

Task A.

Step 1.

```
alex@kali: ~  
File Actions Edit View Help  
(alex@kali)-[~]  
$ ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255  
    inet6 fe80::a00:27ff:fec2:e58b prefixlen 64 scopeid 0x20<link>  
    inet6 fd17:625c:f037:2:a00:27ff:fec2:e58b prefixlen 64 scopeid 0x0<  
<global>  
    inet6 fd17:625c:f037:2:a00:27ff:fec2:e58b prefixlen 64 scopeid 0x0<  
global>  
    ether 08:00:27:c2:e5:8b txqueuelen 1000 (Ethernet)  
    RX packets 9 bytes 3723 (3.6 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 29 bytes 4884 (4.7 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 0x10<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  
  
(alex@kali)-[~]  
$
```

Steps 2 and 3

```
(alex@kali)-[~]  
$ route  
Kernel IP routing table  
Destination Gateway Genmask Flags Metric Ref Use Iface  
default 10.0.2.2 0.0.0.0 UG 100 0 0 eth0  
10.0.2.0 0.0.0.0 255.255.255.0 U 100 0 0 eth0  
  
(alex@kali)-[~]  
$ netstat -ta  
Active Internet connections (servers and established)  
Proto Recv-Q Send-Q Local Address Foreign Address State
```

Step 4

```
alex@kali: ~  
File Actions Edit View Help  
PING ubuntu.com (185.125.190.20) 56(84) bytes of data.  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=1 ttl=255 time=82.5 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=2 ttl=255 time=82.9 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=3 ttl=255 time=83.1 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=4 ttl=255 time=83.6 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=5 ttl=255 time=84.5 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=6 ttl=255 time=86.0 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=7 ttl=255 time=84.0 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=8 ttl=255 time=82.3 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=9 ttl=255 time=83.3 ms  
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp  
p_seq=10 ttl=255 time=83.2 ms  
  
— ubuntu.com ping statistics —  
10 packets transmitted, 10 received, 0% packet loss, time 9016ms  
rtt min/avg/max/mdev = 82.308/83.539/85.990/1.029 ms  
  
(alex@kali)-[~]  
$
```

Step 5

```
(alex@kali)-[~]  
$ host www.odu.edu  
www.odu.edu has address 35.170.140.174
```

Steps 6 & 7

```
(alex@kali)-[~]
$ cat /etc/hostname
kali

(alex@kali)-[~]
$ cat /etc/resolv.conf
# Generated by NetworkManager
search mynetworksettings.com
nameserver 10.0.2.3
nameserver fd17:625c:f037:2::3

(alex@kali)-[~]
$
```

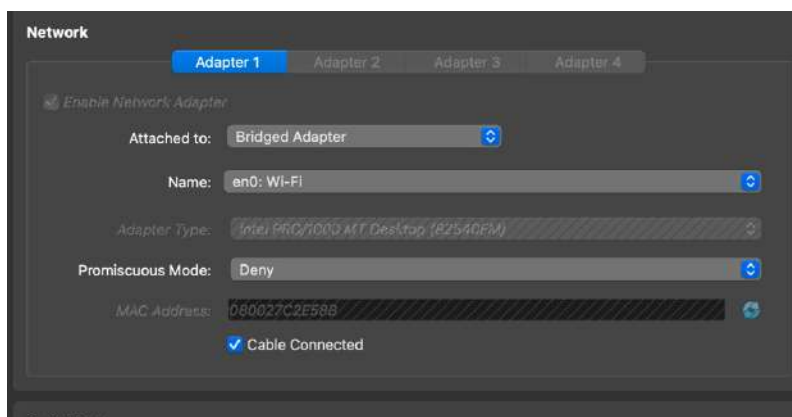
Step 8

```
(alex@kali)-[~]
$ sudo vim /etc/hostname
[sudo] password for alex:

(alex@kali)-[~]
$ cat /etc/hostname
abret003
```

Task B

Step 1



Step 2 & 3


```
alex@abret003: ~  
File Actions Edit View Help  
(alex@abret003)-[~]  
$ ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.1.248 netmask 255.255.255.0 broadcast 192.168.1.255  
    inet6 2600:4040:12ca:4100:a00:27ff:fec2:e58b prefixlen 64 scopeid 0x0<global>  
    inet6 fe80::a00:27ff:fec2:e58b prefixlen 64 scopeid 0x20<link>  
    inet6 2600:4040:12ca:4100:a177:d8e9:8c7d:7282 prefixlen 64 scopeid 0x0<global>  
    ether 08:00:27:c2:e5:8b txqueuelen 1000 (Ethernet)  
    RX packets 185 bytes 41874 (40.8 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 93 bytes 27108 (26.4 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 0x10<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  
  
(alex@abret003)-[~]  
$
```

The ifconfig showed different ip addresses.

```
(alex@abret003)-[~]  
$ route  
Kernel IP routing table  
Destination Gateway Genmask Flags Metric Ref Use Iface  
default G3100.mynetwork 0.0.0.0 UG 100 0 0 eth0  
192.168.1.0 0.0.0.0 255.255.255.0 U 100 0 0 eth0
```

Route also showed separate ip addresses compared to NAT.

```
(alex@abret003)-[~]  
$ netstat -ta  
Active Internet connections (servers and established)  
Proto Recv-Q Send-Q Local Address Foreign Address State  
(alex@abret003)-[~]
```

No difference on netstat.

```

alex@abret003:~$ 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=57 time
=83.0 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=2 ttl=57 time
=81.6 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=3 ttl=57 time
=82.0 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=4 ttl=57 time
=83.2 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=5 ttl=57 time
=81.9 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=6 ttl=57 time
=82.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=7 ttl=57 time
=82.3 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=8 ttl=57 time
=84.4 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=9 ttl=57 time
=80.6 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=10 ttl=57 tim
e=82.1 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9013ms
rtt min/avg/max/mdev = 80.602/82.369/84.353/0.964 ms

alex@abret003:~$

```

Ping returned a different ipv6 address from ubuntu.

```

alex@abret003:~$ host www.odu.edu
www.odu.edu has address 35.170.140.174

```

No difference on ODU address.

```

alex@abret003:~$ cat /etc/hostname
abret003

alex@abret003:~$ cat /etc/resolv.conf
# Generated by NetworkManager
search mynetworksettings.com
nameserver 192.168.1.1
nameserver 2600:4040:12ca:4100::1

```

Same hostname, different ip addresses on resolv.conf.

Overall: changing to bridged changed the ipv4 and ipv4 addresses.

