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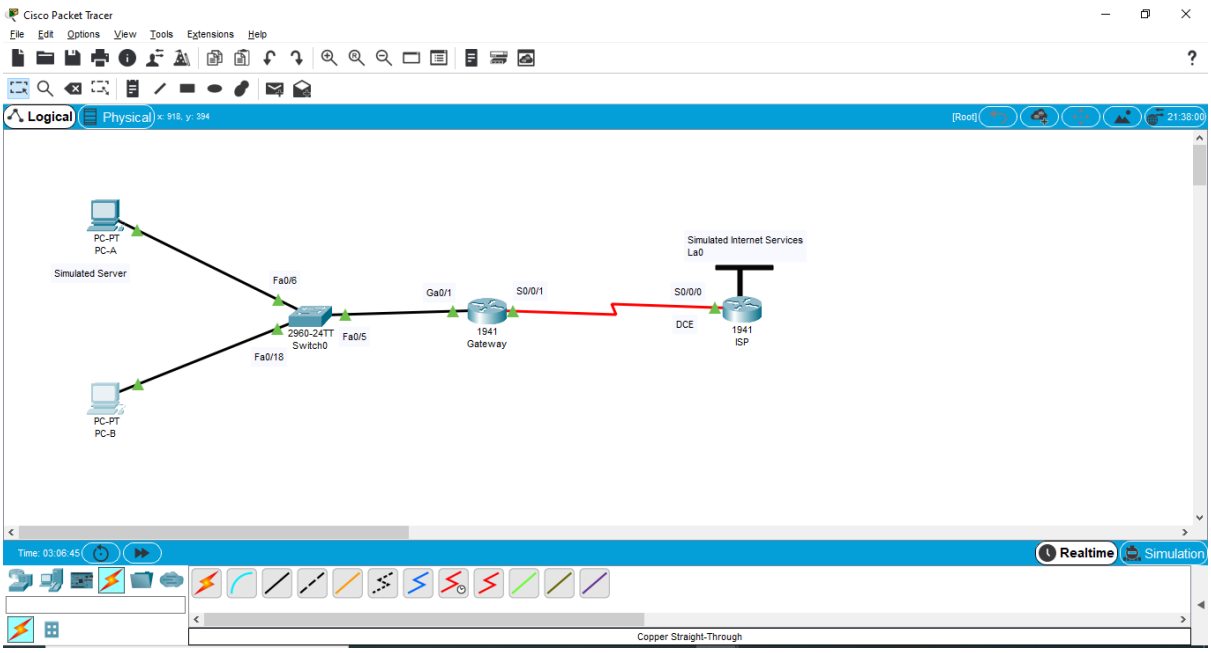
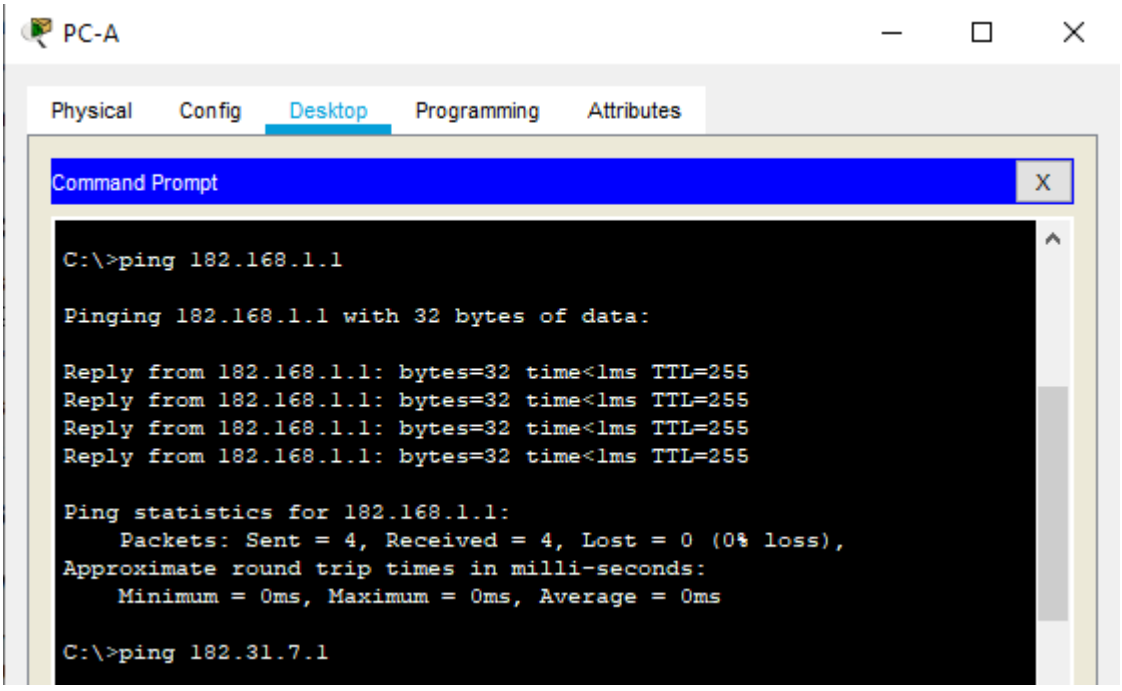
ISE2 – Configuring Dynamic and Static NAT Topology

Task 1 :

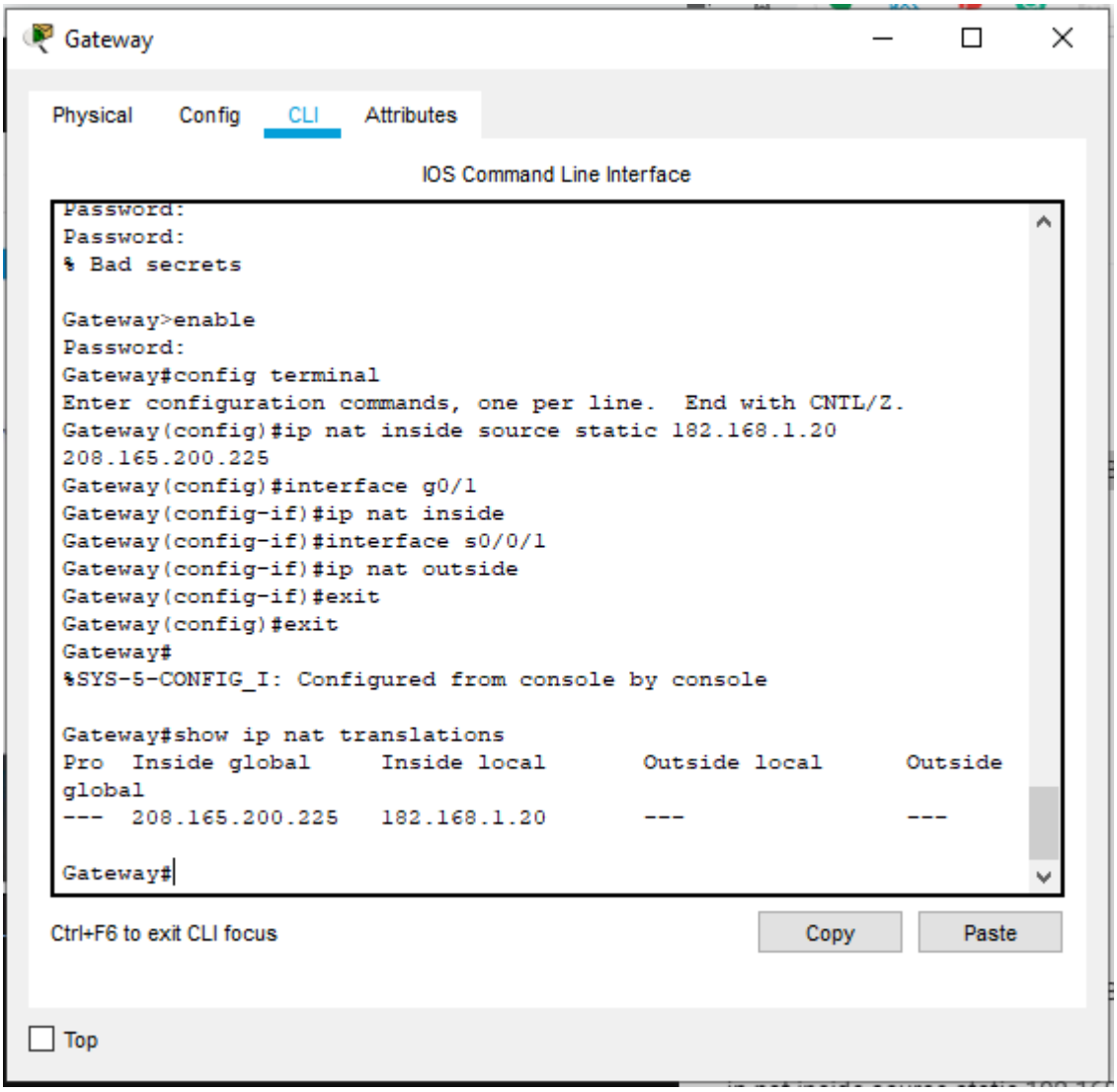
Network Topology

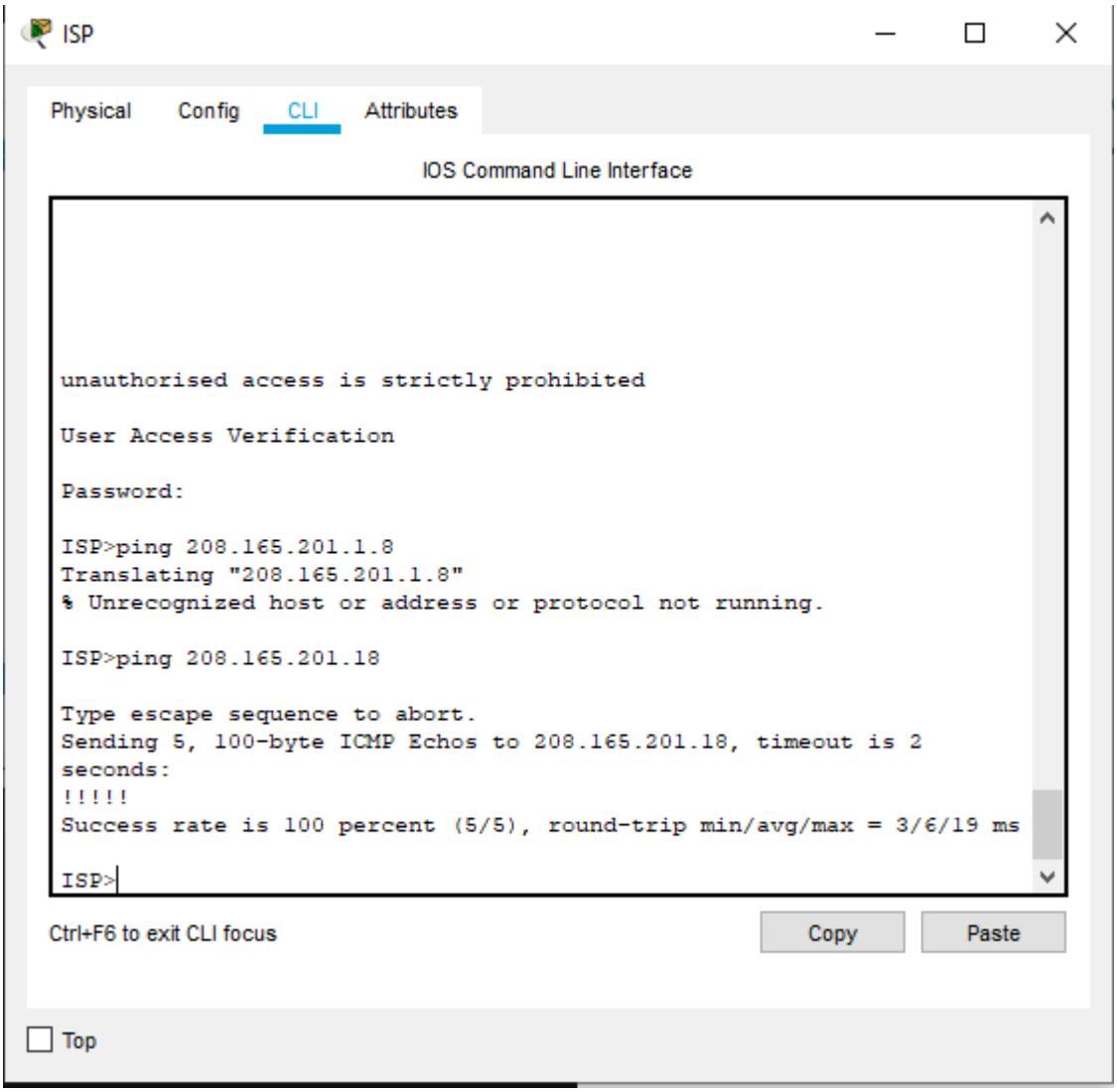


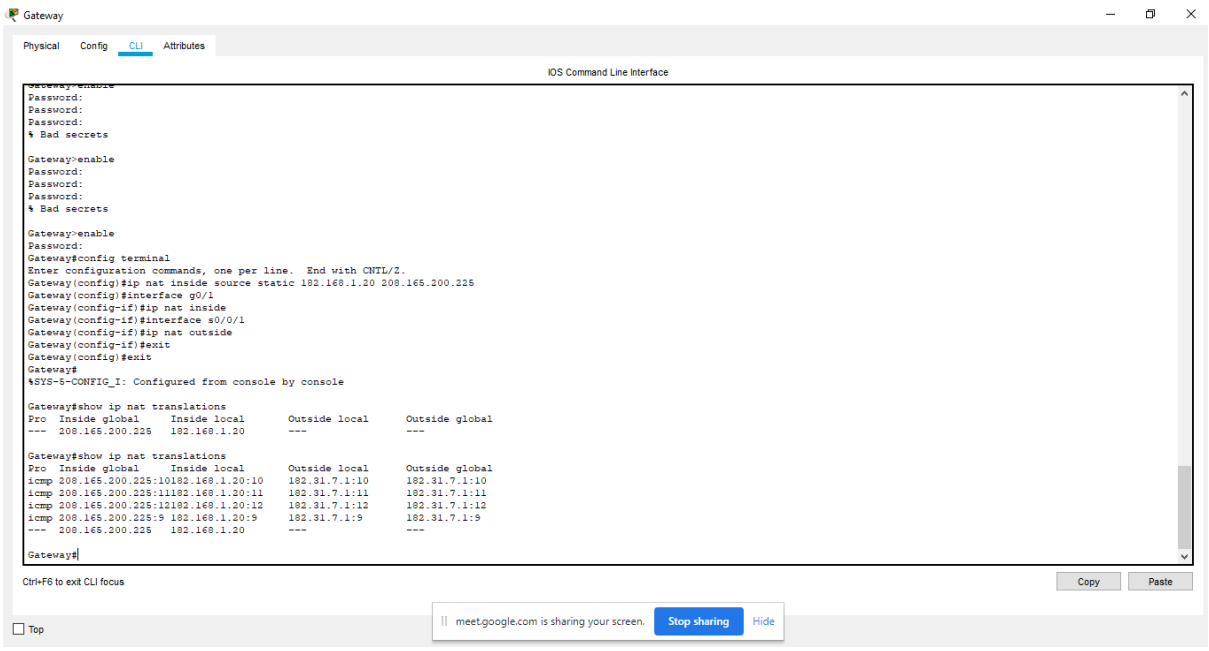
PING from PC-A to Gateway:

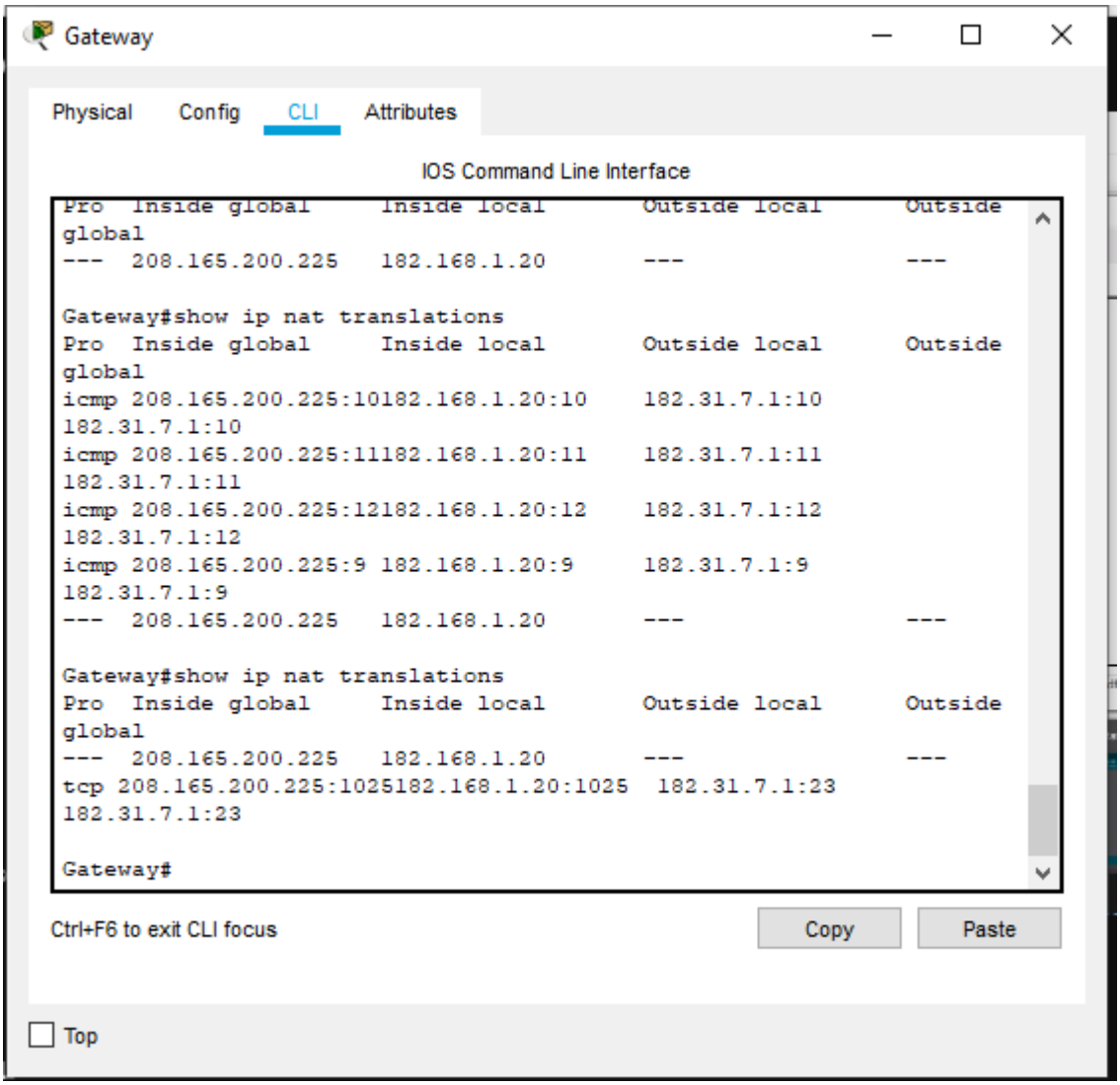


Task 2 STATIC NAT :


Gateway
Physical
Config
CLI
Attributes
IOS Command Line Interface
Password:
Password:
% Bad secrets
Gateway>enable
Password:
Gateway#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#ip nat inside source static 182.168.1.20
208.165.200.225
Gateway(config)#interface g0/1
Gateway(config-if)#ip nat inside
Gateway(config-if)#interface s0/0/1
Gateway(config-if)#ip nat outside
Gateway(config-if)#exit
Gateway(config)#exit
Gateway#
%SYS-5-CONFIG_I: Configured from console by console
Gateway#show ip nat translations
Pro Inside global Inside local Outside local Outside
global
--- 208.165.200.225 182.168.1.20 --- ---
Gateway#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


ISP
Physical
Config
CLI
Attributes
IOS Command Line Interface
unauthorised access is strictly prohibited
User Access Verification
Password:
ISP>ping 208.165.201.1.8
Translating "208.165.201.1.8"
% Unrecognized host or address or protocol not running.
ISP>ping 208.165.201.18
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 208.165.201.18, timeout is 2
seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 3/6/19 ms
ISP>
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Gateway
Physical
Config
CLI
Attributes
IOS Command Line Interface
Password:
Password:
Password:
% Bad secrets
Gateway>enable
Password:
Password:
Password:
% Bad secrets
Gateway>enable
Password:
Gateway#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#ip nat inside source static 182.168.1.20 208.165.200.225
Gateway(config)#interface g0/1
Gateway(config-if)#ip nat inside
Gateway(config-if)#interface s0/0/1
Gateway(config-if)#ip nat outside
Gateway(config-if)#exit
Gateway(config)#exit
Gateway#
%SYS-5-CONFIG_I: Configured from console by console
Gateway#show ip nat translations
Pro Inside global Inside local Outside local Outside global
--- 208.165.200.225 182.168.1.20 --- ---
Gateway#show ip nat translations
Pro Inside global Inside local Outside local Outside global
icmp 208.165.200.225:10182.168.1.20:10 182.31.7.1:10 182.31.7.1:10
icmp 208.165.200.225:11182.168.1.20:11 182.31.7.1:11 182.31.7.1:11
icmp 208.165.200.225:12182.168.1.20:12 182.31.7.1:12 182.31.7.1:12
icmp 208.165.200.225:9 182.168.1.20:9 182.31.7.1:9 182.31.7.1:9
--- 208.165.200.225 182.168.1.20 --- ---
Gateway#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
meet.google.com is sharing your screen.
Stop sharing
Hide



Dynamic NAT :

```
Gateway#clear ip nat translation *
Gateway#clear ip nat statistics
                  ^
% Invalid input detected at '^' marker.
```

```
Gateway(config)#access-list 1 permit 182.168.1.0 0.0.0.255
Gateway(config)#show ip nat statistics
```

```
Gateway(config)#ip nat pool public_access 208.165.200.242 208.165.200.254 netmask 255.255.255.224
Gateway(config)#ip nat inside source list 1 pool public_access
Gateway(config)#exit
```

```
Gateway#show ip nat translations
Pro  Inside global     Inside local       Outside local      Outside global
---  208.165.200.225   182.168.1.20       ---                ---

Gateway#show ip nat statistics
Total translations: 3 (1 static, 2 dynamic, 2 extended)
Outside Interfaces: Serial0/0/1
Inside Interfaces: GigabitEthernet0/1
Hits: 89  Misses: 53
Expired translations: 18
Dynamic mappings:
-- Inside Source
access-list 1 pool public_access refCount 2
 pool public_access: netmask 255.255.255.224
       start 208.165.200.242 end 208.165.200.254
       type generic, total addresses 13 , allocated 1 (7%), misses 0
```

```
Gateway#show ip nat translations
Pro  Inside global     Inside local       Outside local      Outside global
icmp 208.165.200.242:13182.168.1.20:13    182.31.7.1:13      182.31.7.1:13
icmp 208.165.200.242:14182.168.1.20:14    182.31.7.1:14      182.31.7.1:14
icmp 208.165.200.242:15182.168.1.20:15    182.31.7.1:15      182.31.7.1:15
icmp 208.165.200.242:16182.168.1.20:16    182.31.7.1:16      182.31.7.1:16
icmp 208.165.200.243:13182.168.1.21:13    182.31.7.1:13      182.31.7.1:13
icmp 208.165.200.243:14182.168.1.21:14    182.31.7.1:14      182.31.7.1:14
icmp 208.165.200.243:15182.168.1.21:15    182.31.7.1:15      182.31.7.1:15
icmp 208.165.200.243:16182.168.1.21:16    182.31.7.1:16      182.31.7.1:16

Gateway#show ip nat statistics
Total translations: 4 (0 static, 4 dynamic, 4 extended)
Outside Interfaces: Serial0/0/1
Inside Interfaces: GigabitEthernet0/1
Hits: 97  Misses: 61
Expired translations: 23
Dynamic mappings:
-- Inside Source
access-list 1 pool public_access refCount 4
 pool public_access: netmask 255.255.255.224
       start 208.165.200.242 end 208.165.200.254
       type generic, total addresses 13 , allocated 1 (7%), misses 0
Gateway#
```

```
C:\>ping 182.31.7.1

Pinging 182.31.7.1 with 32 bytes of data:

Reply from 182.31.7.1: bytes=32 time=1ms TTL=254
Reply from 182.31.7.1: bytes=32 time=1ms TTL=254
Reply from 182.31.7.1: bytes=32 time=4ms TTL=254
Reply from 182.31.7.1: bytes=32 time=6ms TTL=254

Ping statistics for 182.31.7.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 6ms, Average = 3ms
```