

ACTIVIDAD 6.8.1 CONFIGURACIÓN NAT PARA IPV4

Memoria Técnica

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I. ANTECEDENTES

- I.1. Objetivos

- - **Configure NAT Dinamico con PAT**
 - **Configure NAT Estatico**

- I.2. Alcance

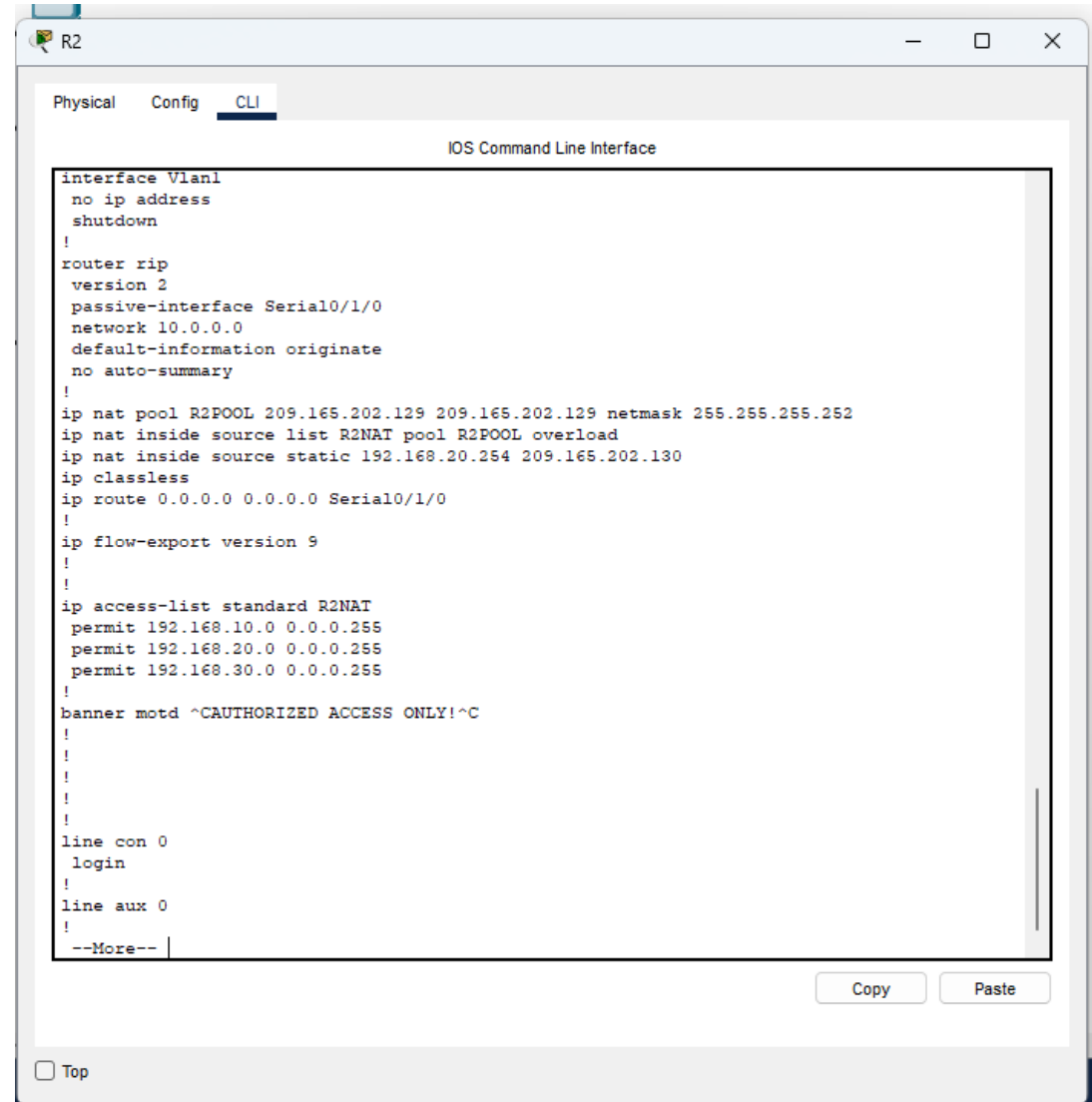
- En este laboratorio, configurará un router con NAT dinámico con PAT. Esto traducirá direcciones de las tres LAN internas a una única dirección externa. Además, configurará NAT estático para traducir una dirección interna del servidor a una dirección externa.

2. DESCRIPCIÓN TÉCNICA DE LA SOLUCIÓN

Configure NAT Dinamico con PAT

• UTILICE UNA ACL CON NOMBRE PARA PERMITIR LA TRADUCCIÓN DE LAS DIRECCIONES DE LAN1, LAN2 Y LAN3 . ESPECIFIQUE LAS LAN EN ESTE ORDEN. USA EL NOMBRE R2NAT. EL NOMBRE QUE UTILICE DEBE COINCIDIR EXACTAMENTE CON ESTE NOMBRE.

• CREE UN GRUPO NAT LLAMADO R2POOL. EL GRUPO DEBE USAR LA PRIMERA DIRECCIÓN DEL ESPACIO DE DIRECCIONES 209.165.202.128/30. EL NOMBRE DEL GRUPO QUE UTILICE DEBE COINCIDIR EXACTAMENTE CON ESTE NOMBRE. TODAS LAS DIRECCIONES TRADUCIDAS DEBEN USAR ESTA DIRECCIÓN COMO SU DIRECCIÓN EXTERNA.



The screenshot shows a Cisco IOS CLI window titled "R2" with tabs for "Physical", "Config", and "CLI". The "CLI" tab is active, displaying the "IOS Command Line Interface". The configuration commands entered are as follows:

```
interface Vlan1
no ip address
shutdown
!
router rip
version 2
passive-interface Serial0/1/0
network 10.0.0.0
default-information originate
no auto-summary
!
ip nat pool R2POOL 209.165.202.129 209.165.202.129 netmask 255.255.255.252
ip nat inside source list R2NAT pool R2POOL overload
ip nat inside source static 192.168.20.254 209.165.202.130
ip classless
ip route 0.0.0.0 0.0.0.0 Serial0/1/0
!
ip flow-export version 9
!
!
ip access-list standard R2NAT
permit 192.168.10.0 0.0.0.255
permit 192.168.20.0 0.0.0.255
permit 192.168.30.0 0.0.0.255
!
banner motd ^AUTHORIZED ACCESS ONLY!^C
!
!
!
!
!
line con 0
login
!
line aux 0
!
--More--
```

At the bottom of the window, there are "Copy" and "Paste" buttons, and a "Top" link.

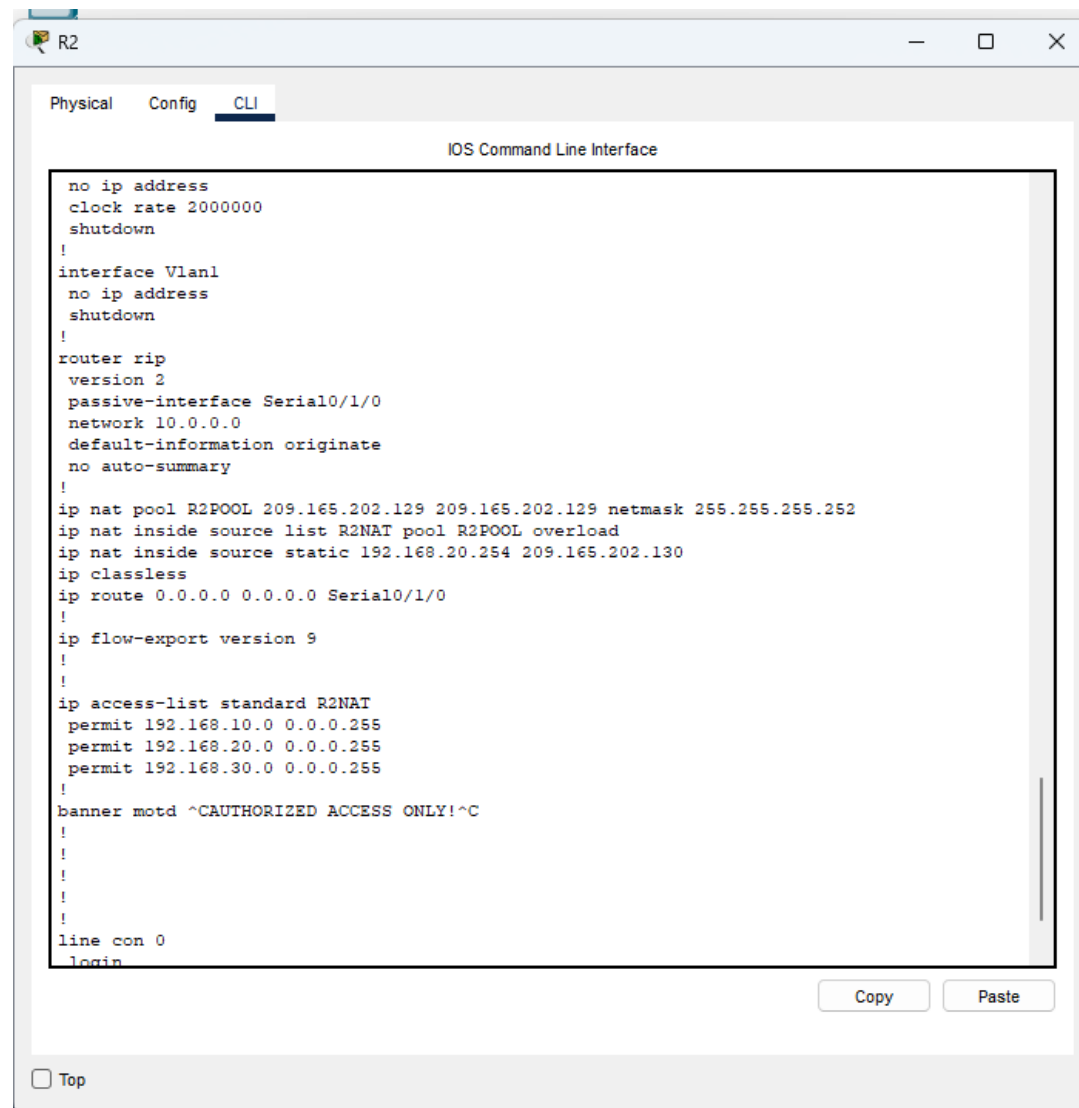
2. DESCRIPCIÓN TÉCNICA DE LA SOLUCIÓN

Configure NAT Estatico

- **CONFIGURE NAT CON EL GRUPO ACL Y NAT QUE HA CREADO.**

- **CONFIGURE NAT ESTÁTICO PARA ASIGNAR LA DIRECCIÓN INTERNA DEL SERVIDOR LOCAL.PKA A LA SEGUNDA DIRECCIÓN DEL ESPACIO DE DIRECCIONES 209.165.202.128/30 .**

- **CONFIGURE LAS INTERFACES QUE PARTICIPARÁN EN NAT.**

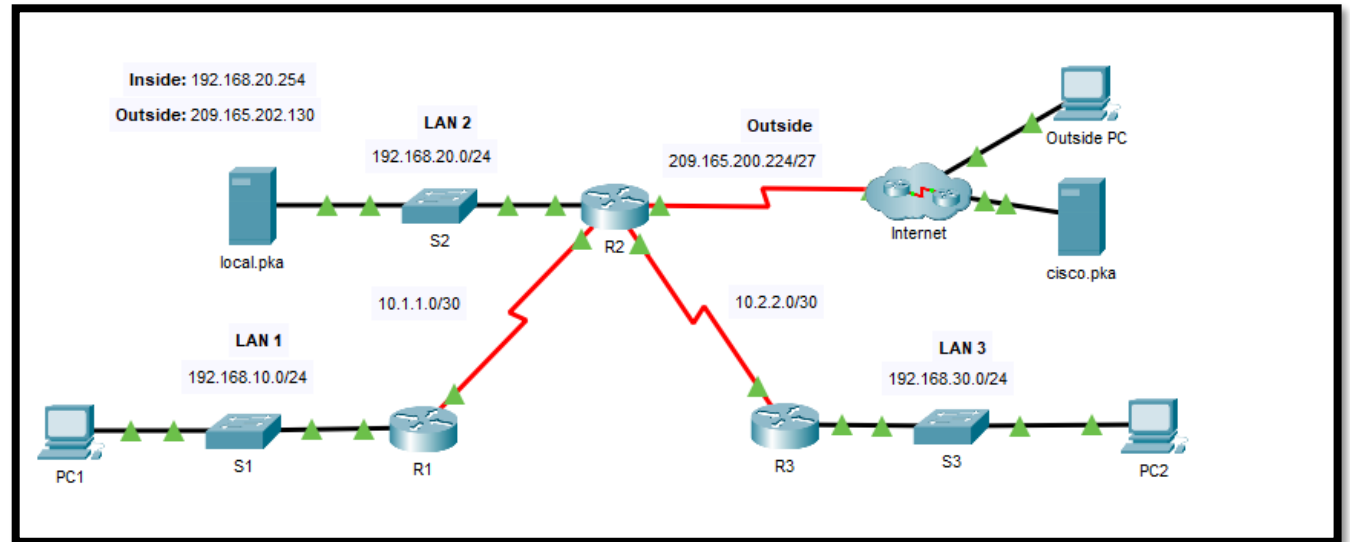


The screenshot shows a Cisco IOS Command Line Interface window titled 'R2'. The 'CLI' tab is selected, and the window displays a series of configuration commands for NAT. The commands are as follows:

```
no ip address
clock rate 2000000
shutdown
!
interface Vlan1
no ip address
shutdown
!
router rip
version 2
passive-interface Serial0/1/0
network 10.0.0.0
default-information originate
no auto-summary
!
ip nat pool R2POOL 209.165.202.129 209.165.202.129 netmask 255.255.255.252
ip nat inside source list R2NAT pool R2POOL overload
ip nat inside source static 192.168.20.254 209.165.202.130
ip classless
ip route 0.0.0.0 0.0.0.0 Serial0/1/0
!
ip flow-export version 9
!
!
ip access-list standard R2NAT
permit 192.168.10.0 0.0.0.255
permit 192.168.20.0 0.0.0.255
permit 192.168.30.0 0.0.0.255
!
banner motd ^CAUTHORIZED ACCESS ONLY!^C
!
!
!
!
!
line con 0
login
```

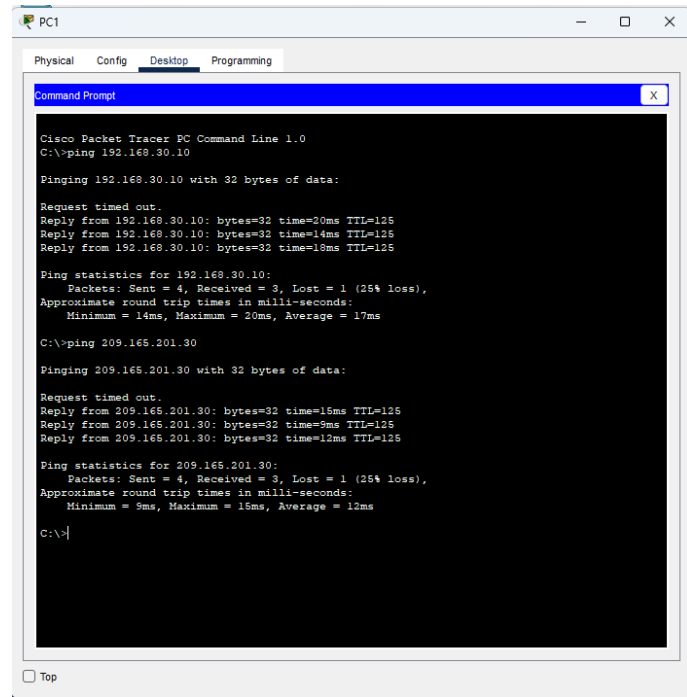
At the bottom of the window, there are 'Copy' and 'Paste' buttons, and a 'Top' link.

3.ESQUEMA GENERAL



4.SCRIPT CTC

Dispositivo	Interfaz	Dirección IP
R1	S0/0/0	10.1.1.1/30
	F0/0	192.168.10.1/24
R2	S0/0/0	10.1.1.2/30
	S0/0/1	10.2.2.1/30
	S0/1/0	209.165.200.225/27
	F0/0/0	192.168.20.1/24
R3	S0/0/1	10.2.2.2/30
	F0/0	192.168.30.1/24
PC1	NIC	192.168.10.10/24
PC2	NIC	192.168.30.10/24
local.pka	NIC	192.168.20.254/24
PC exterior	NIC	209.165.201.14/28
cisco.pka	NIC	209.165.201.30/28



```
PC1
Physical Config Desktop Programming
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.30.10

Pinging 192.168.30.10 with 32 bytes of data:

Request timed out.
Reply from 192.168.30.10: bytes=32 time=20ms TTL=125
Reply from 192.168.30.10: bytes=32 time=14ms TTL=125
Reply from 192.168.30.10: bytes=32 time=18ms TTL=125

Ping statistics for 192.168.30.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 14ms, Maximum = 20ms, Average = 17ms

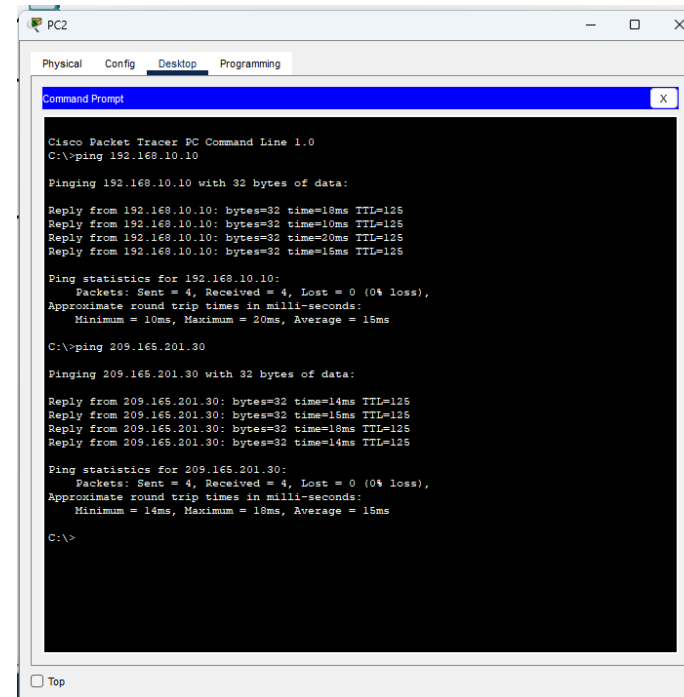
C:\>ping 209.165.201.30

Pinging 209.165.201.30 with 32 bytes of data:

Request timed out.
Reply from 209.165.201.30: bytes=32 time=15ms TTL=125
Reply from 209.165.201.30: bytes=32 time=9ms TTL=125
Reply from 209.165.201.30: bytes=32 time=12ms TTL=125

Ping statistics for 209.165.201.30:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 9ms, Maximum = 15ms, Average = 12ms

C:\>
```



```
PC2
Physical Config Desktop Programming
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.10

Pinging 192.168.10.10 with 32 bytes of data:

Reply from 192.168.10.10: bytes=32 time=18ms TTL=125
Reply from 192.168.10.10: bytes=32 time=10ms TTL=125
Reply from 192.168.10.10: bytes=32 time=20ms TTL=125
Reply from 192.168.10.10: bytes=32 time=15ms TTL=125

Ping statistics for 192.168.10.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 10ms, Maximum = 20ms, Average = 16ms

C:\>ping 209.165.201.30

Pinging 209.165.201.30 with 32 bytes of data:

Reply from 209.165.201.30: bytes=32 time=14ms TTL=125
Reply from 209.165.201.30: bytes=32 time=15ms TTL=125
Reply from 209.165.201.30: bytes=32 time=18ms TTL=125
Reply from 209.165.201.30: bytes=32 time=14ms TTL=125

Ping statistics for 209.165.201.30:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 14ms, Maximum = 18ms, Average = 15ms

C:\>
```

5. PRUEBAS