

# CSCI 5010 – Data Communications

## Updated Assignment 2

### GNS3 and Cisco Packet Tracer

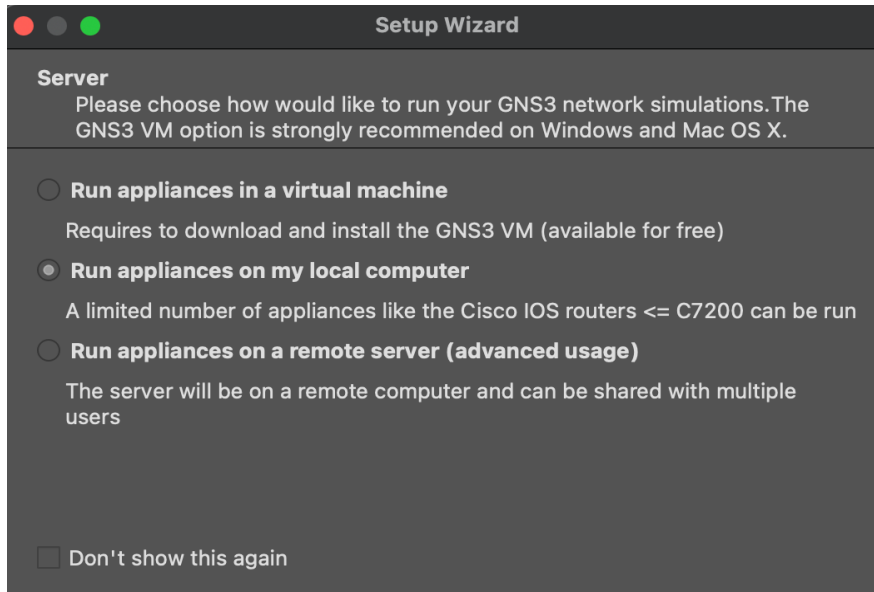
**Student Name: Srivaishnavi Gone**

**Student ID: 110378712**

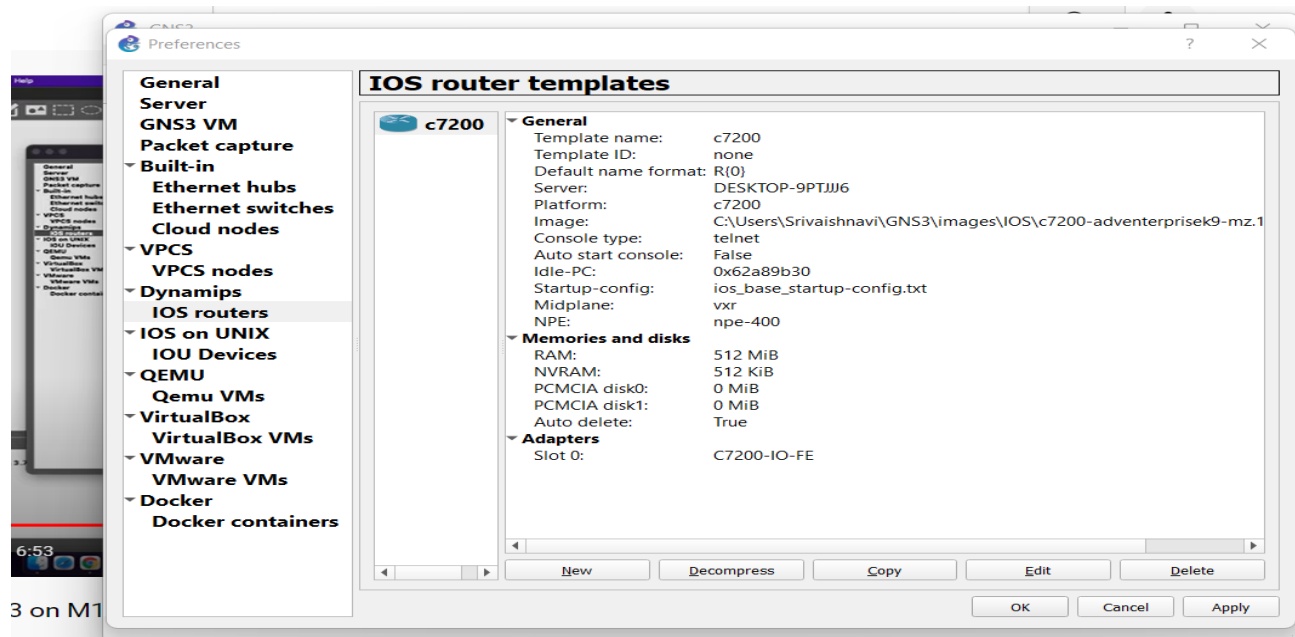
**Date: 09/04/2022**

## 1.1 GNS3 Installation

1. Download GNS3 using the following link: <https://gns3.com/software/download>  
Sign up and it will have a separate download link for Mac hosts.
2. Once the setup file is downloaded, run the GNS3 application.
3. The below setup window may be prompted during the installation, select **Run appliances on my local computer**.



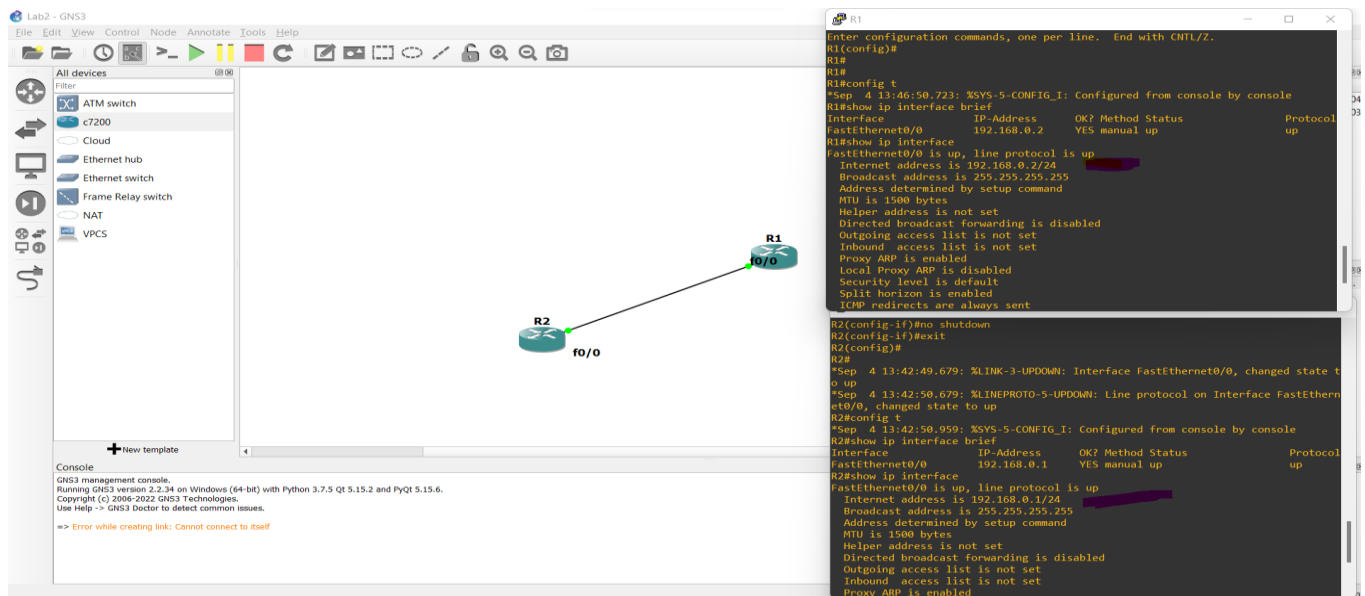
4. The application should be successfully hosted at this point and the simulation window should appear.
5. Download the cisco C7200 image from the below link:  
<https://drive.google.com/file/d/1AwdWxzjKIOBbRVqkC6yzKIv9S3angPbN/view>
6. The below YouTube video has instructions on how to download the image file and host it on GNS3. Please follow the link to get the C7200 device up and working.  
<https://www.youtube.com/watch?v=AXpvUzyyiSk>



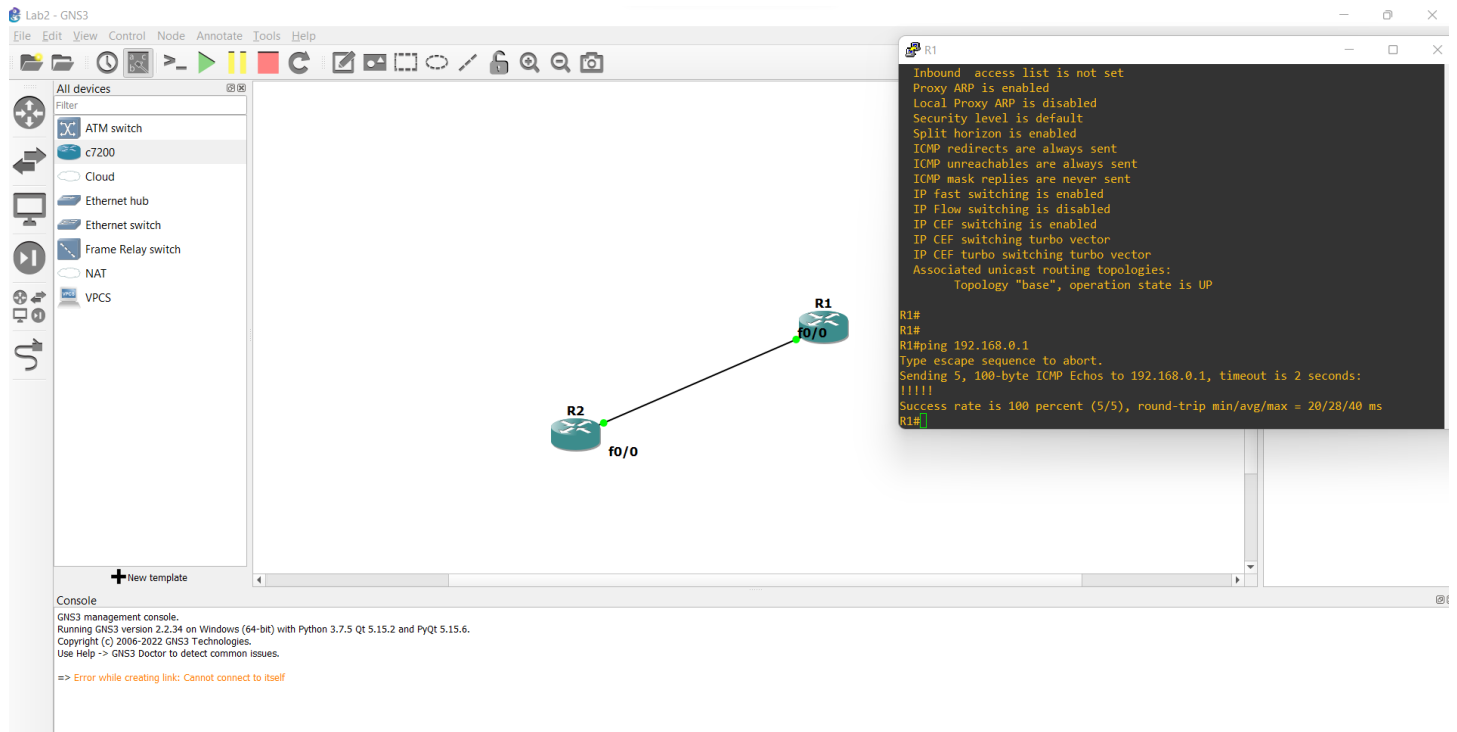
7. Once that is done, create the following topology in GNS3 using an available router.



8. Provide a screenshot of the topology that you created in GNS3. Both interfaces should successfully turn green upon adding and powering up the routers into the workspace. [75 points]



## Ping from R1 to R2 :



Lab2 - GNS3

File Edit View Control Node Annotate Tools Help

All devices

- Filter
- ATM switch
- c7200
- Cloud
- Ethernet hub
- Ethernet switch
- Frame Relay switch
- NAT
- VPCS

+ New template

Console

GNS3 management console.  
Running GNS3 version 2.2.34 on Windows (64-bit) with Python 3.7.5 Qt 5.15.2 and PyQt 5.15.6.  
Copyright (c) 2006-2022 GNS3 Technologies.  
Use Help -> GNS3 Doctor to detect common issues.

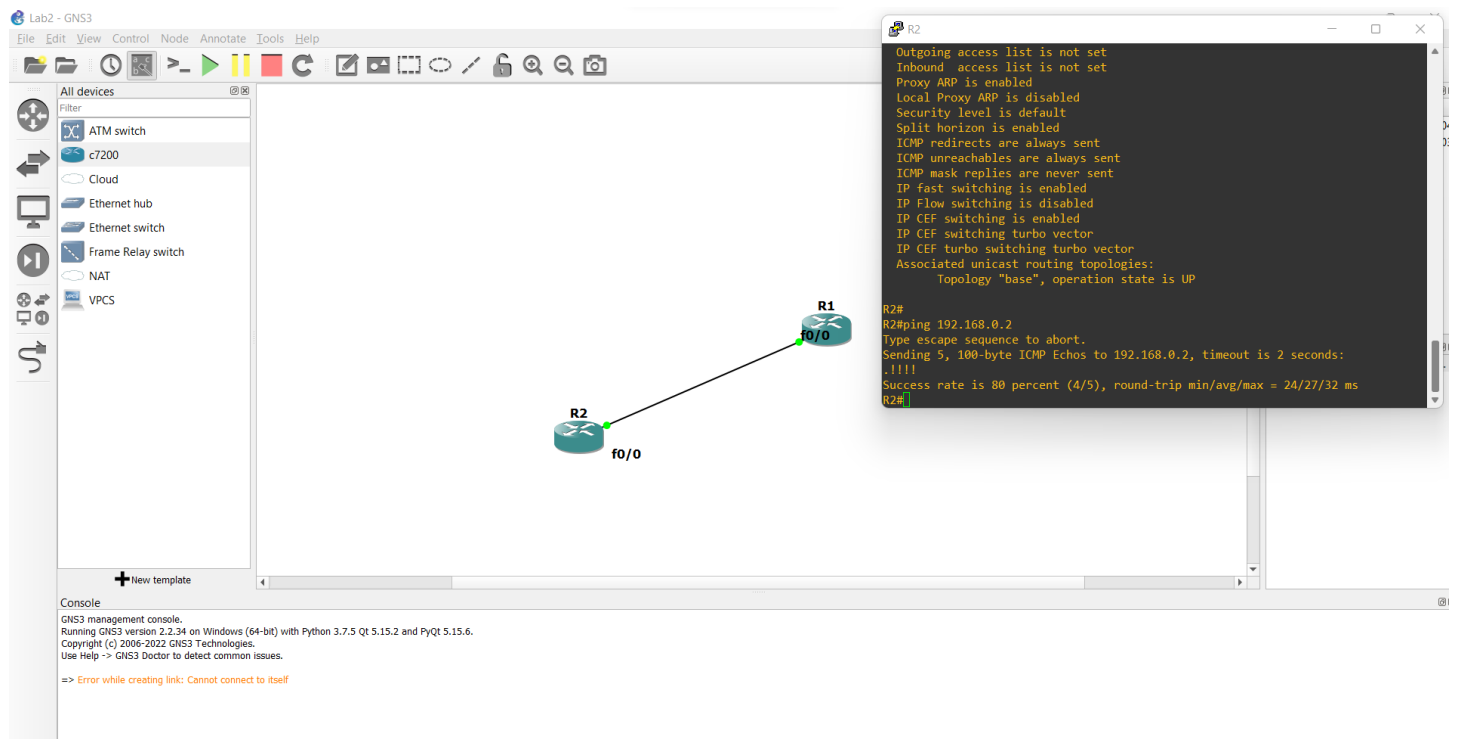
=> Error while creating link: Cannot connect to itself

R1

```
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP CEF turbo switching turbo vector
Associated unicast routing topologies:
Topology "base", operation state is UP

R1#
R1#
R1#ping 192.168.0.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.0.1, timeout is 2 seconds:
.!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/28/40 ms
R1#
```

## Ping from R2 to R1



Lab2 - GNS3

File Edit View Control Node Annotate Tools Help

All devices

- Filter
- ATM switch
- c7200
- Cloud
- Ethernet hub
- Ethernet switch
- Frame Relay switch
- NAT
- VPCS

+ New template

Console

GNS3 management console.  
Running GNS3 version 2.2.34 on Windows (64-bit) with Python 3.7.5 Qt 5.15.2 and PyQt 5.15.6.  
Copyright (c) 2006-2022 GNS3 Technologies.  
Use Help -> GNS3 Doctor to detect common issues.

=> Error while creating link: Cannot connect to itself

R2

```
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP CEF turbo switching turbo vector
Associated unicast routing topologies:
Topology "base", operation state is UP

R2#
R2#ping 192.168.0.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.0.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 24/27/32 ms
R2#
```

## 1.2 Cisco Packet Tracer Installation

### 1. Windows Users:

Download Cisco Packet Tracer: <https://www.netacad.com/courses/packet-tracer-download/>

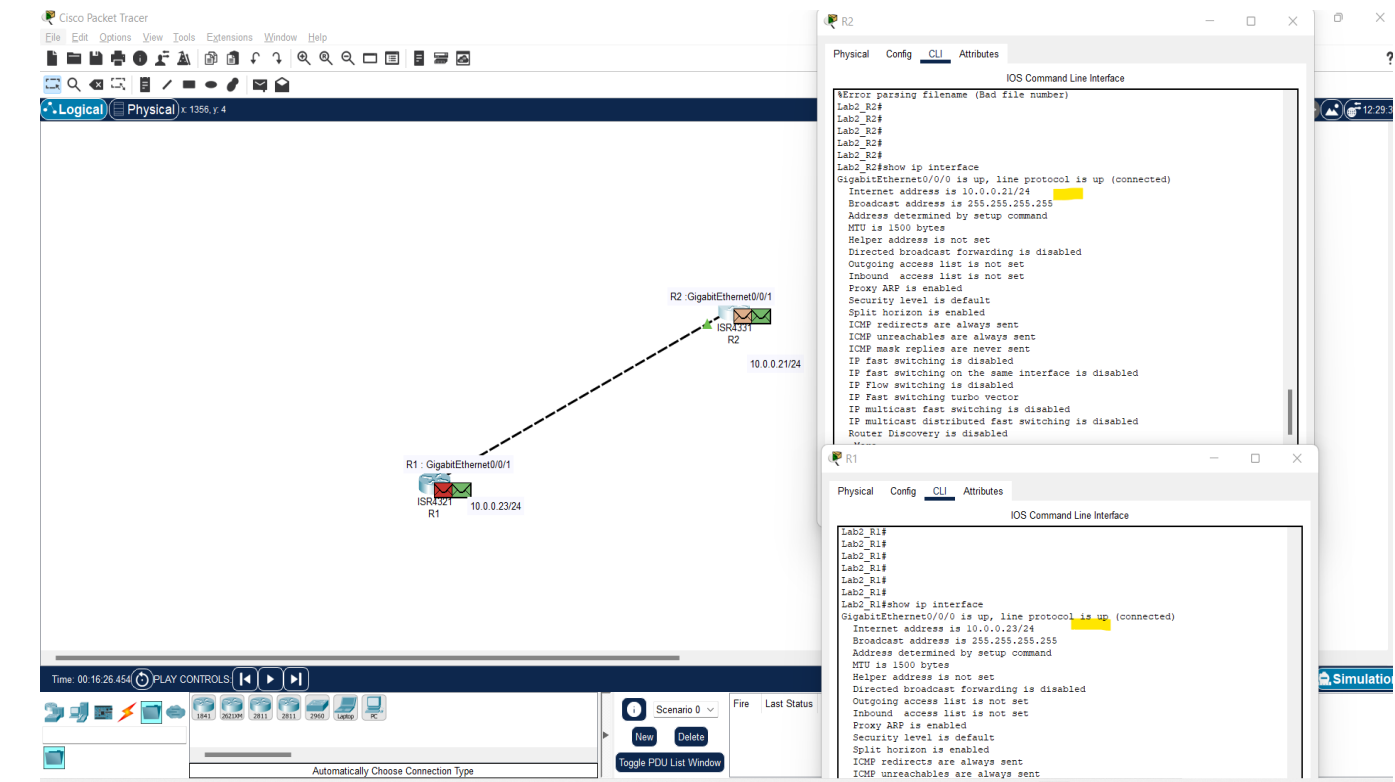
- It should be free after signing up. It will ask you to watch a video, which will be helpful about how to use the software in the future, but not mandatory.
- Then log in to the Cisco Network Academy and navigate to Resources > Download Packet Tracer (this is also explained in slide 2 of the “training”). From there, you can use any Cisco device with everything just like the hardware version, but it is all virtual

### Mac Users:

- For the students using MacOS, Cisco does not provide official support of Cisco Packet Tracer for MacOS. However, there are various third-party tools such as Wine that can help you install Cisco Packet Tracer on your MacBook. We request any student using MacOS to please reach us out on (the course email ticketing address listed on the syllabus) with their macOS version so that we can point out helpful links and support for installing Cisco Packet Tracer on Mac.
  - In case you are using macOS High Sierra, please follow the steps mentioned in the following link to install CPT on Mac: <https://www.sysnettechsolutions.com/en/ciscopackettracer/install-cisco-packet-tracer-7-1-on-macos-high-sierra/>.
2. Once that is done, create the following topology in Cisco Packer Tracer using available routers.



3. Provide a screenshot of the topology that you created in Cisco Packer Tracer. [75 points]



Total - /150 points