

COMPUTER NETWORKS  
Lab Assignment-1

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1.if config :

```
charish@charish-Nitro-AN515-57:~$ ifconfig
enp2s0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether 08:8f:c3:70:5c:14 txqueuelen 1000 (Ethernet)
    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

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 5884 bytes 479396 (479.3 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5884 bytes 479396 (479.3 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlp0s20f3: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether 7c:b5:66:3b:1b:40 txqueuelen 1000 (Ethernet)
    RX packets 300322 bytes 411255590 (411.2 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 57736 bytes 6569555 (6.5 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
charish@charish-Nitro-AN515-57:~$ ifconfig lo
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 5916 bytes 481684 (481.6 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5916 bytes 481684 (481.6 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

## 2.Ping :

```
charish@charish-Nitro-ANS15-57:~$ ping google.com
PING google.com(2404:6800:4007:828::200e) 56 data bytes
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=10 ttl=59 time=155 ms
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=11 ttl=59 time=38.4 ms
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=12 ttl=59 time=39.2 ms
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=13 ttl=59 time=38.9 ms
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=14 ttl=59 time=94.3 ms
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=15 ttl=59 time=117 ms
64 bytes from maa03s43-in-x0e.1e100.net (2404:6800:4007:828::200e): icmp_seq=16 ttl=59 time=37.7 ms
^C
--- google.com ping statistics ---
16 packets transmitted, 7 received, 56.25% packet loss, time 17408ms
rtt min/avg/max/mdev = 37.728/74.226/154.560/44.312 ms
```

## 3.Traceroute :

```
charish@charish-Nitro-ANS15-57:~$ traceroute google.com
traceroute to google.com (142.250.195.14), 30 hops max, 60 byte packets
 1  reliance.reliance (192.168.29.1)  4.908 ms  4.864 ms  4.846 ms
 2  10.212.160.1 (10.212.160.1)  5.072 ms  5.055 ms  5.256 ms
 3  172.31.2.118 (172.31.2.118)  14.949 ms  60.405 ms  60.389 ms
 4  192.168.171.118 (192.168.171.118)  60.365 ms  192.168.153.232 (192.168.153.232)  60.381 ms  192.168.153.236 (192.168.153.236)  60.338 ms
 5  172.17.185.180 (172.17.185.180)  60.319 ms  60.302 ms  60.286 ms
 6  172.17.185.163 (172.17.185.163)  60.267 ms  172.17.185.162 (172.17.185.162)  52.271 ms  52.222 ms
 7  192.168.171.108 (192.168.171.108)  52.193 ms  192.168.90.144 (192.168.90.144)  63.495 ms  192.168.171.104 (192.168.171.104)  63.195 ms
 8  * * *
 9  * * *
10  * * *
11  * * *
12  * * *
13  72.14.217.252 (72.14.217.252)  144.759 ms  192.178.110.106 (192.178.110.106)  46.286 ms  192.178.110.108 (192.178.110.108)  33.224 ms
14  64.233.174.1 (64.233.174.1)  125.549 ms  142.251.55.90 (142.251.55.90)  32.655 ms  209.85.142.246 (209.85.142.246)  36.032 ms
15  142.251.246.206 (142.251.246.206)  134.433 ms  172.253.71.132 (172.253.71.132)  51.669 ms  216.239.48.65 (216.239.48.65)  153.923 ms
16  172.253.70.166 (172.253.70.166)  34.216 ms  142.251.52.211 (142.251.52.211)  168.907 ms  172.253.71.132 (172.253.71.132)  30.463 ms
17  142.251.246.204 (142.251.246.204)  59.979 ms  del12s09-in-f14.1e100.net (142.250.195.14)  174.253 ms  159.730 ms
```

#### 4.netstat :

```
charish@charish-Nitro-AN515-57:~$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp      78      0 charish-Nitro-AN5:48060 ec2-54-186-58-232:https CLOSE_WAIT
tcp       0      0 charish-Nitro-AN5:48052 ec2-54-186-58-232:https ESTABLISHED
udp       0      0 localhost:58823         localhost:58823         ESTABLISHED
udp       0      0 charish-Nitro-AN:bootpc reliance.relianc:bootps  ESTABLISHED
udp6      0      0 charish-Nitro-AN5:36304 maa05s26-in-x0a.1:https ESTABLISHED

Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags       Type       State      I-Node  Path
unix   3      [ ]         STREAM     CONNECTED  84537
unix   3      [ ]         STREAM     CONNECTED  32611
unix   3      [ ]         STREAM     CONNECTED  94469
unix   3      [ ]         STREAM     CONNECTED  94466
unix   3      [ ]         STREAM     CONNECTED  27183
unix   2      [ ]         DGRAM      CONNECTED  23030
unix   3      [ ]         STREAM     CONNECTED  25922    /run/dbus/system_bus_socket
unix   3      [ ]         STREAM     CONNECTED  22365    /run/systemd/journal/stdout
unix   3      [ ]         STREAM     CONNECTED  21394    /run/user/1000/bus
unix   3      [ ]         STREAM     CONNECTED  27084    /run/systemd/journal/stdout
unix   3      [ ]         STREAM     CONNECTED  36516
unix   3      [ ]         STREAM     CONNECTED  85740
unix   3      [ ]         STREAM     CONNECTED  35642
unix   3      [ ]         STREAM     CONNECTED  23760
unix   3      [ ]         STREAM     CONNECTED  71567
unix   3      [ ]         STREAM     CONNECTED  71566
unix   3      [ ]         STREAM     CONNECTED  21402    /run/user/1000/bus
unix   3      [ ]         STREAM     CONNECTED  29278
unix   3      [ ]         STREAM     CONNECTED  30956
unix   3      [ ]         STREAM     CONNECTED  57690    /run/systemd/journal/stdout
unix   3      [ ]         STREAM     CONNECTED  15325    /run/systemd/journal/stdout
unix   3      [ ]         STREAM     CONNECTED  26061
unix   3      [ ]         STREAM     CONNECTED  25958
unix   3      [ ]         STREAM     CONNECTED  34396    /run/dbus/system_bus_socket
unix   3      [ ]         STREAM     CONNECTED  24157
unix   3      [ ]         STREAM     CONNECTED  21298    /run/systemd/journal/stdout
unix   3      [ ]         STREAM     CONNECTED  22488
```

#### 5. nslookup

```
charish@charish-Nitro-AN515-57:~$ nslookup google.com
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.182.78
Name:   google.com
Address: 2404:6800:4002:813::200e
```

6.arp :

```
charish@charish-Nitro-AN515-57:~$ arp -a
reliance.reliance (192.168.29.1) at b4:a7:c6:d2:3c:da [ether] on wlp0s20f3
```

ip:

```
charish@charish-Nitro-AN515-57:~$ ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp2s0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel state DOWN group default qlen 1000
    link/ether 08:8f:c3:70:5c:14 brd ff:ff:ff:ff:ff:ff
3: wlp0s20f3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether 7c:b5:66:3b:1b:40 brd ff:ff:ff:ff:ff:ff
    inet 192.168.29.159/24 brd 192.168.29.255 scope global dynamic noprefixroute wlp0s20f3
        valid_lft 84645sec preferred_lft 84645sec
    inet6 2405:201:c039:f03c:2c48:ec64:54ca:39f1/64 scope global temporary dynamic
        valid_lft 3594sec preferred_lft 3594sec
    inet6 2405:201:c039:f03c:6ef7:689c:5ad4:af64/64 scope global dynamic mngtmpaddr noprefixroute
        valid_lft 3594sec preferred_lft 3594sec
    inet6 fe80::6c43:40db:4906:b2c9/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
```

hostname:

```
charish@charish-Nitro-AN515-57:~$ hostname
charish-Nitro-AN515-57
```

ftp:

```
charish@charish-Nitro-AN515-57:~$ ftp localhost
ftp: Can't connect to `127.0.0.1:21': Connection refused
ftp: Can't connect to `localhost:ftp'
ftp>
```

scp :

```
charish@charish-Nitro-AN515-57:~/Documents$ scp ~/Documents/CS22B1095_LAB1.pdf localhost:
ssh: connect to host localhost port 22: Connection refused
lost connection
```

who is :

```
charish@charish-Nitro-AN515-57:~$ whois -h whois.verisign-grs.com google.com
Domain Name: GOOGLE.COM
Registry Domain ID: 2138514_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2019-09-09T15:39:04Z
Creation Date: 1997-09-15T04:00:00Z
Registry Expiry Date: 2028-09-14T04:00:00Z
Registrar: MarkMonitor Inc.
Registrar IANA ID: 292
Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2086851750
Domain Status: clientDeleteProhibited https://icann.org/epp#clientDeleteProhi
bited
```