

Task A

1.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
$ pwsh
PowerShell 7.5.1

(sziegler@kali)-[/home/sziegler]
└─PS> 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 fd17:625c:f037:2:a00:27ff:fe04:79c prefixlen 64 scopeid 0<*global>
    inet6 fe80::a00:27ff:fe04:79c prefixlen 64 scopeid 0<*20<link>
    inet6 fd17:625c:f037:2:2489:ed93:5f1e:1d6e prefixlen 64 scopeid 0<*globa
└─>
    ether 08:00:27:04:07:9c txqueuelen 1000 (Ethernet)
    RX packets 9 bytes 3699 (3.6 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 30 bytes 4828 (4.7 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
    device interrupt 19 base 0<*d020

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0<*10<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

(sziegler@kali)-[/home/sziegler]
└─PS>
```

2.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
    inet6 fd17:625c:f037:2:a00:27ff:fe04:79c prefixlen 64 scopeid 0<*global>
    inet6 fe80::a00:27ff:fe04:79c prefixlen 64 scopeid 0<*20<link>
    inet6 fd17:625c:f037:2:2489:ed93:5f1e:1d6e prefixlen 64 scopeid 0<*globa
└─>
    ether 08:00:27:04:07:9c txqueuelen 1000 (Ethernet)
    RX packets 9 bytes 3699 (3.6 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 30 bytes 4828 (4.7 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
    device interrupt 19 base 0<*d020

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0<*10<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

(sziegler@kali)-[/home/sziegler]
└─PS> 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

(sziegler@kali)-[/home/sziegler]
└─PS>
```

3.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
RX packets 9 bytes 3699 (3.6 KiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 30 bytes 4828 (4.7 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device interrupt 19 base 0xd020

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

(sziegler@kali)-[/home/sziegler]
└─┬─┘
PS> 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

(sziegler@kali)-[/home/sziegler]
└─┬─┘
PS> netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address Foreign Address State

(sziegler@kali)-[/home/sziegler]
└─┬─┘
PS>
```

4.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
(sziegler@kali)-[/home/sziegler]
└─┬─┘
PS> ping -c 10 ubuntu.com
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_seq=
1 ttl=255 time=87.8 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
2 ttl=255 time=86.2 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
3 ttl=255 time=89.1 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
4 ttl=255 time=89.8 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
5 ttl=255 time=87.4 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
6 ttl=255 time=86.9 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
7 ttl=255 time=86.3 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
8 ttl=255 time=90.1 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
9 ttl=255 time=90.0 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
10 ttl=255 time=87.4 ms

--- ubuntu.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9061ms
rtt min/avg/max/mdev = 86.177/88.096/90.111/1.446 ms

(sziegler@kali)-[/home/sziegler]
└─┬─┘
PS>
```

5.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
(sziegler@kali)-[/home/sziegler]
└─$ ps host odu.edu
odu.edu has address 35.170.140.174
odu.edu mail is handled by 10 odu-edu.mail.protection.outlook.com.
(sziegler@kali)-[/home/sziegler]
└─$
```

6.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
1 ttl=255 time=87.8 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
2 ttl=255 time=86.2 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
3 ttl=255 time=89.1 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
4 ttl=255 time=89.8 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
5 ttl=255 time=87.4 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
6 ttl=255 time=86.9 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
7 ttl=255 time=86.3 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
8 ttl=255 time=90.1 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
9 ttl=255 time=90.0 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
10 ttl=255 time=87.4 ms

--- ubuntu.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9061ms
rtt min/avg/max/mdev = 86.177/88.096/90.111/1.446 ms
(sziegler@kali)-[/home/sziegler]
└─$ ps cat /etc/hostname
kali
(sziegler@kali)-[/home/sziegler]
└─$
```

7.

```
PS> sziegler@kali: /home/sziegler
File Actions Edit View Help
4 ttl=255 time=89.8 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
5 ttl=255 time=87.4 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
6 ttl=255 time=86.9 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
7 ttl=255 time=86.3 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
8 ttl=255 time=90.1 ms
64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
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64 bytes from website-content-cache-1.ps5.canonical.com (185.125.190.20): icmp_seq=
10 ttl=255 time=87.4 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9061ms
rtt min/avg/max/mdev = 86.177/88.096/90.111/1.446 ms

(sziegler@kali)-[~/home/sziegler]
└─PS> cat /etc/hostname
kali

(sziegler@kali)-[~/home/sziegler]
└─PS> cat /etc/resolv.conf
# Generated by NetworkManager
search mynetworksettings.com
nameserver 192.168.1.1

(sziegler@kali)-[~/home/sziegler]
└─PS>
```

8.

```
sziegler@kali -
File Actions Edit View Help
(sziegler@kali)-[~]
└─$ sudo nano /etc/hostname
[sudo] password for sziegler:

(sziegler@kali)-[~]
└─$ cat /etc/hostname
szieg001

(sziegler@kali)-[~]
└─$
```

Task B

1.

```
PS> sziegler@szieg001: /home/sziegler
File Actions Edit View Help
PowerShell 7.5.1

(sziegler@szieg001)~/home/sziegler
PS> ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.204 netmask 255.255.255.0 broadcast 192.168.1.255
    inet6 fe80::a00:27ff:fe04:79c prefixlen 64 scopeid 0x2<link>
    inet6 2600:4040:1640:c000:3db1:a28e:298b:c794 prefixlen 64 scopeid 0x0<gl
obal>
    inet6 2600:4040:1640:c000:a00:27ff:fe04:79c prefixlen 64 scopeid 0x0<glob
al>
    ether 08:00:27:04:07:9c txqueuelen 1000 (Ethernet)
    RX packets 32 bytes 3094 (3.0 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 36 bytes 5790 (5.6 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
    device interrupt 19 base 0xd020

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

(sziegler@szieg001)~/home/sziegler
PS>
```

2.

```
(sziegler@szieg001)~/home/sziegler
PS> 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

(sziegler@szieg001)~/home/sziegler
PS>
```

The destination default is different

3.

```
(sziegler@szieg001)~/home/sziegler
PS> 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

(sziegler@szieg001)~/home/sziegler
PS> netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address Foreign Address State

(sziegler@szieg001)~/home/sziegler
PS>
```

There is no difference

4.

```
PS> sziegler@szieg001: /home/sziegler
File Actions Edit View Help
(sziegler@szieg001)-[~/home/sziegler]
PS> ping -c 10 ubuntu.com
PING ubuntu.com (2620:2d:4000:1::26) 56 data bytes
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
1 ttl=57 time=91.6 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
2 ttl=57 time=91.6 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
3 ttl=57 time=91.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
4 ttl=57 time=87.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
5 ttl=57 time=89.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
6 ttl=57 time=90.2 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
7 ttl=57 time=88.7 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
8 ttl=57 time=88.4 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
9 ttl=57 time=91.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
10 ttl=57 time=89.4 ms

--- ubuntu.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9076ms
rtt min/avg/max/mdev = 86.992/89.789/91.633/1.466 ms
(sziegler@szieg001)-[~/home/sziegler]
PS>
```

There is no difference

5.

```
PS> sziegler@szieg001: /home/sziegler
File Actions Edit View Help
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
2 ttl=57 time=91.6 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
3 ttl=57 time=91.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
4 ttl=57 time=87.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
5 ttl=57 time=89.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
6 ttl=57 time=90.2 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
7 ttl=57 time=88.7 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
8 ttl=57 time=88.4 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
9 ttl=57 time=91.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
10 ttl=57 time=89.4 ms

--- ubuntu.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9076ms
rtt min/avg/max/mdev = 86.992/89.789/91.633/1.466 ms
(sziegler@szieg001)-[~/home/sziegler]
PS> host odu.edu
odu.edu has address 35.170.140.174
odu.edu mail is handled by 10 odu-edu.mail.protection.outlook.com.
(sziegler@szieg001)-[~/home/sziegler]
PS>
```

The ttl and times are different

6.

```
PS> sziegler@szieg001:~/home/sziegler
File Actions Edit View Help
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
4 ttl=57 time=87.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
5 ttl=57 time=89.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
6 ttl=57 time=90.2 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
7 ttl=57 time=88.7 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
8 ttl=57 time=88.4 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
9 ttl=57 time=91.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
10 ttl=57 time=89.4 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9076ms
rtt min/avg/max/mdev = 86.992/89.789/91.633/1.466 ms

(sziegler@szieg001)-[~/home/sziegler]
PS> host odu.edu
odu.edu has address 35.170.140.174
odu.edu mail is handled by 10 odu-edu.mail.protection.outlook.com.

(sziegler@szieg001)-[~/home/sziegler]
PS> cat /etc/hostname
szieg001

(sziegler@szieg001)-[~/home/sziegler]
PS>
```

The hostname was changed to my MIDAS ID

7.

```
PS> sziegler@szieg001:~/home/sziegler
File Actions Edit View Help
7 ttl=57 time=88.7 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
8 ttl=57 time=88.4 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
9 ttl=57 time=91.0 ms
64 bytes from website-content-cache-1.canonical.com (2620:2d:4000:1::26): icmp_seq=
10 ttl=57 time=89.4 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9076ms
rtt min/avg/max/mdev = 86.992/89.789/91.633/1.466 ms

(sziegler@szieg001)-[~/home/sziegler]
PS> host odu.edu
odu.edu has address 35.170.140.174
odu.edu mail is handled by 10 odu-edu.mail.protection.outlook.com.

(sziegler@szieg001)-[~/home/sziegler]
PS> cat /etc/hostname
szieg001

(sziegler@szieg001)-[~/home/sziegler]
PS> cat /etc/resolv.conf
# Generated by NetworkManager
search mynetworksettings.com
nameserver 192.168.1.1
nameserver 2600:4040:1640:c000::1

(sziegler@szieg001)-[~/home/sziegler]
PS>
```

There are two nameservers listed now