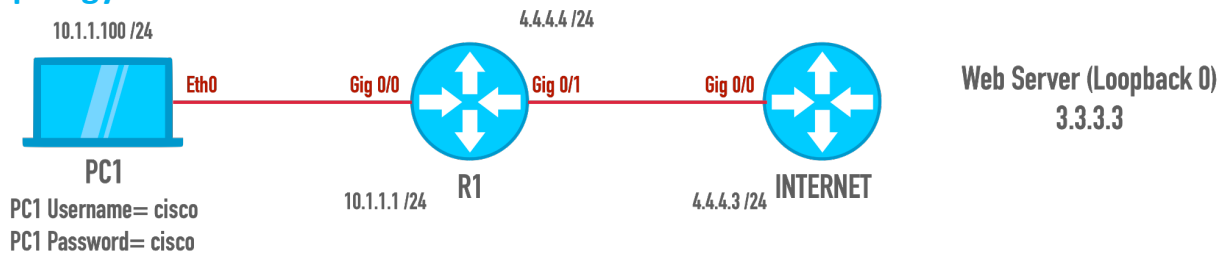


Static NAT

Topology



Inside Local= 10.1.1.100

Inside Global= 4.4.4.3

Initial Configuration Commands

PC1:

```
sudo ifconfig eth0 10.1.1.100 netmask 255.255.255.0 up
sudo ip route default via 10.1.1.1
```

R1:

```
enable
conf t
no ip domain-lookup
logging console
line con 0
logging synchronous
exec-timeout 0 0
hostname R1
int gig 0/0
no shutdown
ip address 10.1.1.1 255.255.255.0
int gig 0/1
no shutdown
ip address 4.4.4.4 255.255.255.0
router ospf 1
network 10.1.1.0 0.0.0.255 area 0
network 4.4.4.0 0.0.0.255 area 0
ip dhcp excluded-address 10.1.1.2 10.1.1.99
ip dhcp excluded-address 10.1.1.101 10.1.1.254
ip dhcp pool POOL
network 10.1.1.0 255.255.255.0
```

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```
default-router 10.1.1.1  
end  
copy run star
```

INTERNET:

```
enable
conf t
no ip domain-lookup
logging console
line con 0
logging synchronous
exec-timeout 0 0
hostname INTERNET
int gig 0/0
no shutdown
ip address 4.4.4.3 255.255.255.0
int lo 0
ip address 3.3.3.3 255.255.255.0
router ospf 1
network 4.4.4.0 0.0.0.255 area 0
network 3.3.3.0 0.0.0.255 area 0
end
copy run star
```

Lab Tasks

- On R1, designate which interface will be the inside NAT interface and which will be the outside NAT interface.
- Add a static NAT statement to map the inside local address to the inside global address.
- Login to PC1 (username= cisco, password= cisco) and verify connectivity to the Web Server at 3.3.3.3, and verify that the static translation takes place on R1.

Solution

Step 1: On R1, designate which interface will be the inside NAT interface and which will be the outside NAT interface.

```
R1>en
R1#conf t
R1 (config) #int gig 0/0
R1 (config-if) #ip nat inside
R1 (config-if) #int gig 0/1
R1 (config-if) #ip nat outside
R1 (config-if) #exit
```

Step 2: Add a static NAT statement to map the inside local address to the inside global address.

```
R1 (config) #ip nat inside source static 10.1.1.100 4.4.4.2
R1 (config) #end
```

Step 3: Login to PC1 (username= cisco, password= cisco) and verify connectivity to the Web Server at 3.3.3.3, and verify that the static translation takes place on R1.

```
inserthostname-here login: cisco
Password: cisco
```

```
inserthostname-here:~$ ping 3.3.3.3
PING 3.3.3.3 (3.3.3.3): 56 data bytes
64 bytes from 3.3.3.3: seq=0 ttl=42 time=2.357 ms
64 bytes from 3.3.3.3: seq=1 ttl=42 time=1.405 ms
64 bytes from 3.3.3.3: seq=2 ttl=42 time=1.676 ms
64 bytes from 3.3.3.3: seq=3 ttl=42 time=1.497 ms
64 bytes from 3.3.3.3: seq=4 ttl=42 time=1.656 ms
64 bytes from 3.3.3.3: seq=5 ttl=42 time=1.603 ms
64 bytes from 3.3.3.3: seq=6 ttl=42 time=1.500 ms
64 bytes from 3.3.3.3: seq=7 ttl=42 time=1.244 ms
^C
--- 3.3.3.3 ping statistics ---
8 packets transmitted, 8 packets received, 0% packet loss
round-trip min/avg/max = 1.244/1.617/2.357 ms
inserthostname-here:~$
```

(##commands are to be entered into PC1)

```
R1#show ip nat translations
```

Pro	Inside global	Inside local	Outside local	Outside global
icmp	4.4.4.2:3	10.1.1.100:3	3.3.3.3:3	3.3.3.3:3
---	4.4.4.2	10.1.1.100	---	---

(##Private IP address of PC1)

(##Publicly routable IP address of PC1)