

## Step 1:

```
Nov 29 18:51
john@john-VirtualBox: ~
Space needed: 848 kB / 17.6 GB available
Get:1 http://us.archive.ubuntu.com/ubuntu plucky-updates/main amd64 net-tools amd64 2.10-1.1ubuntu1.25.04.4 [210 kB]
Fetched 210 kB in 0s (789 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 185063 files and directories currently installed.)
Preparing to unpack ../net-tools_2.10-1.1ubuntu1.25.04.4_amd64.deb ...
Unpacking net-tools (2.10-1.1ubuntu1.25.04.4) ...
Setting up net-tools (2.10-1.1ubuntu1.25.04.4) ...
Processing triggers for man-db (2.13.0-1) ...
john@john-VirtualBox:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fd17:625c:f037:2:569e:d799:7925:6ca8 prefixlen 64 scopeid 0x0<global>
    inet6 fe80::a00:27ff:fe7e:90a0 prefixlen 64 scopeid 0x20<link>
    inet6 fd17:625c:f037:2:a00:27ff:fe7e:90a0 prefixlen 64 scopeid 0x0<global>
    ether 08:00:27:7e:90:a0 txqueuelen 1000 (Ethernet)
    RX packets 303 bytes 241187 (241.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 259 bytes 27605 (27.6 KB)
    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 137 bytes 12375 (12.3 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 137 bytes 12375 (12.3 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

john@john-VirtualBox:~$
```

## Step 2-4:

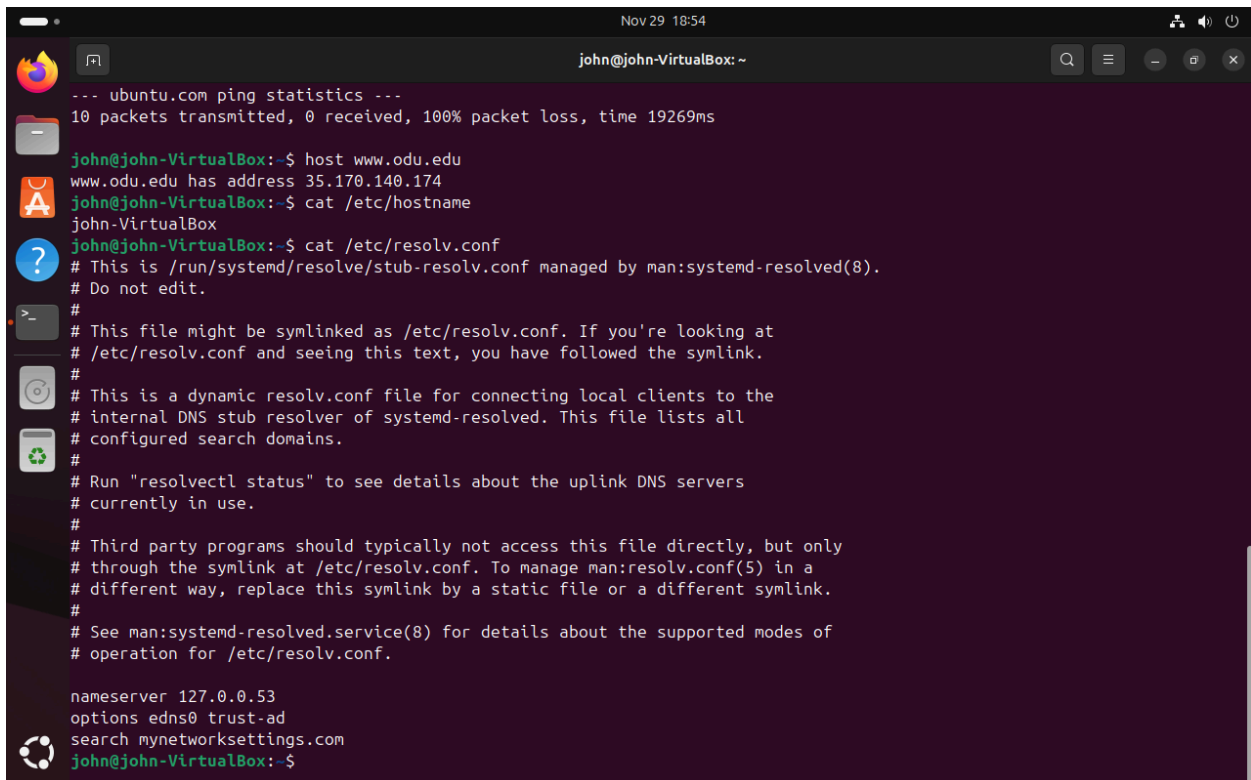
```
Nov 29 18:54
john@john-VirtualBox: ~
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 137 bytes 12375 (12.3 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 137 bytes 12375 (12.3 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

john@john-VirtualBox:~$ ip route
default via 10.0.2.2 dev enp0s3 proto dhcp src 10.0.2.15 metric 100
10.0.2.0/24 dev enp0s3 proto kernel scope link src 10.0.2.15 metric 100
john@john-VirtualBox:~$ netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
john@john-VirtualBox:~$ netstat -tan
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 127.0.0.53:53          0.0.0.0:*                LISTEN
tcp        0      0 127.0.0.1:631         0.0.0.0:*                LISTEN
tcp        0      0 127.0.0.54:53         0.0.0.0:*                LISTEN
tcp6       0      0 :::631                :::*                    LISTEN
john@john-VirtualBox:~$ ping -c 10 ubuntu
ping: ubuntu: Temporary failure in name resolution
john@john-VirtualBox:~$ ping -c 10 ubuntu.com
PING ubuntu.com (185.125.190.21) 56(84) bytes of data.

--- ubuntu.com ping statistics ---
10 packets transmitted, 0 received, 100% packet loss, time 19269ms

john@john-VirtualBox:~$
```

## Step 5-7:



The terminal window shows the following commands and output:

```
Nov 29 18:54
john@john-VirtualBox: ~
--- ubuntu.com ping statistics ---
10 packets transmitted, 0 received, 100% packet loss, time 19269ms

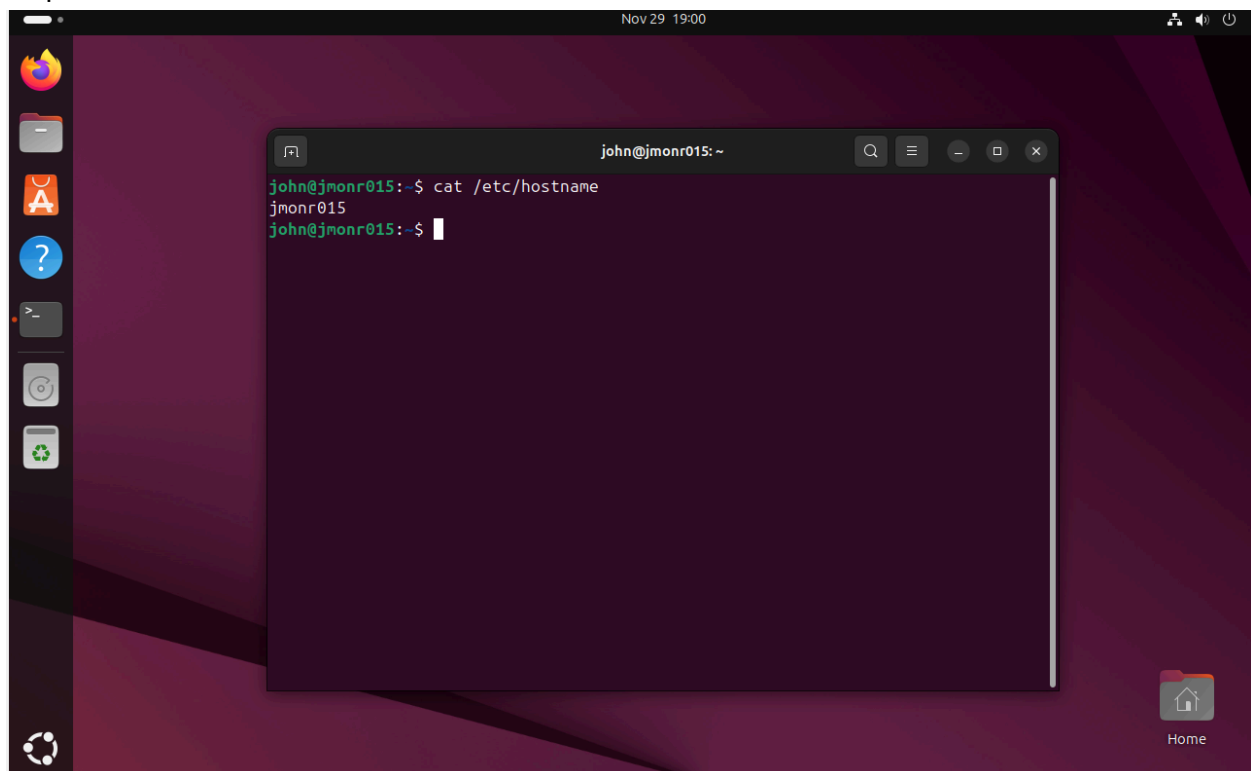
john@john-VirtualBox:~$ host www.odu.edu
www.odu.edu has address 35.170.140.174

john@john-VirtualBox:~$ cat /etc/hostname
john-VirtualBox

john@john-VirtualBox:~$ cat /etc/resolv.conf
# This is /run/systemd/resolve/stub-resolv.conf managed by man:systemd-resolved(8).
# Do not edit.
#
# This file might be symlinked as /etc/resolv.conf. If you're looking at
# /etc/resolv.conf and seeing this text, you have followed the symlink.
#
# This is a dynamic resolv.conf file for connecting local clients to the
# internal DNS stub resolver of systemd-resolved. This file lists all
# configured search domains.
#
# Run "resolvectl status" to see details about the uplink DNS servers
# currently in use.
#
# Third party programs should typically not access this file directly, but only
# through the symlink at /etc/resolv.conf. To manage man:resolv.conf(5) in a
# different way, replace this symlink by a static file or a different symlink.
#
# See man:systemd-resolved.service(8) for details about the supported modes of
# operation for /etc/resolv.conf.

nameserver 127.0.0.53
options edns0 trust-ad
search mynetworksettings.com
john@john-VirtualBox:~$
```

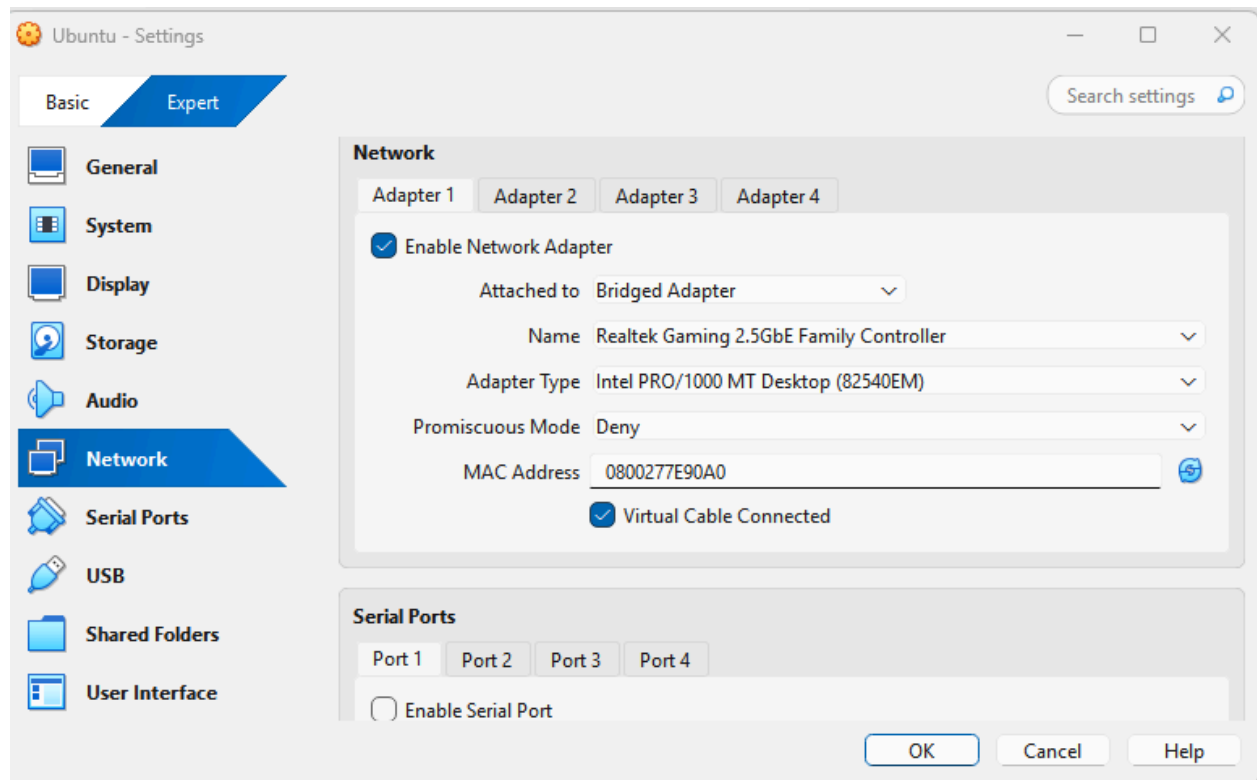
## Step 8:



The terminal window shows the following commands and output:

```
Nov 29 19:00
john@jmonr015: ~
john@jmonr015:~$ cat /etc/hostname
jmonr015
john@jmonr015:~$
```

Part B, Step 1:



## Step 2 and 3:

```
Nov 29 19:10
john@jmonr015: ~
inet 192.168.1.250 netmask 255.255.255.0 broadcast 192.168.1.255
inet6 2600:4040:15d6:9800:a00:27ff:fe7e:90a0 prefixlen 64 scopeid 0x0<global>
inet6 fe80::a00:27ff:fe7e:90a0 prefixlen 64 scopeid 0x20<link>
inet6 2600:4040:15d6:9800:d47b:5e4e:daef:2ac4 prefixlen 64 scopeid 0x0<global>
ether 08:00:27:7e:90:a0 txqueuelen 1000 (Ethernet)
RX packets 3983 bytes 698255 (698.2 KB)
RX errors 0 dropped 4 overruns 0 frame 0
TX packets 263 bytes 74795 (74.7 KB)
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 157 bytes 15228 (15.2 KB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 157 bytes 15228 (15.2 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

john@jmonr015:~$ route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.1.1 0.0.0.0 UG 100 0 0 enp0s3
192.168.1.0 0.0.0.0 255.255.255.0 U 100 0 0 enp0s3
john@jmonr015:~$ netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address Foreign Address State
john@jmonr015:~$ ping -c 10 ubuntu.com
PING ubuntu.com (2620:2d:4000:1::27) 56 data bytes

--- ubuntu.com ping statistics ---
10 packets transmitted, 0 received, 100% packet loss, time 9264ms
```

```
Nov 29 19:09
john@jmonr015: ~
--- ubuntu.com ping statistics ---
10 packets transmitted, 0 received, 100% packet loss, time 9264ms

john@jmonr015:~$ host www.odu.edu
www.odu.edu has address 35.170.140.174
john@jmonr015:~$ cat /etc/hostname
jmonr015
john@jmonr015:~$ cat /etc/resolv.conf
# This is /run/systemd/resolve/stub-resolv.conf managed by man:systemd-resolved(8).
# Do not edit.
#
# This file might be symlinked as /etc/resolv.conf. If you're looking at
# /etc/resolv.conf and seeing this text, you have followed the symlink.
#
# This is a dynamic resolv.conf file for connecting local clients to the
# internal DNS stub resolver of systemd-resolved. This file lists all
# configured search domains.
#
# Run "resolvectl status" to see details about the uplink DNS servers
# currently in use.
#
# Third party programs should typically not access this file directly, but only
# through the symlink at /etc/resolv.conf. To manage man:resolv.conf(5) in a
# different way, replace this symlink by a static file or a different symlink.
#
# See man:systemd-resolved.service(8) for details about the supported modes of
# operation for /etc/resolv.conf.

nameserver 127.0.0.53
options edns0 trust-ad
search mynetworksettings.com
john@jmonr015:~$
```