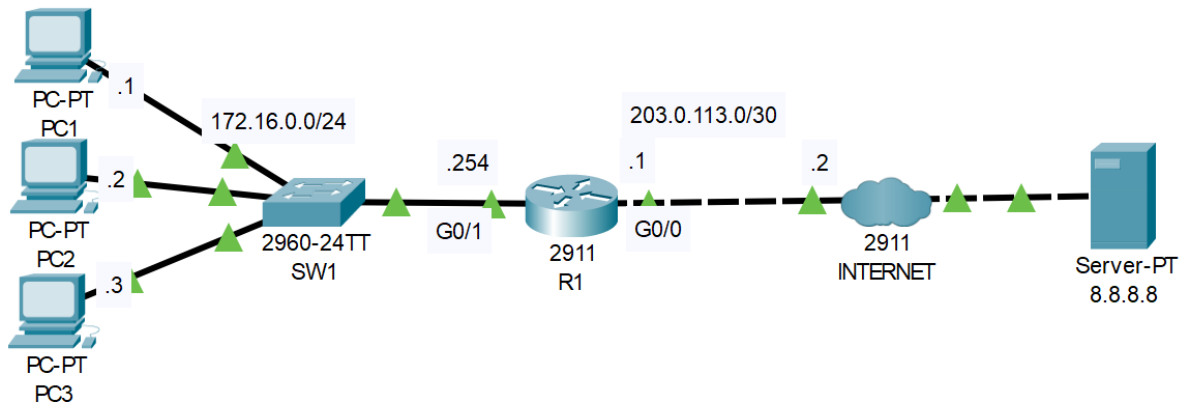Lab-Report

Topic: Static NAT

Source: Jeremy's IT Lab - Udemy

Student: Mono

1. Attempt to ping from PC1 to 8.8.8.8. Does the ping w ork?

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 w ork?

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?

1. No

2.

```
R1>
R1>en
R1#config 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)#exit
R1(config)#int g0/0
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#
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)#
R1(config)#do show ip nat trans
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)#
```

3. Yes.
4.

PC1

```
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

C:\>
```
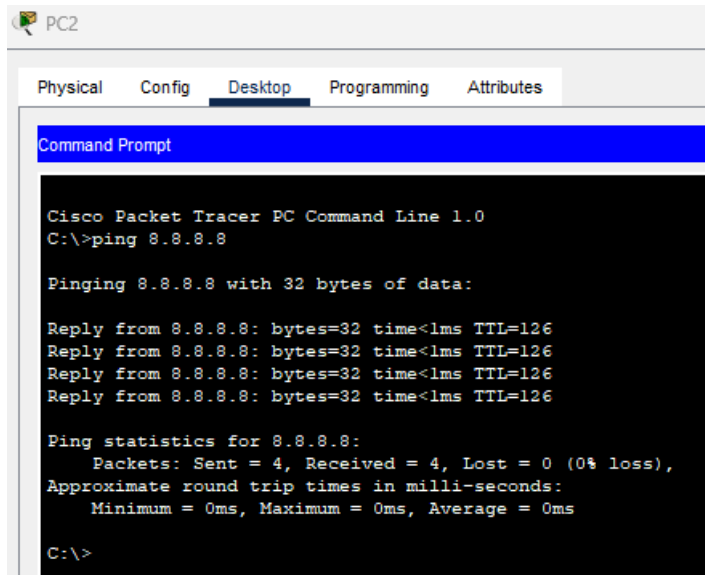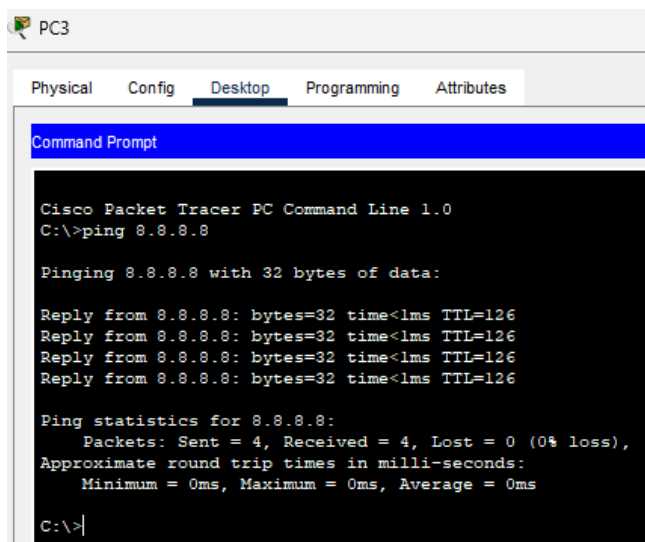
```
R1(config)#do show ip nat trans
Pro  Inside global    Inside local     Outside local    Outside global
icmp 100.0.0.1:10     172.16.0.1:10    8.8.8.8:10       8.8.8.8:10
icmp 100.0.0.1:11     172.16.0.1:11    8.8.8.8:11       8.8.8.8:11
icmp 100.0.0.1:12     172.16.0.1:12    8.8.8.8:12       8.8.8.8:12
icmp 100.0.0.1:9      172.16.0.1:9     8.8.8.8:9        8.8.8.8:9
---  100.0.0.1        172.16.0.1       ---              ---
---  100.0.0.2        172.16.0.2       ---              ---
---  100.0.0.3        172.16.0.3       ---              ---
```

PC2:


```
R1(config)#do show ip nat trans
Pro  Inside global     Inside local      Outside local     Outside global
icmp 100.0.0.2:1       172.16.0.2:1      8.8.8.8:1         8.8.8.8:1
icmp 100.0.0.2:2       172.16.0.2:2      8.8.8.8:2         8.8.8.8:2
icmp 100.0.0.2:3       172.16.0.2:3      8.8.8.8:3         8.8.8.8:3
icmp 100.0.0.2:4       172.16.0.2:4      8.8.8.8:4         8.8.8.8:4
---  100.0.0.1         172.16.0.1        ---               ---
---  100.0.0.2         172.16.0.2        ---               ---
---  100.0.0.3         172.16.0.3        ---               ---
```

PC3

```
R1(config)#do show ip nat trans
Pro  Inside global     Inside local      Outside local     Outside global
icmp 100.0.0.3:1       172.16.0.3:1      8.8.8.8:1         8.8.8.8:1
icmp 100.0.0.3:2       172.16.0.3:2      8.8.8.8:2         8.8.8.8:2
icmp 100.0.0.3:3       172.16.0.3:3      8.8.8.8:3         8.8.8.8:3
icmp 100.0.0.3:4       172.16.0.3:4      8.8.8.8:4         8.8.8.8:4
---  100.0.0.1         172.16.0.1        ---               ---
---  100.0.0.2         172.16.0.2        ---               ---
---  100.0.0.3         172.16.0.3        ---               ---
```

5.

```
R1#clear ip nat trans
% Incomplete command.
R1#clear ip nat trans ?
  *  Deletes all dynamic translations
R1#clear ip nat trans *
R1#show ip nat trans
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        ---               ---
```