

**LAPORAN**  
**ADMINISTRASI DAN DESAIN JARINGAN**



**Dosen:**

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**Universitas Sumatera Utara**

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**Teknologi Informasi**

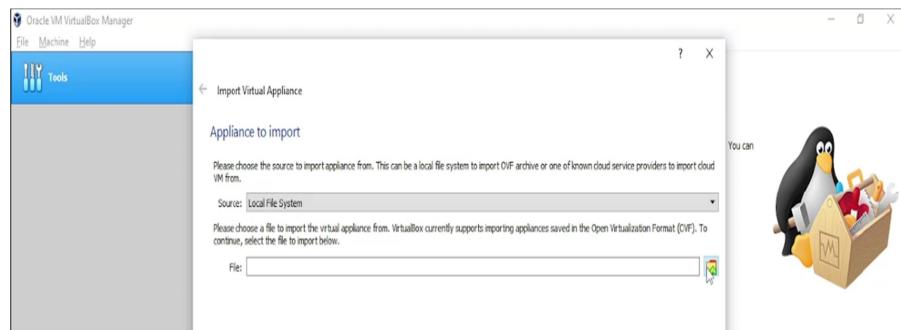
**2021/2022**

## INSTALASASI

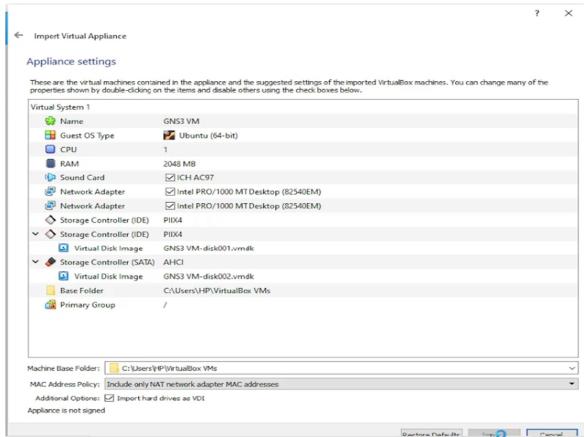
Buka link <https://github.com/GNS3/gns3-gui/release/> Kemudian download sesuai dengan yang ditandai.

The screenshot shows the 'Assets' section of a GitHub repository. It lists various files with their names, sizes, and download links. Two specific files are highlighted with red boxes: 'GNS3 VM VirtualBox 2.2.26.zip' and 'GNS3 VM VMware Workstation 2.2.26.zip'. These are the files intended for download.

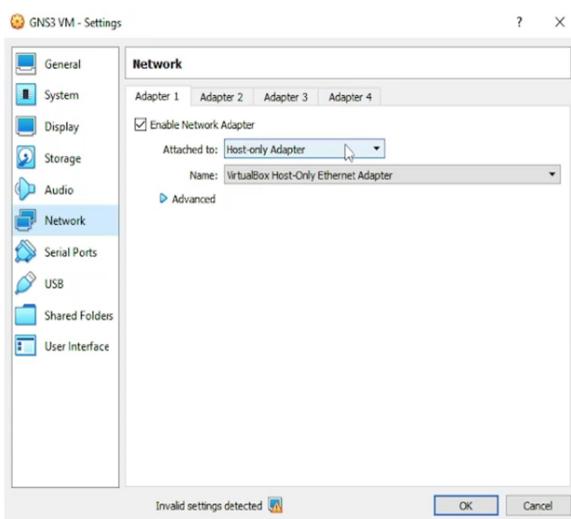
Extract file yang telah di download lalu input ke Oracle VM Vitual Box.



Import GNS3 dan tunggu hingga proses selesai.

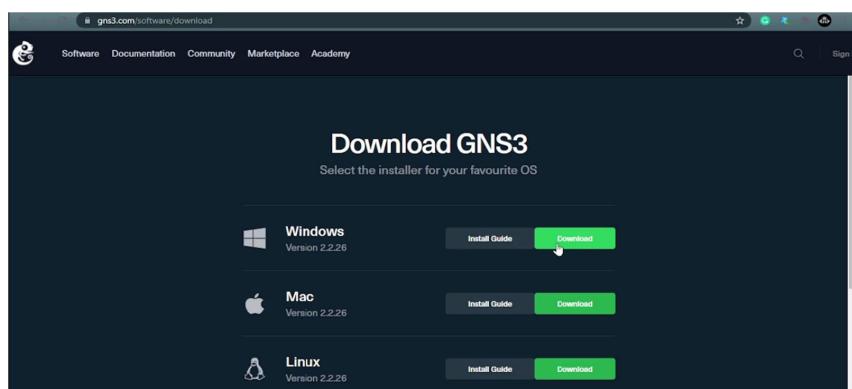


Lalu klik “Settings” Kemudian “Network” Ubah Adapter Attached To “Host only Adapter”

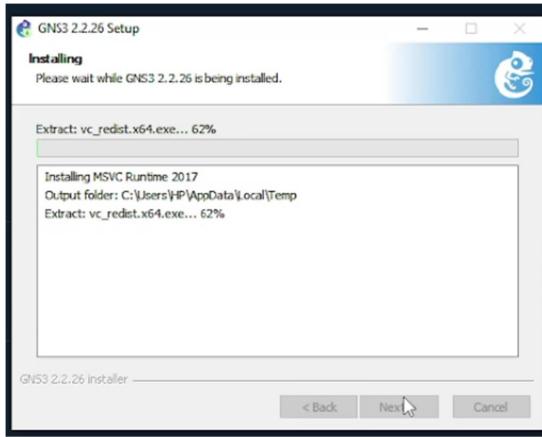


Download aplikasi GNS3 for window melalui link

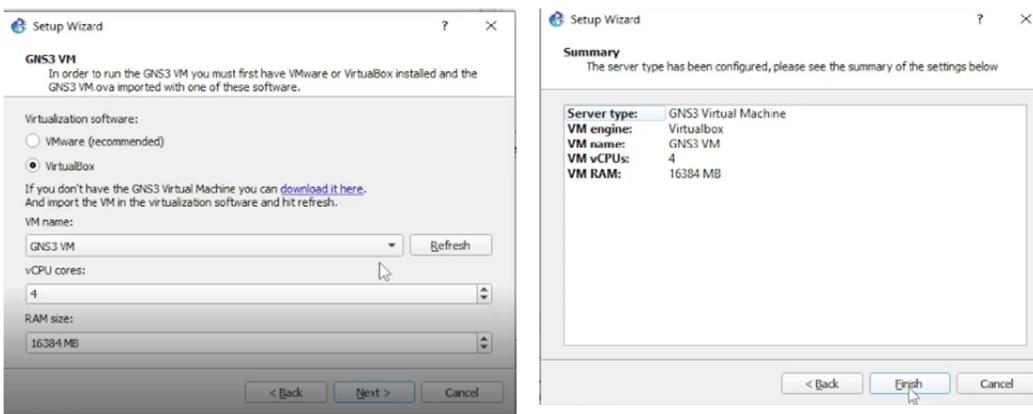
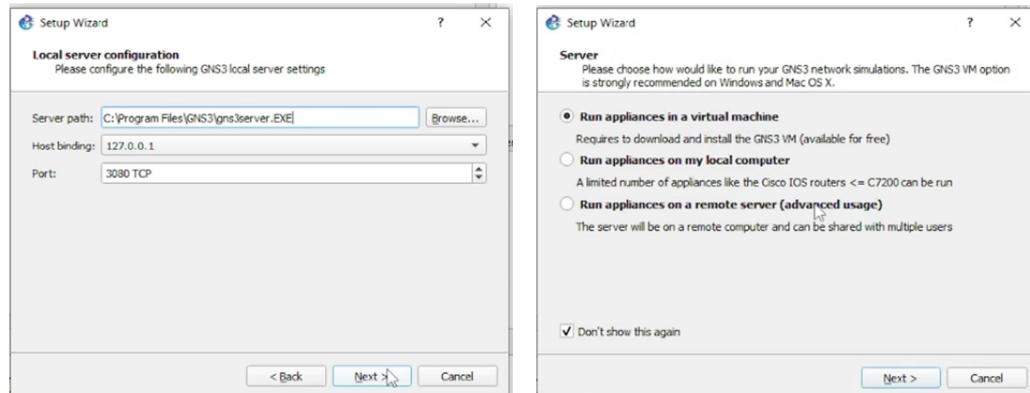
<https://www.gns3.com/software/download>

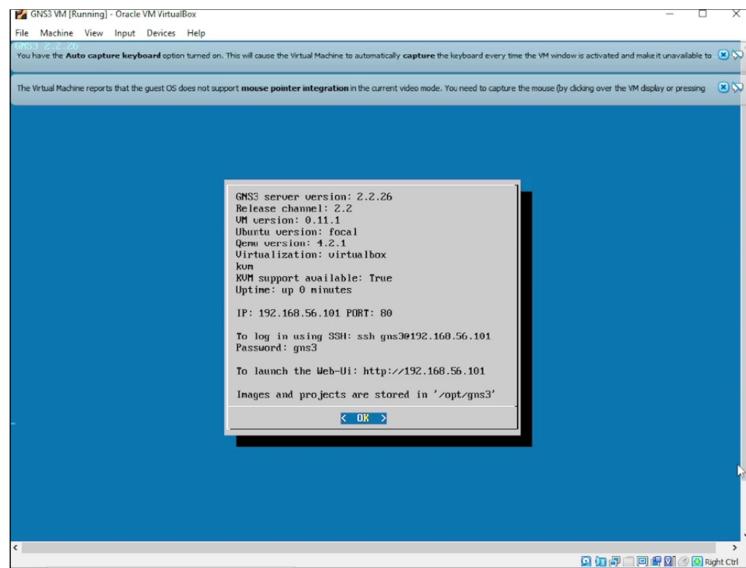


Install dan tunggu hingga selesai

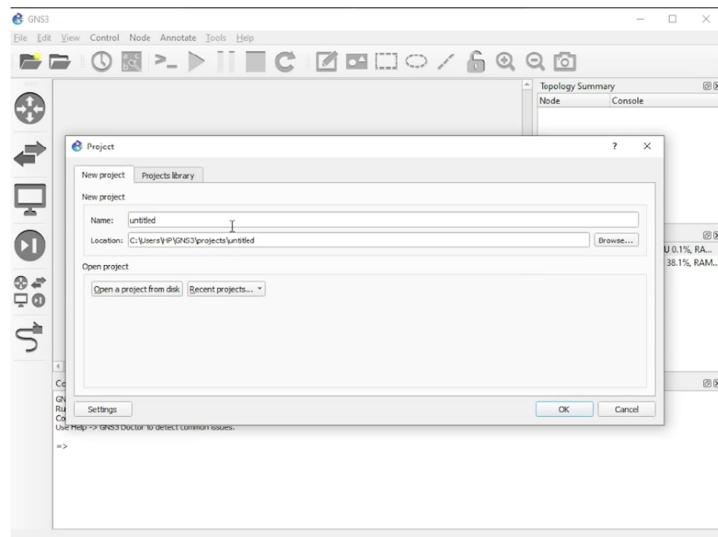


Setup Wizard, ubah setting sesuai dengan gambar

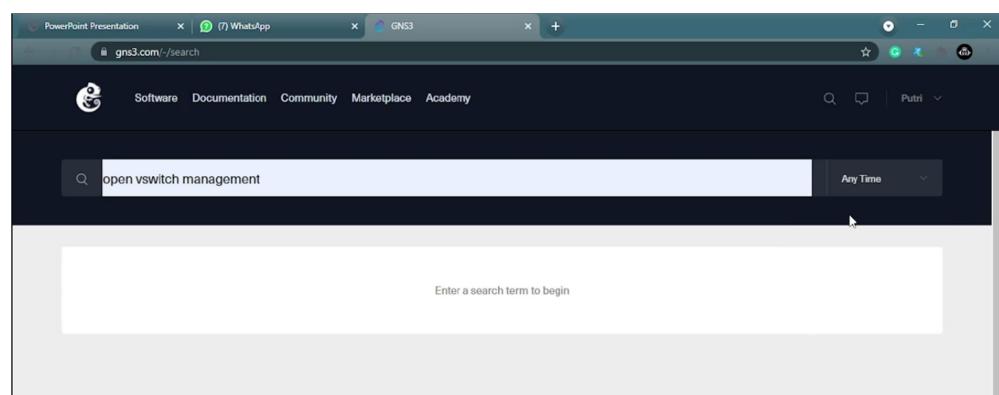




Buat project baru



Buka Link <https://www.gns3.com/marketplace/featured>



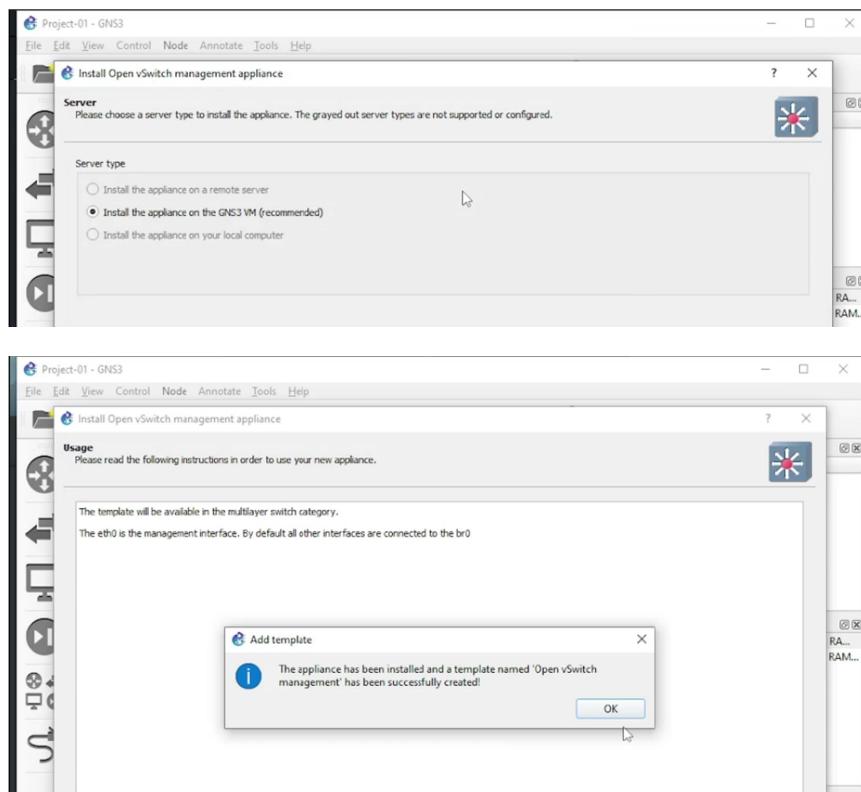
## Download Open vSwitch Management

The screenshot shows a web browser displaying the GNS3 Marketplace. A specific appliance, "Open vSwitch with management interface", is highlighted. It features a teal icon with a white cube, the text "Appliance ~", and the title "Open vSwitch with management interface". Below the title is a smaller "Open vSwitch" text. At the bottom, it says "Posted by Julien Duponchelle · December 9, 2016 at 12:40 UTC". A prominent green "Download" button is centered below the title.

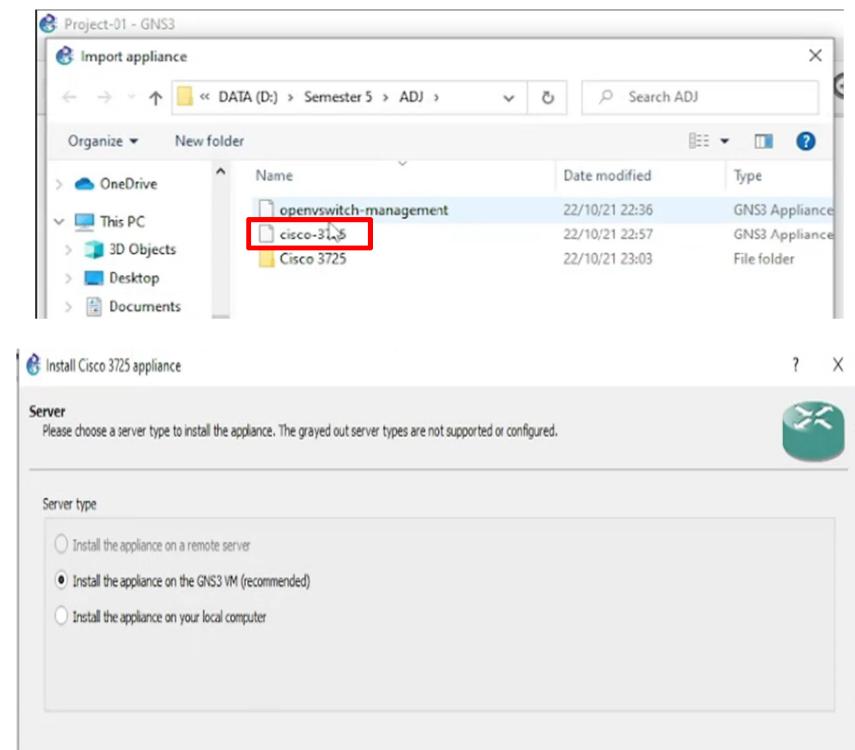
Import Appliance dengan langkah-langkah sebagai berikut

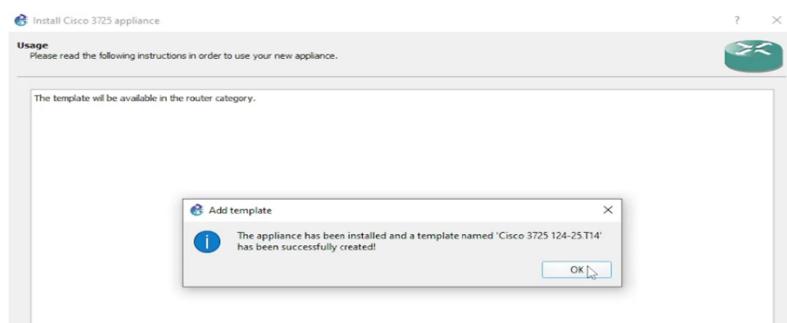
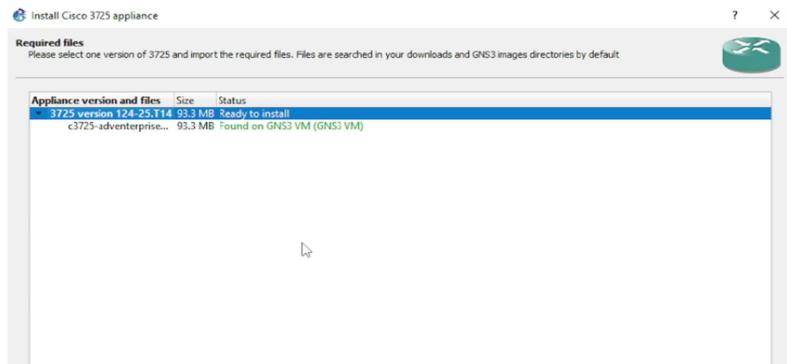
The image contains three screenshots of the GNS3 application interface:

- Screenshot 1:** Shows the "File" menu open with the "Import appliance" option selected. The main window displays a "Topology Summary" and a "Servers Summary" panel.
- Screenshot 2:** Shows the "New template" dialog box. The "Import an appliance file (.gns3a extension)" radio button is selected. The right side of the dialog shows memory configuration options: RAM 1024 MB, RAM 2048 MB, and RAM 4096 MB.
- Screenshot 3:** Shows the "Import appliance" file selection dialog. The file "openvswitch-management.gns3a" is selected, highlighted with a red box. The file is located in the "Downloads" folder.



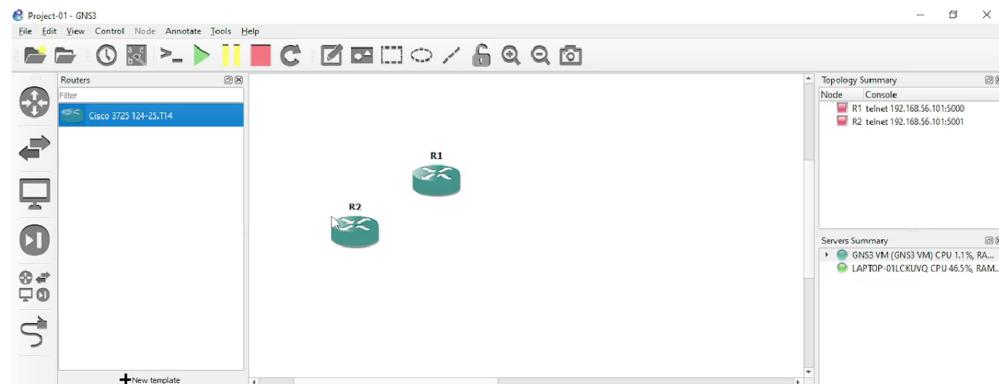
Kemudian import appliance untuk “Cisco”



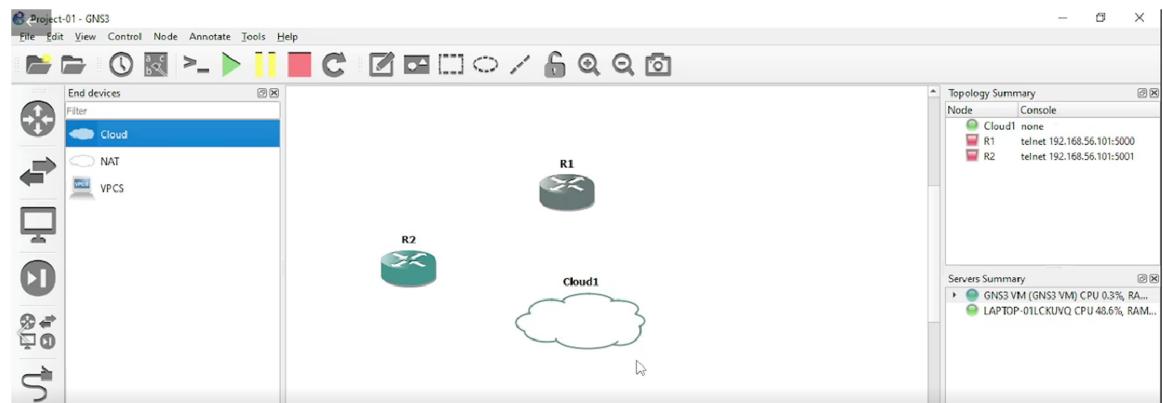


Langkah Instalisasi GNS3 Selesai. Lakukan pengecekan.

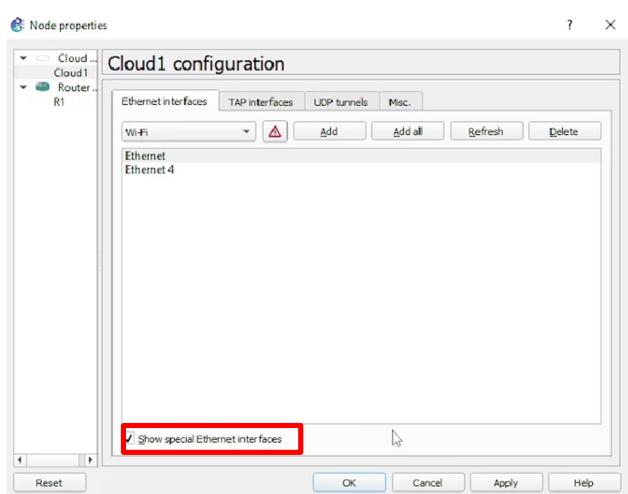
Membuat 2 Router (R1 dan R2) dengan cara drag and drop Router



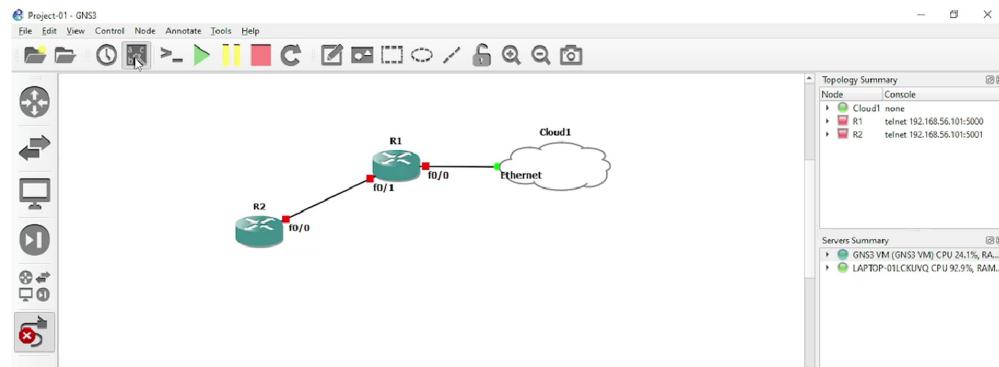
Klik bagian “End Devices” kemudian drag and drop Cloud dengan menggunakan server local computer



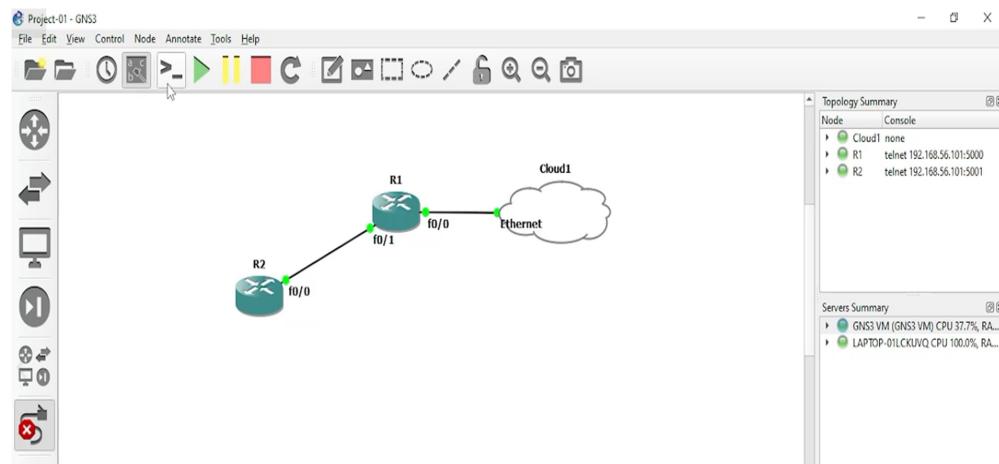
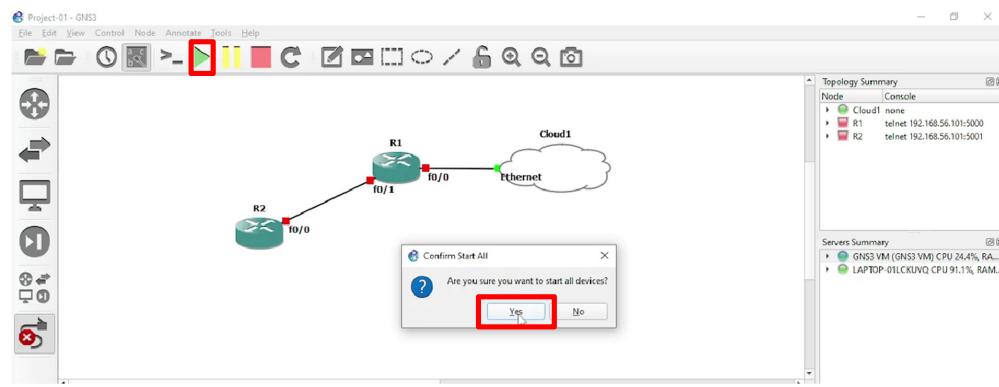
Lalu klik kanan pada cloud dan configure



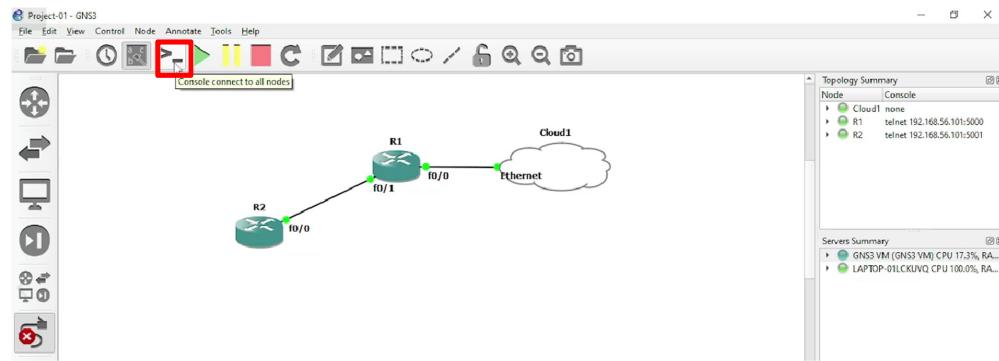
Add link untuk menghubungkan Router dan Cloud. R1 dihubungkan dengan Cloud dan R2 dihubungkan dengan R1



Klik Tombol Start untuk menjalankan semua device



Kemudian klik tombol console dibagian atas

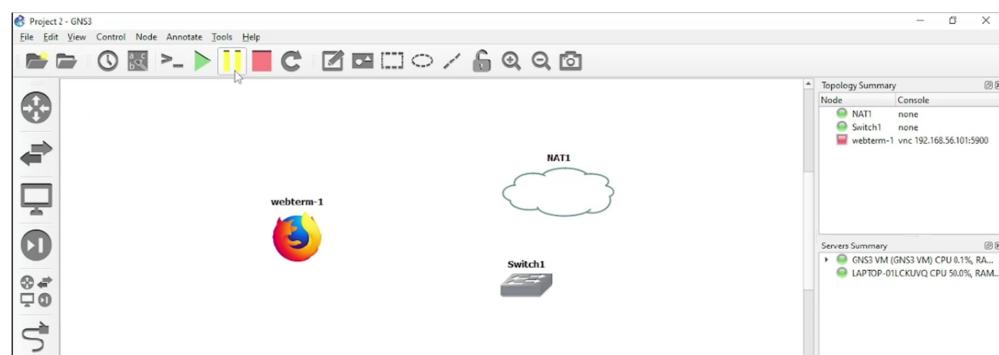


Lakukan Configure

```
Mar 1 00:00:10.231: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state to administratively down
Mar 1 00:00:10.235: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state to administratively down
Mar 1 00:00:10.655: %SYS-5-RESTART: System restarted --
Cisco IOS Software, 3700 Software (C3725-ADVENTERPRISEK9-M), Version 12.4(15)T14
, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2010 by Cisco Systems, Inc.
Compiled Tue Aug 17-Aug-10 12:08 by prod_rel_team
Mar 1 00:00:10.679: %SNMP-5-COLDSTART: SNMP agent on host R1 is undergoing a cold start
Mar 1 00:00:10.767: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
Mar 1 00:00:10.767: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
Mar 1 00:00:11.295: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
Mar 1 00:00:11.299: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down
R1# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)# interface Fastethernet 0/0
R1(config-if)# ip address 192.168.1.123 255.255.255.0
R1(config-if)# no shutdown
R1(config-if)# e
Mar 1 00:02:18.547: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
Mar 1 00:02:19.547: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1(config-if)# ex
R1(config)# ip route 0.0.0.0 0.0.0.0 192.168.1.249
R1(config)# end
R1#
Mar 1 00:03:04.879: %SYS-5-CONFIG_I: Configured from console by console
R1# ping 192.168.1.249
Type escape sequence to abort.
sending 5, 100-byte ICMP Echos to 192.168.1.249, timeout is 2 seconds:
.....
success rate is 0 percent (0/5)
R1#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

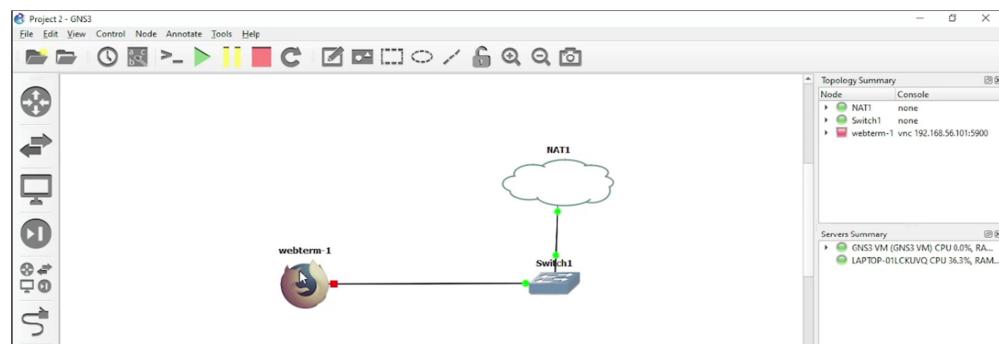
## LINK 2



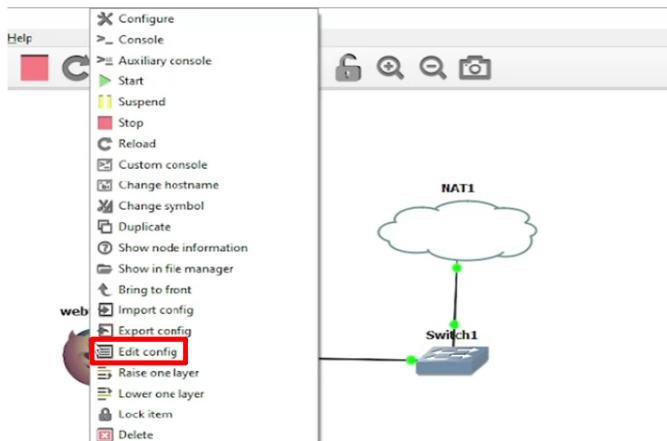
Membuat NAT, Webterm dan Swith pada GNS3 dengan cara drag and drop.  
Gunakan server GNS3 VM.



Memasang link untuk menghubungkan switch dengan NAT dan Webterm dengan Switch



Klik kanan pada webterm dan pilih “Edit Config”



Hilangkan komentar (#)

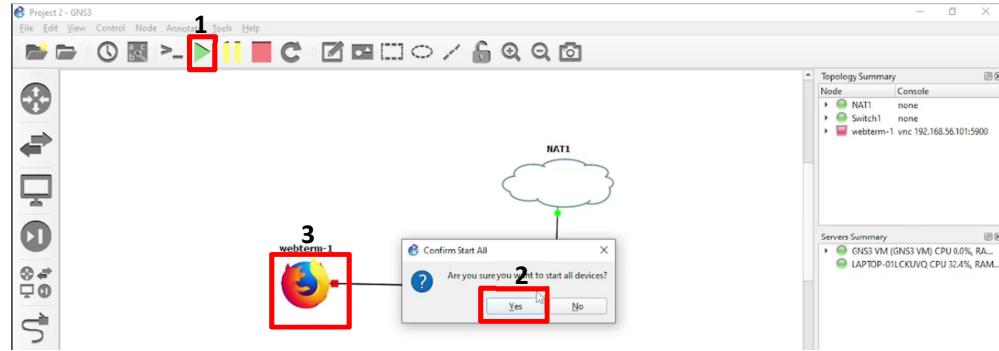


```
# This is a sample network config uncomment lines to configure the network

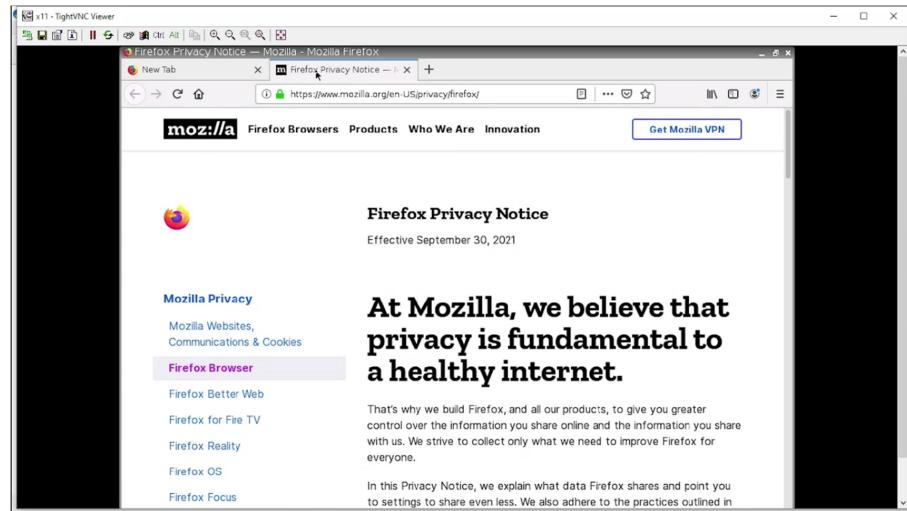
# Static config for eth0
#auto eth0
#iface eth0 inet static
#        address 192.168.0.2
#        netmask 255.255.255.0
#        gateway 192.168.0.1
#        up echo nameserver 192.168.0.1 > /etc/resolv.conf

# DHCP config for eth0
auto eth0
iface eth0 inet dhcp
```

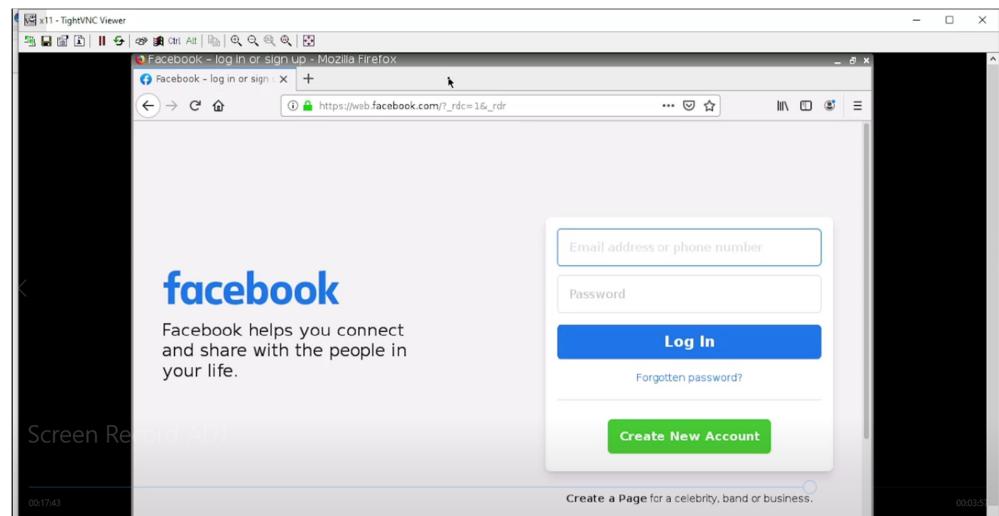
(1)Start All Devices, (2)Klik “Yes”, (3)Double Klik pada webterm



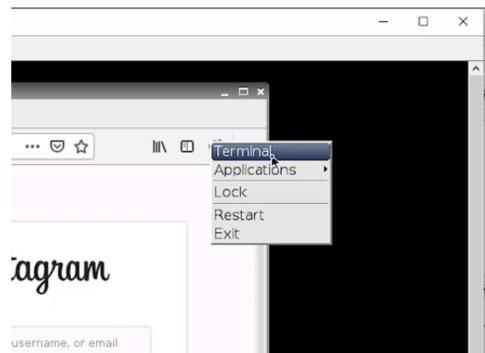
Akan diarahkan ke web



Untuk memastikan apakah proses berhasil bisa dicoba untuk membuka social media. Contoh: Facebook.com



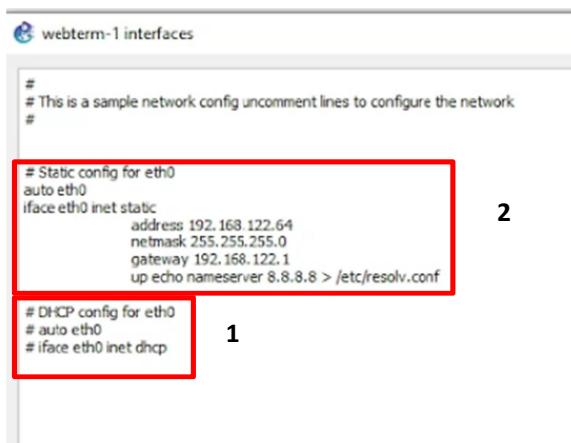
Klik sekali diluar website kemudian pilih “Terminal”



Ketik “ifconfig” Lalu lihat inet addr yang tertampil pada terminal

```
root@webterm-1:~# ifconfig
eth0      Link encap:Ethernet HWaddr ea:c:f2:12:a2:fe
          inet addr:192.168.122.64 Bcast:192.168.122.255 Mask:255.255.255.0
                  UP BROADCAST NOARP MULTICAST MTU:1500 Metric:1
                  RX packets:8610 errors:0 dropped:1 overruns:0 frame:0
                  TX packets:5849 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:1000
                  RX bytes:11155498 (10.6 Mib) TX bytes:426510 (416.5 Kib)
lo        Link encap:Local Loopback
          inet addr:127.0.0.1 Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
                  UP LOOPBACK RUNNING MTU:65536 Metric:1
                  RX packets:0 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:1000
                  RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)
root@webterm-1:~#
```

(1) Beri komentar pada teks (2) Hilangkan komentar dan ubah address sesuai terminal lalu ubah kode up echo nameserver dengan 8.8.8.8



Terakhir double klik pada webterm dan uji proses dengan mencoba membuka suatu website

