

Gurjot Singh Khakh

Professor Torres

9/14/2025

IT 100

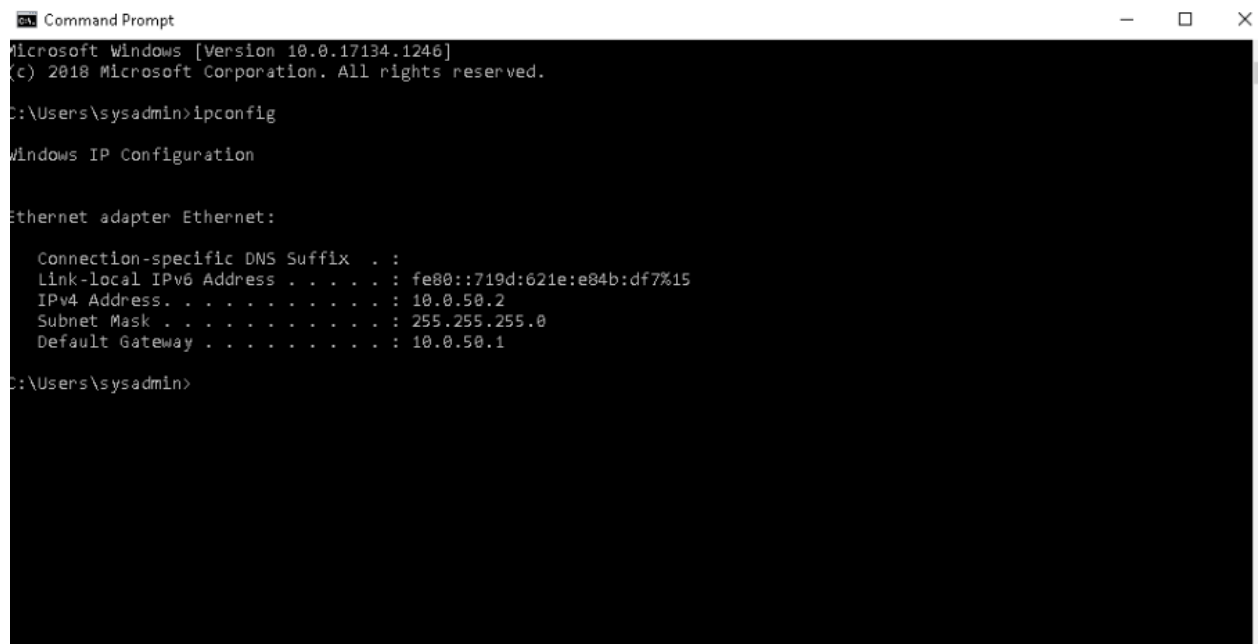
Lab:4

- Copy parts A, B, and C from Canvas

Part A: Log on to "EACH" system in [Netlab](#) NDG A+ v4, Lab 1

- Log on to netlab environment and change the below,
 - Change the IP's on all systems to the 10.0.50.0/24 subnet
 - Change the hostnames to computer1, computer2, and computer3
 - Ensure that you can ping all systems
- From your home computer, Ping Google and interpret the output
- From your home computer, Traceroute Google and interpret the output

- **Part A:**



```
Command Prompt
Microsoft Windows [Version 10.0.17134.1246]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\sysadmin>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::719d:621e:e84b:df7%15
    IPv4 Address. . . . . : 10.0.50.2
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.0.50.1

C:\Users\sysadmin>
```

```
C:\Windows\system32\cmd.exe

C:\Users\sysadmin>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::c41b:ff1c:d784:f220%11
    IPv4 Address. . . . . : 10.0.50.3
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.0.50.1

Tunnel adapter isatap.{05338BDE-CD7F-44DE-B487-C6E9D5BF60D4}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

Tunnel adapter Teredo Tunneling Pseudo-Interface:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

C:\Users\sysadmin>
```

```
Command Prompt

Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\sysadmin>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::f5b4:5079:8090:f89d%3
    IPv4 Address. . . . . : 10.0.50.4
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.0.50.1

Tunnel adapter isatap.{D320715C-BBB1-43EE-AAB0-40EE0357BFE6}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

C:\Users\sysadmin>
```

- Part A hostname:

```
Command Prompt
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\sysadmin>whoami
computer1\sysadmin

C:\Users\sysadmin>
```

```
Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Windows\system32>wmic computersystem where name="%computername%" call rename
name="computer2"
Executing C:\WIN7\ROOT\CIMV2:Win32_ComputerSystem.Name="WIN7"->rename()
Method execution successful.
Out Parameters:
instance of __PARAMETERS
{
    ReturnValue = 0;
};

C:\Windows\system32>
```

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\sysadmin>whoami
computer2\sysadmin

C:\Users\sysadmin>
```

```
Command Prompt
Microsoft Windows [Version 10.0.17134.1246]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\sysadmin>hostname
computer3

C:\Users\sysadmin>
```

```
Command Prompt
C:\Users\sysadmin>hostname
computer3

C:\Users\sysadmin>ping computer1

Pinging Computer1 [fe80::f5b4:5079:8090:f89d%15] with 32 bytes of data:
Reply from fe80::f5b4:5079:8090:f89d%15: time<1ms
Reply from fe80::f5b4:5079:8090:f89d%15: time<1ms
Reply from fe80::f5b4:5079:8090:f89d%15: time<1ms
Reply from fe80::f5b4:5079:8090:f89d%15: time<1ms

Ping statistics for fe80::f5b4:5079:8090:f89d%15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\sysadmin>ping computer2

Pinging computer2 [fe80::c41b:ff1c:d784:f220%15] with 32 bytes of data:
Reply from fe80::c41b:ff1c:d784:f220%15: time<1ms
Reply from fe80::c41b:ff1c:d784:f220%15: time<1ms
Reply from fe80::c41b:ff1c:d784:f220%15: time<1ms
Reply from fe80::c41b:ff1c:d784:f220%15: time<1ms

Ping statistics for fe80::c41b:ff1c:d784:f220%15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\sysadmin>
```

```
C:\Windows\system32\cmd.exe
C:\Users\sysadmin>ping computer1

Pinging Computer1 [fe80::f5b4:5079:8090:f89d%11] with 32 bytes of data:
Reply from fe80::f5b4:5079:8090:f89d%11: time<1ms
Reply from fe80::f5b4:5079:8090:f89d%11: time<1ms
Reply from fe80::f5b4:5079:8090:f89d%11: time<1ms
Reply from fe80::f5b4:5079:8090:f89d%11: time<1ms

Ping statistics for fe80::f5b4:5079:8090:f89d%11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\sysadmin>ping computer3

Pinging computer3 [fe80::719d:621e:e84b:df7%11] with 32 bytes of data:
Reply from fe80::719d:621e:e84b:df7%11: time<1ms
Reply from fe80::719d:621e:e84b:df7%11: time<1ms
Reply from fe80::719d:621e:e84b:df7%11: time<1ms
Reply from fe80::719d:621e:e84b:df7%11: time<1ms

Ping statistics for fe80::719d:621e:e84b:df7%11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
Command Prompt
C:\Users\sysadmin>ping computer2

Pinging computer2 [fe80::c41b:ff1c:d784:f220%3] with 32 bytes of data:
Reply from fe80::c41b:ff1c:d784:f220%3: time<1ms
Reply from fe80::c41b:ff1c:d784:f220%3: time<1ms
Reply from fe80::c41b:ff1c:d784:f220%3: time<1ms
Reply from fe80::c41b:ff1c:d784:f220%3: time<1ms

Ping statistics for fe80::c41b:ff1c:d784:f220%3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\sysadmin>ping computer3

Pinging computer3 [fe80::719d:621e:e84b:df7%3] with 32 bytes of data:
Reply from fe80::719d:621e:e84b:df7%3: time<1ms
Reply from fe80::719d:621e:e84b:df7%3: time<1ms
Reply from fe80::719d:621e:e84b:df7%3: time<1ms
Reply from fe80::719d:621e:e84b:df7%3: time<1ms

Ping statistics for fe80::719d:621e:e84b:df7%3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>ping google.com

Pinging google.com [142.250.189.206] with 32 bytes of data:
Reply from 142.250.189.206: bytes=32 time=8ms TTL=116
Reply from 142.250.189.206: bytes=32 time=12ms TTL=116
Reply from 142.250.189.206: bytes=32 time=10ms TTL=116
Reply from 142.250.189.206: bytes=32 time=15ms TTL=116

Ping statistics for 142.250.189.206:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 8ms, Maximum = 15ms, Average = 11ms

C:\Windows\System32>
```

```
Administrator: Command Prompt

C:\Windows\System32>tracert google.com

Tracing route to google.com [142.250.189.206]
over a maximum of 30 hops:

  0  5 ms    1 ms    1 ms  home [192.168.1.1]
  1  7 ms    6 ms    2 ms  66.60.128.97
  2  6 ms    4 ms    2 ms  204.154.217.202
  3  5 ms    7 ms    7 ms  156.47.94.184
  4  6 ms    8 ms    6 ms  156.47.94.185
  5  7 ms    5 ms    6 ms  156.47.94.191
  6  8 ms   12 ms    6 ms  156.47.94.196
  7  9 ms    9 ms   11 ms  0.et-1-1-2.mpr1.smf2.us.zip.zayo.com [207.126.104.121]
  8 11 ms   11 ms   11 ms  72.14.222.6
  9 11 ms   10 ms    9 ms  142.251.231.97
 10 10 ms   10 ms   11 ms  142.251.224.173
 11 10 ms   10 ms    8 ms  sfo03s25-in-f14.1e100.net [142.250.189.206]

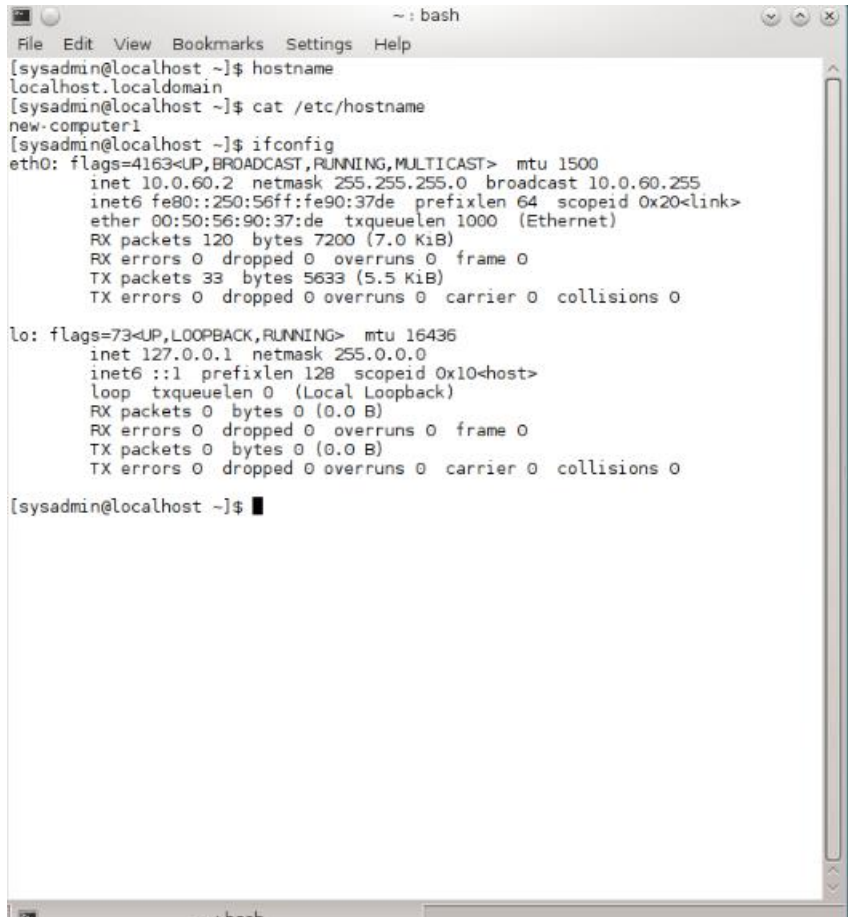
Trace complete.

C:\Windows\System32>
```

Part B: Log on to "EACH" system in NISGTC Linux+ Series 1, Lab 1

- Log on to netlab environment and change the below,
 - Change the IP's on all systems to the 10.0.60.0/24 subnet
 - Change the hostnames to computer1, computer2, computer3, computer4
 - Ensure that you can ping all systems

- **Part B:**



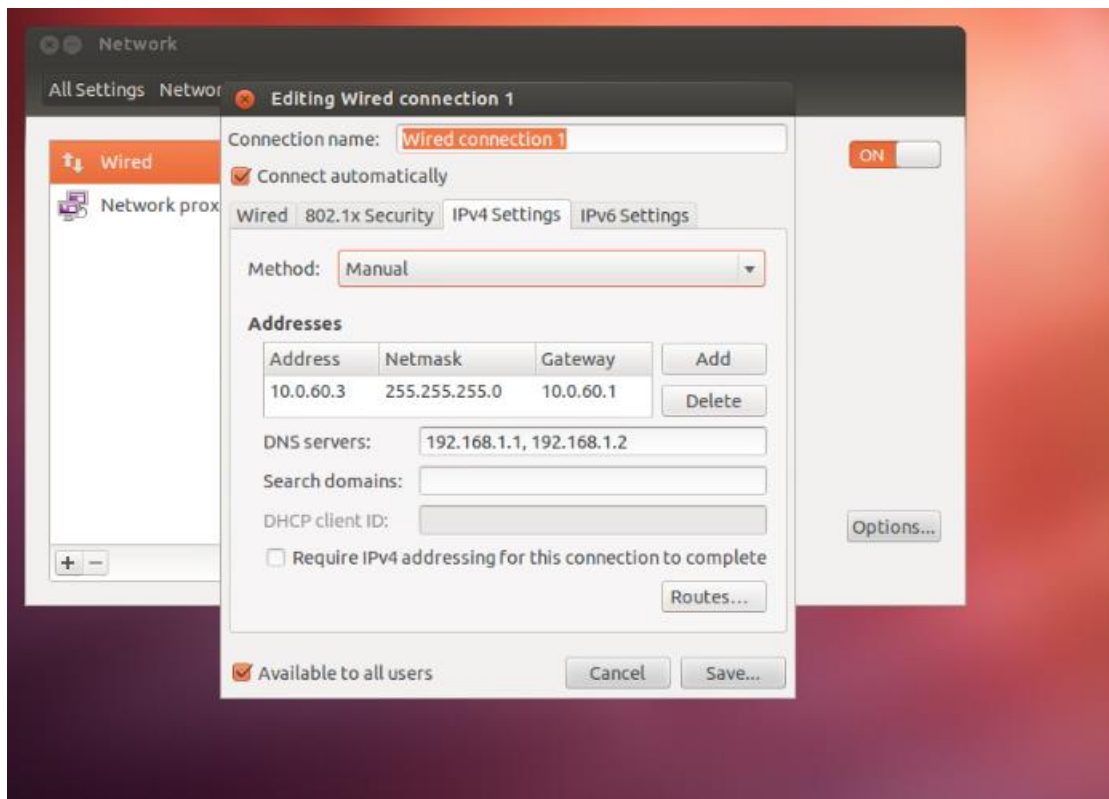
```
~: bash
File Edit View Bookmarks Settings Help
[sysadmin@localhost ~]$ hostname
localhost.localdomain
[sysadmin@localhost ~]$ cat /etc/hostname
new-computer1
[sysadmin@localhost ~]$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.60.2 netmask 255.255.255.0 broadcast 10.0.60.255
    inet6 fe80::250:56ff:fe90:37de prefixlen 64 scopeid 0x20<link>
    ether 00:50:56:90:37:de txqueuelen 1000 (Ethernet)
    RX packets 120 bytes 7200 (7.0 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 33 bytes 5633 (5.5 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 16436
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 0 (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[sysadmin@localhost ~]$
```

```
~ : bash <@localhost.localdomain>
File Edit View Bookmarks Settings Help
[sysadmin@localhost ~]$ su -
Password:
[root@localhost ~]# nano /etc/hostname
[root@localhost ~]# nano /etc/hosts
[root@localhost ~]# hostname computer1
[root@localhost ~]# hostname
computer1
[root@localhost ~]# cat /etc/hostname
new-computer1
[root@localhost ~]# hostname
computer1
[root@localhost ~]# cat /etc/hostname
new-computer1
[root@localhost ~]# hostname
computer1
[root@localhost ~]# exit
logout
[sysadmin@localhost ~]$ hostname
computer1
[sysadmin@localhost ~]$ █
```

~ : bash



```
sysadmin@sysadmin-virtual-machine: ~  
sysadmin@sysadmin-virtual-machine:~$ sudo hostnamectl set-hostname Computer2  
[sudo] password for sysadmin:  
sudo: hostnamectl: command not found  
sysadmin@sysadmin-virtual-machine:~$ cat /etc/os-release  
cat: /etc/os-release: No such file or directory  
sysadmin@sysadmin-virtual-machine:~$ sudo nano /etc/hostname  
sysadmin@sysadmin-virtual-machine:~$ sudo nano /etc/hosts  
sudo: unable to resolve host Computer2  
sysadmin@sysadmin-virtual-machine:~$ sudo hostname Computer2  
sysadmin@sysadmin-virtual-machine:~$ hostname  
Computer2  
sysadmin@sysadmin-virtual-machine:~$ cat /etc/hostname  
Computer2  
sysadmin@sysadmin-virtual-machine:~$ whonai  
No command 'whonai' found, did you mean:  
Command 'whoami' from package 'coreutils' (main)  
whonai: command not found  
sysadmin@sysadmin-virtual-machine:~$ hostname  
Computer2  
sysadmin@sysadmin-virtual-machine:~$
```

```
root@Computer3:~  
File Edit View Search Terminal Help  
[sysadmin@Computer3 ~]$ su -  
Password:  
[root@Computer3 ~]# sudo vi /etc/sysconfig/network-scripts/ifcfg-eth0  
[root@Computer3 ~]# ifconfig  
eth0      Link encap:Ethernet  HWaddr 00:50:56:90:18:18  
          inet addr:10.0.60.4  Bcast:10.0.60.255  Mask:255.255.255.0  
          inet6 addr: fe80::250:56ff:fe90:1818/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:120 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:227 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:7200 (7.0 KiB)  TX bytes:15354 (14.9 KiB)  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1/128 Scope:Host  
          UP LOOPBACK RUNNING  MTU:16436  Metric:1  
          RX packets:363 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:363 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:0  
          RX bytes:32187 (31.4 KiB)  TX bytes:32187 (31.4 KiB)  
  
[root@Computer3 ~]#
```

```
root@Computer3:~  
File Edit View Search Terminal Help  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:120 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:227 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:7200 (7.0 KiB)  TX bytes:15354 (14.9 KiB)  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1/128 Scope:Host  
          UP LOOPBACK RUNNING  MTU:16436  Metric:1  
          RX packets:363 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:363 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:0  
          RX bytes:32187 (31.4 KiB)  TX bytes:32187 (31.4 KiB)  
  
[root@Computer3 ~]# hostname  
Computer3  
[root@Computer3 ~]# sudo hostname computer4  
[root@Computer3 ~]# hostname  
computer4  
[root@Computer3 ~]# sudo hostname Computer3  
[root@Computer3 ~]# hostname  
Computer3  
[root@Computer3 ~]#
```

```
collisions:0 txqueuelen:1000
RX bytes:0 (0.0 B) TX bytes:468 (468.0 B)
Interrupt:18 Base address:0x2000

lo    Link encap:Local Loopback
       inet addr:127.0.0.1 Mask:255.0.0.0
       inet6 addr: ::1/128 Scope:Host
       UP LOOPBACK RUNNING MTU:16436 Metric:1
       RX packets:40 errors:0 dropped:0 overruns:0 frame:0
       TX packets:40 errors:0 dropped:0 overruns:0 carrier:0
       collisions:0 txqueuelen:0
       RX bytes:3008 (3.0 KB) TX bytes:3008 (3.0 KB)

sysadmin@ubuntusrv:~$ ifconfig eth0
eth0   Link encap:Ethernet HWaddr 00:50:56:90:36:ec
       inet addr:10.0.60.5 Bcast:192.168.1.255 Mask:255.255.255.0
       inet6 addr: fe80::250:56ff:fe90:36ec/64 Scope:Link
       UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
       RX packets:0 errors:0 dropped:0 overruns:0 frame:0
       TX packets:6 errors:0 dropped:0 overruns:0 carrier:0
       collisions:0 txqueuelen:1000
       RX bytes:0 (0.0 B) TX bytes:468 (468.0 B)
       Interrupt:18 Base address:0x2000

sysadmin@ubuntusrv:~$
```

```
sysadmin@Computer4:~$ hostname
Computer4
sysadmin@Computer4:~$ _
```

Part B Pinging:

```
~ : bash
File Edit View Bookmarks Settings Help
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 16436
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 0 (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[sysadmin@Computer1 ~]$ hostname
Computer1
[sysadmin@Computer1 ~]$ ping Computer2
ping: unknown host Computer2
[sysadmin@Computer1 ~]$ ping 10.0.60.3
PING 10.0.60.3 (10.0.60.3) 56(84) bytes of data.
64 bytes from 10.0.60.3: icmp_req=1 ttl=64 time=0.529 ms
64 bytes from 10.0.60.3: icmp_req=2 ttl=64 time=0.193 ms
64 bytes from 10.0.60.3: icmp_req=3 ttl=64 time=0.217 ms
64 bytes from 10.0.60.3: icmp_req=4 ttl=64 time=0.225 ms
64 bytes from 10.0.60.3: icmp_req=5 ttl=64 time=0.224 ms
64 bytes from 10.0.60.3: icmp_req=6 ttl=64 time=0.214 ms
64 bytes from 10.0.60.3: icmp_req=7 ttl=64 time=0.216 ms
^[64 bytes from 10.0.60.3: icmp_req=8 ttl=64 time=0.218 ms
64 bytes from 10.0.60.3: icmp_req=9 ttl=64 time=0.287 ms
64 bytes from 10.0.60.3: icmp_req=10 ttl=64 time=0.226 ms
64 bytes from 10.0.60.3: icmp_req=11 ttl=64 time=0.216 ms
^Z
[1]+  Stopped                  ping 10.0.60.3
[sysadmin@Computer1 ~]$ ping 10.0.60.3
PING 10.0.60.3 (10.0.60.3) 56(84) bytes of data.
64 bytes from 10.0.60.3: icmp_req=1 ttl=64 time=0.321 ms
64 bytes from 10.0.60.3: icmp_req=2 ttl=64 time=0.226 ms
64 bytes from 10.0.60.3: icmp_req=3 ttl=64 time=0.221 ms
64 bytes from 10.0.60.3: icmp_req=4 ttl=64 time=0.231 ms
64 bytes from 10.0.60.3: icmp_req=5 ttl=64 time=0.215 ms
64 bytes from 10.0.60.3: icmp_req=6 ttl=64 time=0.233 ms
64 bytes from 10.0.60.3: icmp_req=7 ttl=64 time=0.225 ms
^C
--- 10.0.60.3 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 5999ms
rtt min/avg/max/mdev = 0.215/0.238/0.321/0.039 ms
[sysadmin@Computer1 ~]$
```

```
[sysadmin@Computer1 ~]$ ping 10.0.60.4
PING 10.0.60.4 (10.0.60.4) 56(84) bytes of data.
64 bytes from 10.0.60.4: icmp_req=1 ttl=64 time=0.441 ms
64 bytes from 10.0.60.4: icmp_req=2 ttl=64 time=0.204 ms
64 bytes from 10.0.60.4: icmp_req=3 ttl=64 time=0.215 ms
64 bytes from 10.0.60.4: icmp_req=4 ttl=64 time=0.194 ms
64 bytes from 10.0.60.4: icmp_req=5 ttl=64 time=0.209 ms
64 bytes from 10.0.60.4: icmp_req=6 ttl=64 time=0.107 ms
64 bytes from 10.0.60.4: icmp_req=7 ttl=64 time=0.231 ms
64 bytes from 10.0.60.4: icmp_req=8 ttl=64 time=0.195 ms
^C
--- 10.0.60.4 ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 6999ms
rtt min/avg/max/mdev = 0.107/0.224/0.441/0.090 ms
[sysadmin@Computer1 ~]$
```

```
[sysadmin@Computer1 ~]$ ping 10.0.60.5
PING 10.0.60.5 (10.0.60.5) 56(84) bytes of data.
64 bytes from 10.0.60.5: icmp_req=1 ttl=64 time=0.828 ms
64 bytes from 10.0.60.5: icmp_req=2 ttl=64 time=0.286 ms
64 bytes from 10.0.60.5: icmp_req=3 ttl=64 time=0.296 ms
64 bytes from 10.0.60.5: icmp_req=4 ttl=64 time=0.275 ms
64 bytes from 10.0.60.5: icmp_req=5 ttl=64 time=0.319 ms
64 bytes from 10.0.60.5: icmp_req=6 ttl=64 time=0.309 ms
64 bytes from 10.0.60.5: icmp_req=7 ttl=64 time=0.298 ms
^C
--- 10.0.60.5 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6001ms
rtt min/avg/max/mdev = 0.275/0.373/0.828/0.186 ms
[sysadmin@Computer1 ~]$
```



```
sysadmin@Computer2:~$ hostname
Computer2
sysadmin@Computer2:~$ ping 10.0.60.2
PING 10.0.60.2 (10.0.60.2) 56(84) bytes of data.
64 bytes from 10.0.60.2: icmp_req=1 ttl=64 time=0.315 ms
64 bytes from 10.0.60.2: icmp_req=2 ttl=64 time=0.189 ms
64 bytes from 10.0.60.2: icmp_req=3 ttl=64 time=0.209 ms
64 bytes from 10.0.60.2: icmp_req=4 ttl=64 time=0.186 ms
64 bytes from 10.0.60.2: icmp_req=5 ttl=64 time=0.289 ms
64 bytes from 10.0.60.2: icmp_req=6 ttl=64 time=0.278 ms
64 bytes from 10.0.60.2: icmp_req=7 ttl=64 time=0.239 ms
64 bytes from 10.0.60.2: icmp_req=8 ttl=64 time=0.283 ms
64 bytes from 10.0.60.2: icmp_req=9 ttl=64 time=0.244 ms
^C
--- 10.0.60.2 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 7997ms
rtt min/avg/max/mdev = 0.186/0.248/0.315/0.043 ms
sysadmin@Computer2:~$
```

```
sysadmin@Computer2:~$ ping 10.0.60.4
PING 10.0.60.4 (10.0.60.4) 56(84) bytes of data.
64 bytes from 10.0.60.4: icmp_req=1 ttl=64 time=0.550 ms
64 bytes from 10.0.60.4: icmp_req=2 ttl=64 time=0.224 ms
64 bytes from 10.0.60.4: icmp_req=3 ttl=64 time=0.188 ms
64 bytes from 10.0.60.4: icmp_req=4 ttl=64 time=0.231 ms
64 bytes from 10.0.60.4: icmp_req=5 ttl=64 time=0.183 ms
64 bytes from 10.0.60.4: icmp_req=6 ttl=64 time=0.230 ms
64 bytes from 10.0.60.4: icmp_req=7 ttl=64 time=0.185 ms
64 bytes from 10.0.60.4: icmp_req=8 ttl=64 time=0.182 ms
64 bytes from 10.0.60.4: icmp_req=9 ttl=64 time=0.180 ms
^C
--- 10.0.60.4 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 7996ms
rtt min/avg/max/mdev = 0.180/0.239/0.550/0.112 ms
sysadmin@Computer2:~$
```

```
sysadmin@Computer2:~$ ping 10.0.60.5
PING 10.0.60.5 (10.0.60.5) 56(84) bytes of data.
64 bytes from 10.0.60.5: icmp_req=1 ttl=64 time=0.763 ms
64 bytes from 10.0.60.5: icmp_req=2 ttl=64 time=0.329 ms
64 bytes from 10.0.60.5: icmp_req=3 ttl=64 time=0.306 ms
64 bytes from 10.0.60.5: icmp_req=4 ttl=64 time=0.328 ms
64 bytes from 10.0.60.5: icmp_req=5 ttl=64 time=0.319 ms
64 bytes from 10.0.60.5: icmp_req=6 ttl=64 time=0.320 ms
64 bytes from 10.0.60.5: icmp_req=7 ttl=64 time=0.313 ms
64 bytes from 10.0.60.5: icmp_req=8 ttl=64 time=0.295 ms
^C
--- 10.0.60.5 ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 7000ms
rtt min/avg/max/mdev = 0.295/0.371/0.763/0.149 ms
sysadmin@Computer2:~$
```

```
[sysadmin@Computer3 ~]$ ping 10.0.60.2
PING 10.0.60.2 (10.0.60.2) 56(84) bytes of data.
64 bytes from 10.0.60.2: icmp_seq=1 ttl=64 time=0.667 ms
64 bytes from 10.0.60.2: icmp_seq=2 ttl=64 time=0.213 ms
64 bytes from 10.0.60.2: icmp_seq=3 ttl=64 time=0.217 ms
64 bytes from 10.0.60.2: icmp_seq=4 ttl=64 time=0.214 ms
64 bytes from 10.0.60.2: icmp_seq=5 ttl=64 time=0.235 ms
64 bytes from 10.0.60.2: icmp_seq=6 ttl=64 time=0.206 ms
64 bytes from 10.0.60.2: icmp_seq=7 ttl=64 time=0.217 ms
64 bytes from 10.0.60.2: icmp_seq=8 ttl=64 time=0.189 ms
64 bytes from 10.0.60.2: icmp_seq=9 ttl=64 time=0.219 ms
^C
--- 10.0.60.2 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8130ms
rtt min/avg/max/mdev = 0.189/0.264/0.667/0.143 ms
[sysadmin@Computer3 ~]$
```

```
[sysadmin@Computer3 ~]$ ping 10.0.60.3
PING 10.0.60.3 (10.0.60.3) 56(84) bytes of data.
64 bytes from 10.0.60.3: icmp_seq=1 ttl=64 time=0.314 ms
64 bytes from 10.0.60.3: icmp_seq=2 ttl=64 time=0.228 ms
64 bytes from 10.0.60.3: icmp_seq=3 ttl=64 time=0.231 ms
64 bytes from 10.0.60.3: icmp_seq=4 ttl=64 time=0.216 ms
64 bytes from 10.0.60.3: icmp_seq=5 ttl=64 time=0.206 ms
64 bytes from 10.0.60.3: icmp_seq=6 ttl=64 time=0.276 ms
64 bytes from 10.0.60.3: icmp_seq=7 ttl=64 time=0.217 ms
^C
--- 10.0.60.3 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6692ms
rtt min/avg/max/mdev = 0.206/0.241/0.314/0.037 ms
[sysadmin@Computer3 ~]$
```

```
[sysadmin@Computer3 ~]$ ping 10.0.60.5
PING 10.0.60.5 (10.0.60.5) 56(84) bytes of data.
64 bytes from 10.0.60.5: icmp_seq=1 ttl=64 time=1.73 ms
64 bytes from 10.0.60.5: icmp_seq=2 ttl=64 time=0.278 ms
64 bytes from 10.0.60.5: icmp_seq=3 ttl=64 time=0.312 ms
64 bytes from 10.0.60.5: icmp_seq=4 ttl=64 time=0.358 ms
64 bytes from 10.0.60.5: icmp_seq=5 ttl=64 time=0.338 ms
64 bytes from 10.0.60.5: icmp_seq=6 ttl=64 time=0.309 ms
64 bytes from 10.0.60.5: icmp_seq=7 ttl=64 time=0.263 ms
^C
--- 10.0.60.5 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6032ms
rtt min/avg/max/mdev = 0.263/0.513/1.734/0.499 ms
[sysadmin@Computer3 ~]$
```

```
sysadmin@Computer4:~$ ping 10.0.60.2
PING 10.0.60.2 (10.0.60.2) 56(84) bytes of data.
64 bytes from 10.0.60.2: icmp_req=1 ttl=64 time=0.502 ms
64 bytes from 10.0.60.2: icmp_req=2 ttl=64 time=0.344 ms
64 bytes from 10.0.60.2: icmp_req=3 ttl=64 time=0.324 ms
64 bytes from 10.0.60.2: icmp_req=4 ttl=64 time=0.328 ms
64 bytes from 10.0.60.2: icmp_req=5 ttl=64 time=0.323 ms
64 bytes from 10.0.60.2: icmp_req=6 ttl=64 time=0.325 ms
64 bytes from 10.0.60.2: icmp_req=7 ttl=64 time=0.326 ms
64 bytes from 10.0.60.2: icmp_req=8 ttl=64 time=0.363 ms
^C
--- 10.0.60.2 ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 7000ms
rtt min/avg/max/mdev = 0.323/0.354/0.502/0.059 ms
sysadmin@Computer4:~$
```

```

sysadmin@Computer4:~$ ping 10.0.60.3
PING 10.0.60.3 (10.0.60.3) 56(84) bytes of data.
64 bytes from 10.0.60.3: icmp_req=1 ttl=64 time=0.364 ms
64 bytes from 10.0.60.3: icmp_req=2 ttl=64 time=0.338 ms
64 bytes from 10.0.60.3: icmp_req=3 ttl=64 time=0.313 ms
64 bytes from 10.0.60.3: icmp_req=4 ttl=64 time=0.312 ms
64 bytes from 10.0.60.3: icmp_req=5 ttl=64 time=0.296 ms
64 bytes from 10.0.60.3: icmp_req=6 ttl=64 time=0.328 ms
64 bytes from 10.0.60.3: icmp_req=7 ttl=64 time=0.278 ms
^C
--- 10.0.60.3 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 5996ms
rtt min/avg/max/mdev = 0.278/0.318/0.364/0.030 ms
sysadmin@Computer4:~$ ping 10.0.60.4
PING 10.0.60.4 (10.0.60.4) 56(84) bytes of data.
64 bytes from 10.0.60.4: icmp_req=1 ttl=64 time=0.384 ms
64 bytes from 10.0.60.4: icmp_req=2 ttl=64 time=0.266 ms
64 bytes from 10.0.60.4: icmp_req=3 ttl=64 time=0.313 ms
64 bytes from 10.0.60.4: icmp_req=4 ttl=64 time=0.286 ms
64 bytes from 10.0.60.4: icmp_req=5 ttl=64 time=0.315 ms
64 bytes from 10.0.60.4: icmp_req=6 ttl=64 time=0.275 ms
64 bytes from 10.0.60.4: icmp_req=7 ttl=64 time=0.318 ms
64 bytes from 10.0.60.4: icmp_req=8 ttl=64 time=0.302 ms
64 bytes from 10.0.60.4: icmp_req=9 ttl=64 time=0.321 ms
^C
--- 10.0.60.4 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 7998ms
rtt min/avg/max/mdev = 0.266/0.308/0.384/0.040 ms

```

Part C:

- Explain the below terms "in your own words", in detail to someone who does not know about computers
 - DNS
 - DHCP
 - Subnet
 - Subnet Mask
 - Default Gateway
 - Default Route
 - Static Route
 - ARP
 - OSI Model
 - TCP/IP Model

Part C:

- DNS: Domain Name System
 - This is like a translator for domain names into ip addresses
- DHCP: Dynamic Host Configuration Protocol
 - This gives devices a ip address without this every device would have to have ip address manually, this simplifies network management
- Subnet: Subnetwork
 - This makes different departments for ip network which makes them more efficient and more secure

- Subnet Mask: Subnet Mask Address
 - 32 bit number that divides a ip address
- Default Gateway
 - transmits traffic from local network to other networks
- Default Route:
 - When there is no exact way to the Ip address it tells it where to send
- Static Route:
 - Manually tell a device how to reach an exact destination
- ARP: Address Resolution Protocol
 - To locate an ip address to its MAC address
- OSI Model: Open System interconnection
 - How networks communicate with each other
- TCP/IP Model: Transmission Control Protocol/internet Protocol
 - How data travels through the internet and other networks, the foundation

Part D: SierraLab: ssh to Windows Box

- Log on via SSH to our SierraLab network (207.62.230.146:2222).
 - Use the password you set up with your public/private key
 - Ensure that your putty is setup to use your private key
 - Once you log on, ssh to the Windowsbox (ssh it100student@windowsbox.com)
 - Password is Computersrock1
 - Answer the below questions with screenshots
1. Use the whoami command to see who you are
 2. Use the dir command to see what is here
 3. Use the hostname command to view your hostname
 4. Use the ipconfig command to retrieve your IP address(es)
 - a) What is the MAC address of your system
 - b) What is the default gateway of your computer
 - c) What is the subnet mask of your computer
 - d) What is the DHCP server for your computer
 - e) When was the IP of your computer obtained
 - f) When does the IP of your computer expire
 5. Use the ipconfig command to display DNS information
 6. Use the ping command to ping google
 7. Use the ping command to ping the default gateway
 8. Use the traceert command to see how many hops away google is

Part D:

Administrator: C:\Windows\system32\conhost.exe

```
Microsoft Windows [Version 10.0.20348.2966]
(c) Microsoft Corporation. All rights reserved.

hiddenleaf0\itl100student@HIDDENLEAF C:\Users\itl100student>whoami
hiddenleaf0\itl100student

hiddenleaf0\itl100student@HIDDENLEAF C:\Users\itl100student>dir
Volume in drive C has no label.
Volume Serial Number is 4C3A-51E5

Directory of C:\Users\itl100student

09/04/2025  09:21 PM  <DIR>          .
09/01/2025  02:23 PM  <DIR>          ..
05/08/2021  01:20 AM  <DIR>          Desktop
09/01/2025  02:22 PM  <DIR>          Documents
05/08/2021  01:20 AM  <DIR>          Downloads
05/08/2021  01:20 AM  <DIR>          Favorites
05/08/2021  01:20 AM  <DIR>          Links
05/08/2021  01:20 AM  <DIR>          Music
05/08/2021  01:20 AM  <DIR>          Pictures
05/08/2021  01:20 AM  <DIR>          Saved Games
05/08/2021  01:20 AM  <DIR>          Videos
               0 File(s)              0 bytes
               11 Dir(s)  40,841,011,200 bytes free

hiddenleaf0\itl100student@HIDDENLEAF C:\Users\itl100student>hostname
hiddenleaf

hiddenleaf0\itl100student@HIDDENLEAF C:\Users\itl100student>
```

```
hiddenleaf0\itl100student@HIDDENLEAF C:\Users\itl100student>ipconfig/all
```

Windows IP Configuration

```
Host Name . . . . . : hiddenleaf
Primary Dns Suffix . . . . . : hiddenleaf.local
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : hiddenleaf.local
                                   cyberchallenge.lan
```

Ethernet adapter Ethernet1:

```
Connection-specific DNS Suffix . : cyberchallenge.lan
Description . . . . . : Intel(R) 82574L Gigabit Network Connection #2
Physical Address. . . . . : 00-0C-29-18-56-10
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::6ae9:3c12:9e35:ead6%9(Preferred)
IPv4 Address. . . . . : 172.16.99.4(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Monday, September 1, 2025 2:12:16 PM
Lease Expires . . . . . : Monday, September 8, 2025 12:01:03 PM
Default Gateway . . . . . : 172.16.99.1
DHCP Server . . . . . : 172.16.99.1
DHCPv6 IAID . . . . . : 167775273
DHCPv6 Client DUID. . . . . : 00-01-00-01-2F-91-9B-3E-00-0C-29-18-56-06
DNS Servers . . . . . : ::1
                        8.8.8.8
NetBIOS over Tcpip. . . . . : Enabled
```

```
hiddenleaf0\itl00student@HIDDENLEAF C:\Users\itl00student>ipconfig /displaydns
```

```
Windows IP Configuration
```

```
linuxbox.com
-----
No records of type AAAA

linuxbox.com
-----
Record Name . . . . . : linuxbox.com
Record Type . . . . . : 1
Time To Live . . . . . : 11135
Data Length . . . . . : 4
Section . . . . . : Answer
A (Host) Record . . . . : 172.16.99.2

4.99.16.172.in-addr.arpa
-----
Record Name . . . . . : 4.99.16.172.in-addr.arpa.
Record Type . . . . . : 12
Time To Live . . . . . : 11135
Data Length . . . . . : 8
Section . . . . . : Answer
PTR Record . . . . . : windowsbox.com

windowsbox.com
-----
No records of type AAAA

windowsbox.com
-----
Record Name . . . . . : windowsbox.com
Record Type . . . . . : 1
Time To Live . . . . . : 11134
Data Length . . . . . : 4
Section . . . . . : Answer
A (Host) Record . . . . : 172.16.99.4

2.99.16.172.in-addr.arpa
-----
Record Name . . . . . : 2.99.16.172.in-addr.arpa.
Record Type . . . . . : 12
Time To Live . . . . . : 11134
Data Length . . . . . : 8
```

```
hiddenleaf0\itl00student@HIDDENLEAF C:\Users\itl00student>ping google.com
```

```
Pinging google.com [142.250.188.238] with 32 bytes of data:
Reply from 142.250.188.238: bytes=32 time=13ms TTL=114
Reply from 142.250.188.238: bytes=32 time=13ms TTL=114
Reply from 142.250.188.238: bytes=32 time=14ms TTL=114
Reply from 142.250.188.238: bytes=32 time=14ms TTL=114
```

```
Ping statistics for 142.250.188.238:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 13ms, Maximum = 14ms, Average = 13ms
```

```
hiddenleaf0\itl00student@HIDDENLEAF C:\Users\itl00student>
```

```
hiddenleaf0\itl00student@HIDDENLEAF C:\Users\itl00student>ping 172.16.99.1
```

```
Pinging 172.16.99.1 with 32 bytes of data:
Reply from 172.16.99.1: bytes=32 time<1ms TTL=64
Reply from 172.16.99.1: bytes=32 time<1ms TTL=64
Reply from 172.16.99.1: bytes=32 time<1ms TTL=64
Reply from 172.16.99.1: bytes=32 time<1ms TTL=64
```

```
Ping statistics for 172.16.99.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
hiddenleaf0\itl00student@HIDDENLEAF C:\Users\itl00student>
```

```

hiddenleaf0\it100student@HIDDENLEAF C:\Users\it100student>tracert google.com

Tracing route to google.com [142.250.188.238]
over a maximum of 30 hops:

  1  <1 ms    <1 ms    <1 ms    172.16.99.1
  2  1 ms     <1 ms    <1 ms    192.168.1.1
  3  1 ms     1 ms     1 ms     207.62.230.253
  4  3 ms     3 ms     8 ms     sacrl-agg-01--sj-cc-3--10g--01.cenic.net [137.164.32.36]
  5  6 ms     5 ms     6 ms     emvll-agg-01--sacrl-agg-01--100g--01.cenic.net [137.164.11.98]
  6  6 ms     6 ms     5 ms     svl-agg10--emvll-agg-01--400g--01.cenic.net [137.164.11.94]
  7  8 ms     6 ms     6 ms     142.250.175.184
  8  7 ms     7 ms     7 ms     142.251.69.89
  9  8 ms     7 ms     7 ms     192.178.106.12
 10 8 ms     8 ms     8 ms     216.239.58.215
 11 15 ms    15 ms    15 ms    142.251.68.52
 12 14 ms    15 ms    14 ms    108.170.234.125
 13 15 ms    17 ms    14 ms    108.170.252.119
 14 14 ms    13 ms    14 ms    142.251.60.127
 15 14 ms    13 ms    14 ms    lax3ls15-in-f14.1e100.net [142.250.188.238]

Trace complete.

```

Part E: SierraLab: ssh to Linux Box

- Log on via SSH to our SierraLab network (207.62.230.146:2222).
- Use the password you set up with your public/private key
- Ensure that your putty is setup to use your private key
- Once you log on, ssh to the Linuxbox (ssh it100student@linuxbox.com)
- **Password is Computersrock1**

- 1: type the command pwd. This will print the current working directory. it is where you are at
- 2: type the command w, this list who is logged on to this system
- 3: type the command ls, this tells you what files/folders are here
- 4: type the command cat README, this list the contents of this file
- 5: type the command whoami, this tells you who you are logged on as
- 6: type the ifconfig command to get your IP address
- 7: type the route command to get your routing table
- 8: type the command to get your disk size
- 9: type the command to get your total memory
- 10: type the command to get processor information

```
(itl00student@ Kali)-[~]
$ pwd
/home/itl00student

(itl00student@ Kali)-[~]
$ w
00:50:05 up 9 days,  3:49,  4 users,  load average: 0.11, 0.10, 0.09
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
kali      tty7      :0            05Sep25  9days 27:51   3.65s  xfce4-session
kali      pts/2     -            05Sep25  9days  0.02s  0.12s  sudo su
itl00stu  pts/3     172.16.99.5   00:47    4.00s  0.08s  0.05s  w
itl15stu  pts/0     172.16.99.5   00:30   21.00s  0.08s  0.04s  -bash

(itl00student@ Kali)-[~]
$ ls -la
.  ..  .bash_history  .bash_logout  .bashrc  .bashrc.original  .config  .face  .face.icon  .java  .local  .profile  .zshrc

(itl00student@ Kali)-[~]
$ cat README
cat: README: No such file or directory

(itl00student@ Kali)-[~]
$ whoami
itl00student

(itl00student@ Kali)-[~]
$
```

```

(itl00student@ Kali)-[~]
$ ifconfig
br-339414195aeb: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.5.5.1 netmask 255.255.255.0 broadcast 10.5.5.255
    inet6 fe80::42:80ff:fe45:ac:a1 prefixlen 64 scopeid 0x20<link>
    ether 02:42:80:45:ac:a1 txqueuelen 0 (Ethernet)
    RX packets 88555 bytes 3797470 (3.6 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 106931 bytes 5991983 (5.7 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

br-355ee7945a88: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.1 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 fe80::42:20ff:fe18:c0:94 prefixlen 64 scopeid 0x20<link>
    ether 02:42:20:18:c0:94 txqueuelen 0 (Ethernet)
    RX packets 19295 bytes 1332959 (1.2 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 37834 bytes 1925914 (1.8 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

br-internal: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.6.6.1 netmask 255.255.255.0 broadcast 10.6.6.255
    inet6 fe80::42:b4ff:fe2a:9def prefixlen 64 scopeid 0x20<link>
    ether 02:42:b4:2a:9d:ef txqueuelen 0 (Ethernet)
    RX packets 91580 bytes 3876332 (3.6 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 109106 bytes 6115159 (5.8 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

docker0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.17.0.1 netmask 255.255.0.0 broadcast 172.17.255.255
    inet6 fe80::42:f9ff:fe78:b4dc prefixlen 64 scopeid 0x20<link>
    ether 02:42:f9:78:b4:dc txqueuelen 0 (Ethernet)
    RX packets 16029 bytes 1187252 (1.1 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 112540 bytes 5005244 (4.7 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.99.2 netmask 255.255.255.0 broadcast 172.16.99.255
    ether 00:0c:29:70:00:58 txqueuelen 1000 (Ethernet)
    RX packets 600373 bytes 49466599 (47.1 MiB)
    RX errors 14 dropped 41 overruns 0 frame 0
    TX packets 1418748 bytes 94153912 (89.7 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
    device interrupt 18 base 0x2000

eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.99.2 netmask 255.255.255.0 broadcast 172.16.99.255
    inet6 fe80::f419:4c03:3e3e:b7ea prefixlen 64 scopeid 0x20<link>

```

```

(itl00student@ Kali)-[~]
$ route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default 172.16.99.1 0.0.0.0 UG 0 0 0 eth0
default 172.16.99.1 0.0.0.0 UG 100 0 0 eth1
10.5.5.0 0.0.0.0 255.255.255.0 U 0 0 0 br-339414195aeb
10.6.6.0 0.0.0.0 255.255.255.0 U 0 0 0 br-internal
172.16.99.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0
172.16.99.0 0.0.0.0 255.255.255.0 U 100 0 0 eth1
172.17.0.0 0.0.0.0 255.255.0.0 U 0 0 0 docker0
192.168.0.0 0.0.0.0 255.255.255.0 U 0 0 0 br-355ee7945a88

(itl00student@ Kali)-[~]
$

```

```

(it100student@ Kali)~$ df -h
Filesystem                Size      Used Avail Use% Mounted on
udev                      7.8G         0  7.8G   0% /dev
tmpfs                     1.6G       2.3M   1.6G   1% /run
/dev/mapper/Ethical--Hacker--Kali--vg-root 37G       27G   8.8G  75% /
tmpfs                     7.9G         0   7.9G   0% /dev/shm
tmpfs                     5.0M         0   5.0M   0% /run/lock
/dev/sdal                 455M       96M   335M  23% /boot
tmpfs                     1.6G      120K   1.6G   1% /run/user/1000
tmpfs                     1.6G      112K   1.6G   1% /run/user/125
tmpfs                     1.6G      108K   1.6G   1% /run/user/1001

(it100student@ Kali)~$ free -h
               total        used        free      shared  buff/cache   available
Mem:           15Gi         5.7Gi         7.7Gi          43Mi         2.5Gi         9.9Gi
Swap:          975Mi           0B         975Mi

```

-
-
-
-
-
-
-
-
-
-
-

- Add notes and screenshots
- Can you reproduce the lab with the questions and your screenshots with notes?
- If your boss asked you for this, did you provide the answer with context?