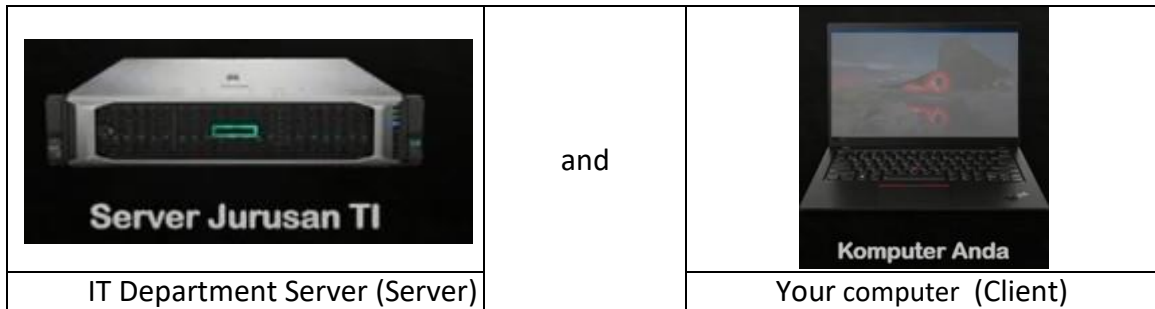


# Teacher and Student Laboratory Setup Guide

## A. General Explanation of Laboratory Virtual Architecture

1. Laboratory architecture consists of two sides:



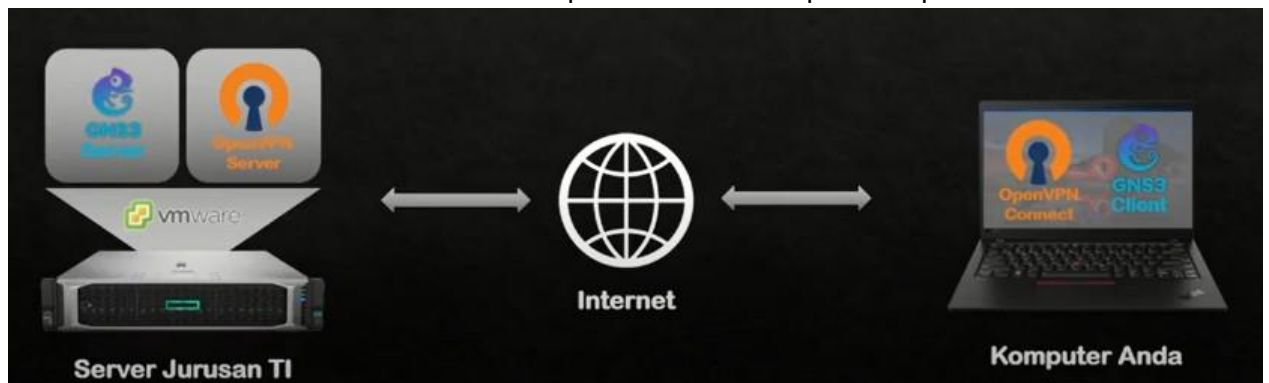
2. On the server side, the JTI server has installed the operating system of baremetal VMWare vSphere. And there are two virtual machines that run in it, namely Virtual Machine **OpenVPN Server** and Virtual Machine **GNS3 Server**.



3. On the client side, your compiler is required to perform installation and configuration. **OpenVPN Connect** and **GNS3 Client**



4. After that, connect your computer to the Internet Network. And then make a connection to the server using the help of the **OpenVPN Connect application**. Then you will be connected to the server of the IT Department and can perform practicum.

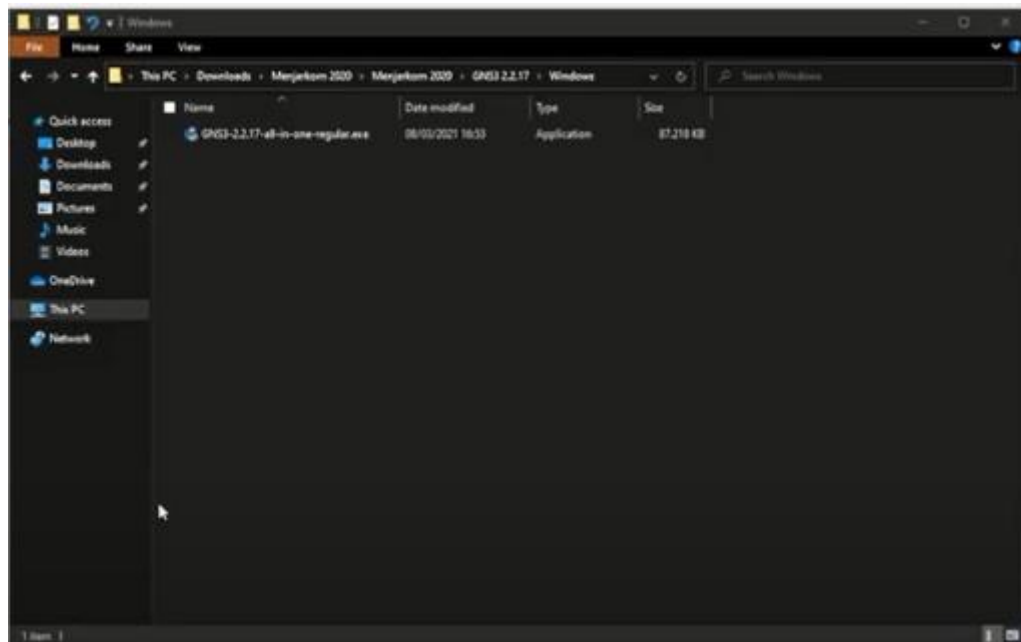


5. But to be able to use the OpenVPN Connect app, you must download the OpenVPN profile.
6. So, the application needs on your computer, are :
  - a. GNS3 Simulator Application version 2.2.17
  - b. Connect OpenVPN app
  - c. Profiles OpenVPN
7. To download all of those, you can access the link below



## B. GNS3 Simulator Installation

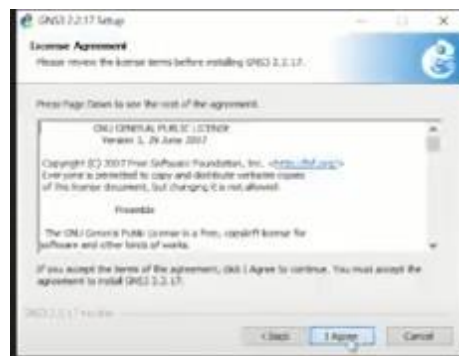
1. Open the GNS3 installation file that has been downloaded from google drive above



2. Initial set up view, click next



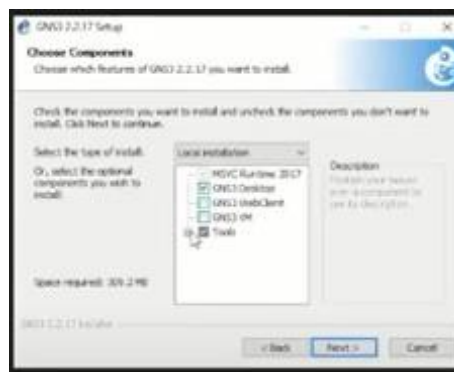
3. Then select 'I agree'



4. Then 'next' again



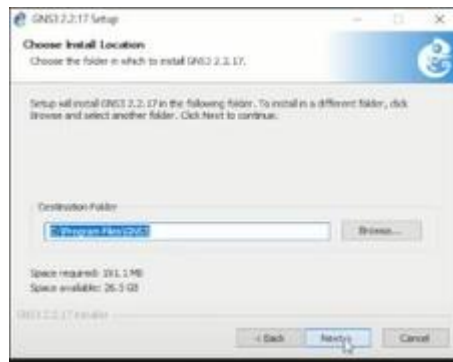
5. Select GNS 'desktop'



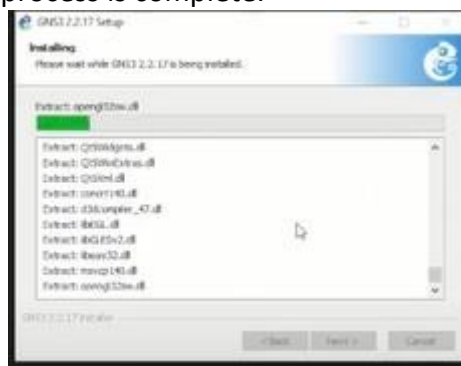
6. Then remove all check marks except tight-vnc server, solar putty and virt-viewer, then click next



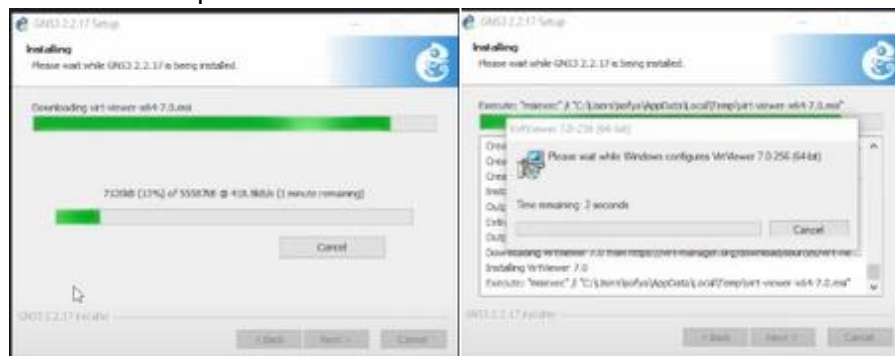
7. Then click next again



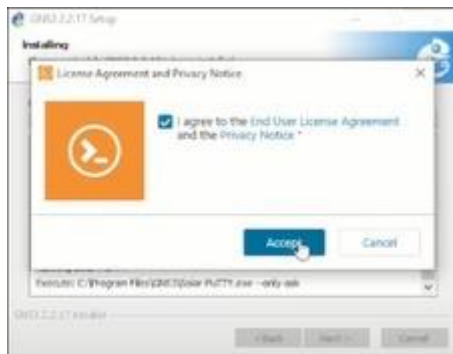
8. Wait until the installation process is complete.



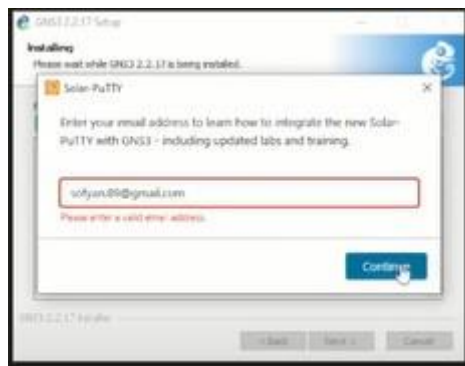
9. And make sure to connect to the internet because there is some software that must be installed when the set up runs



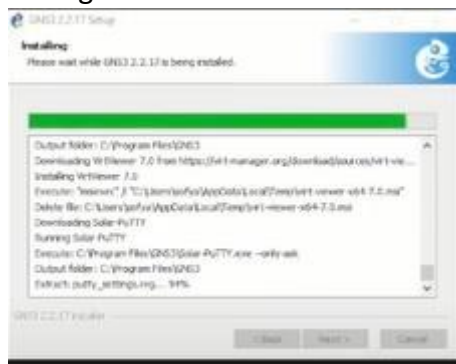
10. Then Click 'I agree' and then next



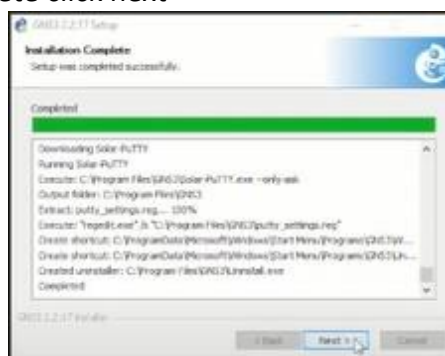
11. Then write down your email address and click next



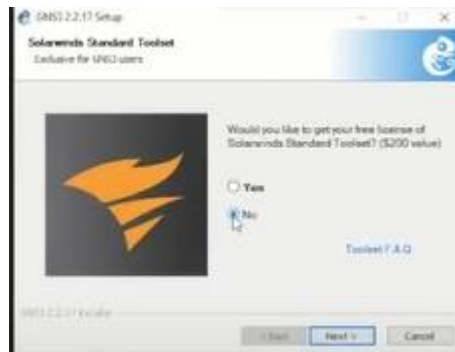
12. Then the set up will take place again.



13. When the set up is complete click next



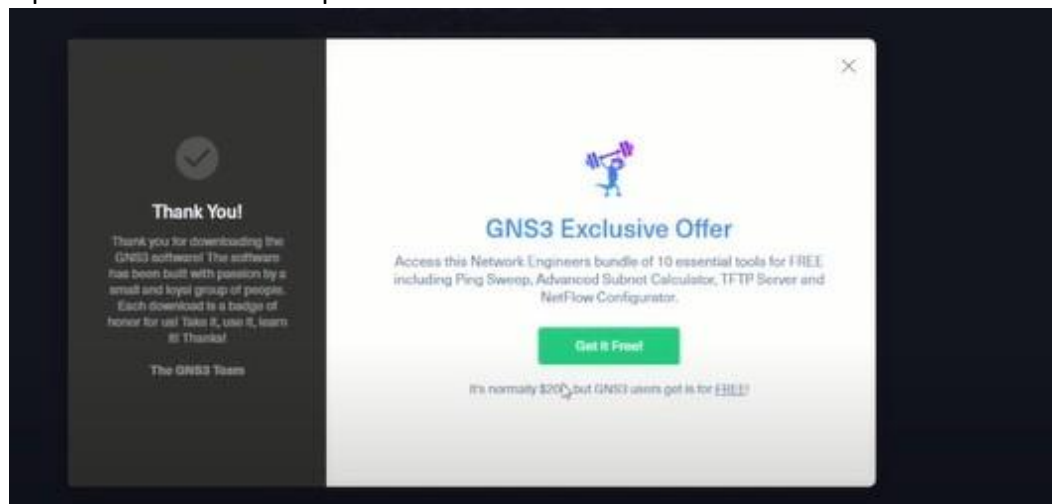
14. Select "no"



15. Then uncheck and click finish

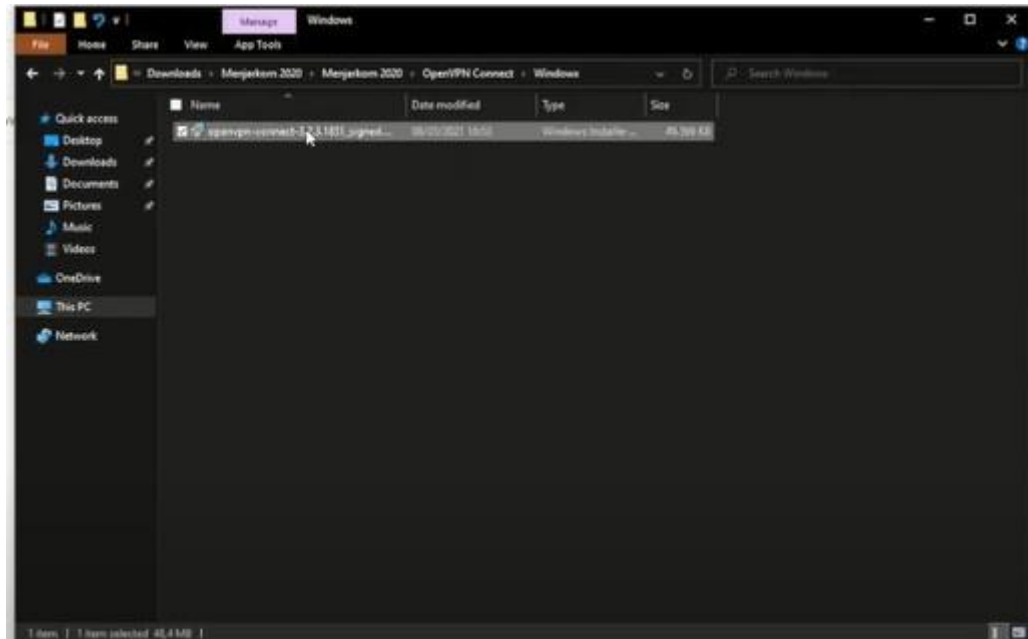


16. Set Up GNS 3 has been completed

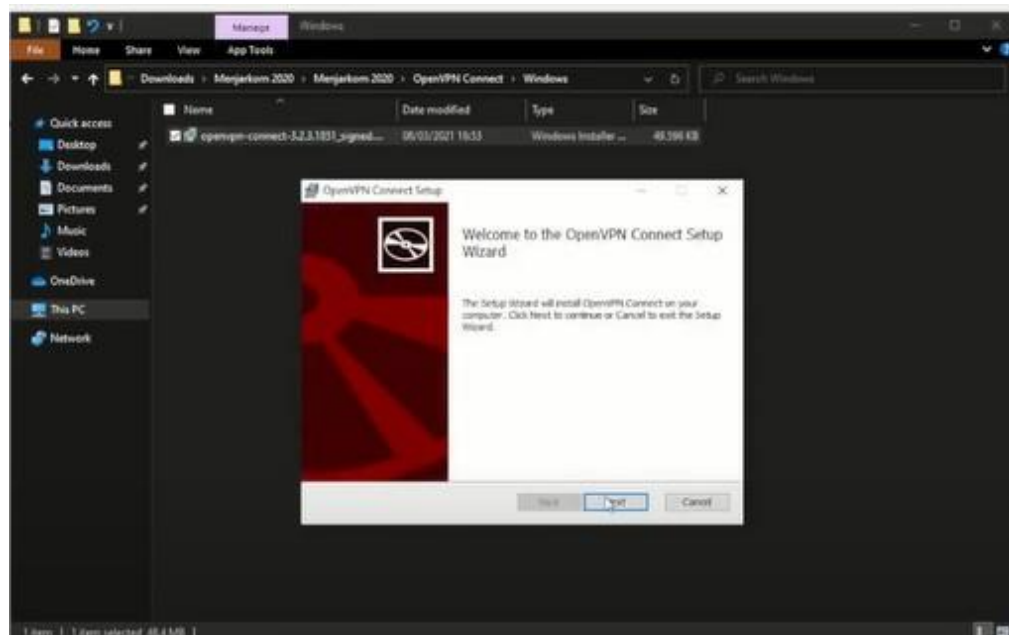


## C. Installation stage and configuration of Open VPN Connect

1. First open the openvpn connect installation file that you have downloaded

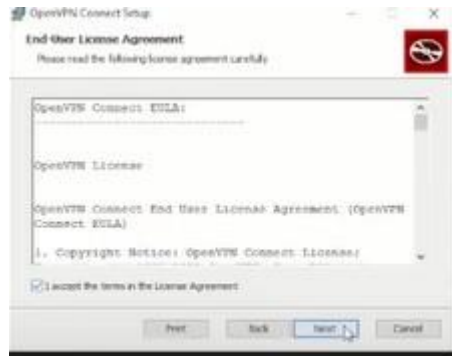


2. Click Next





3. Then click I accept, and then next



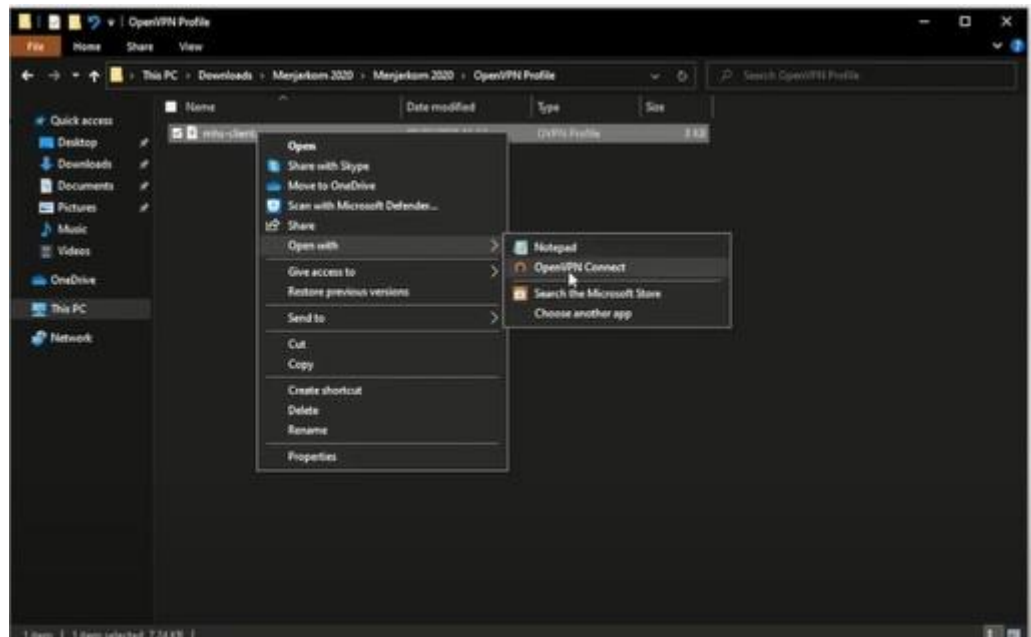
4. Then click the install button



5. Then click finish



6. Open the OpenVPN profile download in your folder. Then right-click, select open with. And select open VPN connect



7. You Can skip tour by pressing the cross button



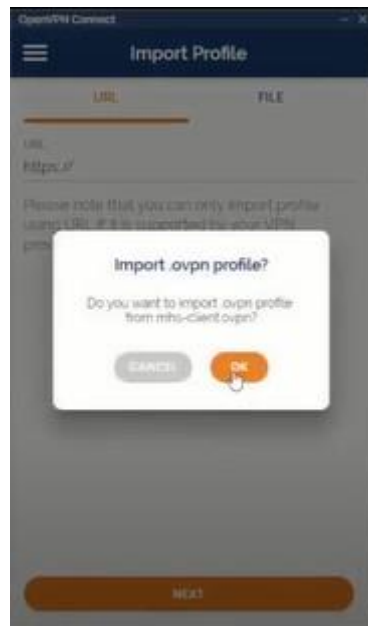
8. Select the agree button



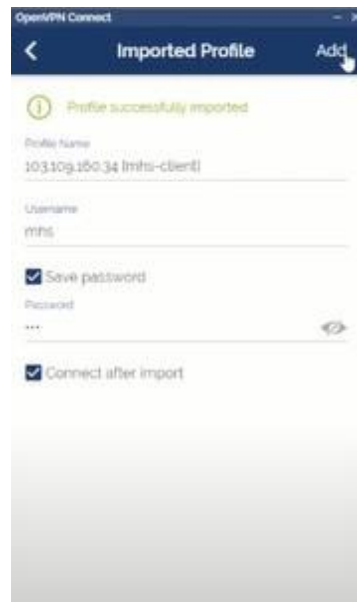
9. Click ok



10. Click Ok



11. Click Username and password 'mhs' and then click add



12. Wait until it is connected, if it has appeared as below berrati already connect



#### D. Gns3 Simulator Installation and Configuration Stage

1. Make sure the VPN connection is connected

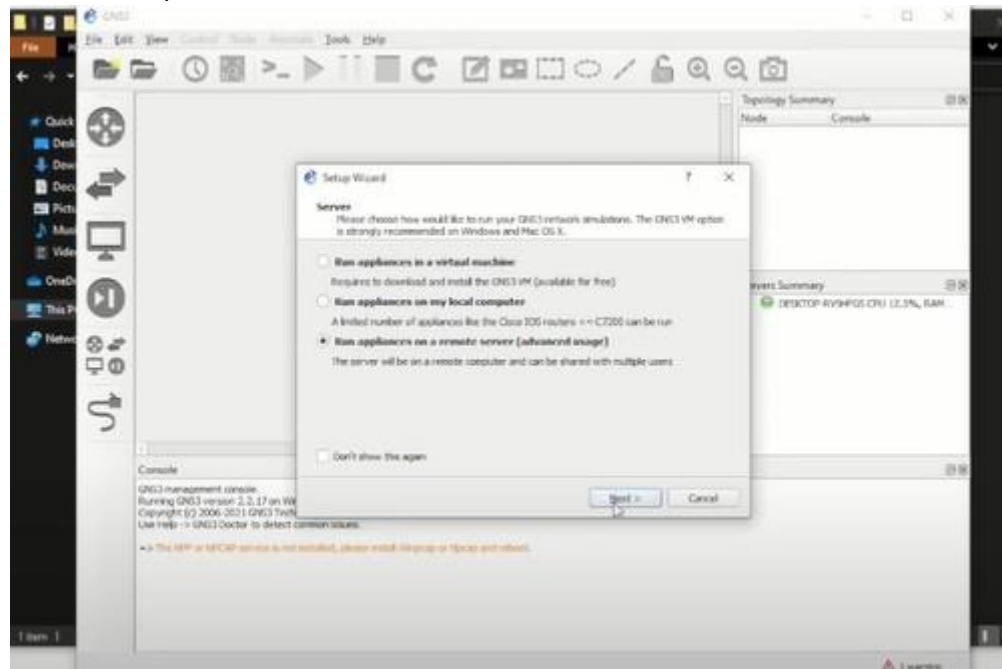


2. Then minimize the open VPN application

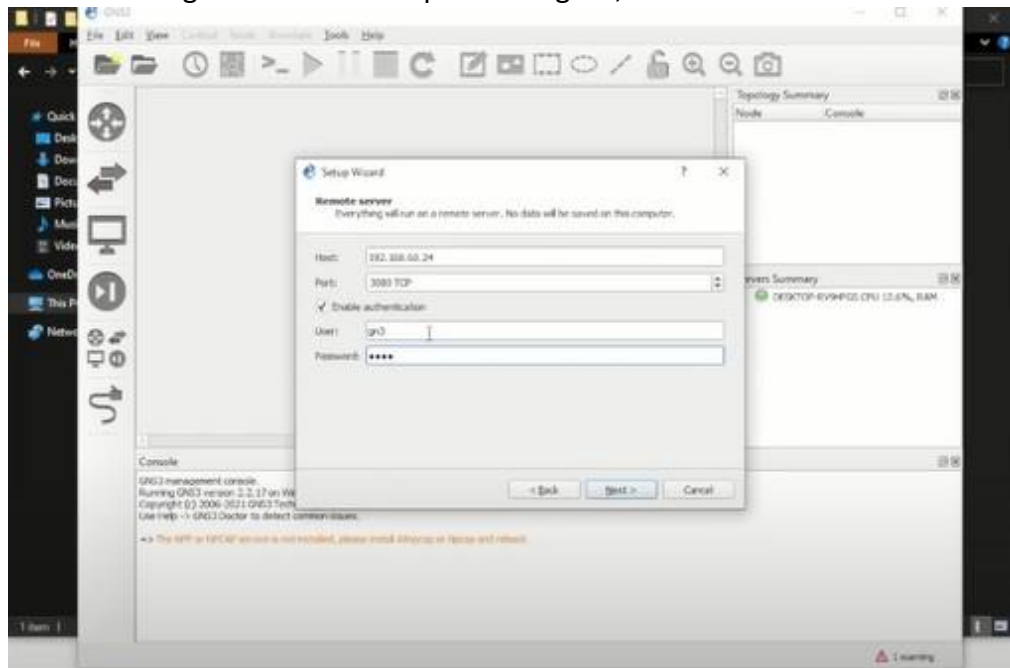
3. Click GNS3



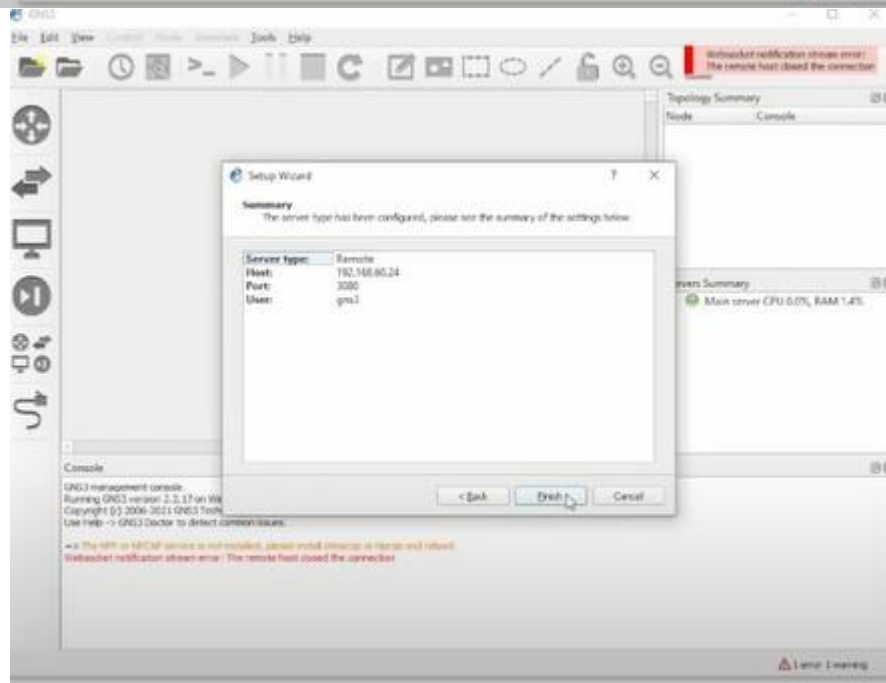
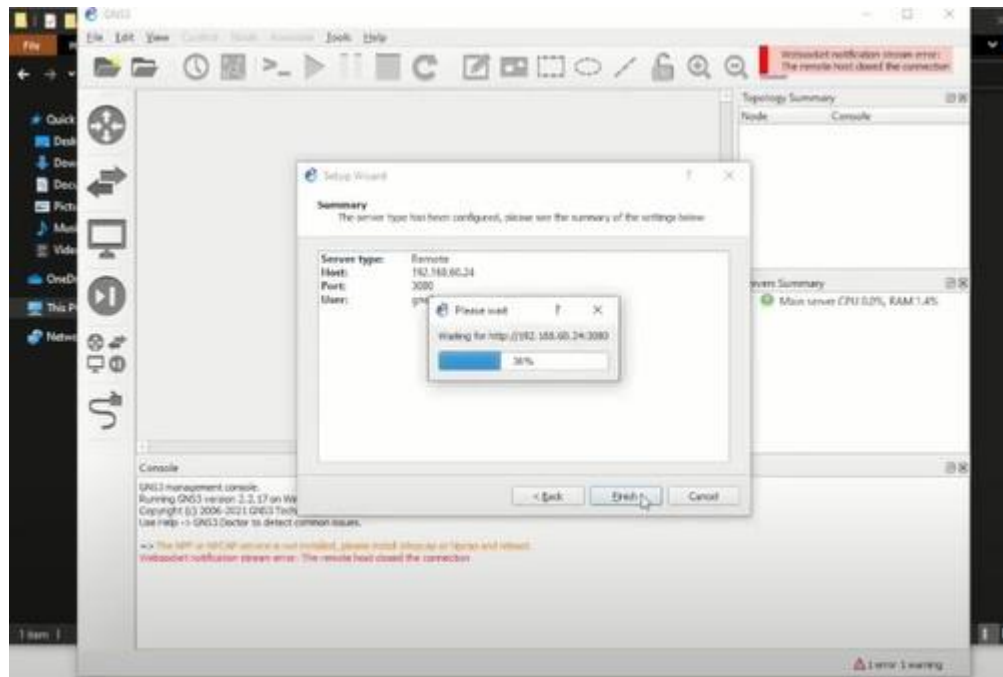
4. Select the third option



5. Then fill in the image below with the password gns3, then click next

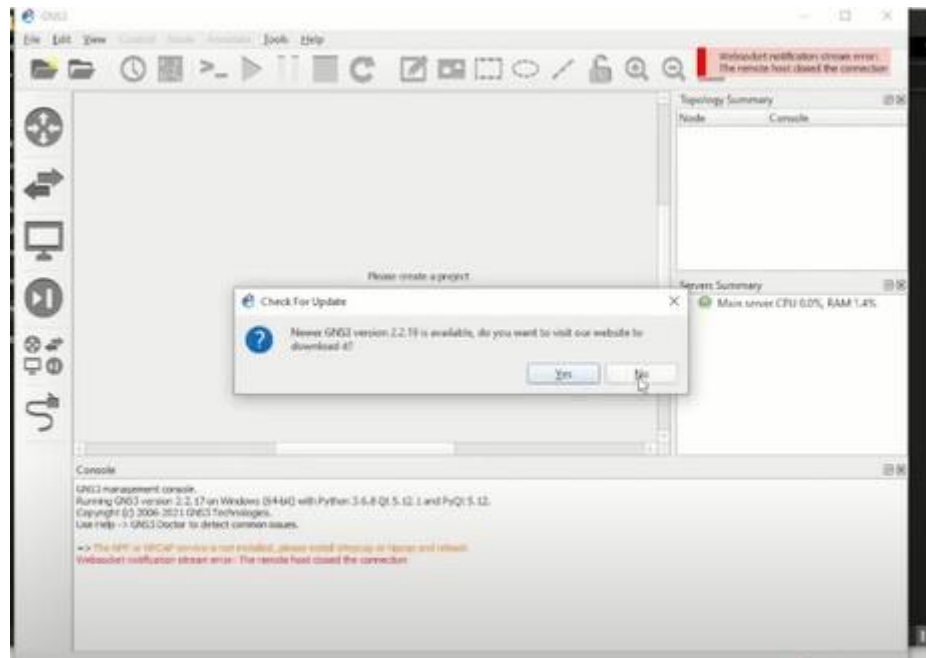


6. Then Click Finish





7. Pick no



8. Make sure there is a green button as seen in the figure below.

