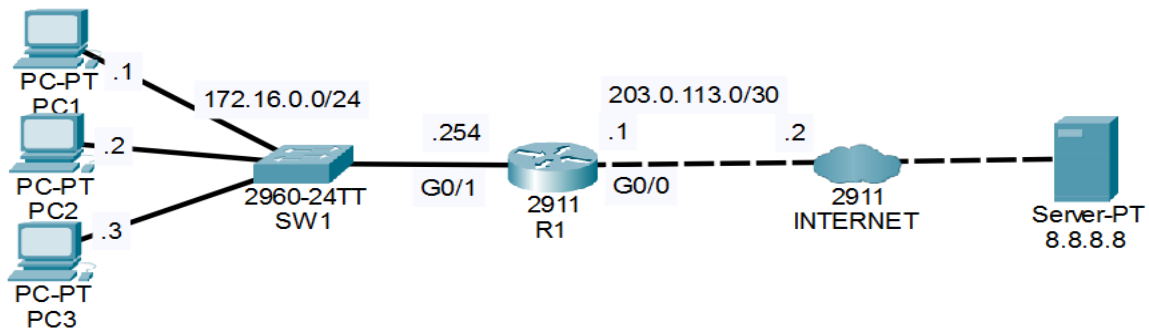


Network Topology:



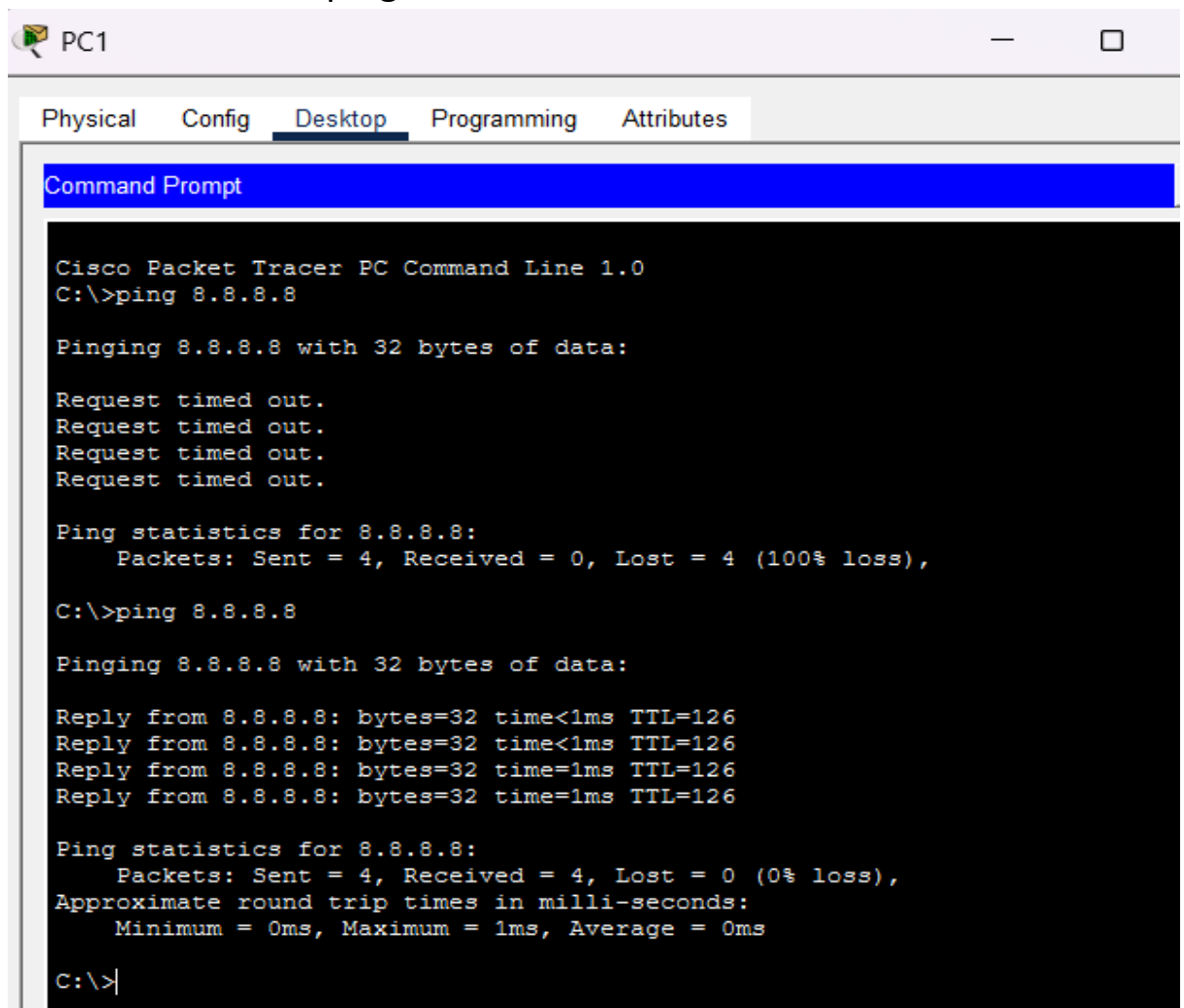
Instructions and actions:

1. Configure static NAT on R1

R1 CLI:

```
R1>en
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#int g0/1
R1(config-if)#ip nat inside
R1(config-if)#int g0/0
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#ip nat inside source static 172.16.0.1 100.0.0.1
R1(config)#ip nat inside source static 172.16.0.2 100.0.0.2
R1(config)#ip nat inside source static 172.16.0.3 100.0.0.3
R1(config)#do sh ip nat translations
Pro  Inside global      Inside local          Outside local          Outside global
---  ---                ---                  ---                  ---
---  100.0.0.1           172.16.0.1           ---                  ---
---  100.0.0.2           172.16.0.2           ---                  ---
---  100.0.0.3           172.16.0.3           ---                  ---
R1(config)#
```

PC1 is now able to ping SRV1 across the internet



2. Ping google.com from PC1, and then check the nat translations on R1

NAT translations on R1 after doing <ping google.com> on PC1:

Here, the PC asks SRV1 for the IP address of google.com on port 53, which is used for DNS.

```
R1(config)#do sh ip nat translations
Pro  Inside global      Inside local      Outside local      Outside global
icmp 100.0.0.1:10      172.16.0.1:10    172.217.175.238:10
172.217.175.238:10
icmp 100.0.0.1:11      172.16.0.1:11    172.217.175.238:11
172.217.175.238:11
icmp 100.0.0.1:12      172.16.0.1:12    172.217.175.238:12
172.217.175.238:12
icmp 100.0.0.1:9       172.16.0.1:9     172.217.175.238:9
172.217.175.238:9
--- 100.0.0.1          172.16.0.1       ---               ---
--- 100.0.0.2          172.16.0.2       ---               ---
--- 100.0.0.3          172.16.0.3       ---               ---
udp 100.0.0.1:1025     172.16.0.1:1025  8.8.8.8:53       8.8.8.8:53
R1(config)#
```

3. Clear the NAT translations on R1. Which entries remain?

Static entries remain –

```
R1#clear ip nat translation *
R1#sh ip nat translations
Pro  Inside global      Inside local      Outside local      Outside global
---  100.0.0.1          172.16.0.1       ---               ---
---  100.0.0.2          172.16.0.2       ---               ---
---  100.0.0.3          172.16.0.3       ---               ---
R1#
```