1. **Attempt to ping from PC1 to 8.8.8.8. Does the ping work?**

2. **Configure static NAT on R1.**
   - **Configure the appropriate inside/outside interfaces**
   - **Map the IP addresses of PC1, PC2, and PC3 to 100.0.0.x/24**

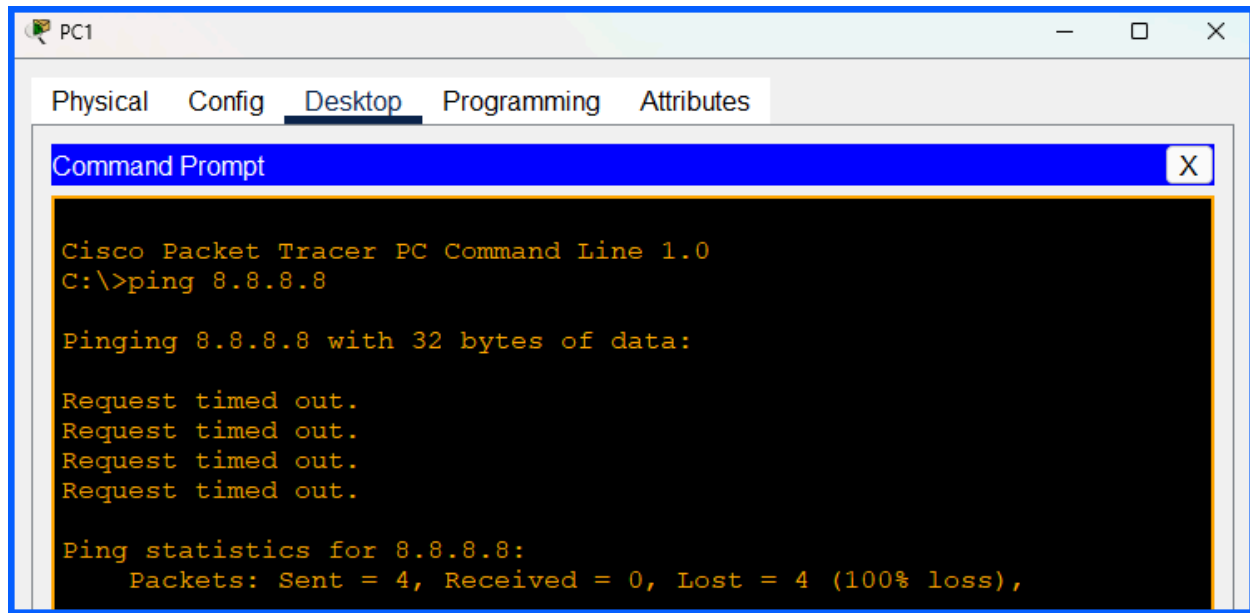3. **Ping 8.8.8.8 from PC1 again. Does the ping work?**

4. **Ping google.com from each PC, and then check the NAT translations on R1.**

5. **Clear the NAT translations on R1. Which entries remain?**

Task 1. Attempt to ping from PC1 to 8.8.8.8. Does the ping work?

On PC1
   - ping 8.8.8.8

The ping did not work: The Request Timed Out

Task 2. Configure static NAT on R1.
  - **Task 2A: Configure the appropriate inside/outside interfaces**
  - **Task 2B: Map the IP addresses of PC1, PC2, and PC3 to 100.0.0.x/24**

Task 2A Configure the appropriate inside/outside interfaces

Configure R1

Enter Global Config mode:
  - enable
  - configure terminal

Note the 172.16.0.0/24 LAN is connected to R1 G0/1 interface and R1 G0/0 is connected to the internet

Configure R1 G0/1 as inside:
  - interface G0/1
  - ip nat inside

Configure R1 G0/0 as inside:
  - interface G0/0
  - ip nat outside
  - exit

Task 2B: Map the IP addresses of PC1, PC2, and PC3 to 100.0.0.x/24

Configure Static NAT for PC1 - 3
- ip nat inside source static 172.16.0.1 100.0.0.1
- ip nat inside source static 172.16.0.2 100.0.0.2
- ip nat inside source static 172.16.0.3 100.0.0.3
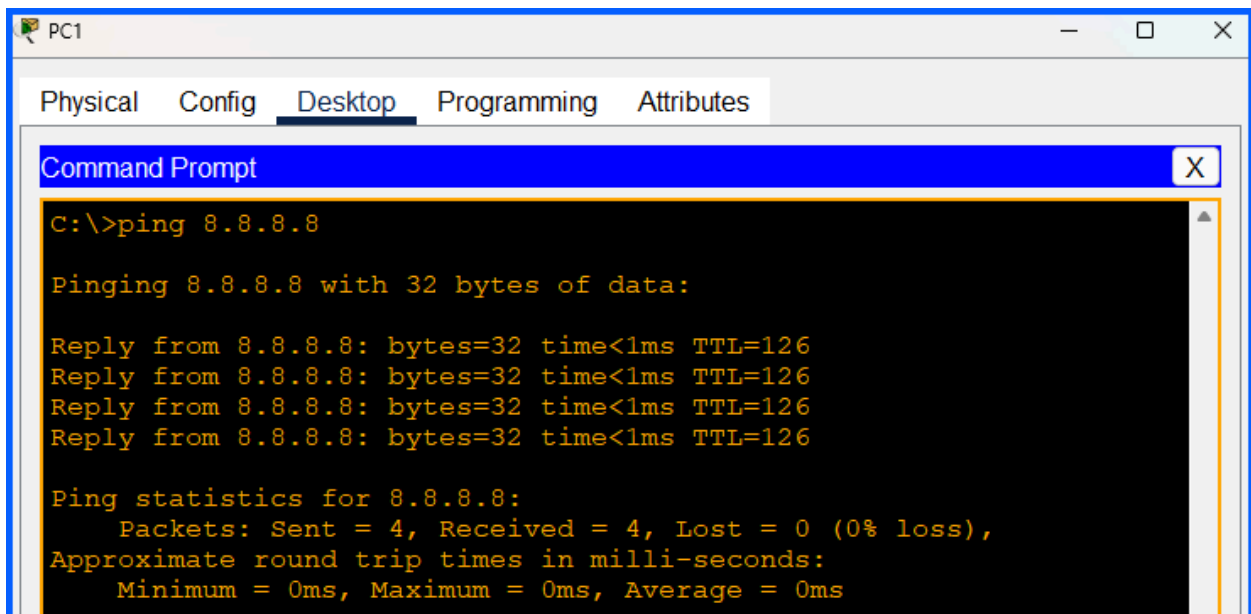
Verify:
- show ip nat translations

```
R1#show 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         ---                ---
```

Note: There's no translation yet because I haven't access a service over the internet

Task 3. Ping 8.8.8.8 from PC1 again. Does the ping work?

On PC1:
- ping 8.8.8.8

```
PC1                                                          —    □    X

Physical   Config   Desktop   Programming   Attributes

Command Prompt                                                    X

C:\>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:

Reply from 8.8.8.8: bytes=32 time<1ms TTL=126
Reply from 8.8.8.8: bytes=32 time<1ms TTL=126
Reply from 8.8.8.8: bytes=32 time<1ms TTL=126
Reply from 8.8.8.8: bytes=32 time<1ms TTL=126

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```
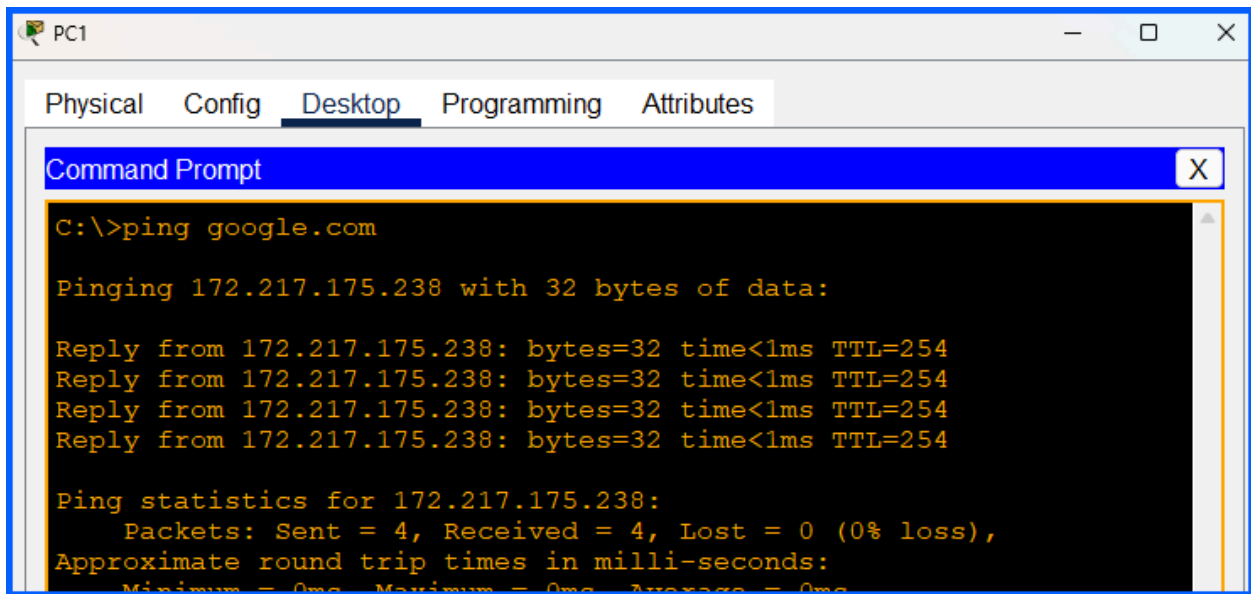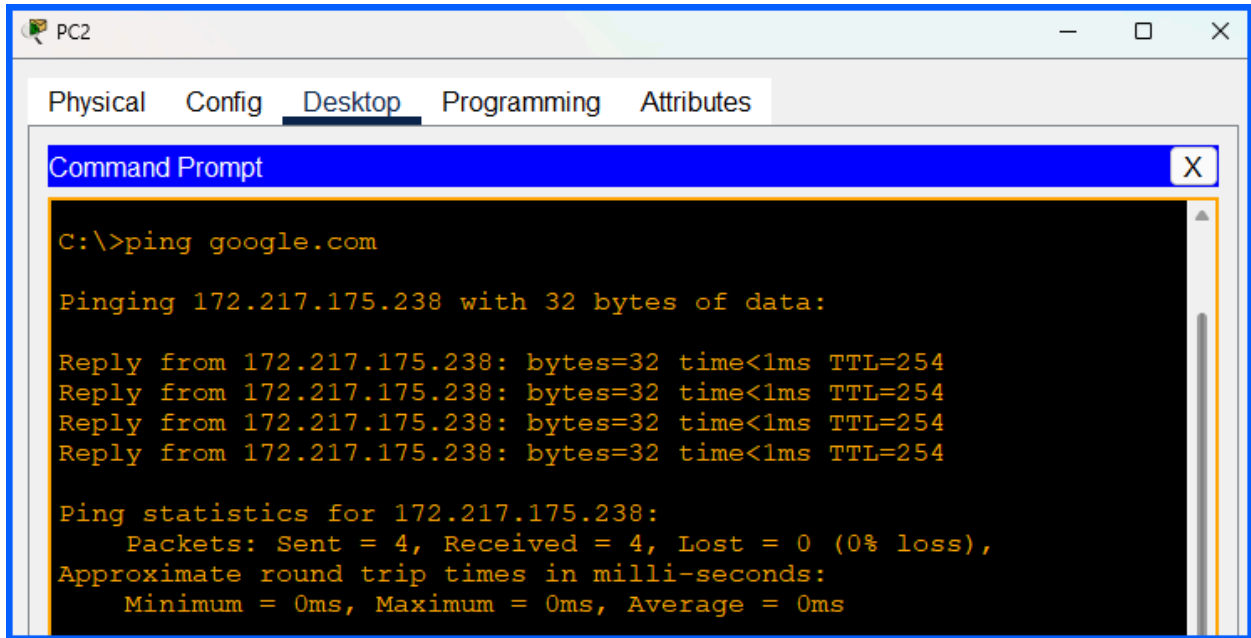
The ping was successful

On PC1 2 and 3
- ping google.com

PC1 ping success

PC2 ping success

PC1 ping success

PC3 ping success

Check the NAT translations on R1

In privileged EXEC mode:
- show ip nat translations

```
R1#show 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          ---                 ---
udp   100.0.0.1:1025    172.16.0.1:1025     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.1:1026    172.16.0.1:1026     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.1:1027    172.16.0.1:1027     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.1:1028    172.16.0.1:1028     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.2:1025    172.16.0.2:1025     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.2:1026    172.16.0.2:1026     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.2:1027    172.16.0.2:1027     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.3:1025    172.16.0.3:1025     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.3:1026    172.16.0.3:1026     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.3:1027    172.16.0.3:1027     8.8.8.8:53          8.8.8.8:53
udp   100.0.0.3:1028    172.16.0.3:1028     8.8.8.8:53          8.8.8.8:53
```

Task 5. Clear the NAT translations on R1. Which entries remain?

In privileged EXEC mode:
- clear ip nat translations *

View NAT translations once again:
- show ip nat translations

Even though I only configured static NAT, not dynamic NAT, every time the static NAT entries were used, dynamic entries were added to the NAT translation table for those translations.

After clearing the translations only the Static Nat entries remained