```
student@ccf020:~$ ping google.com
PING google.com (142.250.67.206) 56(84) bytes of data.
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=1 ttl=118 time=31.9 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=2 ttl=118 time=31.7 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=3 ttl=118 time=31.8 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=4 ttl=118 time=31.8 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=5 ttl=118 time=31.8 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=6 ttl=118 time=32.0 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=7 ttl=118 time=31.8 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=8 ttl=118 time=31.9 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=9 ttl=118 time=31.7 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=10 ttl=118 time=31.8 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=11 ttl=118 time=31.7 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=12 ttl=118 time=31.8 ms
64 bytes from bom12s08-in-f14.1e100.net (142.250.67.206): icmp_seq=13 ttl=118 time=31.9 ms
^Z
[1]+  Stopped                 ping google.com
```

```
student@ccf020:~$ arp -a
? (192.168.7.254) at 7c:5a:1c:cd:7e:68 [ether] on enp3s0
? (192.168.7.105) at 10:62:e5:0b:01:8a [ether] on enp3s0
? (192.168.10.192) at 6c:3c:7c:c7:50:6e [ether] on enp3s0
? (192.168.3.215) at 40:f8:df:a2:60:a0 [ether] on enp3s0
_gateway (192.168.0.66) at 7c:5a:1c:cd:7e:68 [ether] on enp3s0
? (192.168.1.127) at 10:62:e5:0a:9e:c0 [ether] on enp3s0
```

```
student@ccf020:~$ route -n
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
0.0.0.0         192.168.0.66    0.0.0.0         UG    100    0        0 enp3s0
169.254.0.0     0.0.0.0         255.255.0.0     U     1000   0        0 enp3s0
192.168.0.0     0.0.0.0         255.255.0.0     U     100    0        0 enp3s0
```

```
student@ccf020:~$ netstat -a
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address          Foreign Address         State
tcp        0      0 localhost:domain        0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:ssh             0.0.0.0:*               LISTEN
tcp        0      0 localhost:ipp           0.0.0.0:*               LISTEN
tcp        0      0 ccf020:37860            bom12s19-in-f10.1:https ESTABLISHED
tcp        0      0 ccf020:47534            bom07s20-in-f3.1e:https TIME_WAIT
tcp        0      0 ccf020:36594            bom07s35-in-f5.1e:https TIME_WAIT
tcp        0      0 ccf020:37876            102.115.120.34.bc:https TIME_WAIT
tcp        0      0 ccf020:42390            bom12s16-in-f14.1:https ESTABLISHED
tcp        0      0 ccf020:40772            34.0.72.251:https       ESTABLISHED
tcp        0      0 ccf020:38872            bom12s19-in-f14.1:https ESTABLISHED
tcp        0      0 ccf020:42108            239.237.117.34.bc:https TIME_WAIT
tcp        0      0 ccf020:43626            bom12s20-in-f14.1:https ESTABLISHED
tcp        0      0 ccf020:49556            bom05s12-in-f3.1e:https ESTABLISHED
tcp        0      0 ccf020:45502            93.243.107.34.bc.:https ESTABLISHED
tcp        0      0 ccf020:37862            bom12s19-in-f10.1:https ESTABLISHED
tcp        0      0 ccf020:44802            bom07s29-in-f3.1e:https ESTABLISHED
tcp        0      0 ccf020:45296            bom07s29-in-f3.1e:https ESTABLISHED
tcp        0      0 ccf020:33086            bom12s08-in-f14.1:https ESTABLISHED
tcp        0      0 ccf020:52306            bom12s16-in-f14.1:https ESTABLISHED
tcp        0      0 ccf020:52306            bom12s16-in-f14.1:https ESTABLISHED
tcp6       0      0 [::]:ssh                [::]:*                  LISTEN
tcp6       0      0 ip6-localhost:ipp       [::]:*                  LISTEN
udp        0      0 localhost:domain        0.0.0.0:*
udp        0      0 0.0.0.0:45559           0.0.0.0:*
udp        0      0 0.0.0.0:ipp             0.0.0.0:*
udp        0      0 0.0.0.0:mdns            0.0.0.0:*
udp        0      0 0.0.0.0:mdns            0.0.0.0:*
udp        0      0 0.0.0.0:mdns            0.0.0.0:*
udp6       0      0 [::]:48054              [::]:*
udp6       0      0 [::]:mdns               [::]:*
udp6       0      0 [::]:mdns               [::]:*
raw      768      0 0.0.0.0:icmp            0.0.0.0:*               7
raw    12288      0 0.0.0.0:icmp            0.0.0.0:*               7
raw6   35328      0 [::]:ipv6-icmp          [::]:*                  7
```

```
student@ccf020:~$ ls /etc
acpi                          hosts.allow                popularity-contest.conf
adduser.conf                  hosts.deny                 ppp
alternatives                  hp                         printcap
anacrontab                    ifplugd                    profile
apg.conf                      ImageMagick-6              profile.d
apm                           init                       protocols
     Screenshot               init.d                     pulse
apparmor
apparmor.d                    initramfs-tools            python2.7
apport                        inputrc                    python3
appstream.conf                insserv.conf.d             python3.6
apt                           iproute2                   rc0.d
avahi                         issue                      rc1.d
bash.bashrc                   issue.net                  rc2.d
bash_completion               java-11-openjdk            rc3.d
bash_completion.d             kernel                     rc4.d
bindresvport.blacklist        kernel-img.conf            rc5.d
binfmt.d                      kerneloops.conf            rc6.d
bluetooth                     ldap                       rcS.d
brlapi.key                    ld.so.cache                resolvconf
brltty                        ld.so.conf                 resolv.conf
brltty.conf                   ld.so.conf.d               rmt
ca-certificates               legal                      rpc
ca-certificates.conf          libao.conf                 rsyslog.conf
ca-certificates.conf.dpkg-old libaudit.conf              rsyslog.d
calendar                      libblockdev                sane.d
chatscripts                   libnl-3                    securetty
console-setup                 libpaper.d                 security
cracklib                      libreoffice                selinux
cron.d                        lintianrc                  sensors3.conf
cron.daily                    locale.alias               sensors.d
cron.hourly                   locale.gen                 services
cron.monthly                  localtime                  shadow
crontab                       logcheck                   shadow-
cron.weekly                   login.defs                 shells
cups                          logrotate.conf             skel
cupshelpers                   logrotate.d                speech-dispatcher
```

```
rajagiri@ccf018:~$ traceroute google.com
traceroute to google.com (142.250.196.14), 30 hops max, 60 byte packets
 1  _gateway (192.168.0.66)  0.218 ms  0.213 ms  0.207 ms
 2  1.6.22.65 (1.6.22.65)  1.281 ms  1.590 ms  1.633 ms
 3  maa03s44-in-f14.1e100.net (142.250.196.14)  33.788 ms  32.424 ms  28.436 ms
rajagiri@ccf018:~$ route -n
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
0.0.0.0         192.168.0.66    0.0.0.0         UG    100    0        0 enp3s0
169.254.0.0     0.0.0.0         255.255.0.0     U     1000   0        0 enp3s0
192.168.0.0     0.0.0.0         255.255.0.0     U     100    0        0 enp3s0
```