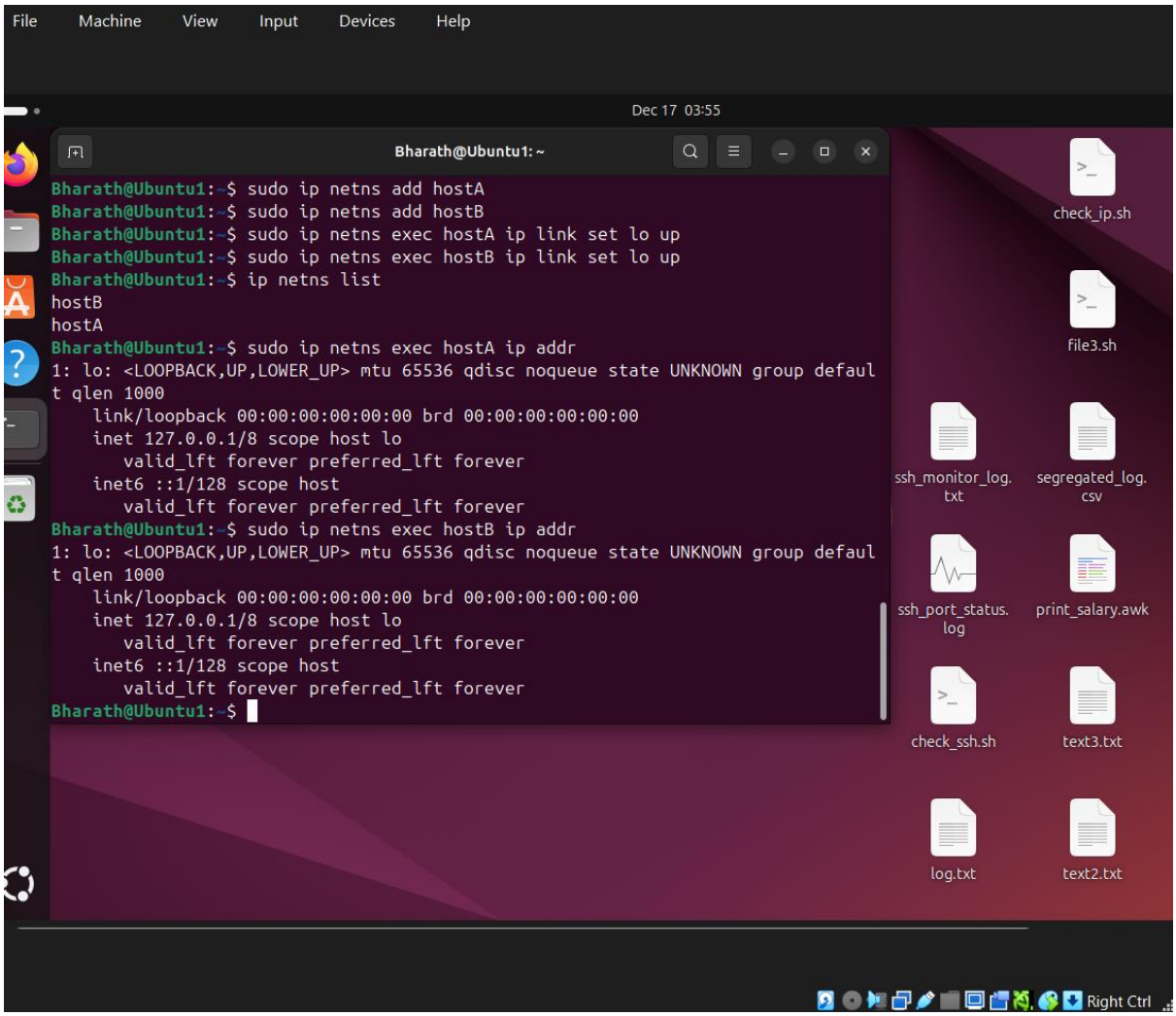
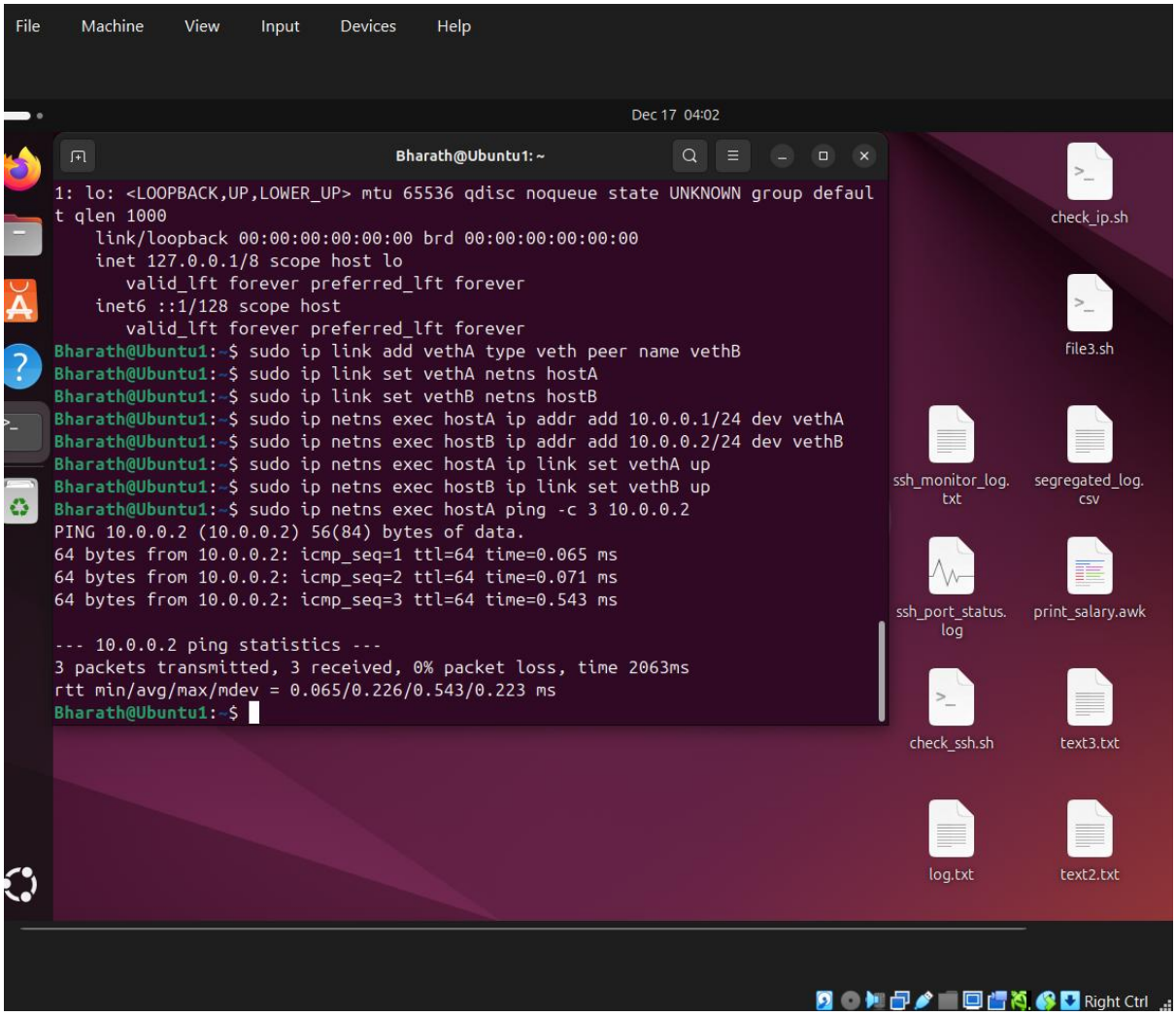
Linux Network Creation Lab Plan

Step 3:

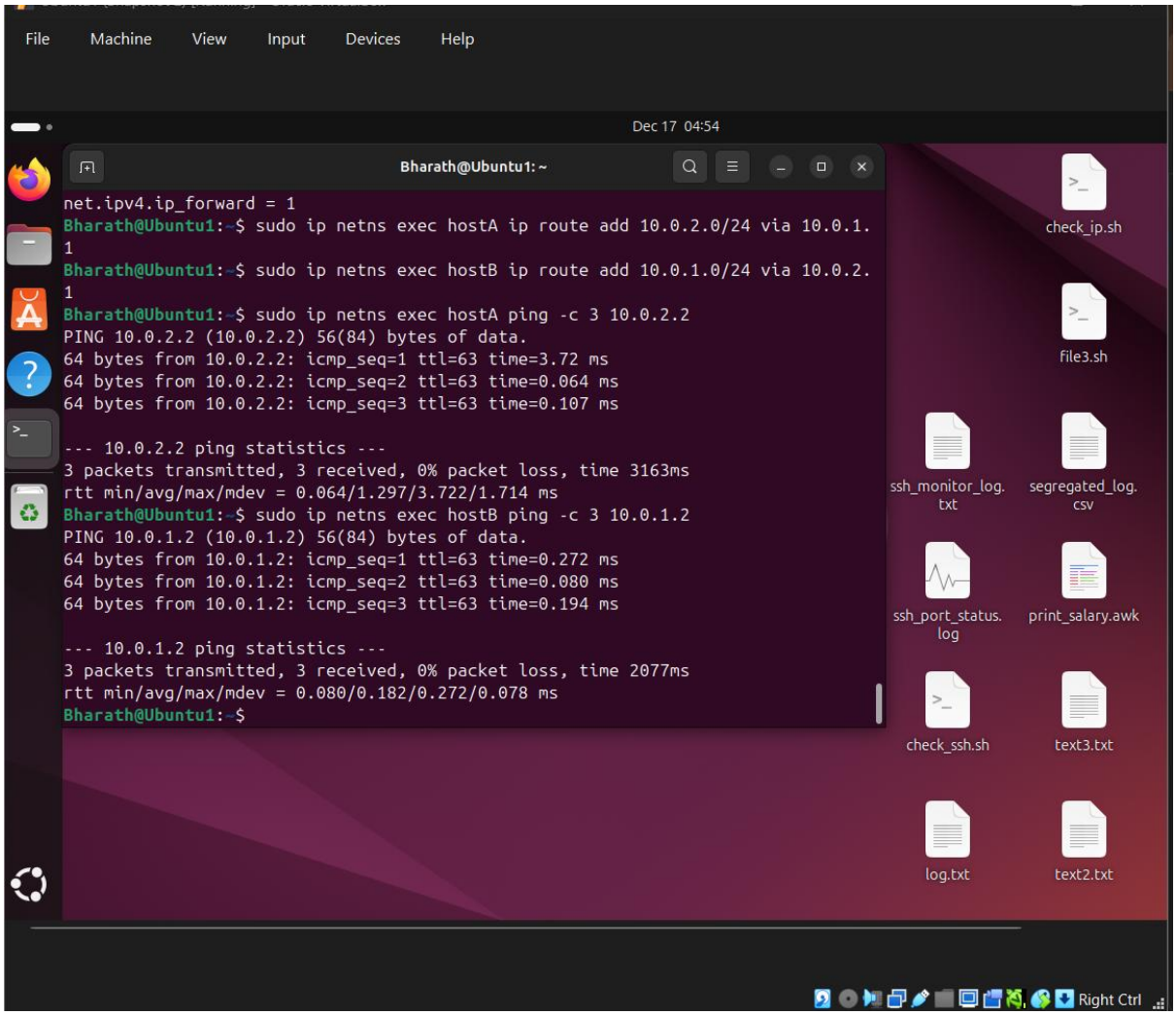


Step 4 :

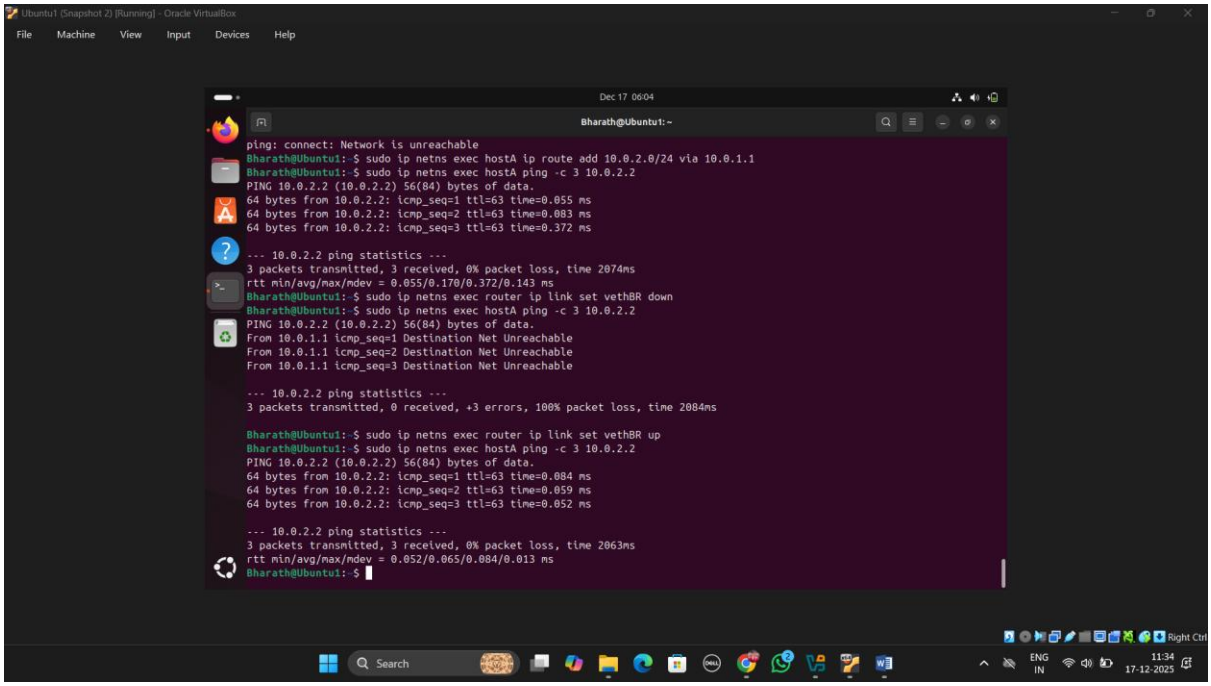

File
Machine
View
Input
Devices
Help
Dec 17 04:02
Bharath@Ubuntu1: ~
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group defaul
t qlen 1000
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
inet 127.0.0.1/8 scope host lo
valid_lft forever preferred_lft forever
inet6 ::1/128 scope host
valid_lft forever preferred_lft forever
Bharath@Ubuntu1:~$ sudo ip link add vethA type veth peer name vethB
Bharath@Ubuntu1:~$ sudo ip link set vethA netns hostA
Bharath@Ubuntu1:~$ sudo ip link set vethB netns hostB
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ip addr add 10.0.0.1/24 dev vethA
Bharath@Ubuntu1:~$ sudo ip netns exec hostB ip addr add 10.0.0.2/24 dev vethB
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ip link set vethA up
Bharath@Ubuntu1:~$ sudo ip netns exec hostB ip link set vethB up
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.0.2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
64 bytes from 10.0.0.2: icmp_seq=1 ttl=64 time=0.065 ms
64 bytes from 10.0.0.2: icmp_seq=2 ttl=64 time=0.071 ms
64 bytes from 10.0.0.2: icmp_seq=3 ttl=64 time=0.543 ms
--- 10.0.0.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2063ms
rtt min/avg/max/mdev = 0.065/0.226/0.543/0.223 ms
Bharath@Ubuntu1:~$
check_ip.sh
file3.sh
ssh_monitor_log.txt
segregated_log.csv
ssh_port_status.log
print_salary.awk
check_ssh.sh
text3.txt
log.txt
text2.txt
Right Ctrl

Step 5: ping host A to host B

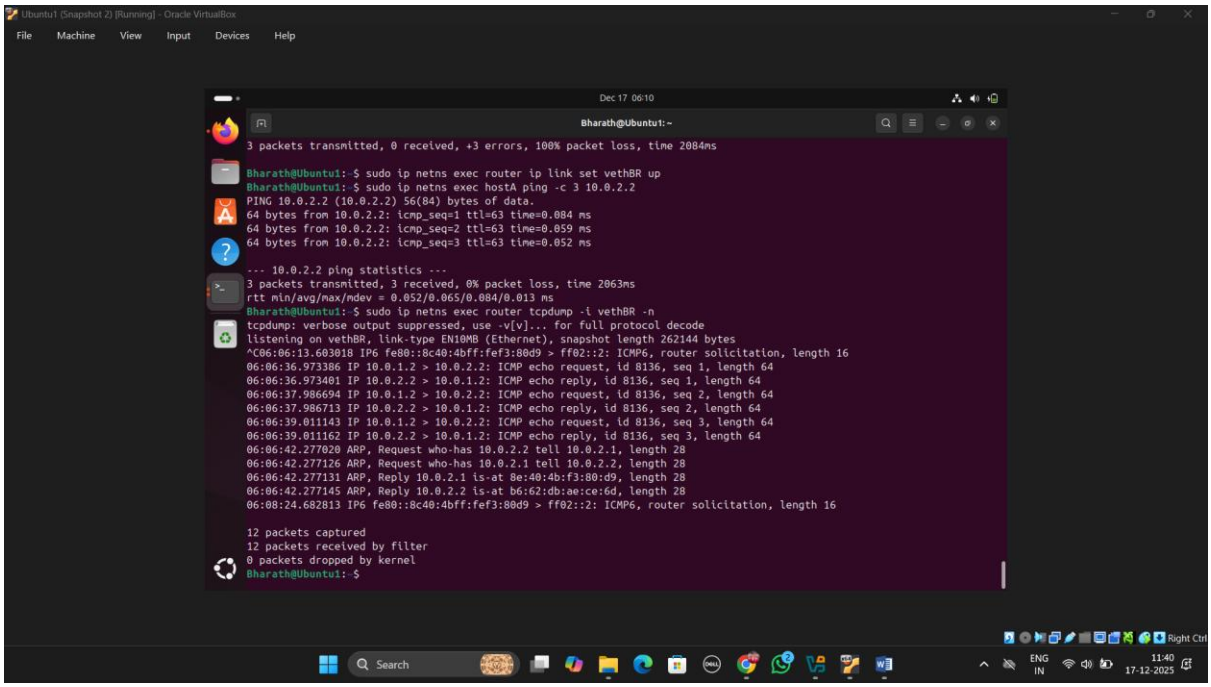
Ping host B to host A



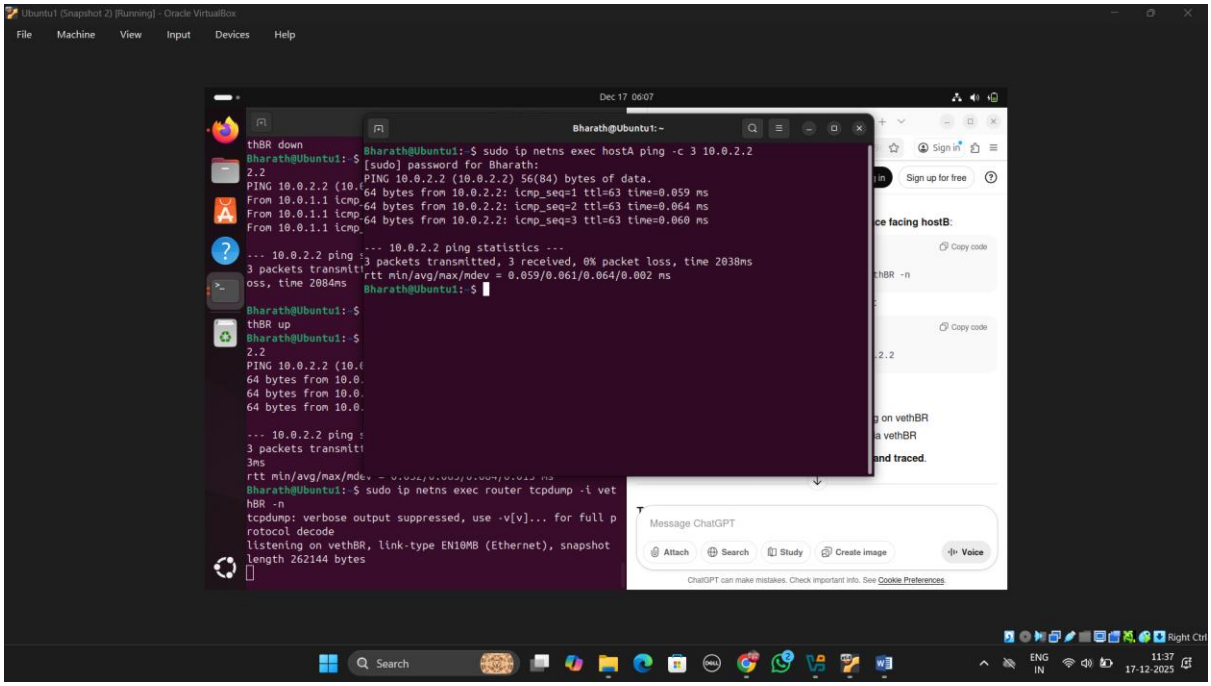
Step 6.2:


Ubuntu1 (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Dec 17 06:04
Bharath@Ubuntu1: ~
ping: connect: Network is unreachable
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ip route add 10.0.2.0/24 via 10.0.1.1
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
64 bytes from 10.0.2.2: icmp_seq=1 ttl=63 time=0.055 ms
64 bytes from 10.0.2.2: icmp_seq=2 ttl=63 time=0.083 ms
64 bytes from 10.0.2.2: icmp_seq=3 ttl=63 time=0.372 ms
--- 10.0.2.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2074ms
rtt min/avg/max/mdev = 0.055/0.170/0.372/0.143 ms
Bharath@Ubuntu1:~$ sudo ip netns exec router ip link set vethBR down
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
From 10.0.1.1 icmp_seq=1 Destination Net Unreachable
From 10.0.1.1 icmp_seq=2 Destination Net Unreachable
From 10.0.1.1 icmp_seq=3 Destination Net Unreachable
--- 10.0.2.2 ping statistics ---
3 packets transmitted, 0 received, +3 errors, 100% packet loss, time 2084ms
Bharath@Ubuntu1:~$ sudo ip netns exec router ip link set vethBR up
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
64 bytes from 10.0.2.2: icmp_seq=1 ttl=63 time=0.084 ms
64 bytes from 10.0.2.2: icmp_seq=2 ttl=63 time=0.059 ms
64 bytes from 10.0.2.2: icmp_seq=3 ttl=63 time=0.052 ms
--- 10.0.2.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2063ms
rtt min/avg/max/mdev = 0.052/0.065/0.084/0.013 ms
Bharath@Ubuntu1:~$
Search
ENG IN
11:34 17-12-2025

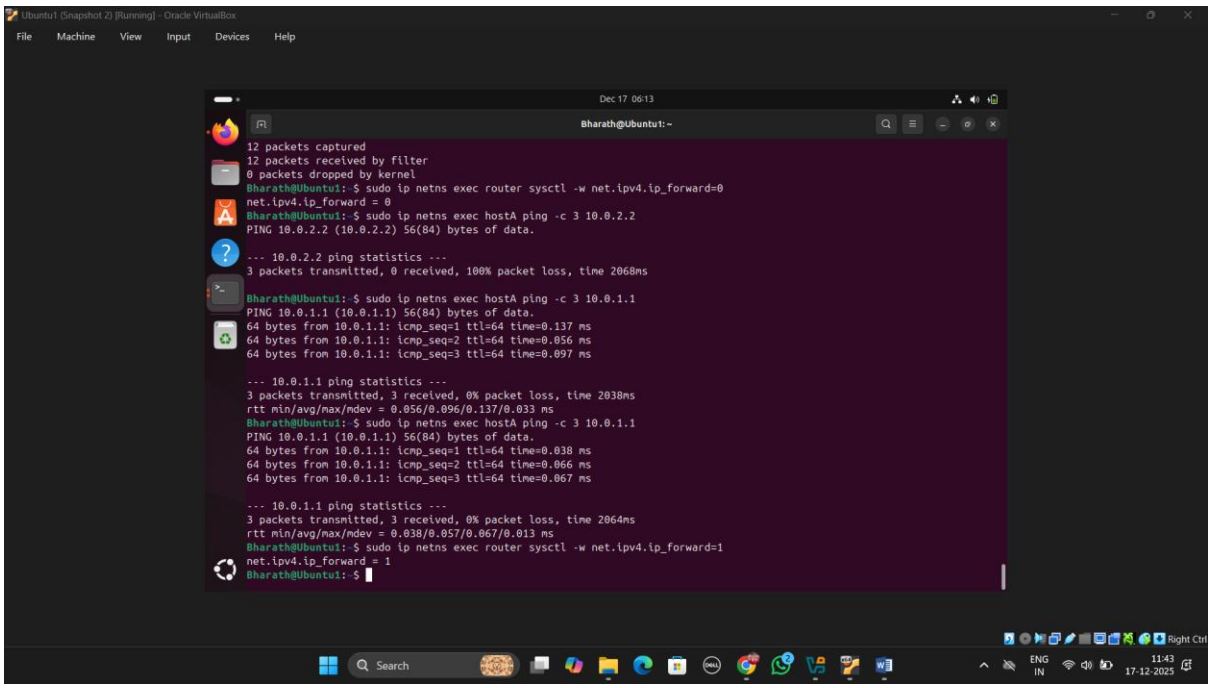
6.3


Ubuntu1 (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Dec 17 06:10
Bharath@Ubuntu1: ~
3 packets transmitted, 0 received, +3 errors, 100% packet loss, time 2084ms
Bharath@Ubuntu1:~$ sudo ip netns exec router ip link set vethBR up
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
64 bytes from 10.0.2.2: icmp_seq=1 ttl=63 time=0.084 ms
64 bytes from 10.0.2.2: icmp_seq=2 ttl=63 time=0.059 ms
64 bytes from 10.0.2.2: icmp_seq=3 ttl=63 time=0.052 ms
--- 10.0.2.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2063ms
rtt min/avg/max/mdev = 0.052/0.065/0.084/0.013 ms
Bharath@Ubuntu1:~$ sudo ip netns exec router tcpdump -i vethBR -n
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on vethBR, link-type EN10MB (Ethernet), snapshot length 262144 bytes
^C06:06:13.603018 IP6 fe80::8c40:4bff:fef3:80d9 > ff02::2: ICMP6, router solicitation, length 16
06:06:36.973386 IP 10.0.1.2 > 10.0.2.2: ICMP echo request, id 8136, seq 1, length 64
06:06:36.973401 IP 10.0.2.2 > 10.0.1.2: ICMP echo reply, id 8136, seq 1, length 64
06:06:37.986694 IP 10.0.1.2 > 10.0.2.2: ICMP echo request, id 8136, seq 2, length 64
06:06:37.986713 IP 10.0.2.2 > 10.0.1.2: ICMP echo reply, id 8136, seq 2, length 64
06:06:39.011143 IP 10.0.1.2 > 10.0.2.2: ICMP echo request, id 8136, seq 3, length 64
06:06:39.011162 IP 10.0.2.2 > 10.0.1.2: ICMP echo reply, id 8136, seq 3, length 64
06:06:42.277020 ARP, Request who-has 10.0.2.2 tell 10.0.2.1, length 28
06:06:42.277126 ARP, Request who-has 10.0.2.1 tell 10.0.2.2, length 28
06:06:42.277131 ARP, Reply 10.0.2.1 is-at 8e:40:4b:f3:80:d9, length 28
06:06:42.277145 ARP, Reply 10.0.2.2 is-at b6:62:db:ae:ce:6d, length 28
06:08:24.682813 IP6 fe80::8c40:4bff:fef3:80d9 > ff02::2: ICMP6, router solicitation, length 16
12 packets captured
12 packets received by filter
0 packets dropped by kernel
Bharath@Ubuntu1:~$
Search
ENG IN
11:40 17-12-2025

6.3


Ubuntu1 (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Dec 17 06:07
Bharath@Ubuntu1: ~
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.2.2
[sudo] password for Bharath:
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
64 bytes from 10.0.2.2: icmp_seq=1 ttl=63 time=0.059 ms
64 bytes from 10.0.2.2: icmp_seq=2 ttl=63 time=0.064 ms
64 bytes from 10.0.2.2: icmp_seq=3 ttl=63 time=0.060 ms
--- 10.0.2.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2038ms
rtt min/avg/max/mdev = 0.059/0.061/0.064/0.002 ms
Bharath@Ubuntu1:~$
thBR down
thBR up
Bharath@Ubuntu1:~$ sudo ip netns exec router tcpdump -i vethBR -n
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on vethBR, link-type EN10MB (Ethernet), snapshot length 262144 bytes
Message ChatGPT
Attach
Search
Study
Create image
Voice
ChatGPT can make mistakes. Check important info. See Cookie Preferences.
Search
ENG IN
11:37
17-12-2025

6.4


Ubuntu1 (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Dec 17 06:13
Bharath@Ubuntu1: ~
12 packets captured
12 packets received by filter
0 packets dropped by kernel
Bharath@Ubuntu1:~$ sudo ip netns exec router sysctl -w net.ipv4.ip_forward=0
net.ipv4.ip_forward = 0
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
--- 10.0.2.2 ping statistics ---
3 packets transmitted, 0 received, 100% packet loss, time 2068ms
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.1.1
PING 10.0.1.1 (10.0.1.1) 56(84) bytes of data.
64 bytes from 10.0.1.1: icmp_seq=1 ttl=64 time=0.137 ms
64 bytes from 10.0.1.1: icmp_seq=2 ttl=64 time=0.056 ms
64 bytes from 10.0.1.1: icmp_seq=3 ttl=64 time=0.097 ms
--- 10.0.1.1 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2038ms
rtt min/avg/max/mdev = 0.056/0.096/0.137/0.033 ms
Bharath@Ubuntu1:~$ sudo ip netns exec hostA ping -c 3 10.0.1.1
PING 10.0.1.1 (10.0.1.1) 56(84) bytes of data.
64 bytes from 10.0.1.1: icmp_seq=1 ttl=64 time=0.038 ms
64 bytes from 10.0.1.1: icmp_seq=2 ttl=64 time=0.066 ms
64 bytes from 10.0.1.1: icmp_seq=3 ttl=64 time=0.067 ms
--- 10.0.1.1 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2064ms
rtt min/avg/max/mdev = 0.038/0.057/0.067/0.013 ms
Bharath@Ubuntu1:~$ sudo ip netns exec router sysctl -w net.ipv4.ip_forward=1
net.ipv4.ip_forward = 1
Bharath@Ubuntu1:~$
Search
ENG IN
11:43
17-12-2025