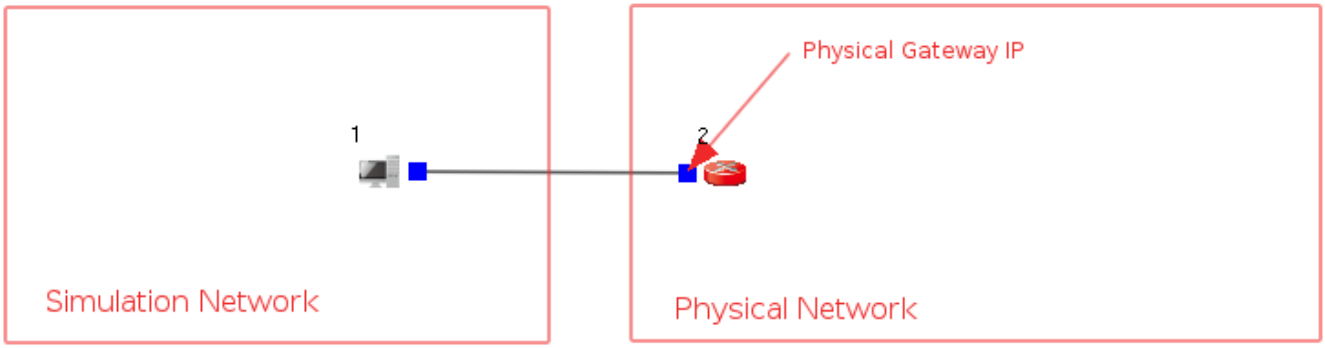
The Emulation settings on EstiNet simulator module MIFX

MIFX module

The MIFX module is to send and receive packets between simulator and physical network card. This is a communication way for EstiNet simulator and physical network.

The setting steps of MIFX module

1. Select a Router Inferface which will send and receive packets to physical network.



2. Make sure the subnet of physical network card.

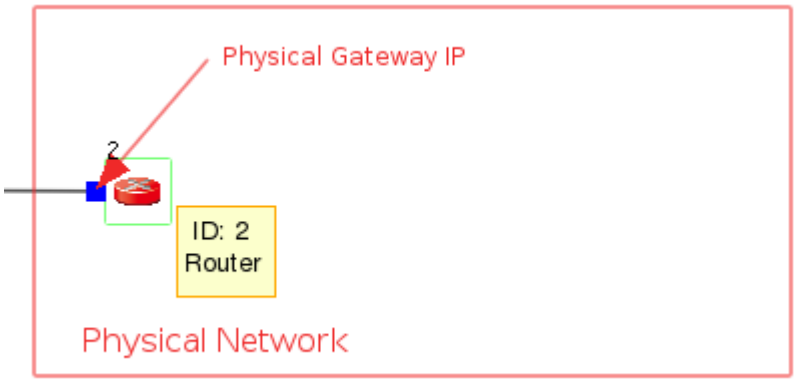
```
[anton@localhost ~]$ ifconfig ens33
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.206.129  netmask 255.255.255.0  broadcast 192.168.206.255
        inet6 fe80::fceb:cc7c:cb2d:3e5b  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:62:c0:4b  txqueuelen 1000  (Ethernet)
        RX packets 544142  bytes 41338281 (39.4 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 527195  bytes 1344091653 (1.2 GiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

3. Make sure the Gateway IP of physical network.

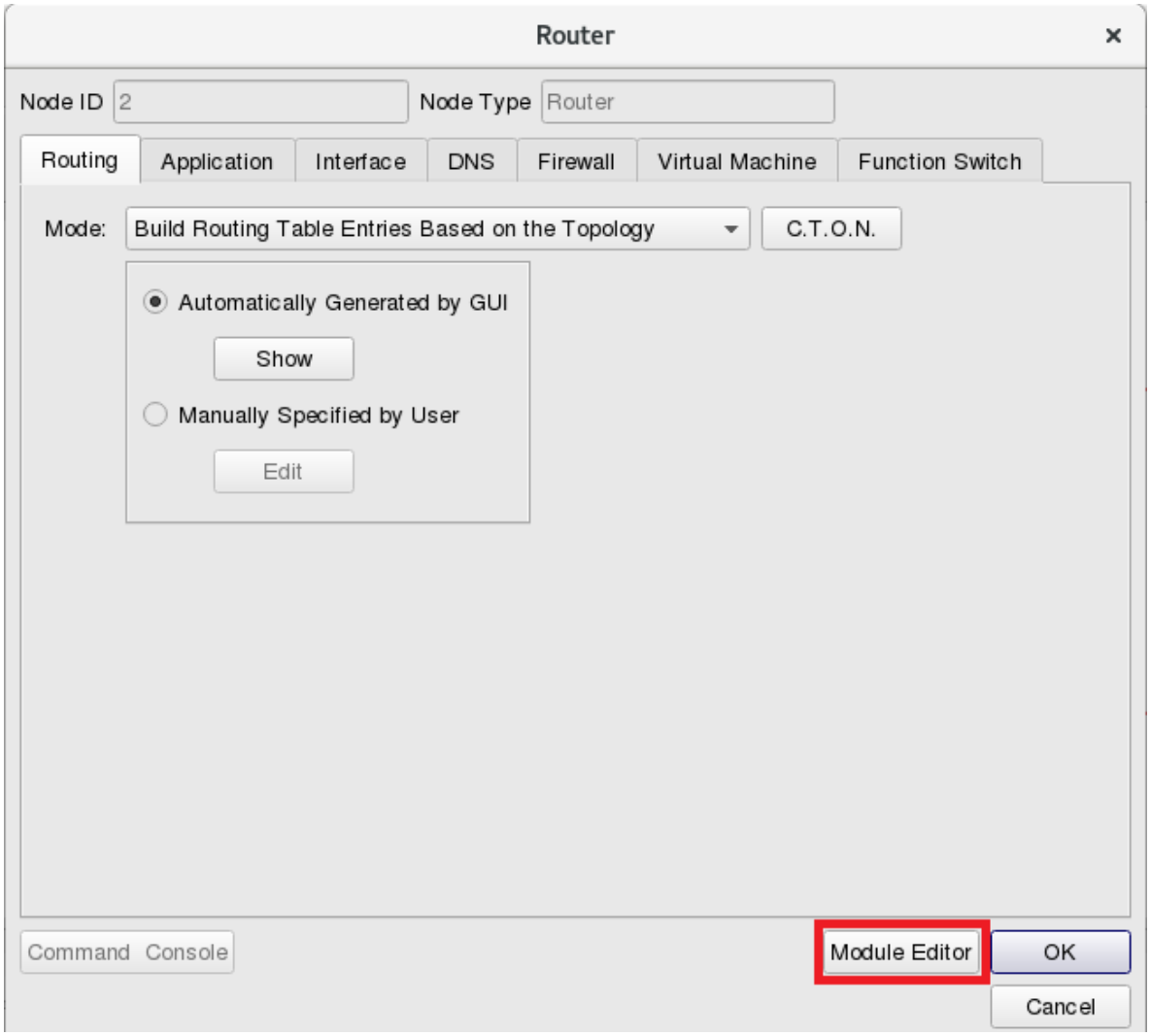
```
[anton@localhost ~]$ ip route
default via 192.168.206.2 dev ens33  proto static  metric 100
172.17.0.0/16 dev docker0  proto kernel  scope link  src 172.17.0.1 linkdown
192.168.206.0/24 dev ens33  proto kernel  scope link  src 192.168.206.129  metric 100
```

4. Switch to Edit Parameters state.

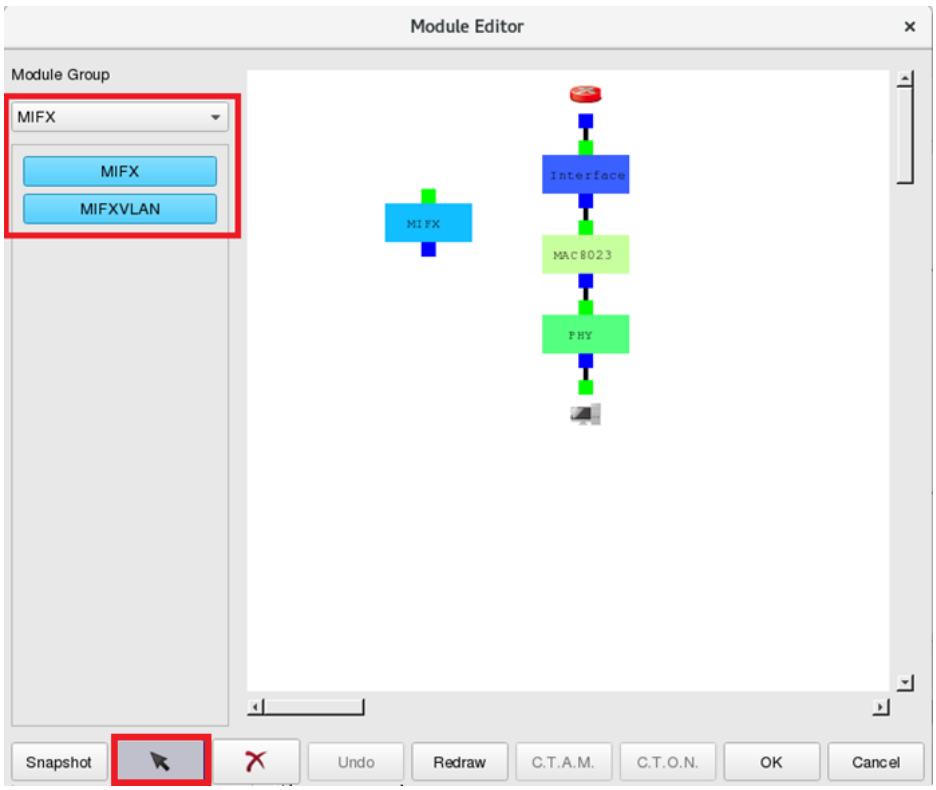
5. Double click the Node which will send and receive packets between simulator and physical network.



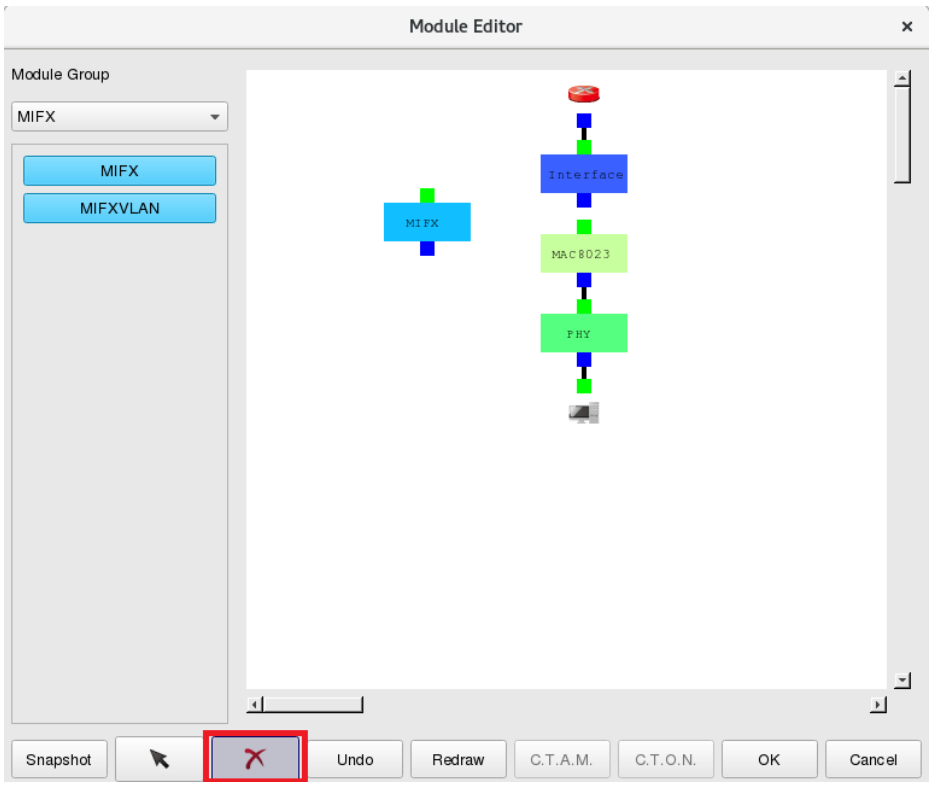
6. Click the button “Module Editor”.



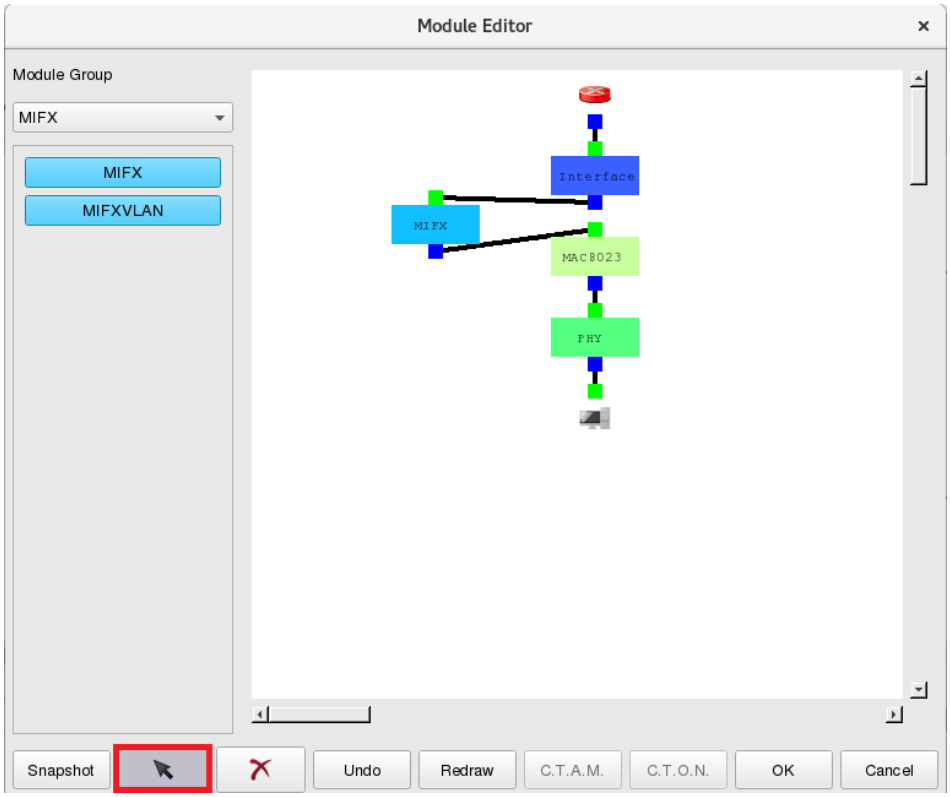
7. Add a MIFX module from Module Group.



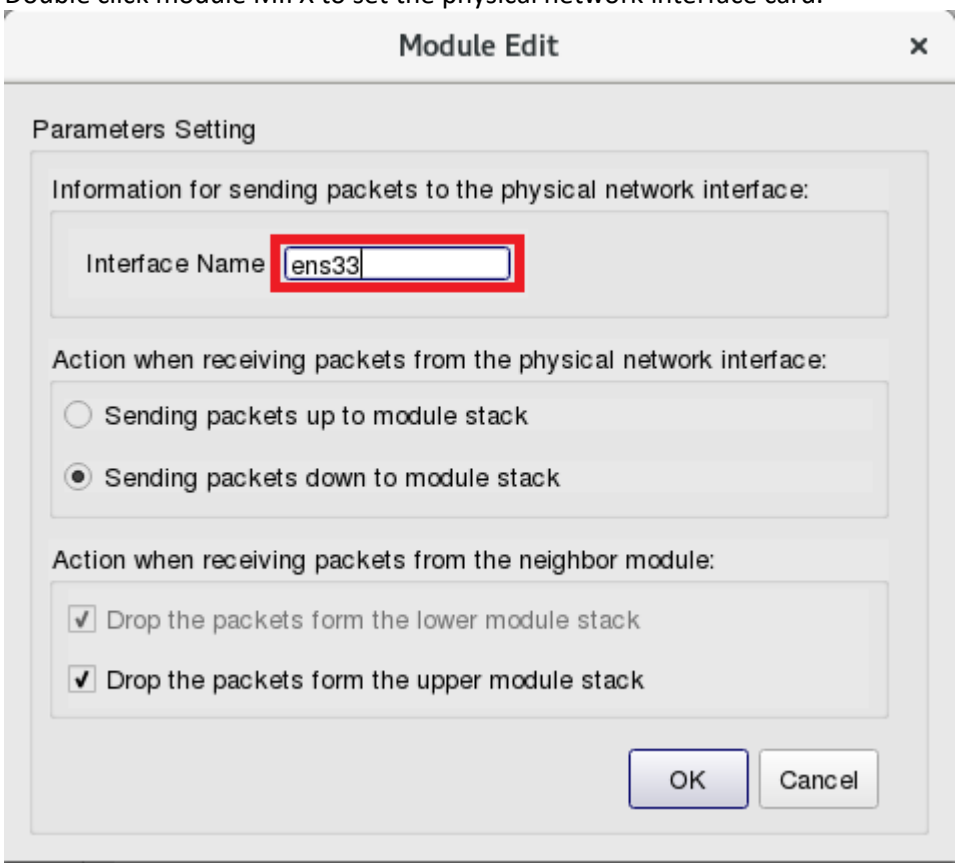
Remove the connection between module" Interface" and "MAC8023".

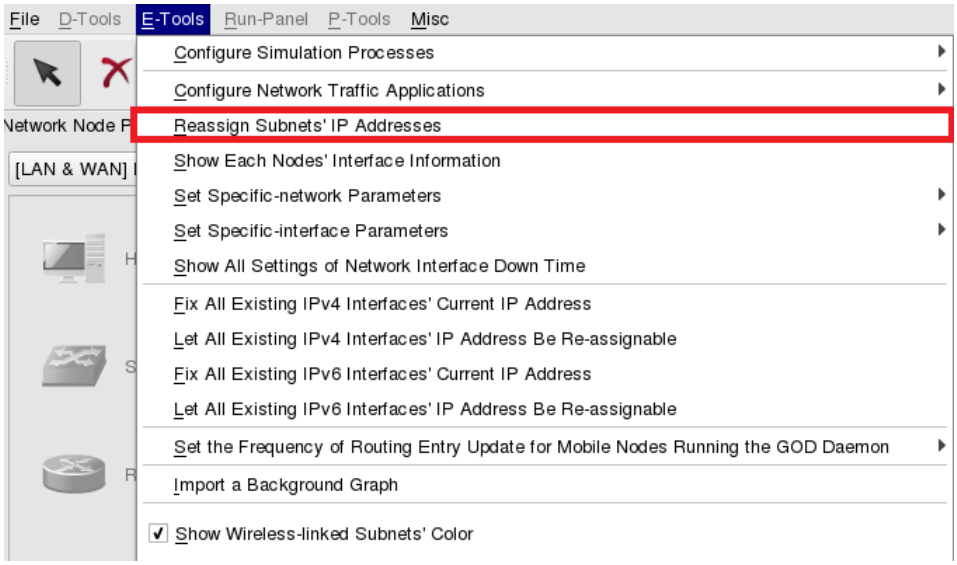


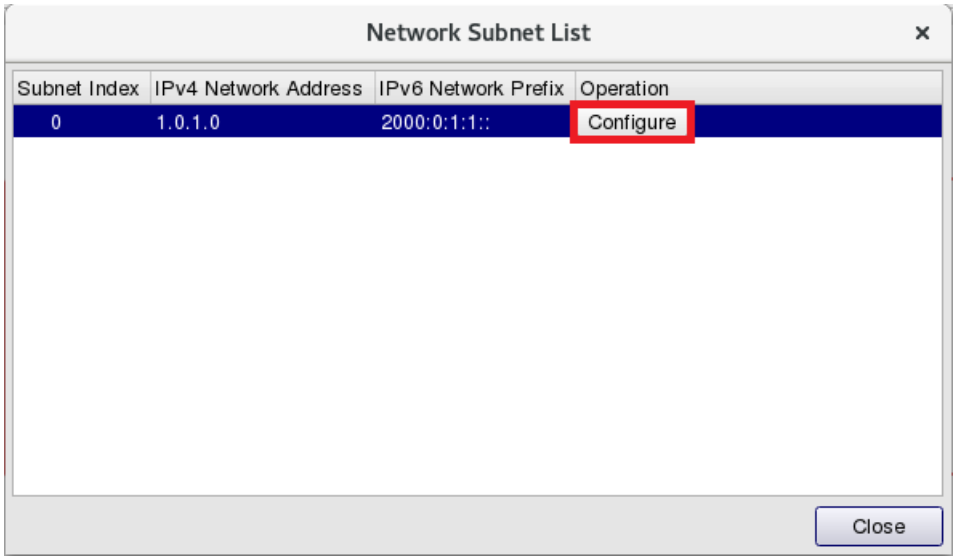
Connect the module “Interface”<->”MIFX” and “MAC8023”.

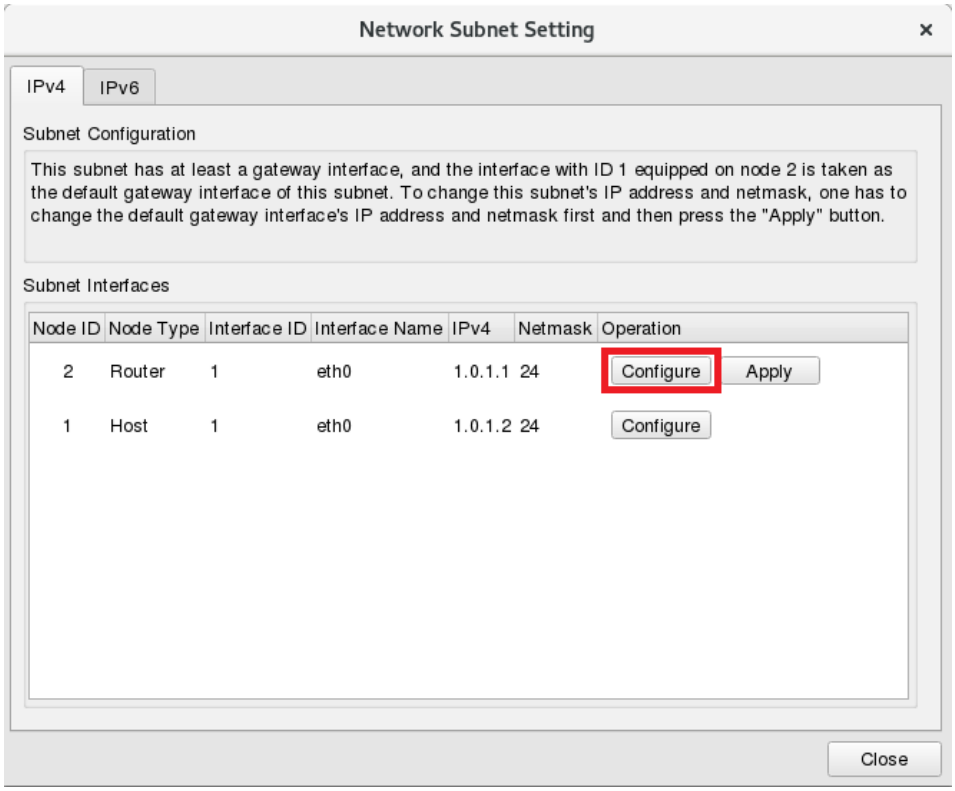


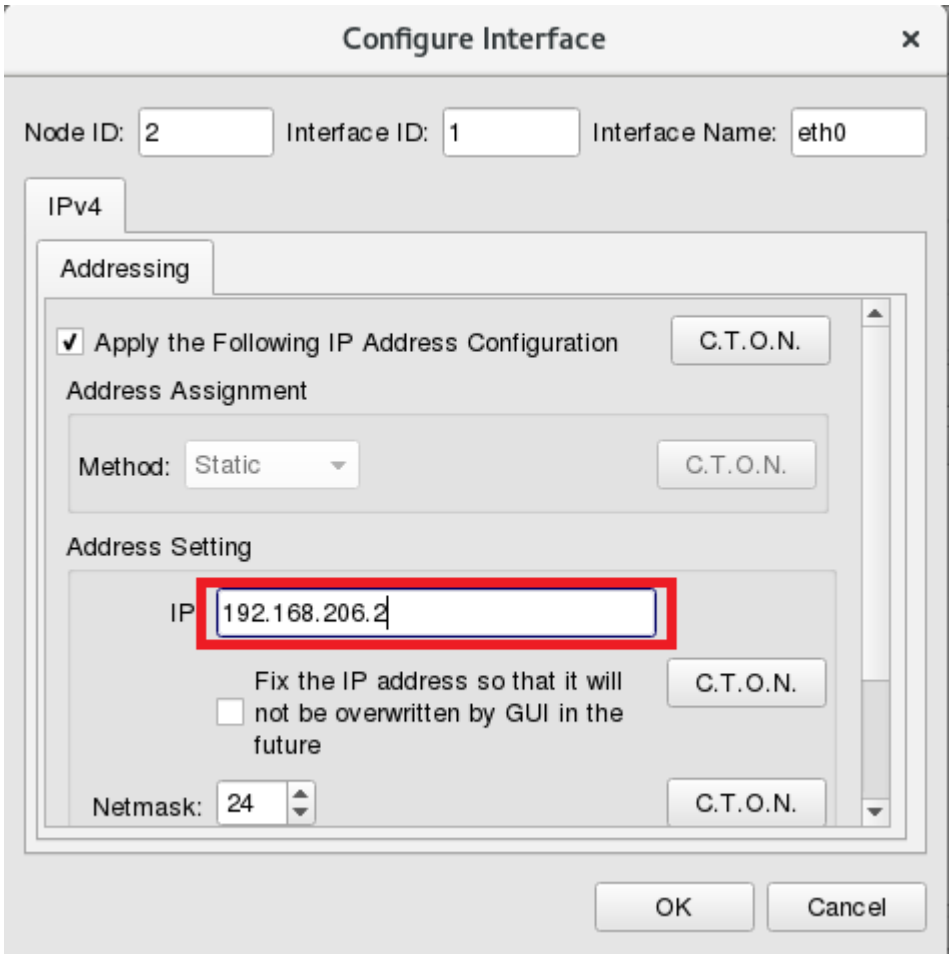
Double click module MIFX to set the physical network interface card.



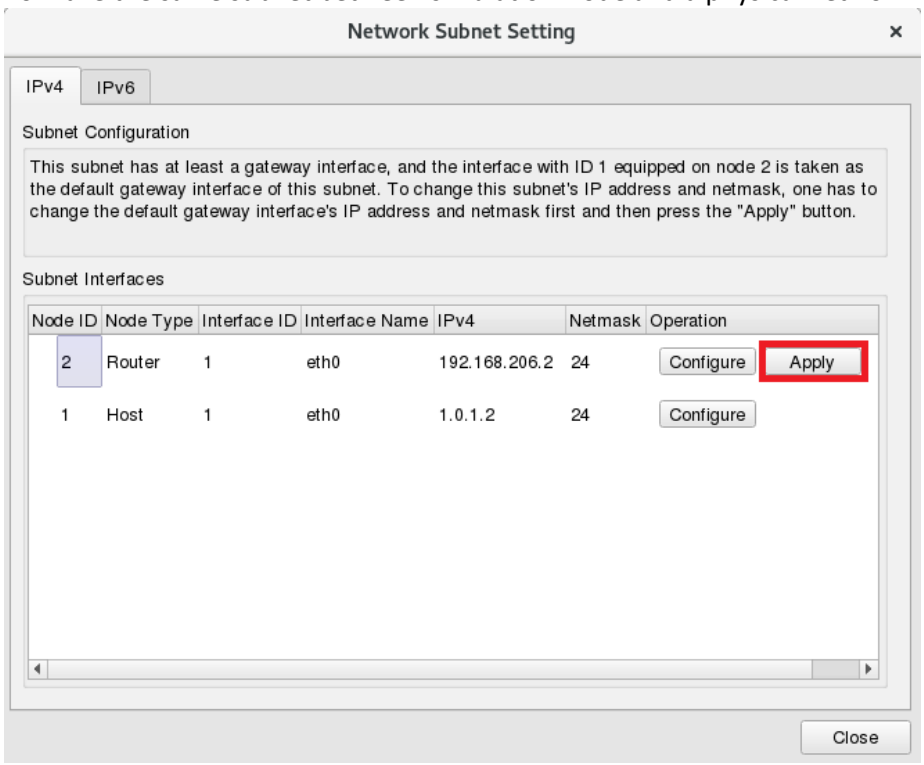
8. From tool bar “E-Tools”=> Reassign Subnets’ IP Address, to reset the interface IP. To make the same subnet between simulation environment and physical network interface IP. In this sample, the Gateway IP of physical network is “192.168.206.2”.
9. 



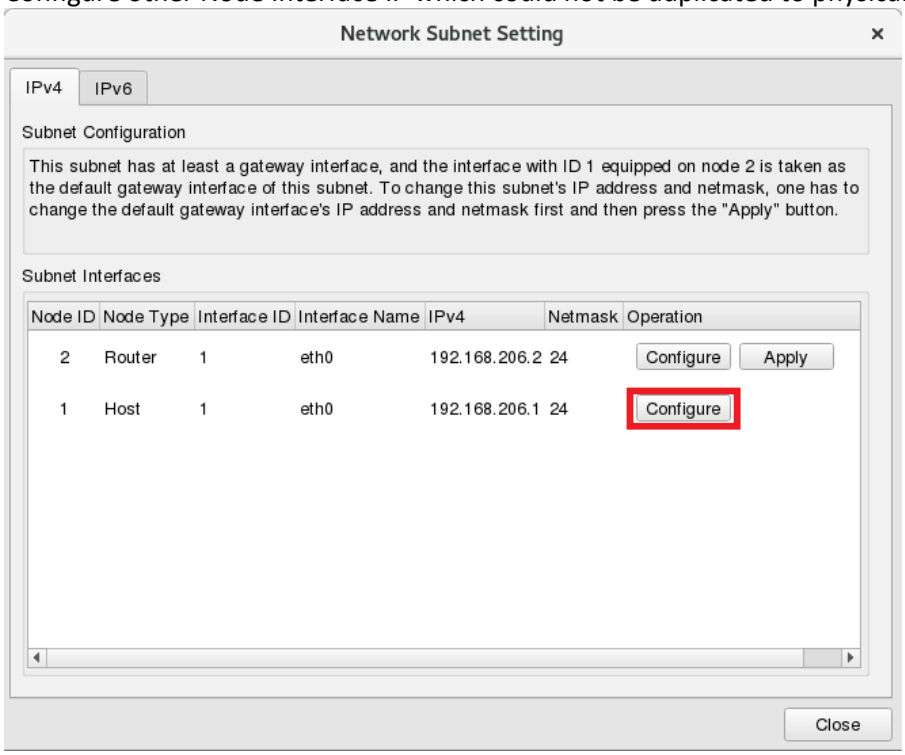


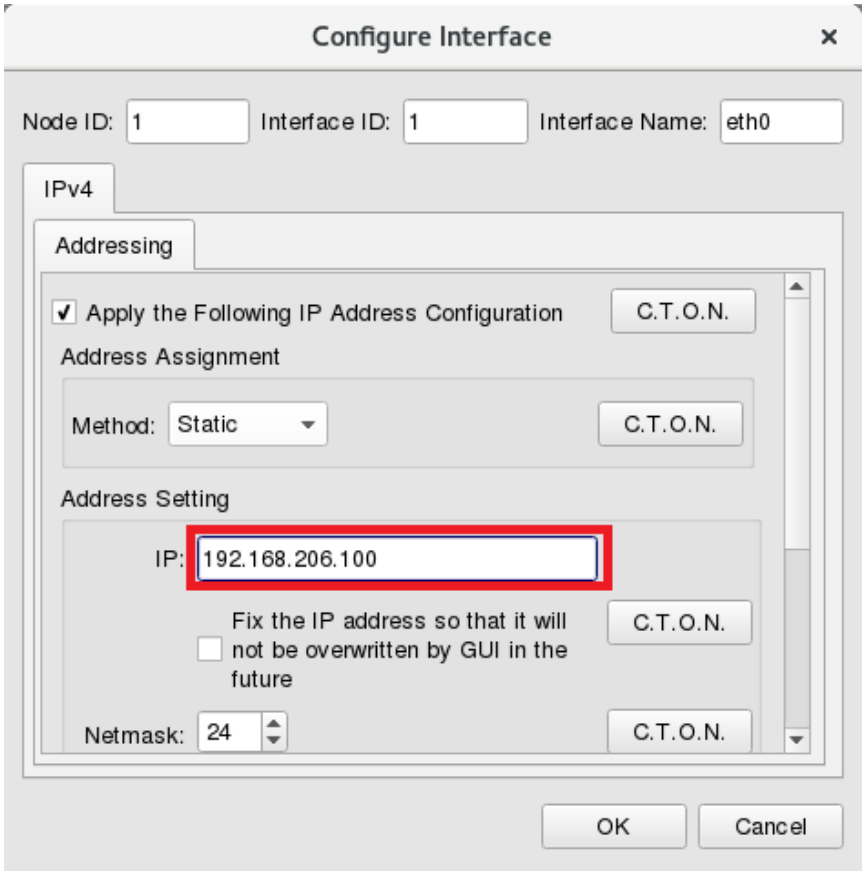


10. To make the same subnet between simulation Node and a physical network interface card.



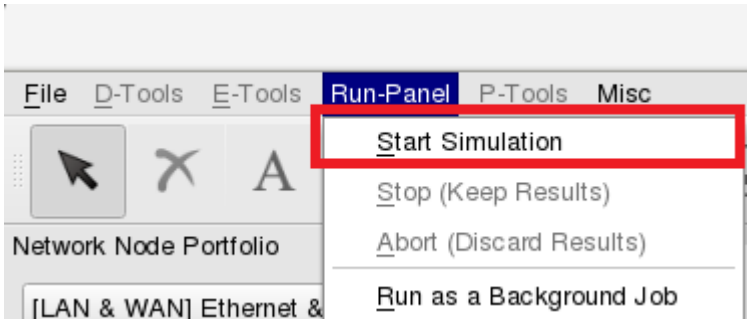
11. Configure other Node Interface IP which could not be duplicated to physical network IP.



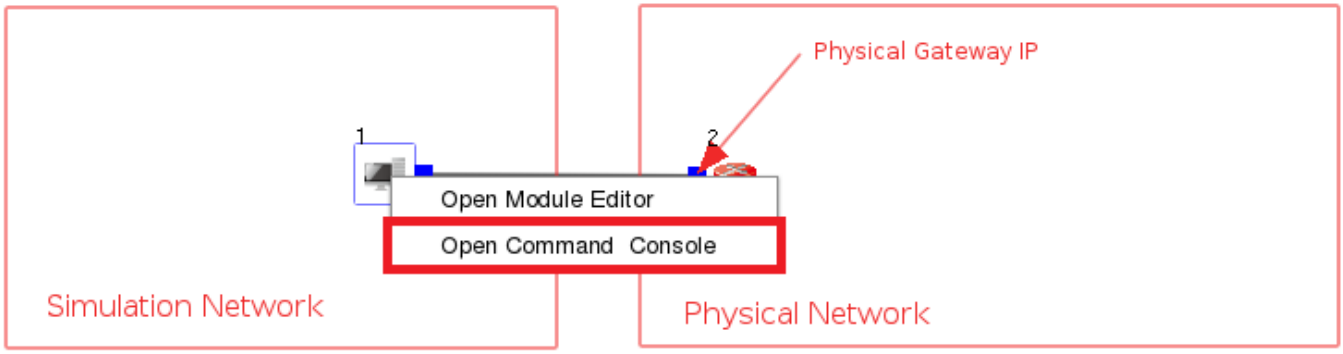


12. Switch to “G” state “Generate Configuration File”.

13. To execute simulation from tool bar “Run-Panel”=> “Start Simulation”.



14. Click mouse right button to “Open Command Console”.



15. Use command “ping” to test the network connection status.
    PS. IP 8.8.8.8 is Google DNS server.