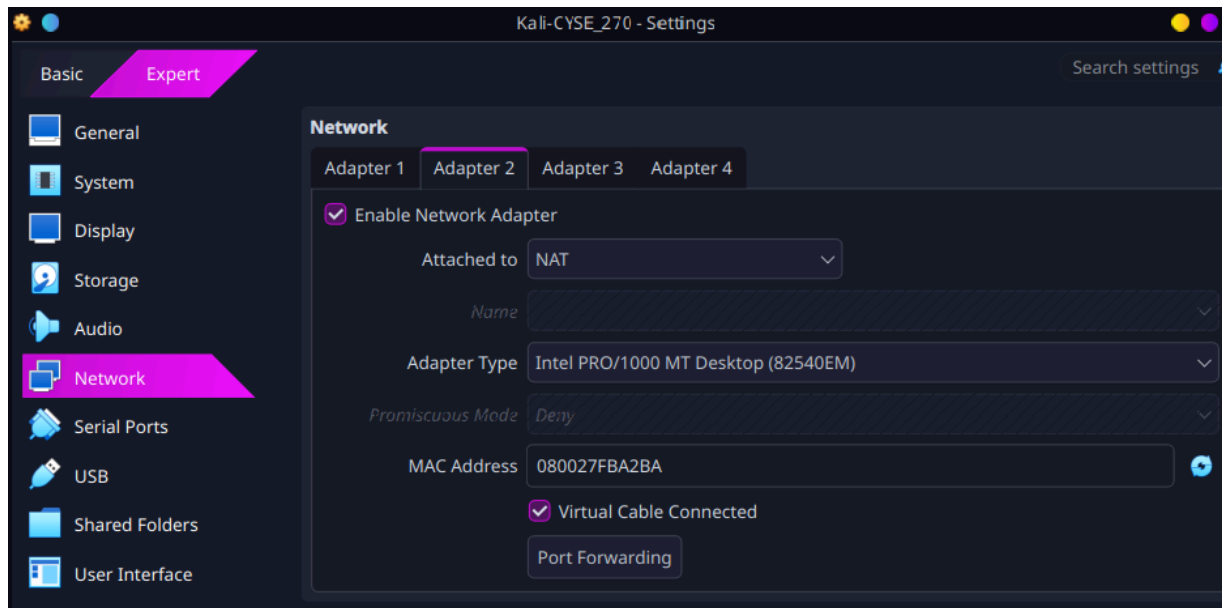


Task A



Step 1 (ifconfig):

```
(tiaw@Tia-Kali)-[~]
└─$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.3.15 netmask 255.255.255.0 broadcast 10.0.3.255
    inet6 fd17:625c:f037:3:3cd1:c5f5:af1:8cee prefixlen 64 scopeid 0<global>
    inet6 fe80::a00:27ff:febf:a2ba prefixlen 64 scopeid 0<link>
    inet6 fd17:625c:f037:3:a00:27ff:febf:a2ba prefixlen 64 scopeid 0<global>
    ether 08:00:27:fb:a2:ba txqueuelen 1000 (Ethernet)
    RX packets 11 bytes 4879 (4.7 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 32 bytes 5652 (5.5 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 8 bytes 480 (480.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8 bytes 480 (480.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Step 2 (route):

```
(tiaw@Tia-Kali)-[~]
└─$ route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default 10.0.3.2 0.0.0.0 UG 100 0 0 eth0
10.0.3.0 0.0.0.0 255.255.255.0 U 100 0 0 eth0
```

Step 3 (netstat -tcp):

```
(tiaw@Tia-Kali)-[~]
└─$ netstat --tcp
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address Foreign Address State

(tiaw@Tia-Kali)-[~]
└─$
```

Step 4 (ping -c 10 ubuntu.com):

```
(tiaw@Tia-Kali)-[~]
└─$ ping -c 10 ubuntu.com
PING ubuntu.com (185.125.190.29) 56(84) bytes of data:
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=1 ttl=255 time=97.3 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=2 ttl=255 time=94.1 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=3 ttl=255 time=91.5 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=4 ttl=255 time=92.3 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=5 ttl=255 time=92.9 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=6 ttl=255 time=137 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=7 ttl=255 time=98.5 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=8 ttl=255 time=94.9 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=9 ttl=255 time=87.6 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=10 ttl=255 time=95.6 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9365ms
rtt min/avg/max/mdev = 87.564/98.224/137.498/13.417 ms

(tiaw@Tia-Kali)-[~]
└─$
```

Step 5 (host www.odu.edu):

```
(tiaw@Tia-Kali)-[~]
└─$ host www.odu.edu
www.odu.edu has address 35.170.140.174

(tiaw@Tia-Kali)-[~]
└─$
```

Step 6 (cat /etc/hostname):

```
(tiaw@Tia-Kali)-[~]
└─$ cat /etc/hostname
Tia-Kali
```

Step 7 (cat /etc/hosts):

```
(tiaw@Tia-Kali)-[~]
└─$ cat /etc/hosts
127.0.0.1    localhost
127.0.1.1    Tia-Kali

# The following lines are desirable for IPv6 capable hosts
::1         localhost ip6-localhost ip6-loopback
ff02::1    ip6-allnodes
ff02::2    ip6-allrouters

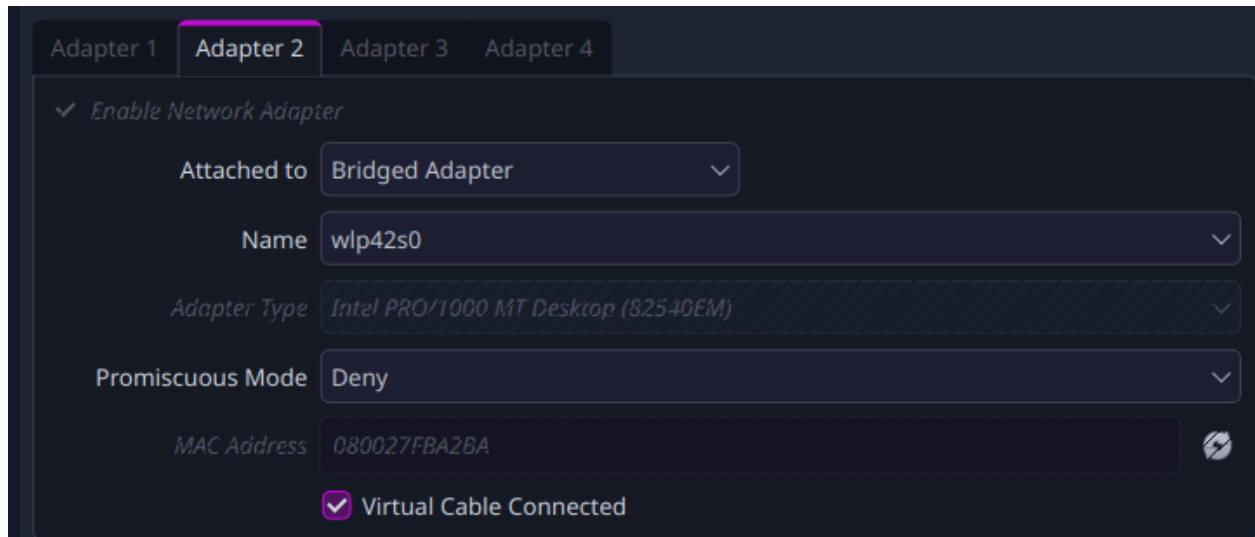
(tiaw@Tia-Kali)-[~]
└─$
```

Step 8 (vi /etc/hostname; reboot; cat /etc/hostname):

```
tiaw@twarr013: ~
File Actions Edit View Help
(tiaw@twarr013)-[~]
└─$ cat /etc/hostname
twarr013

(tiaw@twarr013)-[~]
└─$
```

Task B



Step 1 (ifconfig):

```
(tiaw@twarr013)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.32 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 2600:8805:270d:a300:a00:27ff:febf:a2ba prefixlen 64 scopeid 0<global>
    inet6 fe80::a00:27ff:febf:a2ba prefixlen 64 scopeid 0<link>
    inet6 2600:8805:270d:a300::1608 prefixlen 128 scopeid 0<global>
    inet6 2600:8805:270d:a300:43a:3b38:70ce:42cf prefixlen 64 scopeid 0<global>
    ether 08:00:27:fb:a2:ba txqueuelen 1000 (Ethernet)
    RX packets 108 bytes 57474 (56.1 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 86 bytes 32353 (31.5 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 8 bytes 480 (480.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8 bytes 480 (480.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

IP now falls under my home network range, 192.168.0.x, instead of 10.0.3.x
Ethernet stayed the same as expected

Step 2 (route):

```
(tiaw@twarr013)-[~]
└─$ route
Kernel IP routing table
Destination      Gateway          Genmask          Flags Metric Ref    Use Iface
default          192.168.0.1     0.0.0.0          UG    100    0      0 eth0
192.168.0.0     0.0.0.0         255.255.255.0   U     100    0      0 eth0

(tiaw@twarr013)-[~]
└─$ netstat --tcp
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
```

Gateway now matches my network gateway (192.168.0.1) instead of the 10.0.3.2 gateway

Step 3 (netstat -tcp):

```
(tiaw@twarr013)-[~]
└─$ netstat --tcp
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
```

No changes

Step 4 (ping -c 10 ubuntu.com):

```
(tiaw@twarr013)-[~]
└─$ ping -c 10 ubuntu.com
PING ubuntu.com (2620:2d:4000:1::28) 56 data bytes
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=1 ttl=51 time=92.4 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=2 ttl=51 time=94.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=3 ttl=51 time=92.4 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=4 ttl=51 time=97.3 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=5 ttl=51 time=94.3 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=6 ttl=51 time=89.3 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=7 ttl=51 time=98.9 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=8 ttl=51 time=96.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=9 ttl=51 time=92.5 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=10 ttl=51 time=90.1 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9163ms
rtt min/avg/max/mdev = 89.335/93.869/98.934/2.948 ms
```

Pinged an IPv6 Address instead of IPv4

When forcing a ping with the -4 option, it's the same address as last time.

```
(tiaw@twarr013)-[~]
└─$ ping -4c 10 ubuntu.com
PING ubuntu.com (185.125.190.29) 56(84) bytes of data.
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=1 ttl=252 time
=96.1 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=2 ttl=252 time
=94.5 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=3 ttl=252 time
=92.1 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=4 ttl=252 time
=94.8 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=5 ttl=252 time
=96.9 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=6 ttl=252 time
=92.3 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=7 ttl=252 time
=93.4 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=8 ttl=252 time
=93.3 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=9 ttl=252 time
=96.3 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=10 ttl=252 tim
e=86.9 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9103ms
rtt min/avg/max/mdev = 86.875/93.652/96.893/2.754 ms
```

Step 5 (host www.odu.edu):

```
(tiaw@twarr013)-[~]
└─$ host www.odu.edu
www.odu.edu has address 35.170.140.174

(tiaw@twarr013)-[~]
└─$
```

No changes

Step 6 (cat /etc/hostname):

```
(tiaw@twarr013)-[~]
└─$ cat /etc/hostname
twarr013
```

Now displays twarr013 as expected

Step 7 (cat /etc/hosts)

```
(tiaw@twarr013)-[~]
$ cat /etc/hosts
127.0.0.1    localhost
127.0.1.1    twarr013

# The following lines are desirable for IPv6 capable hosts
::1         localhost ip6-localhost ip6-loopback
ff02::1    ip6-allnodes
ff02::2    ip6-allrouters
```

I had to change the /etc/hosts record too so the system wouldn't fail to resolve