)

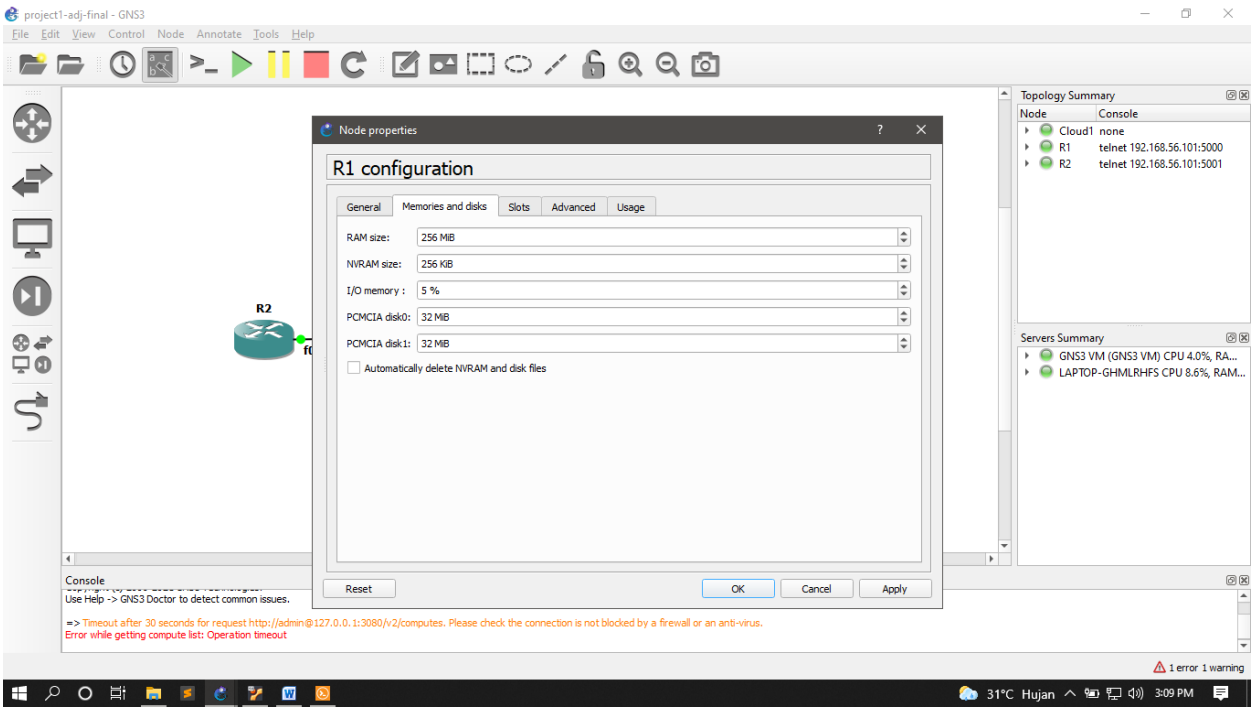
Drag and down 1 cloud dan 2 router cisco 3725.



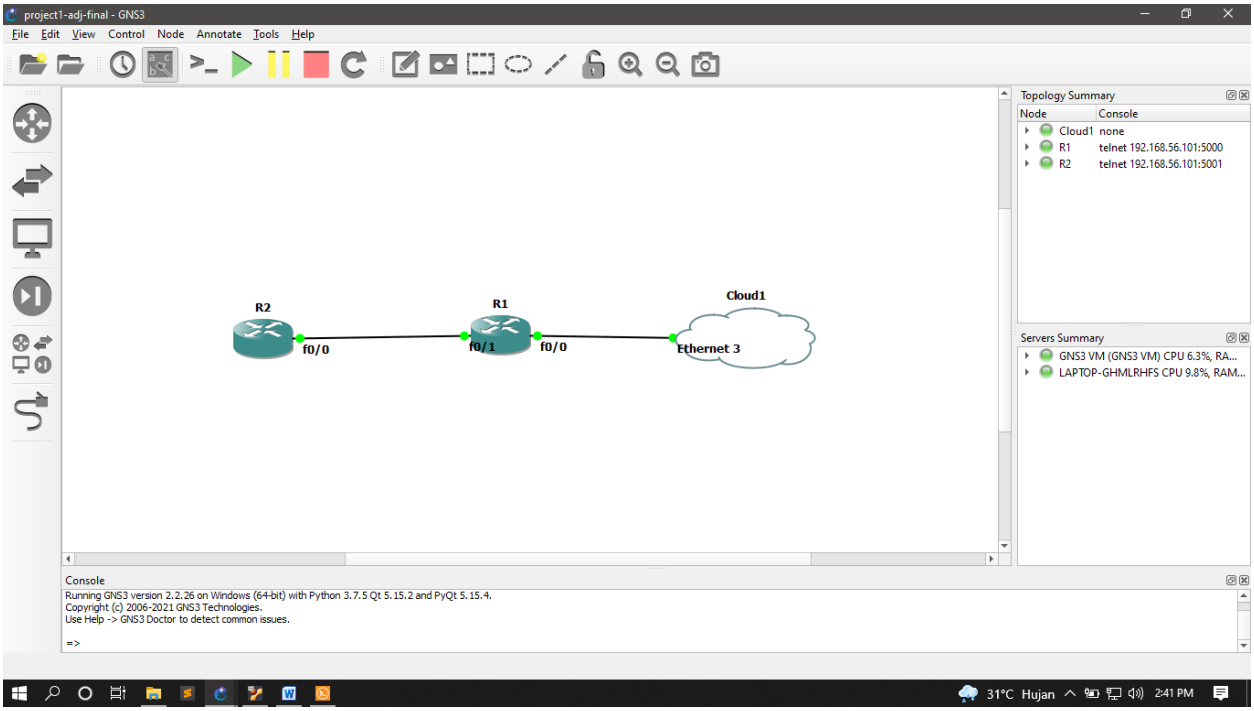
Pastikan Ethernet yang terhubung dengan komputer telah muncul di konfigurasi cloud.



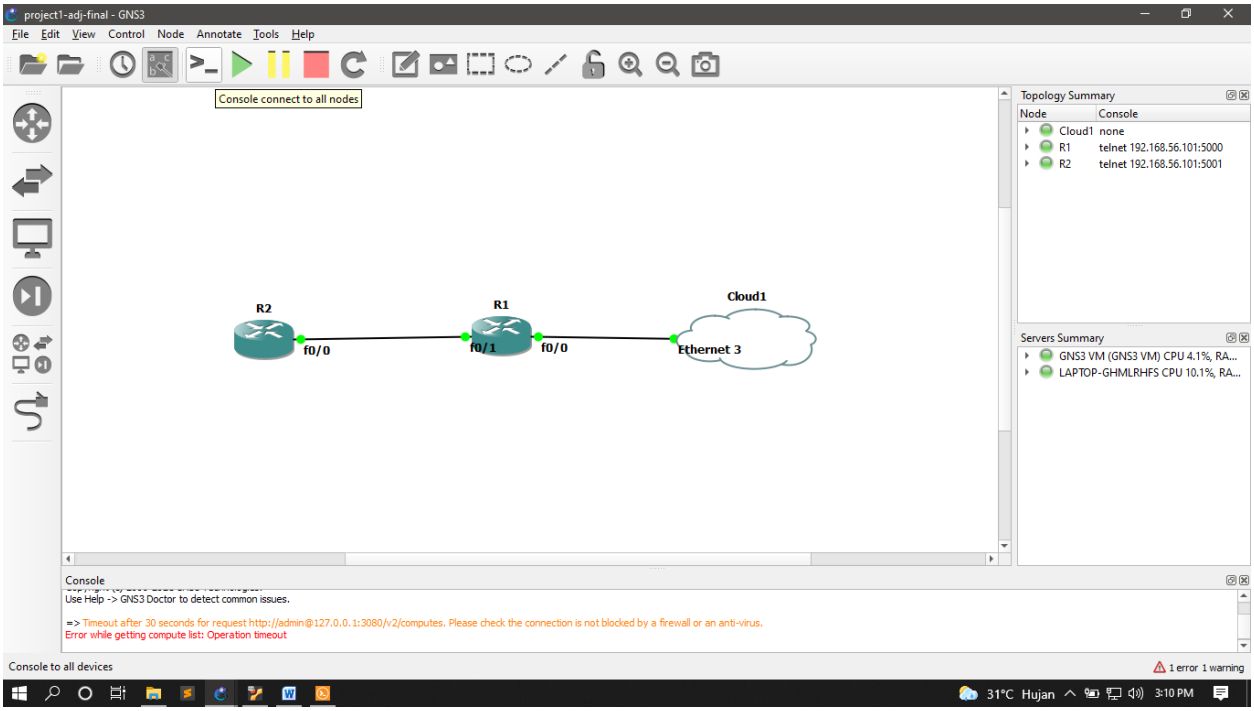
Lakukan konfigurasi pada router yang pertama, di contoh ini adalah R1. Klik apply dan ok.



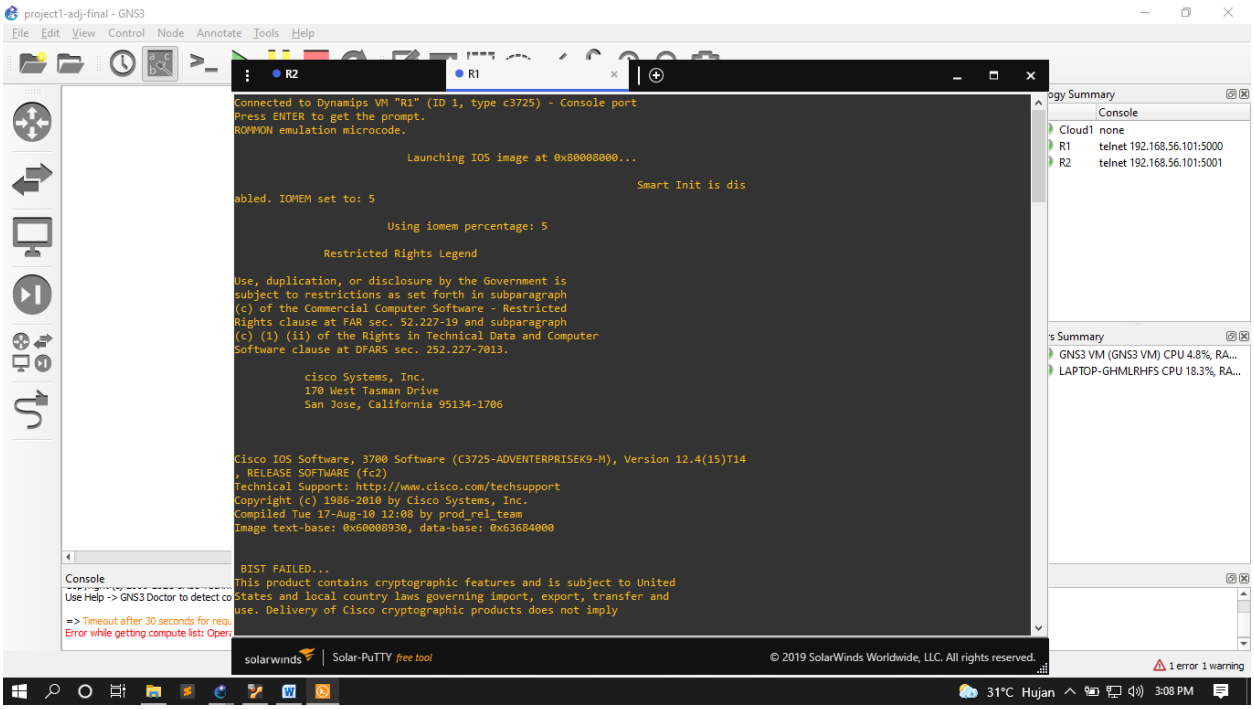
Hubungkan ketiga node. Untuk cloud, pilih Ethernet yang dihubungkan ke komputer. Pada contoh ini menggunakan Ethernet 3. Kemudian klik start.



Kemudian klik console connect to all nodes untuk membuka jendela console router.



Jendela concole router :



Pada R1 lakukan perintah berikut :

IP address dan gateway disesuaikan dengan laptop masing-masing. Gambar di bawah ini menunjukkan bahwa router berhasil di ping.

```
R1# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)# ip address 192.168.42.100 255.255.255.0
                       ^
% Invalid input detected at '^' marker.

R1(config)# interface FastEthernet 0/0
R1(config-if)# ip address 192.168.42.100 255.255.255.0
R1(config-if)# no shutdown
R1(config-if)# exit
R1(config)# ip route 0.0.0.0 0.0.0.0 192.168.42.129
R1(config)# end
R1#
*Mar  1 00:24:58.487: %SYS-5-CONFIG_I: Configured from console by console
R1# ping 192.168.42.129

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.42.129, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 12/26/56 ms
```

Kemudian ikuti perintah berikut :

Gambar di bawah ini menunjukkan bahwa google berhasil di ping.

```
R1# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)# ip domain-lookup
R1(config)# ip name-server 8.8.8.8
R1(config)# end
R1#
*Mar  1 00:26:33.963: %SYS-5-CONFIG_I: Configured from console by console
R1# ping google.com

Translating "google.com"...domain server (8.8.8.8) [OK]

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.217.194.138, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 24/43/60 ms
```

Lanjutkan perintah berikut :

```
R1# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)# interface FastEthernet 0/1
R1(config-if)# ip address 10.1.1.1 255.255.255.0
R1(config-if)# no shutdown
R1(config-if)# exit
R1(config)#
```

Selanjutnya jalankan perintah berikut pada router kedua, pada percobaan ini ialah R2 :

```
R2# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)# interface FastEthernet 0/0
R2(config-if)# ip address 10.1.1.2 255.255.255.0
R2(config-if)# no shutdown
R2(config-if)# exit
R2(config)#
```

Kemudian kembali melakukan perintah di R1 :

```
R1(config)# router ospf 1
R1(config-router)# network 10.0.0.0 0.255.255.255 area 0
R1(config-router)# default-information originate
R1(config-router)# end
R1#
```

Kemudian ikuti perintah ini di R2 :

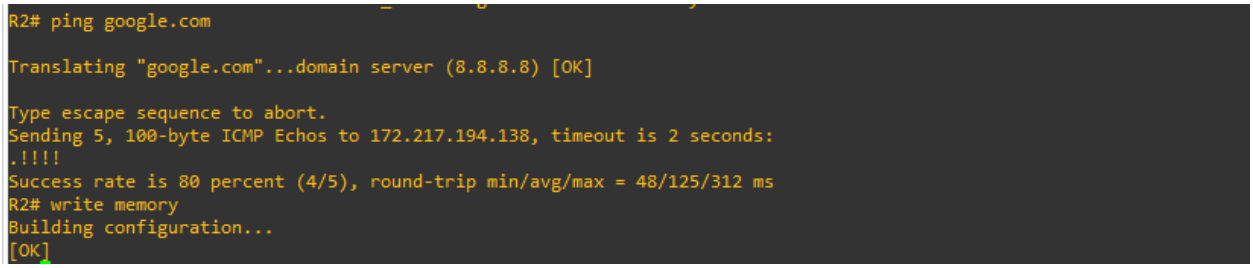
```
R2(config)# router ospf 1
R2(config-router)# network 10.0.0.0 0.255.255.255 area 0
R2(config-router)# end
R2#
```

```
R2# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)# ip domain-lookup
R2(config)# ip name-server 8.8.8.8
R2(config)# end
R2#
```

Pada console R1 ikuti perintah berikut :

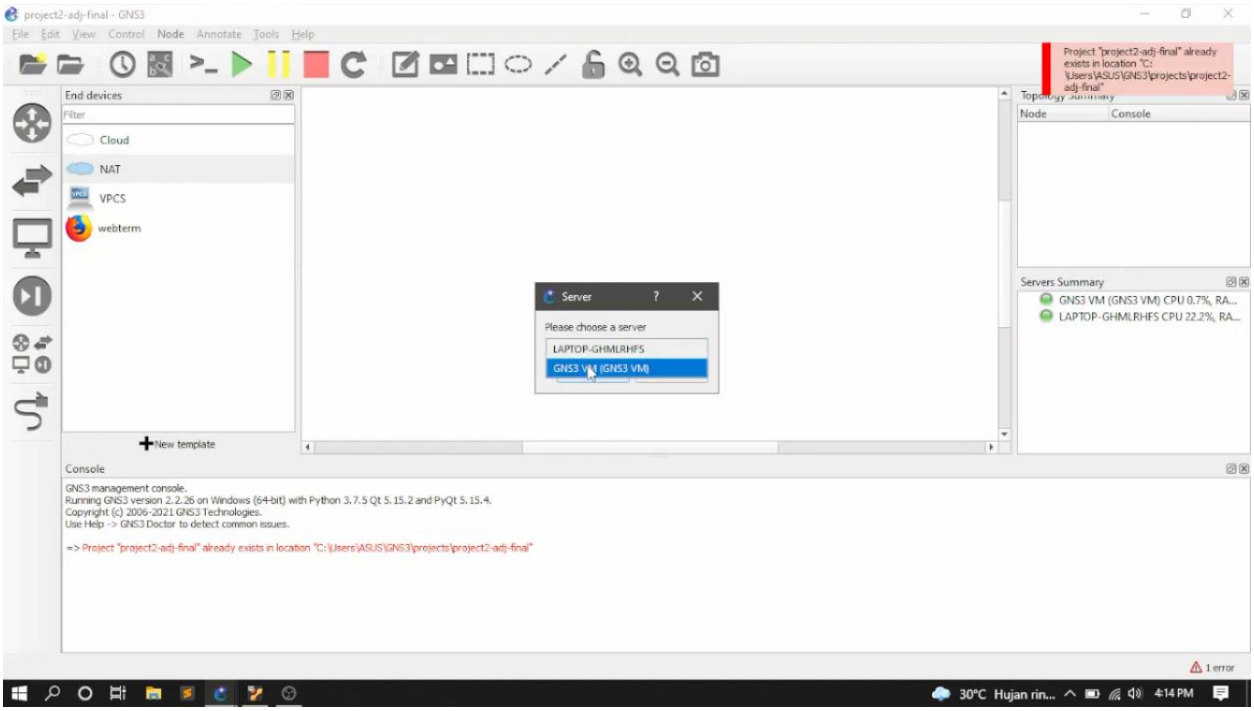
```
R1# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)# interface FastEthernet 0/0
R1(config-if)# ip nat outside

*Mar  1 00:33:48.615: %LINEPROTO-5-UPDOWN: Line protocol on Interface NVI0, changed state to up
R1(config-if)# interface FastEthernet 0/1
R1(config-if)# ip nat inside
R1(config-if)# exit
R1(config)# ip nat inside source list 1 interface FastEthernet 0/0 overload
R1(config)# access-list 1 permit 10.0.0.0 0.255.255.255
R1(config)# end
R1#
*Mar  1 00:35:53.959: %SYS-5-CONFIG_I: Configured from console by console
R1# write memory
Building configuration...
[OK]
```

Melakukan ping kepada google.com di concole R2 :

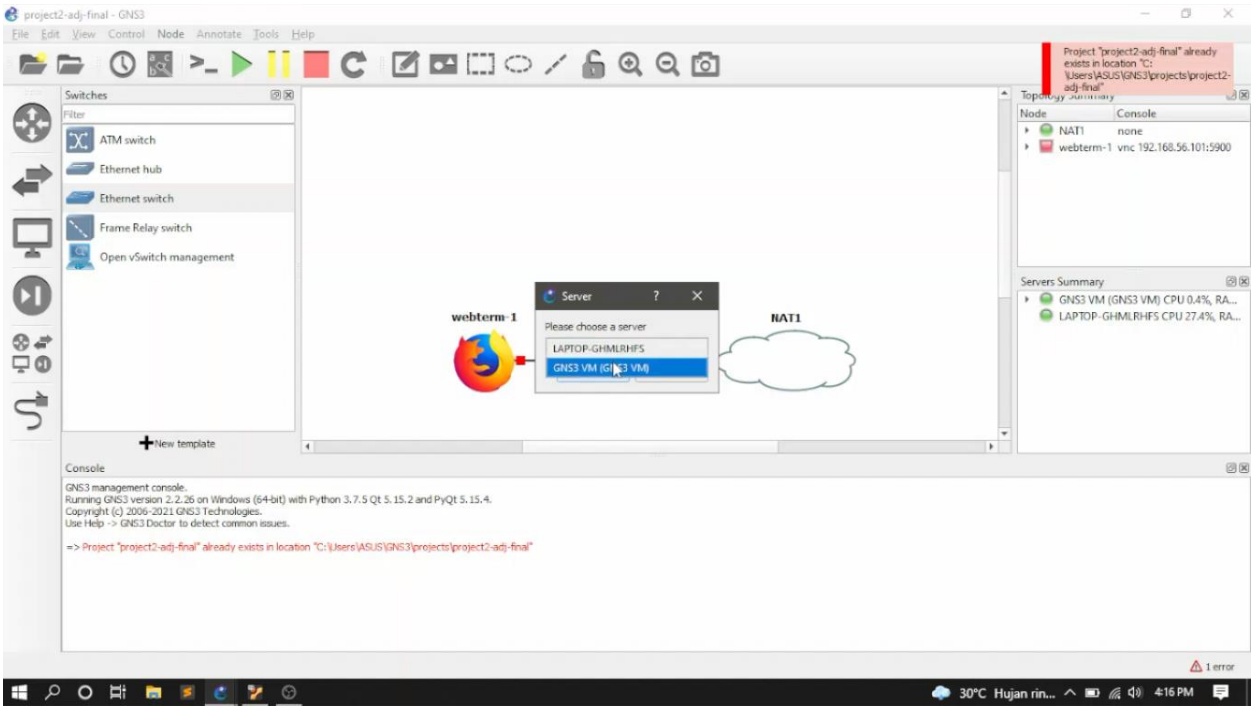


THE NAT NODE

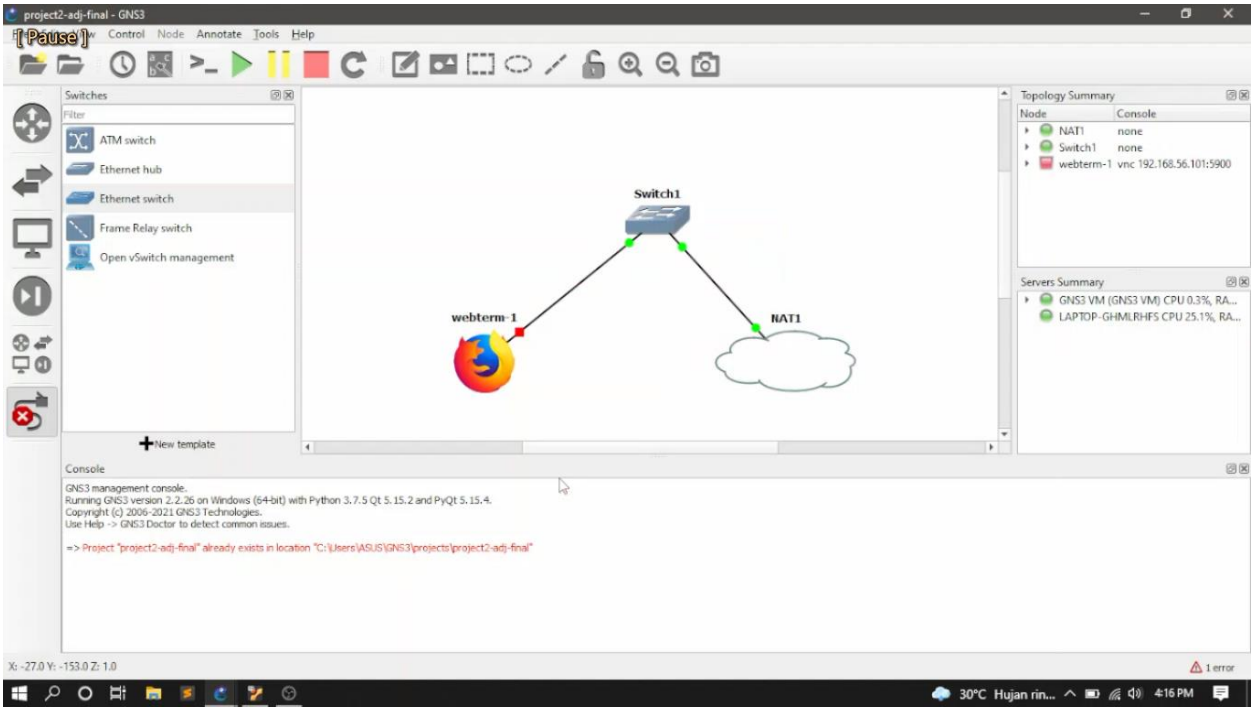
Drag and drop Nat dan pilih GNS3 VM pada server yang akan digunakan :



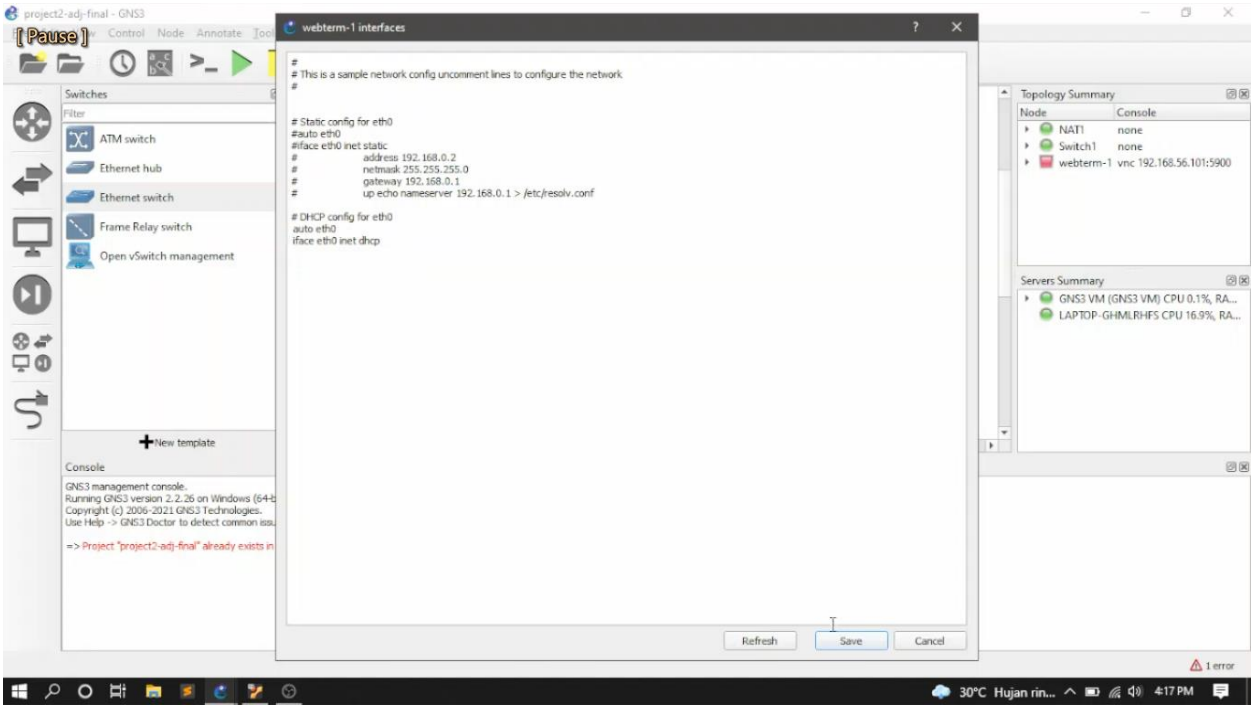
Drag and drop webterm dan juga Ethernet switch dan pilih server GNS3 VM :



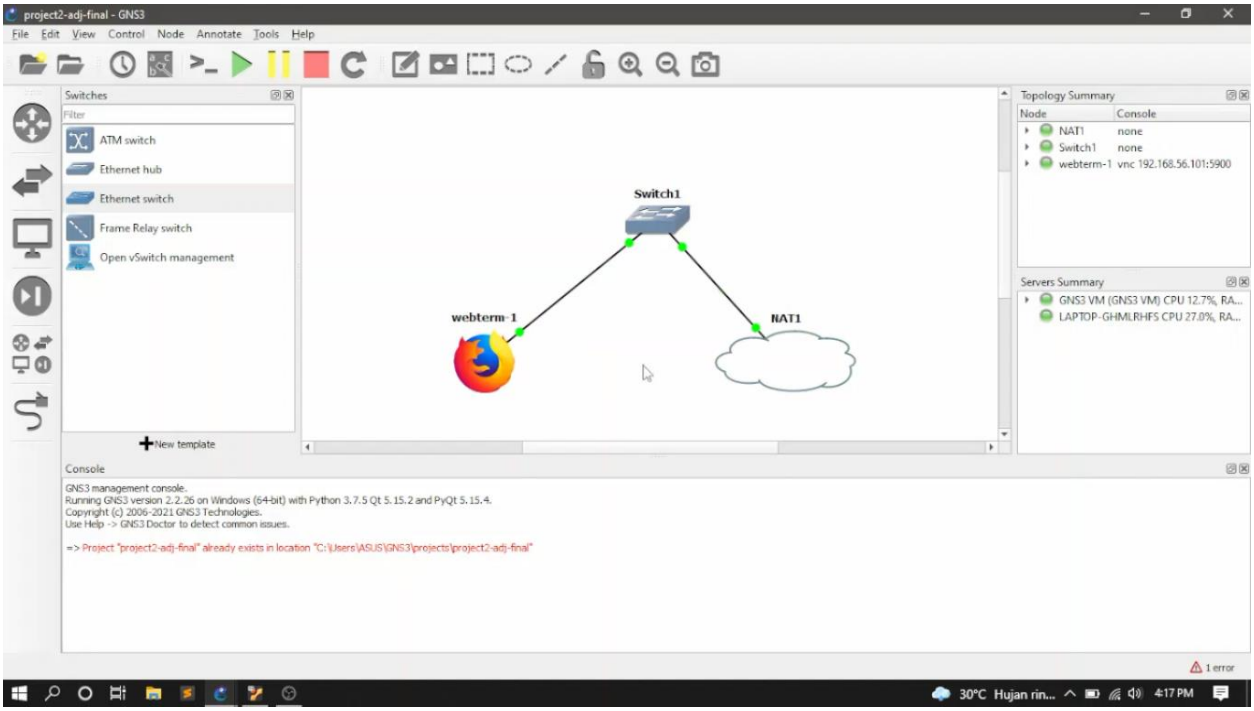
Hubungkan ketiga node :



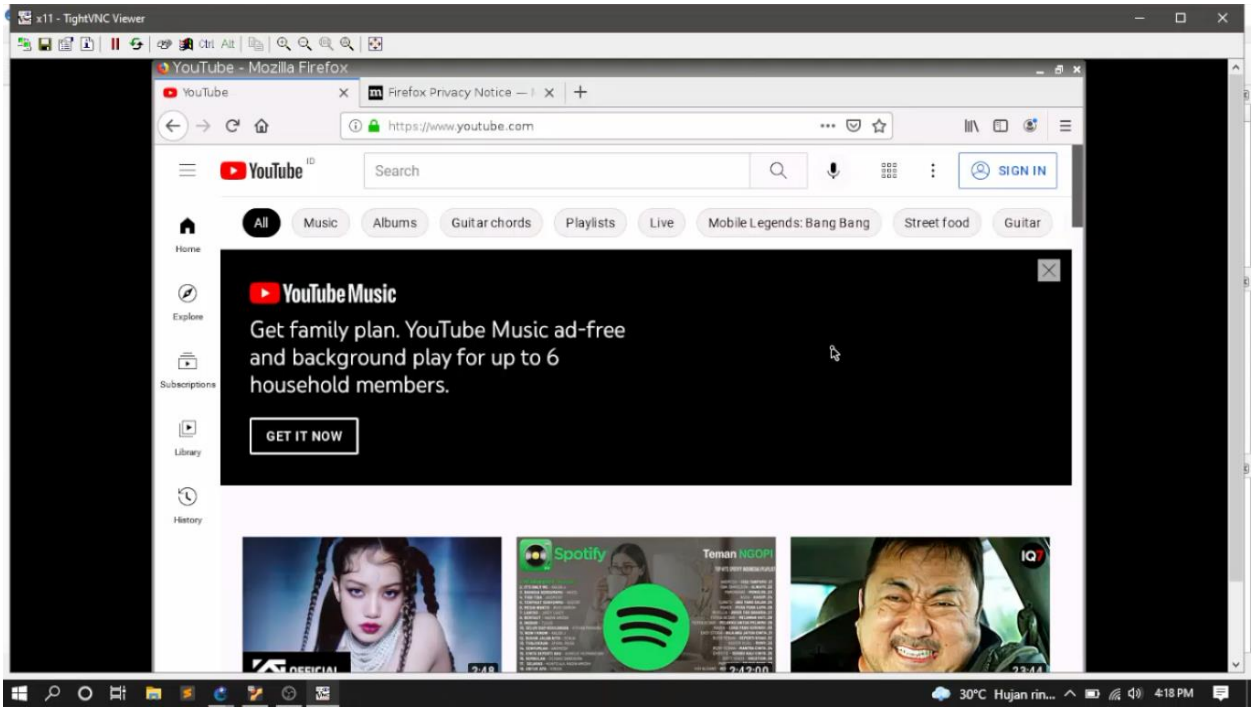
Klik kanan webterm dan pilih edit config. Uncomment 2 baris paling bawah, untuk menggunakan DHCP :



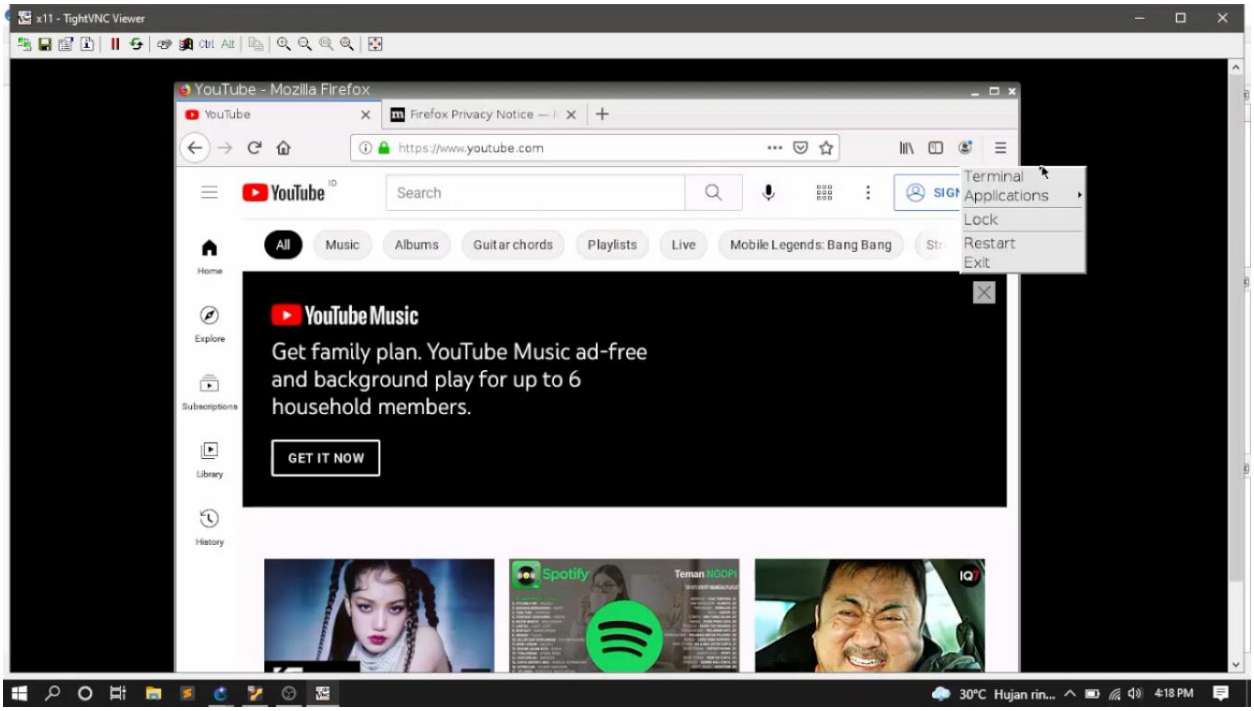
Kemudian klik start :



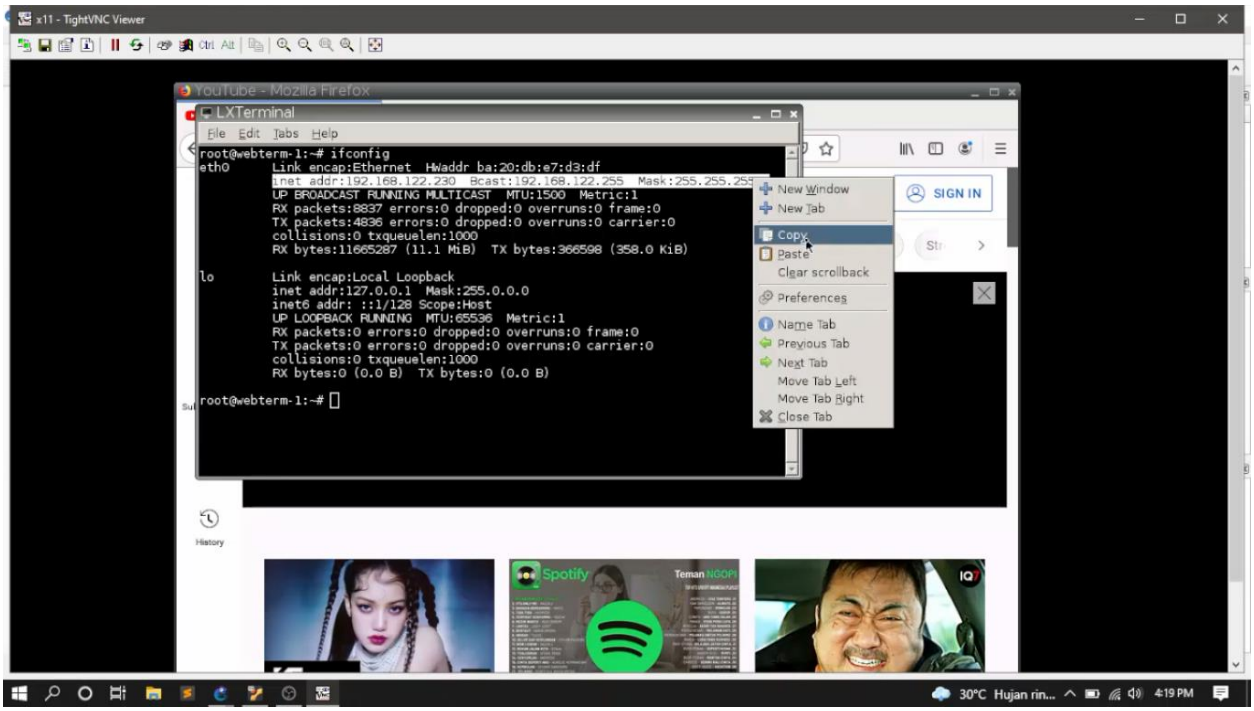
Klik 2x pada webterm, dan jendela mozilla akan terbuka otomatis. Gambar di bawah ini menunjukkan bahwa layanan internet dapat diakses :



Kemudian minimize jendela mozilla, pada layar yang hitam klik kiri dan pilih terminal :

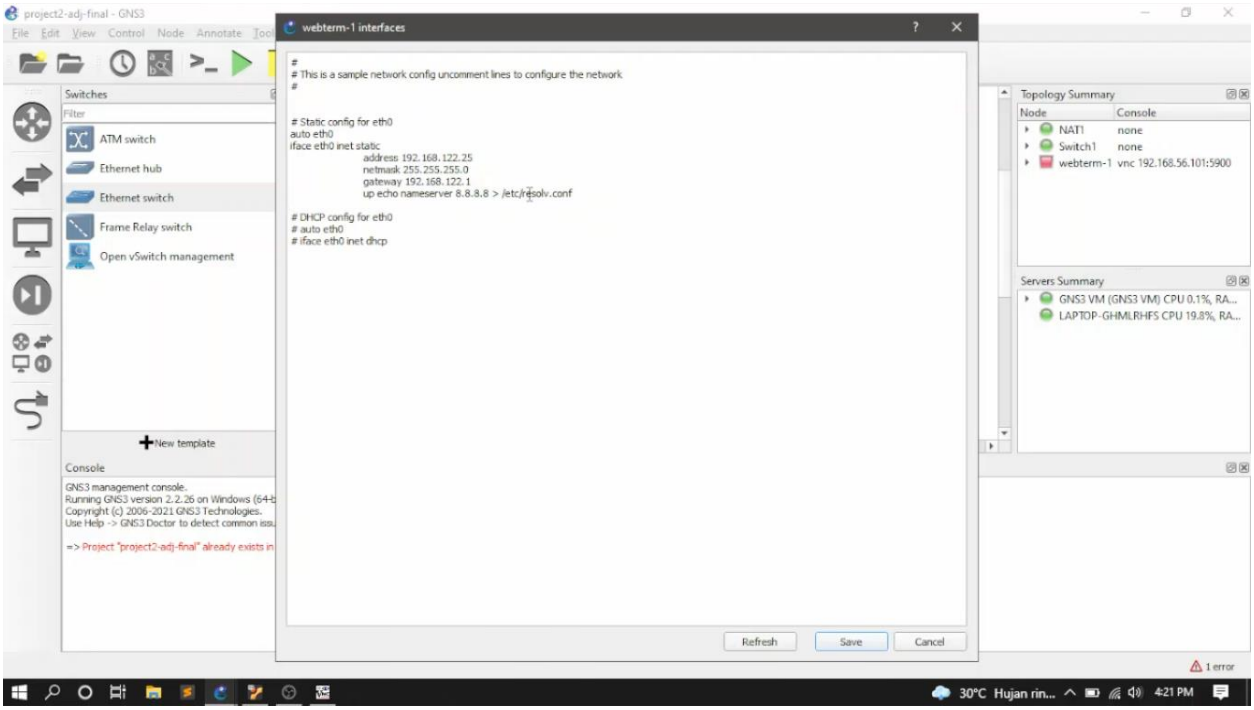


Jalankan perintah ifconfig dan salin IP address beserta gateway :



Stop all nodes dan edit config lagi pada webterm :

Comment 2 baris paling bawah. Kemudian uncomment baris yang menjalankan proses secara static, dan juga ganti IP address dan gateway dengan yang telah disalin tadi.



Buka jendela mozilla dan jika layanan internet dapat diakses, maka berhasil menjalankan proses secara static :