

How to Connect GNS3 to a Real Network:

First, we have to create a network loopback adapter. To create a network loopback adapter, we'll do the following steps:

1. At first go to Device Manager, click on action and then click on Add Legacy Hardware
2. 1st Click on Next, then in the 2nd Step Select "Install the hardware that I manually select from a list (Advanced)" and at the 3rd Step Select Network adapters and, then click on Next.
3. Select "Microsoft" from the Manufacturer on the left side and, then select "Microsoft KM-TEST Loopback Adapter" from the Model on the right side. At the last click on Next.
4. Choose "Next" and then click on Finish to complete the process.
5. Now open the Control Panel, and right click on Network and Sharing Centre, there will be an option Change Adapter Settings. Now right click on the created Ethernet adapter. Here we created Ethernet 2, so we'll select that. Then choose the Properties, and then click on Internet Protocol Version 4(TCP/IPv4). Now we can set the IP address manually or automatically. The automatically generated IP can be found in cmd using #ipconfig command.

Then we need to add the network loopback adapter to GNS3. We will add it to the GNS3 cloud, to connect GNS3 to a laptop or real network.

1. First, run GNS3 and drag and drop a cloud and router from all devices.
2. Right-click on the cloud and select Configure. Add and apply your created network adapter and click on OK.
3. Connect the router and cloud with your created ethernet adapter. Now we will assign an IP address to the router with the same network of the ethernet.
4. As there is no IP address assigned to any GigabitEthernet 1/0, we will assign the IP address "192.168.137.5" to the router IP interface, as the IP address of cloud was 192.168.137.1.
5. Now, ping the adapter IP from router, and open Command Prompt and ping the router. Both the device will be pinged.

N.B: If you face difficulties, try the followings-

1. Restart the GNS3.
2. Turn off Windows Defenders Firewall.
3. Try using GigabitEthernet port.