Phase 1: "I'd like to Teach the World to Ping"

Solution:

Create a file containing the IP Addresses/Subnet-mask, and addresses range, named **hollywood_office_iprange.txt** to record the Hollywood office IP ranges from the **Rock Star Server List** provided with the command syntax :

$ echo “<IP Address/Subnet Mask> <Subnet Address Range>” >> hollywood_office_iprange.txt

```
sysadmin@UbuntuDesktop:~$
sysadmin@UbuntuDesktop:~$ echo "<IP Address/subnet mask> : <Subnet IP Address Range>" > hollywood_office_iprange.txt
sysadmin@UbuntuDesktop:~$ echo "15.199.95.91/28 : 15.199.95.80 - 15.199.95.95" >> hollywood_office_iprange.txt
sysadmin@UbuntuDesktop:~$ echo "15.199.94.91/28 : 15.199.94.80 - 15.199.94.95" >> hollywood_office_iprange.txt
sysadmin@UbuntuDesktop:~$ echo "167.172.144.11/32 : 167.172.144.11" >> hollywood_office_iprange.txt
sysadmin@UbuntuDesktop:~$ echo "11.199.141.91/28 : 11.199.141.80 - 11.199.141.95" >> hollywood_office_iprange.txt
sysadmin@UbuntuDesktop:~$ echo "11.199.158.91/28 : 11.199.158.80 - 11.199.158.95" >> hollywood_office_iprange.txt
sysadmin@UbuntuDesktop:~$ cat hollywood_office_iprange.txt
<IP Address/subnet mask> : <Subnet IP Address Range>
15.199.95.91/28 : 15.199.95.80 - 15.199.95.95
15.199.94.91/28 : 15.199.94.80 - 15.199.94.95
167.172.144.11/32 : 167.172.144.11
11.199.141.91/28 : 11.199.141.80 - 11.199.141.95
11.199.158.91/28 : 11.199.158.80 - 11.199.158.95
sysadmin@UbuntuDesktop:~$
sysadmin@UbuntuDesktop:~$
```

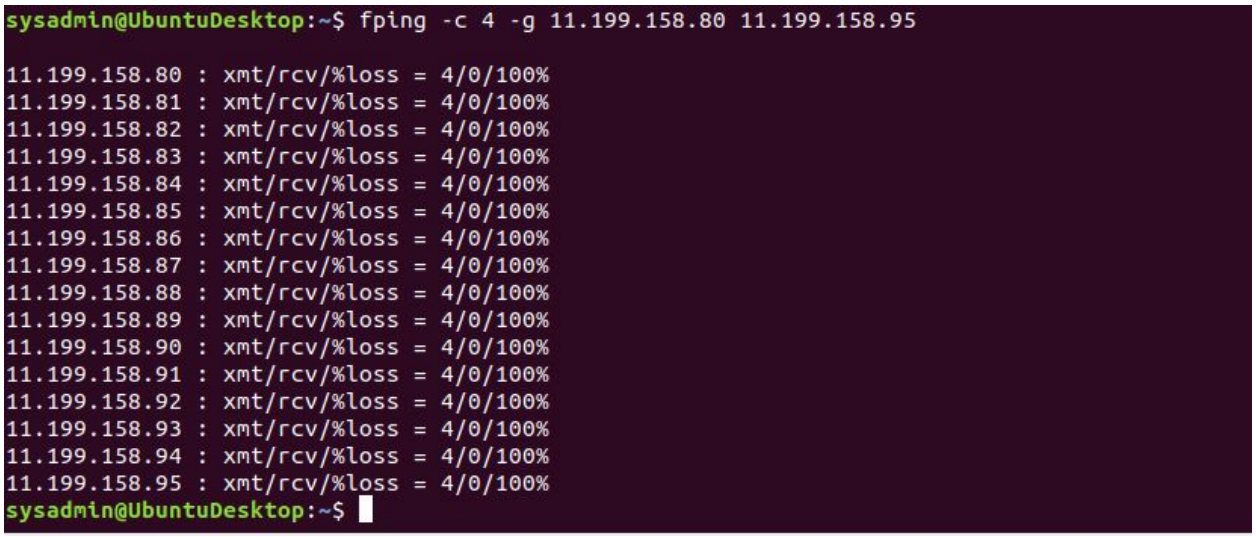
Run **fping** against the IP ranges:

```
ysadmin@UbuntuDesktop:~$ fping -c 4 -g 15.199.95.80 15.199.95.95

5.199.95.80 : xmt/rcv/%loss = 4/0/100%
5.199.95.81 : xmt/rcv/%loss = 4/0/100%
5.199.95.82 : xmt/rcv/%loss = 4/0/100%
5.199.95.83 : xmt/rcv/%loss = 4/0/100%
5.199.95.84 : xmt/rcv/%loss = 4/0/100%
5.199.95.85 : xmt/rcv/%loss = 4/0/100%
5.199.95.86 : xmt/rcv/%loss = 4/0/100%
5.199.95.87 : xmt/rcv/%loss = 4/0/100%
5.199.95.88 : xmt/rcv/%loss = 4/0/100%
5.199.95.89 : xmt/rcv/%loss = 4/0/100%
5.199.95.90 : xmt/rcv/%loss = 4/0/100%
5.199.95.91 : xmt/rcv/%loss = 4/0/100%
5.199.95.92 : xmt/rcv/%loss = 4/0/100%
5.199.95.93 : xmt/rcv/%loss = 4/0/100%
5.199.95.94 : xmt/rcv/%loss = 4/0/100%
5.199.95.95 : xmt/rcv/%loss = 4/0/100%
ysadmin@UbuntuDesktop:~$
```

```
sysadmin@UbuntuDesktop:~$ fping -c 4 -g 15.199.94.80 15.199.94.95

15.199.94.80 : xmt/rcv/%loss = 4/0/100%
15.199.94.81 : xmt/rcv/%loss = 4/0/100%
15.199.94.82 : xmt/rcv/%loss = 4/0/100%
15.199.94.83 : xmt/rcv/%loss = 4/0/100%
15.199.94.84 : xmt/rcv/%loss = 4/0/100%
15.199.94.85 : xmt/rcv/%loss = 4/0/100%
15.199.94.86 : xmt/rcv/%loss = 4/0/100%
15.199.94.87 : xmt/rcv/%loss = 4/0/100%
15.199.94.88 : xmt/rcv/%loss = 4/0/100%
15.199.94.89 : xmt/rcv/%loss = 4/0/100%
15.199.94.90 : xmt/rcv/%loss = 4/0/100%
15.199.94.91 : xmt/rcv/%loss = 4/0/100%
15.199.94.92 : xmt/rcv/%loss = 4/0/100%
15.199.94.93 : xmt/rcv/%loss = 4/0/100%
15.199.94.94 : xmt/rcv/%loss = 4/0/100%
15.199.94.95 : xmt/rcv/%loss = 4/0/100%
sysadmin@UbuntuDesktop:~$
```

```
ysadmin@UbuntuDesktop:~$ fping -c 4 -g 167.172.144.11 167.172.144.11
67.172.144.11 : [0], 84 bytes, 59.2 ms (59.2 avg, 0% loss)
67.172.144.11 : [1], 84 bytes, 49.3 ms (54.2 avg, 0% loss)
67.172.144.11 : [2], 84 bytes, 46.1 ms (51.5 avg, 0% loss)
67.172.144.11 : [3], 84 bytes, 46.1 ms (50.2 avg, 0% loss)

67.172.144.11 : xmt/rcv/%loss = 4/4/0%, min/avg/max = 46.1/50.2/59.2
ysadmin@UbuntuDesktop:~$
```

```
sysadmin@UbuntuDesktop:~$ fping -c 4 -g 11.199.141.80 11.199.141.95

11.199.141.80 : xmt/rcv/%loss = 4/0/100%
11.199.141.81 : xmt/rcv/%loss = 4/0/100%
11.199.141.82 : xmt/rcv/%loss = 4/0/100%
11.199.141.83 : xmt/rcv/%loss = 4/0/100%
11.199.141.84 : xmt/rcv/%loss = 4/0/100%
11.199.141.85 : xmt/rcv/%loss = 4/0/100%
11.199.141.86 : xmt/rcv/%loss = 4/0/100%
11.199.141.87 : xmt/rcv/%loss = 4/0/100%
11.199.141.88 : xmt/rcv/%loss = 4/0/100%
11.199.141.89 : xmt/rcv/%loss = 4/0/100%
11.199.141.90 : xmt/rcv/%loss = 4/0/100%
11.199.141.91 : xmt/rcv/%loss = 4/0/100%
11.199.141.92 : xmt/rcv/%loss = 4/0/100%
11.199.141.93 : xmt/rcv/%loss = 4/0/100%
11.199.141.94 : xmt/rcv/%loss = 4/0/100%
11.199.141.95 : xmt/rcv/%loss = 4/0/100%
sysadmin@UbuntuDesktop:~$
```



Summary

IP address 167.172.144.11 accepts connections because 4 ICMP packets were transmitted and received given a percentage loss of zero (0% loss).

All other IP ranges provided do not accept connections, which could be for security reasons to prevent **ping flood.**

The OSI layer to which these findings are based is **Network Layer.**