

1. External

```
PING 104.196.54.211 (104.196.54.211) 56(84) bytes of data.
64 bytes from 104.196.54.211: icmp_seq=1 ttl=61 time=0.523 ms
64 bytes from 104.196.54.211: icmp_seq=2 ttl=61 time=0.600 ms
64 bytes from 104.196.54.211: icmp_seq=3 ttl=61 time=0.562 ms
64 bytes from 104.196.54.211: icmp_seq=4 ttl=61 time=0.572 ms
64 bytes from 104.196.54.211: icmp_seq=5 ttl=61 time=0.604 ms
64 bytes from 104.196.54.211: icmp_seq=6 ttl=61 time=0.554 ms
64 bytes from 104.196.54.211: icmp_seq=7 ttl=61 time=0.640 ms
64 bytes from 104.196.54.211: icmp_seq=8 ttl=61 time=0.575 ms
64 bytes from 104.196.54.211: icmp_seq=9 ttl=61 time=0.637 ms
64 bytes from 104.196.54.211: icmp_seq=10 ttl=61 time=0.578 ms
64 bytes from 104.196.54.211: icmp_seq=11 ttl=61 time=0.555 ms
64 bytes from 104.196.54.211: icmp_seq=12 ttl=61 time=0.608 ms
64 bytes from 104.196.54.211: icmp_seq=13 ttl=61 time=0.636 ms
64 bytes from 104.196.54.211: icmp_seq=14 ttl=61 time=0.483 ms
64 bytes from 104.196.54.211: icmp_seq=15 ttl=61 time=0.491 ms
64 bytes from 104.196.54.211: icmp_seq=16 ttl=61 time=0.548 ms
64 bytes from 104.196.54.211: icmp_seq=17 ttl=61 time=0.470 ms
64 bytes from 104.196.54.211: icmp_seq=18 ttl=61 time=0.492 ms
64 bytes from 104.196.54.211: icmp_seq=19 ttl=61 time=0.561 ms
64 bytes from 104.196.54.211: icmp_seq=20 ttl=61 time=0.547 ms
64 bytes from 104.196.54.211: icmp_seq=21 ttl=61 time=0.461 ms
64 bytes from 104.196.54.211: icmp_seq=22 ttl=61 time=0.576 ms
64 bytes from 104.196.54.211: icmp_seq=23 ttl=61 time=0.558 ms
64 bytes from 104.196.54.211: icmp_seq=24 ttl=61 time=0.433 ms
64 bytes from 104.196.54.211: icmp_seq=25 ttl=61 time=0.604 ms
^C
--- 104.196.54.211 ping statistics ---
25 packets transmitted, 25 received, 0% packet loss, time 24575ms
rtt min/avg/max/mdev = 0.433/0.554/0.640/0.062 ms
jahidley42@instance-1:~$

jahidley42@instance-2:~$ ping 34.73.53.10
PING 34.73.53.10 (34.73.53.10) 56(84) bytes of data.
64 bytes from 34.73.53.10: icmp_seq=1 ttl=61 time=2.13 ms
64 bytes from 34.73.53.10: icmp_seq=2 ttl=61 time=0.537 ms
64 bytes from 34.73.53.10: icmp_seq=3 ttl=61 time=0.493 ms
64 bytes from 34.73.53.10: icmp_seq=4 ttl=61 time=0.872 ms
64 bytes from 34.73.53.10: icmp_seq=5 ttl=61 time=0.567 ms
64 bytes from 34.73.53.10: icmp_seq=6 ttl=61 time=0.582 ms
64 bytes from 34.73.53.10: icmp_seq=7 ttl=61 time=0.582 ms
64 bytes from 34.73.53.10: icmp_seq=8 ttl=61 time=0.573 ms
64 bytes from 34.73.53.10: icmp_seq=9 ttl=61 time=0.524 ms
64 bytes from 34.73.53.10: icmp_seq=10 ttl=61 time=0.502 ms
64 bytes from 34.73.53.10: icmp_seq=11 ttl=61 time=0.576 ms
64 bytes from 34.73.53.10: icmp_seq=12 ttl=61 time=0.432 ms
64 bytes from 34.73.53.10: icmp_seq=13 ttl=61 time=0.501 ms
64 bytes from 34.73.53.10: icmp_seq=14 ttl=61 time=0.580 ms
64 bytes from 34.73.53.10: icmp_seq=15 ttl=61 time=0.481 ms
64 bytes from 34.73.53.10: icmp_seq=16 ttl=61 time=0.500 ms
64 bytes from 34.73.53.10: icmp_seq=17 ttl=61 time=0.511 ms
64 bytes from 34.73.53.10: icmp_seq=18 ttl=61 time=0.495 ms
64 bytes from 34.73.53.10: icmp_seq=19 ttl=61 time=0.506 ms
64 bytes from 34.73.53.10: icmp_seq=20 ttl=61 time=0.473 ms
64 bytes from 34.73.53.10: icmp_seq=21 ttl=61 time=0.499 ms
64 bytes from 34.73.53.10: icmp_seq=22 ttl=61 time=0.462 ms
64 bytes from 34.73.53.10: icmp_seq=23 ttl=61 time=0.520 ms
64 bytes from 34.73.53.10: icmp_seq=24 ttl=61 time=0.534 ms
^C
--- 34.73.53.10 ping statistics ---
24 packets transmitted, 24 received, 0% packet loss, time 23531ms
rtt min/avg/max/mdev = 0.432/0.601/2.134/0.330 ms
jahidley42@instance-2:~$
```

1. Internal

```
jahidley42@instance-1:~$ ping 10.142.0.2
PING 10.142.0.2 (10.142.0.2) 56(84) bytes of data.
64 bytes from 10.142.0.2: icmp_seq=1 ttl=64 time=0.033 ms
64 bytes from 10.142.0.2: icmp_seq=2 ttl=64 time=0.044 ms
64 bytes from 10.142.0.2: icmp_seq=3 ttl=64 time=0.041 ms
64 bytes from 10.142.0.2: icmp_seq=4 ttl=64 time=0.047 ms
64 bytes from 10.142.0.2: icmp_seq=5 ttl=64 time=0.050 ms
64 bytes from 10.142.0.2: icmp_seq=6 ttl=64 time=0.043 ms
64 bytes from 10.142.0.2: icmp_seq=7 ttl=64 time=0.050 ms
64 bytes from 10.142.0.2: icmp_seq=8 ttl=64 time=0.043 ms
64 bytes from 10.142.0.2: icmp_seq=9 ttl=64 time=0.044 ms
64 bytes from 10.142.0.2: icmp_seq=10 ttl=64 time=0.041 ms
64 bytes from 10.142.0.2: icmp_seq=11 ttl=64 time=0.059 ms
64 bytes from 10.142.0.2: icmp_seq=12 ttl=64 time=0.042 ms
64 bytes from 10.142.0.2: icmp_seq=13 ttl=64 time=0.063 ms
64 bytes from 10.142.0.2: icmp_seq=14 ttl=64 time=0.043 ms
64 bytes from 10.142.0.2: icmp_seq=15 ttl=64 time=0.042 ms
64 bytes from 10.142.0.2: icmp_seq=16 ttl=64 time=0.045 ms
64 bytes from 10.142.0.2: icmp_seq=17 ttl=64 time=0.045 ms
64 bytes from 10.142.0.2: icmp_seq=18 ttl=64 time=0.051 ms
^C
--- 10.142.0.2 ping statistics ---
18 packets transmitted, 18 received, 0% packet loss, time 17413ms
rtt min/avg/max/mdev = 0.033/0.045/0.063/0.011 ms
jahidley42@instance-1:~$

jahidley42@instance-2:~$ ping 10.142.0.3
PING 10.142.0.3 (10.142.0.3) 56(84) bytes of data.
64 bytes from 10.142.0.3: icmp_seq=1 ttl=64 time=0.029 ms
64 bytes from 10.142.0.3: icmp_seq=2 ttl=64 time=0.045 ms
64 bytes from 10.142.0.3: icmp_seq=3 ttl=64 time=0.049 ms
64 bytes from 10.142.0.3: icmp_seq=4 ttl=64 time=0.041 ms
64 bytes from 10.142.0.3: icmp_seq=5 ttl=64 time=0.041 ms
64 bytes from 10.142.0.3: icmp_seq=6 ttl=64 time=0.043 ms
64 bytes from 10.142.0.3: icmp_seq=7 ttl=64 time=0.040 ms
64 bytes from 10.142.0.3: icmp_seq=8 ttl=64 time=0.051 ms
64 bytes from 10.142.0.3: icmp_seq=9 ttl=64 time=0.074 ms
64 bytes from 10.142.0.3: icmp_seq=10 ttl=64 time=0.053 ms
64 bytes from 10.142.0.3: icmp_seq=11 ttl=64 time=0.061 ms
64 bytes from 10.142.0.3: icmp_seq=12 ttl=64 time=0.059 ms
64 bytes from 10.142.0.3: icmp_seq=13 ttl=64 time=0.052 ms
64 bytes from 10.142.0.3: icmp_seq=14 ttl=64 time=0.053 ms
64 bytes from 10.142.0.3: icmp_seq=15 ttl=64 time=0.062 ms
64 bytes from 10.142.0.3: icmp_seq=16 ttl=64 time=0.056 ms
64 bytes from 10.142.0.3: icmp_seq=17 ttl=64 time=0.057 ms
64 bytes from 10.142.0.3: icmp_seq=18 ttl=64 time=0.055 ms
^C
--- 10.142.0.3 ping statistics ---
18 packets transmitted, 18 received, 0% packet loss, time 17411ms
rtt min/avg/max/mdev = 0.029/0.051/0.074/0.010 ms
jahidley42@instance-2:~$
```

	instance-1	instance-2
Internal	All packets received with	All packets received with

	0% packet loss. The minimal time it took to receive one packet was 0.033ms. The maximum time it took to receive one packet was 0.063ms. The average time to receive 10 packets was 0.045ms.	0% packet loss. The minimal time it took to receive one packet was 0.029ms. The maximum time it took to receive one packet was 0.074ms. The average time to receive 10 packets was 0.051ms.
External	All packets received with 0% packet loss. The minimal time it took to receive one packet was 0.433ms. The maximum time it took to receive one packet was 0.640ms. The average time to receive 25 packets was 0.554ms.	All packets received with 0% packet loss. The minimal time it took to receive one packet was 0.432ms. The maximum time it took to receive one packet was 2.134ms. The average time to receive 24 packets was 0.601ms.

4.

jahidley42@instance-1: ~

```

traceroute to google.com (172.217.193.138), 30 hops max, 60 byte packets
 1 * * *
 2 142.250.57.70 (142.250.57.70) 1.492 ms 216.239.50.36 (216.239.50.36) 1.529
ms 142.250.57.70 (142.250.57.70) 1.455 ms
 3 172.253.74.157 (172.253.74.157) 1.197 ms 72.14.239.99 (72.14.239.99) 1.891
ms 172.253.74.125 (172.253.74.125) 1.181 ms
 4 * * *
 5 * * *
 6 * * *
 7 * * *
 8 * * *
 9 * * *
10 * * *
11 * * *
12 * * *
13 ud-in-f138.1e100.net (172.217.193.138) 0.752 ms 0.739 ms 0.255 ms
jahidley42@instance-1:~$

```

6. Run ifconfig

jahidley42@instance-2: ~

```

traceroute to google.com (172.217.204.138), 30 hops max, 60 byte packets
 1 * * *
 2 216.239.47.196 (216.239.47.196) 1.891 ms 172.253.77.16 (172.253.77.16) 1.7
40 ms 142.250.57.18 (142.250.57.18) 1.903 ms
 3 172.253.74.204 (172.253.74.204) 1.973 ms 142.251.79.104 (142.251.79.104) 2
.783 ms 216.239.49.108 (216.239.49.108) 1.949 ms
 4 64.233.175.118 (64.233.175.118) 2.175 ms 216.239.42.63 (216.239.42.63) 2.0
60 ms 142.251.227.226 (142.251.227.226) 2.364 ms
 5 209.85.246.147 (209.85.246.147) 2.769 ms 74.125.253.119 (74.125.253.119) 3
.913 ms 209.85.247.169 (209.85.247.169) 3.618 ms
 6 * * *
 7 * * *
 8 * * *
 9 * * *
10 * * *
11 * * *
12 * * *
13 * * *
14 * * *
15 ue-in-f138.1e100.net (172.217.204.138) 0.867 ms 0.856 ms 0.305 ms
jahidley42@instance-2:~$

```

Instance-1	Instance-2
There are 3 hops to get to its destination	There are 5 hops to get to its destination

7.

jahidley42@instance-1: ~\$ ifconfig

```

ens4: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1460
    inet 10.142.0.2 netmask 255.255.255.255 broadcast 0.0.0.0
    inet6 fe80::4001:aff:fe8e:2 prefixlen 64 scopeid 0x20<link>
    ether 42:01:0a:8e:00:02 txqueuelen 1000 (Ethernet)
    RX packets 27209 bytes 111374869 (111.3 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 23580 bytes 2332674 (2.3 MB)
    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 1426 bytes 154139 (154.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1426 bytes 154139 (154.1 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
jahidley42@instance-1:~$

```

jahidley42@instance-2: ~\$ ifconfig

```

ens4: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1460
    inet 10.142.0.3 netmask 255.255.255.255 broadcast 0.0.0.0
    inet6 fe80::4001:aff:fe8e:3 prefixlen 64 scopeid 0x20<link>
    ether 42:01:0a:8e:00:03 txqueuelen 1000 (Ethernet)
    RX packets 30505 bytes 103690172 (103.6 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 27783 bytes 3127275 (3.1 MB)
    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 1402 bytes 154915 (154.9 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1402 bytes 154915 (154.9 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
jahidley42@instance-2:~$

```

Instance-1:

IP: 10.142.0.2

Ethernet: 42:01:0a:8e:00:02

Netmask: 255.255.255.255

MTU: 1460

Instance-2:

IP: 10.142.0.3

Ethernet: 42:01:0a:8e:00:03

Netmask: 255.255.255.255

MTU: 1460

8.

```
jahidley42@instance-1:~$ ip route show
default via 10.142.0.1 dev ens4 proto dhcp src 10.142.0.2 metric 100
10.142.0.1 dev ens4 proto dhcp scope link src 10.142.0.2 metric 100
jahidley42@instance-1:~$
```

```
jahidley42@instance-2:~$ ip route show
default via 10.142.0.1 dev ens4 proto dhcp src 10.142.0.3 metric 100
10.142.0.1 dev ens4 proto dhcp scope link src 10.142.0.3 metric 100
jahidley42@instance-2:~$
```

9.

They both show the default routes which is the internal IP.