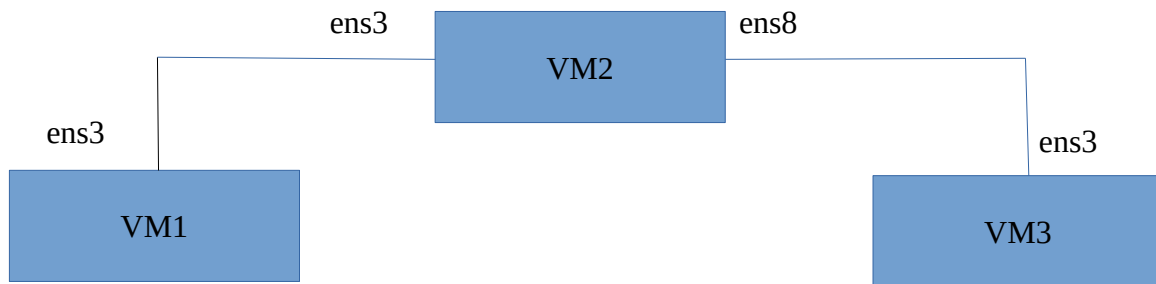


3. Demonstrate routing with NAT and iptables.



Step 1: Create 3 Virtual Machines

- Create VM1 with One Interface
 - Check the ip using ifconfig
 - ens3 - 192.168.122.131
- Create VM2 with two Interface
 - Check the ip using ifconfig
 - ens3 – 192.168.122.172
 - ens8 - 172.16.34.38
- Create VM3 with isolated Network
 - Check the ip using ifconfig
 - ens3 – 172.16.34.39

Now Check The Connectivity fro each VM

- ping VM3 to VM2 (second Interface) - Done
- ping VM3 to VM2 (First Interface) – Unsuccessful - Successful
- ping VM3 to VM1 – Unsuccessful - Successful

Step 2: Go to VM2

- sudo -i
- type following command
 - cat /proc/sys/net/ipv4/ip_forward
 - (yo
 - u will get False [0], make it True [1])
 - echo 1 > /proc/sys/net/ipv4/ip_forward
 - (you will get True [1])

Step 3: Go to VM3

- Add default gateway to second interface (ens8) by typing following command
 - sudo route add default gw 172.16.34.38 (sencond interface of VM2)

Step 4: Go to VM2

- Add rules in iptables
 - sudo iptables -P FORWARD ACCEPT
 - sudo iptables -t nat -A POSTROUTING -o ens3 -j MASQUERADE

Step 5: Check The connectivity from VM1 to VM3

Step 6: Repeat Step 1 to Step 4 for VM1 to VM3