

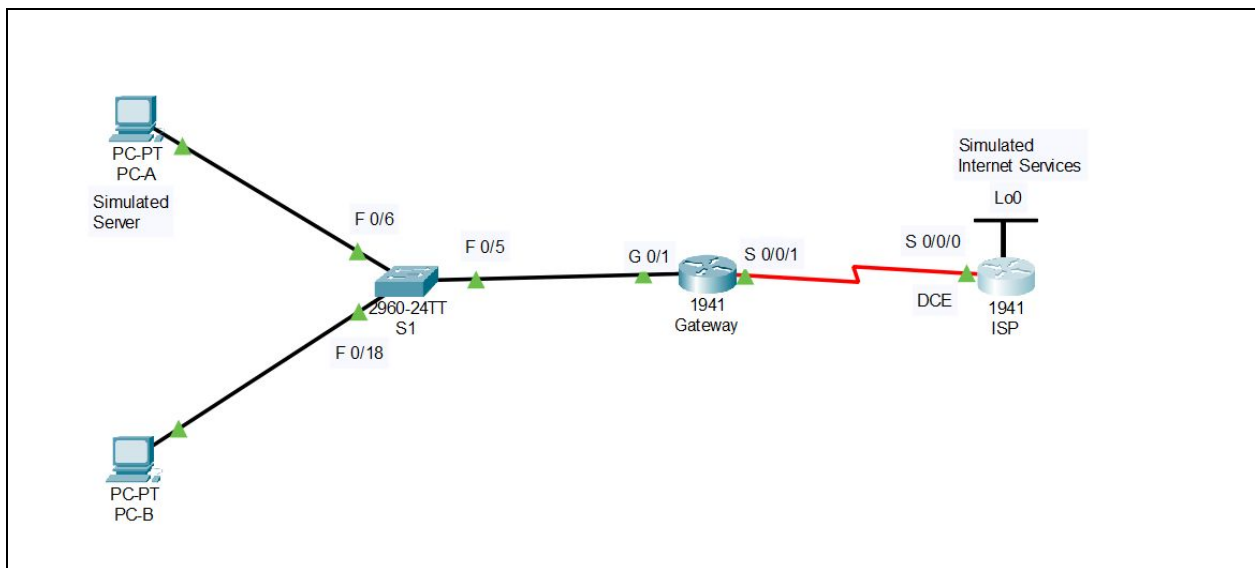
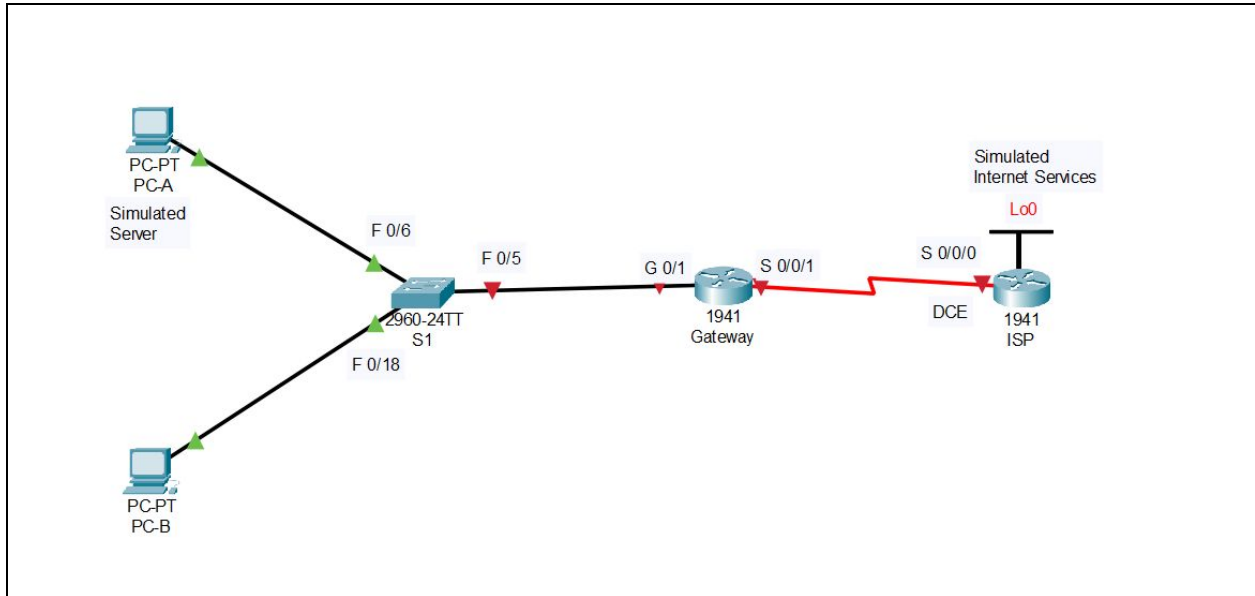
# DCCN ISE 2

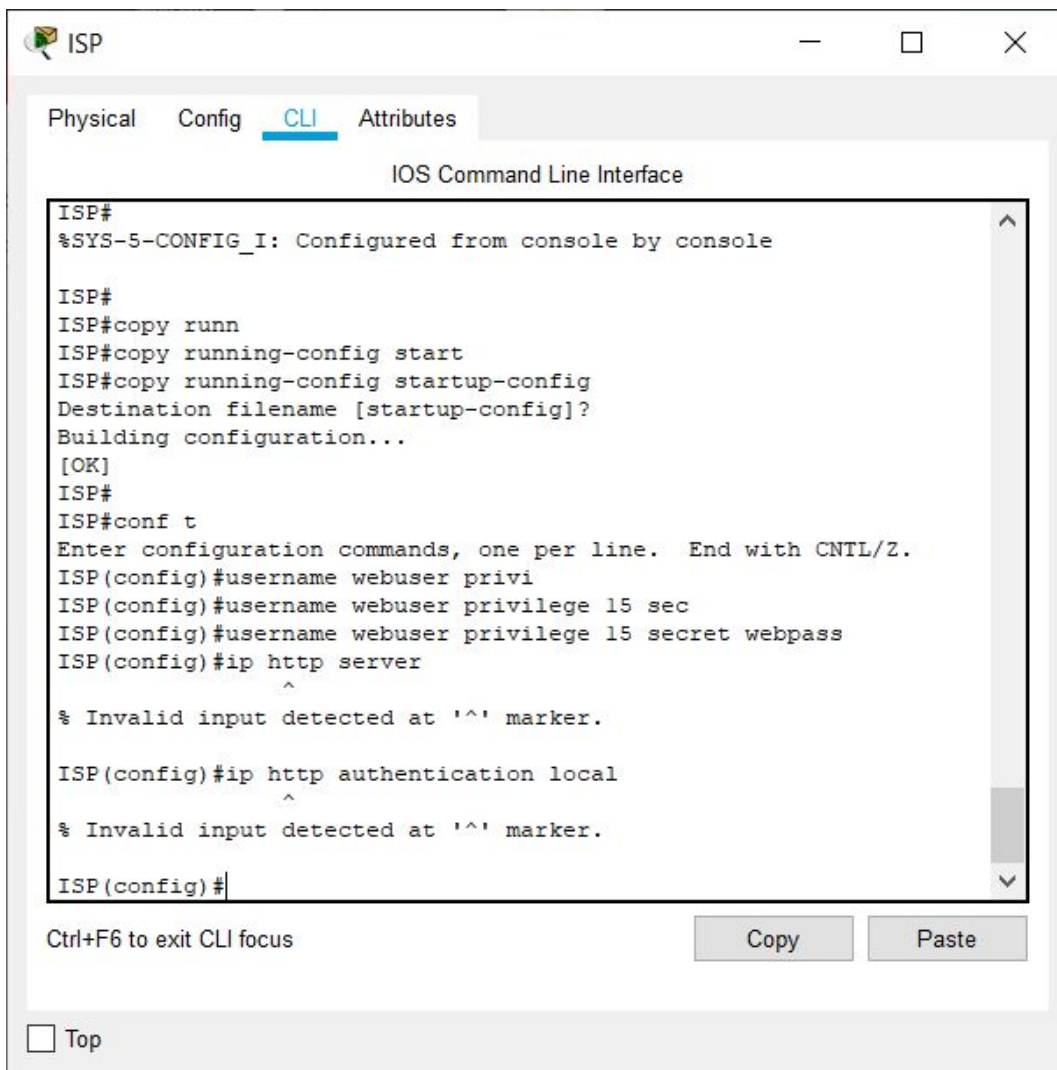
Ashutosh Naik -2018130030

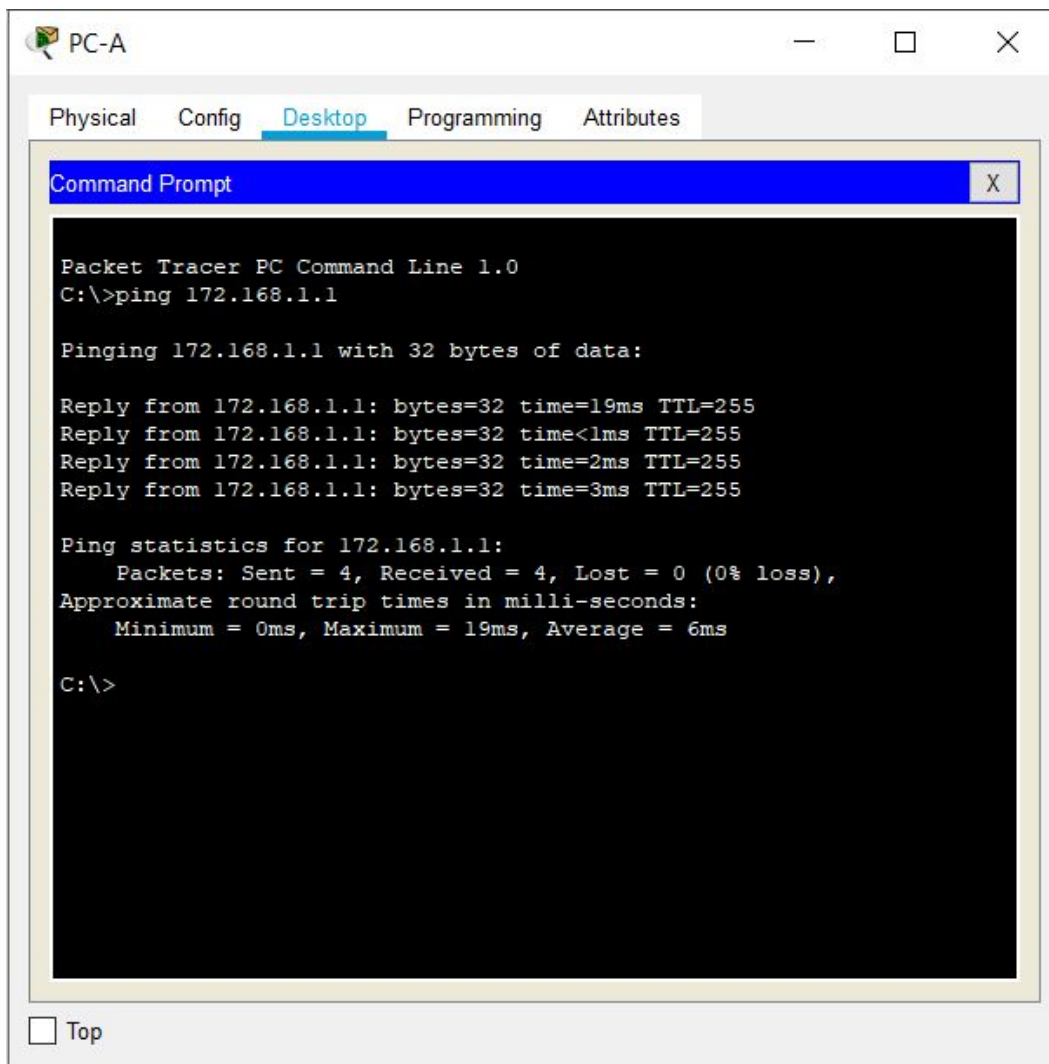
Rohit Pai - 2018130033

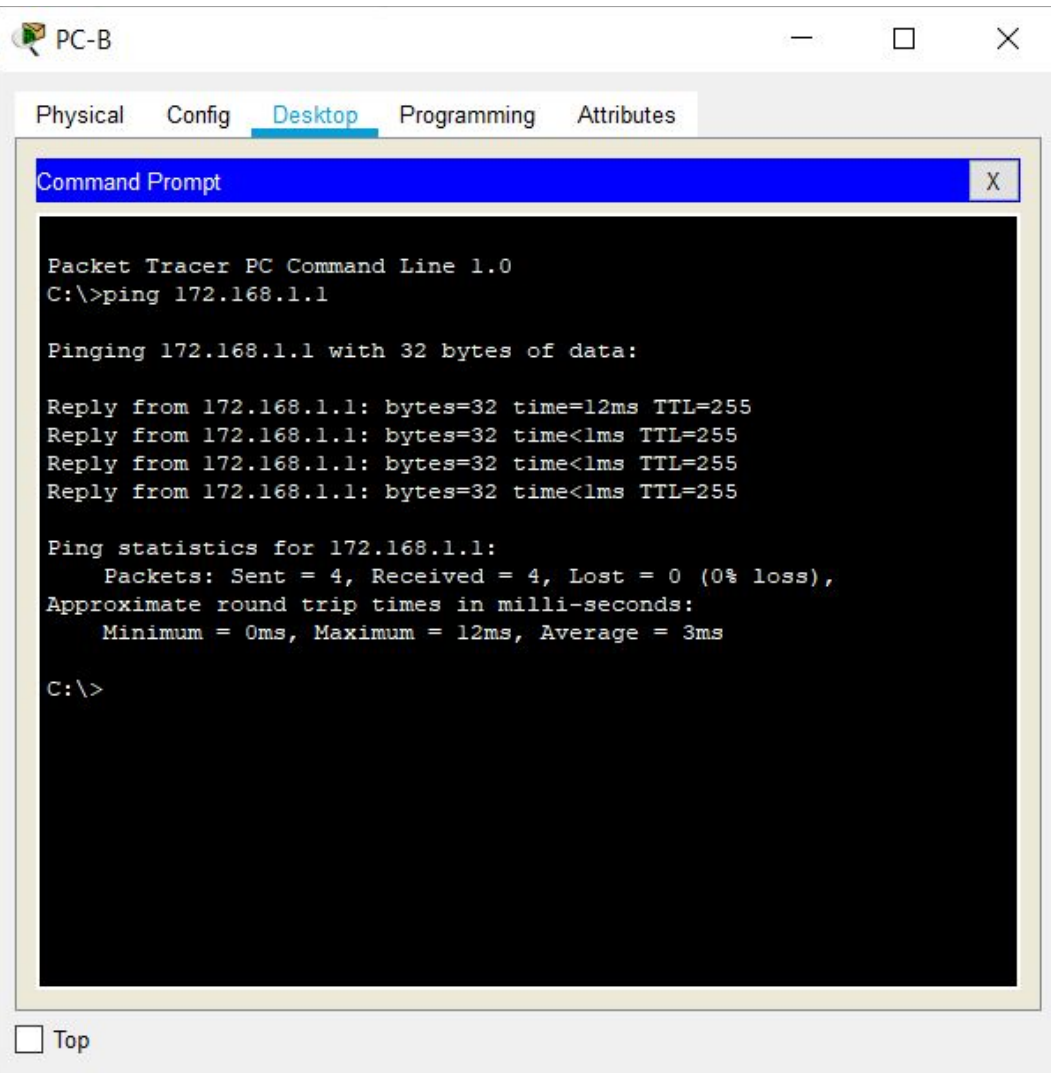
Harsh Sandesara - 2018130045

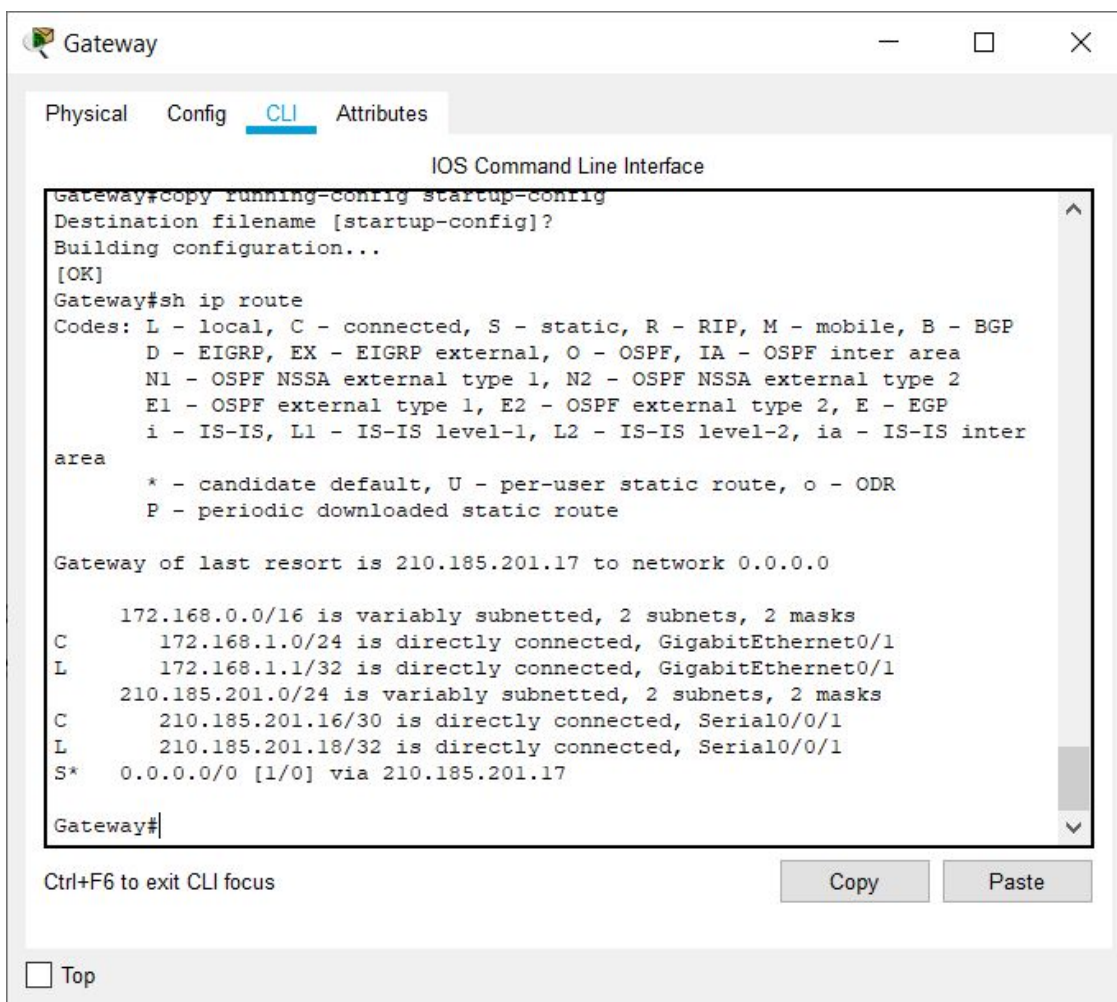
## Task 1:












 ISP

Physical Config CLI Attributes

IOS Command Line Interface

```
ISP#copy running-config start
ISP#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
ISP#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

    172.31.0.0/32 is subnetted, 1 subnets
C      172.31.7.1/32 is directly connected, Loopback0
    210.185.200.0/27 is subnetted, 1 subnets
S      210.185.200.224/27 [1/0] via 210.185.201.18
    210.185.201.0/24 is variably subnetted, 2 subnets, 2 masks
C      210.185.201.16/30 is directly connected, Serial0/0/0
L      210.185.201.17/32 is directly connected, Serial0/0/0

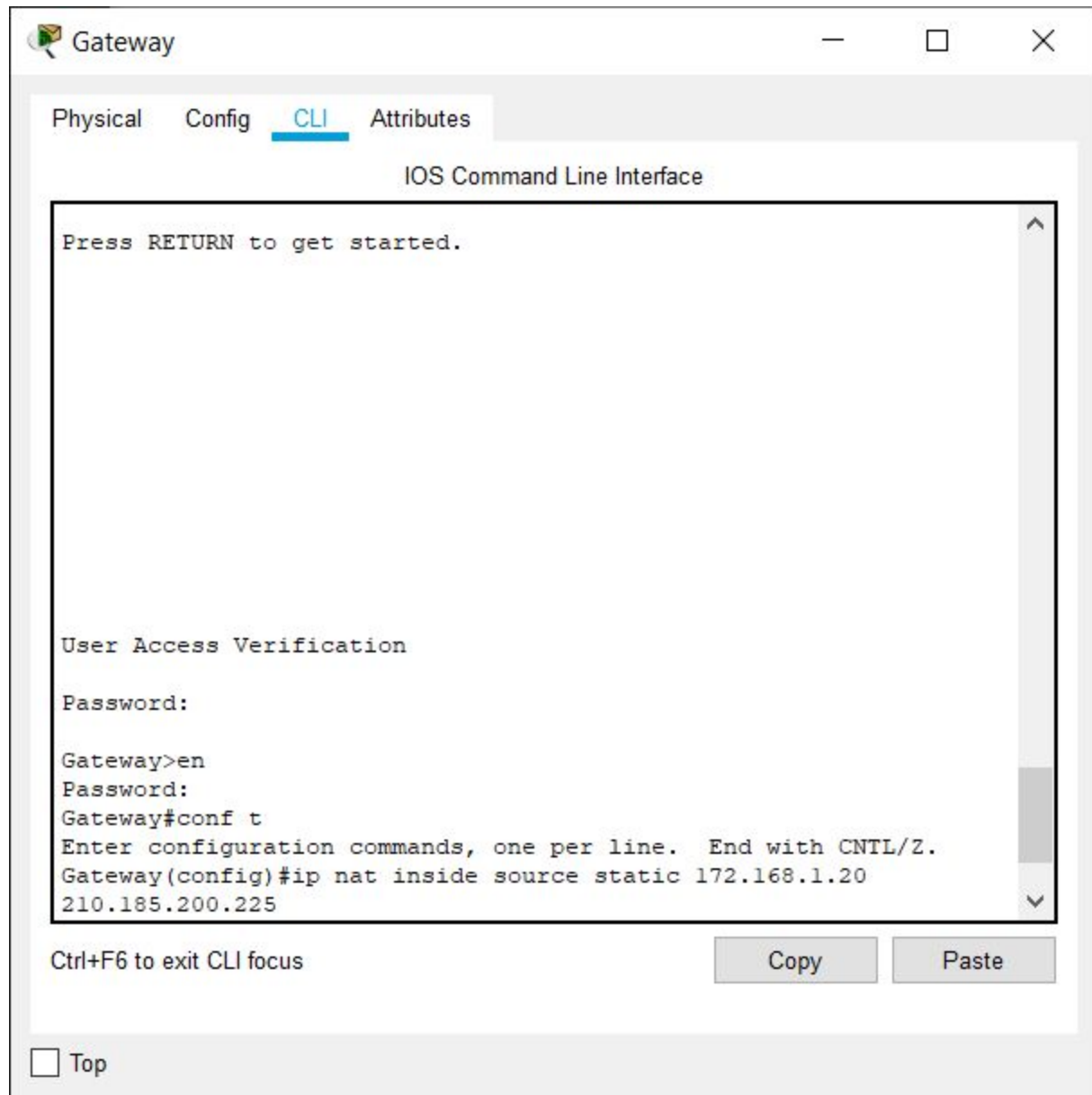
ISP#
```

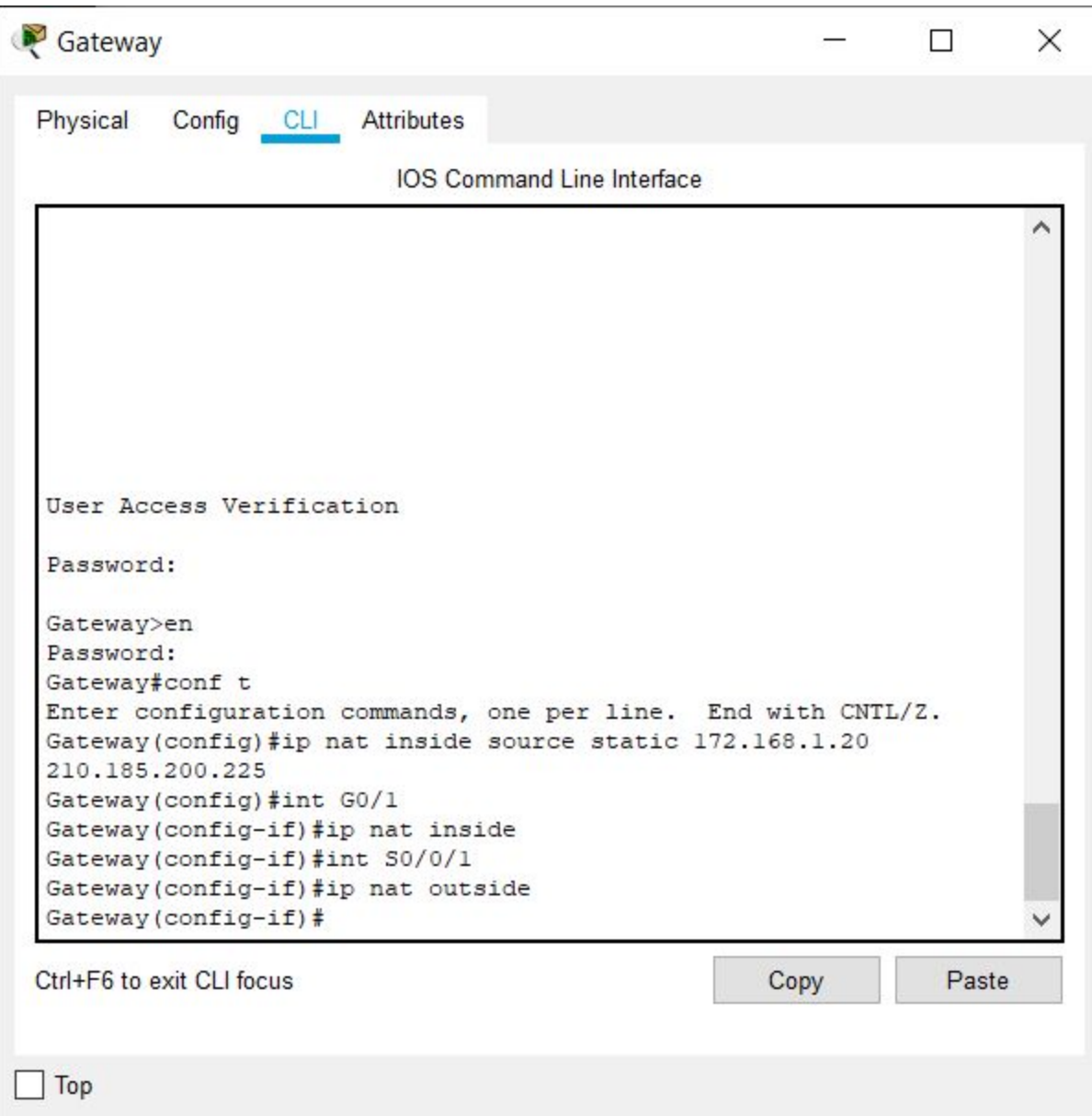
Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

## **Task 2:**







The screenshot shows a window titled "Gateway" with tabs for Physical, Config, CLI (selected), and Attributes. The CLI tab displays the "IOS Command Line Interface" with the following text:

```
Gateway(config)#ip nat inside source static 172.168.1.20
210.185.200.225
Gateway(config)#int G0/1
Gateway(config-if)#ip nat inside
Gateway(config-if)#int S0/0/1
Gateway(config-if)#ip nat outside
Gateway(config-if)#exit
^
% Invalid input detected at '^' marker.

Gateway(config-if)#exit
Gateway(config)#exit
Gateway#
%SYS-5-CONFIG_I: Configured from console by console

Gateway#show ip nat translations
^
% Invalid input detected at '^' marker.

Gateway#show ip nat translations
Pro  Inside global      Inside local      Outside local
-----
Outside global
---  210.185.200.225      172.168.1.20      ---              ---

Gateway#
```

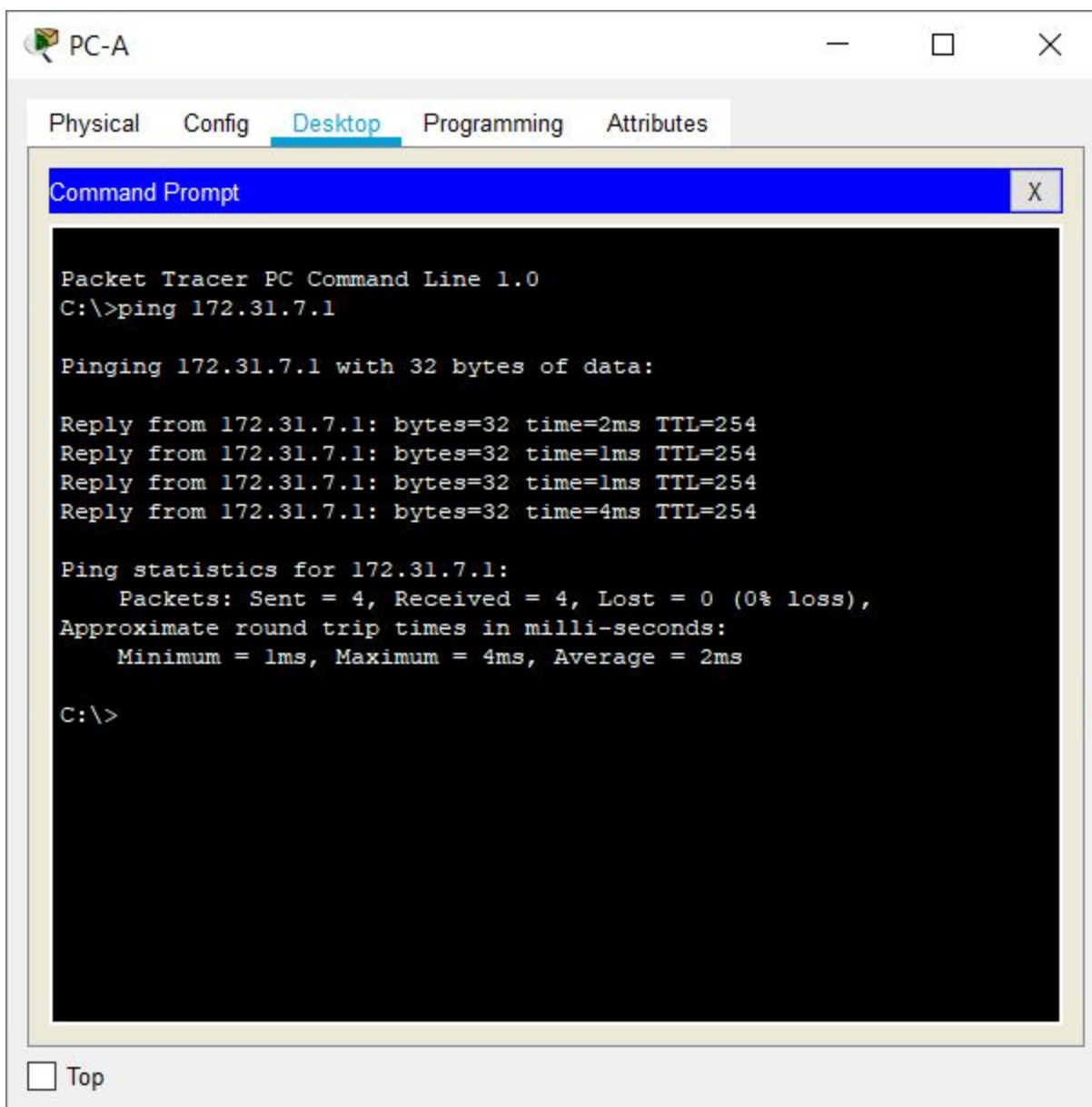
Below the CLI window, there is a status bar with the text "Ctrl+F6 to exit CLI focus" and two buttons: "Copy" and "Paste". At the bottom left, there is a checkbox labeled "Top".

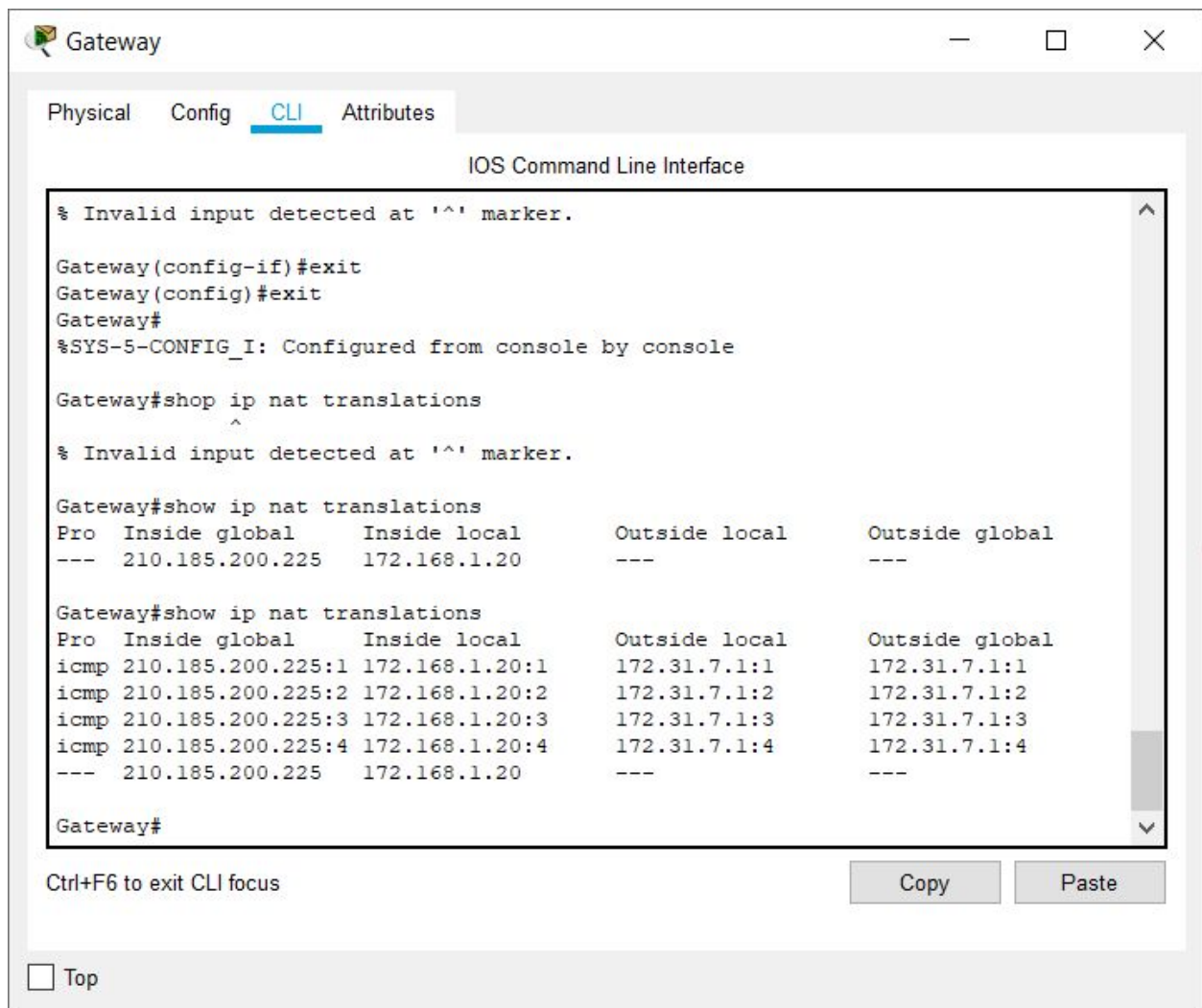
What is the translation of the inside local host address?

172.168.1.20 = **210.185.200.225**

The inside global address is assigned by? **ISP (Static) and NAT Pool (Dynamic)**

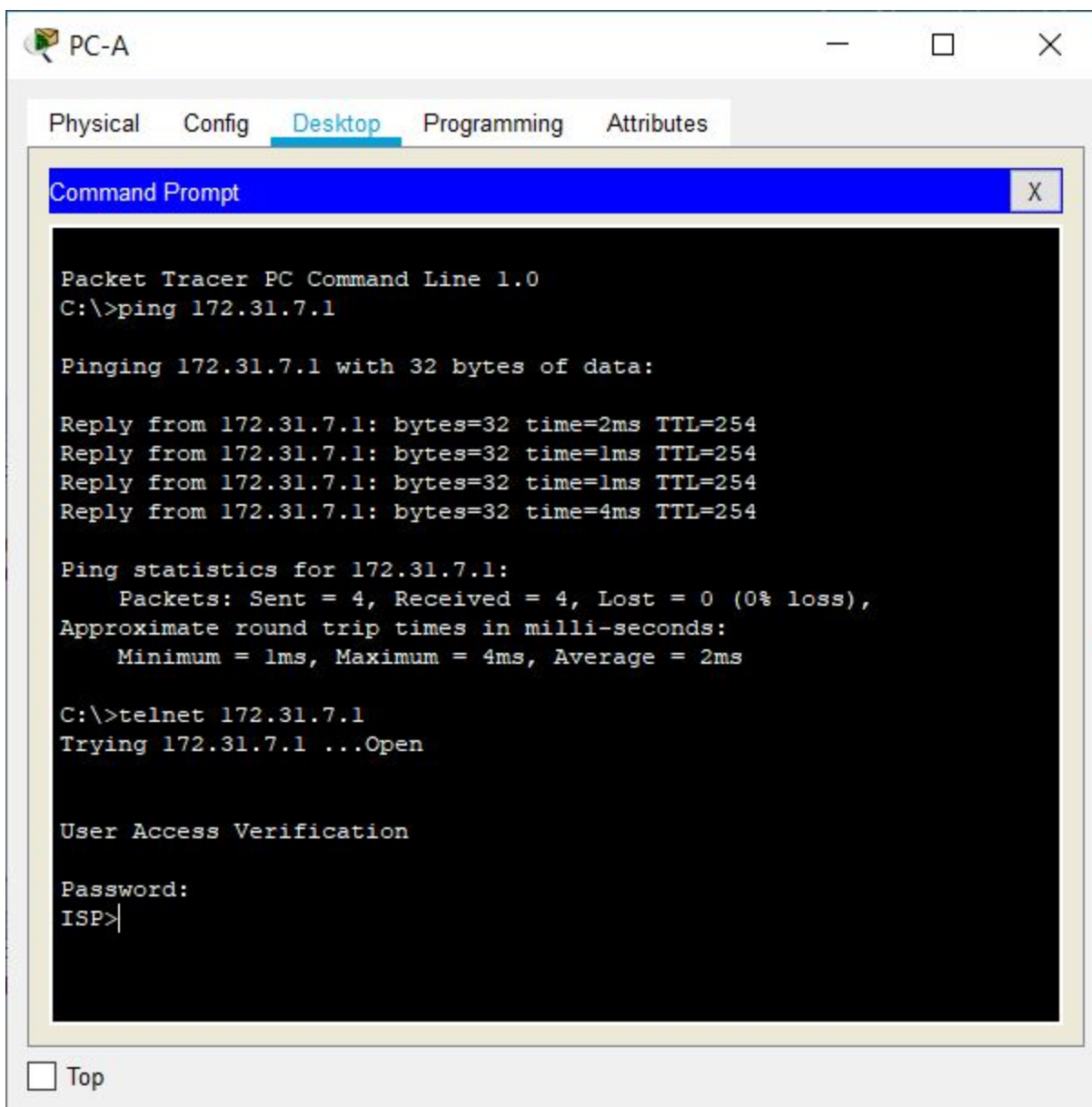
The inside local address is assigned by? **System Administrator**





What port number was used in this ICMP exchange?

4 port numbers were used for 4 ICMP exchanges for 4 pings. They are 1, 2, 3, and 4.



Gateway

Physical Config CLI Attributes

IOS Command Line Interface

Pro	Inside global	Inside local	Outside local
Outside global	---	210.185.200.225	172.168.1.20
---	---	---	---

Gateway#show ip nat translations

Pro	Inside global	Inside local	Outside local
Outside global	---	210.185.200.225	172.168.1.20
icmp	210.185.200.225:1	172.168.1.20:1	172.31.7.1:1
icmp	210.185.200.225:2	172.168.1.20:2	172.31.7.1:2
icmp	210.185.200.225:3	172.168.1.20:3	172.31.7.1:3
icmp	210.185.200.225:4	172.168.1.20:4	172.31.7.1:4
---	---	---	---

Gateway#show ip nat translations

Pro	Inside global	Inside local	Outside local
Outside global	---	210.185.200.225	172.168.1.20
tcp	210.185.200.225:1025	172.168.1.20:1025	172.31.7.1:23
---	---	---	---

Gateway#

Ctrl+F6 to exit CLI focus

Copy Paste


☐ Top

What was the protocol used in this translation? **TCP**

What are the port numbers used?

Inside global/local: **1025**

Outside global/local: **23**

 ISP

Physical

Config

CLI

Attributes

IOS Command Line Interface

Press RETURN to get started!

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

User Access Verification

Password:

ISP>ping 210.185.200.225

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 210.185.200.225, timeout is 2 seconds:

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms


ISP>

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

 Gateway

Physical

Config

CLI

Attributes

IOS Command Line Interface

User Access Verification

Password:

Gateway>en

Password:

Gateway#show ip nat translations

Pro	Inside global	Inside local	Outside local	Outside global
icmp	210.185.200.225:1	172.168.1.20:1	210.185.201.17:1	210.185.201.17:1
icmp	210.185.200.225:2	172.168.1.20:2	210.185.201.17:2	210.185.201.17:2
icmp	210.185.200.225:3	172.168.1.20:3	210.185.201.17:3	210.185.201.17:3
icmp	210.185.200.225:4	172.168.1.20:4	210.185.201.17:4	210.185.201.17:4
icmp	210.185.200.225:5	172.168.1.20:5	210.185.201.17:5	210.185.201.17:5
---	210.185.200.225	172.168.1.20	---	---
tcp	210.185.200.225:1025	172.168.1.20:1025	172.31.7.1:23	172.31.7.1:23

Gateway#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top



Gateway

PhysicalConfigCLIAttributes

IOS Command Line Interface

Gateway#show ip nat translations

Pro	Inside global	Inside local	Outside local	Outside global
icmp	210.185.200.225:1	172.168.1.20:1	210.185.201.17:1	210.185.201.17:1
icmp	210.185.200.225:2	172.168.1.20:2	210.185.201.17:2	210.185.201.17:2
icmp	210.185.200.225:3	172.168.1.20:3	210.185.201.17:3	210.185.201.17:3
icmp	210.185.200.225:4	172.168.1.20:4	210.185.201.17:4	210.185.201.17:4
icmp	210.185.200.225:5	172.168.1.20:5	210.185.201.17:5	210.185.201.17:5
---	210.185.200.225	172.168.1.20	---	---
tcp	210.185.200.225:1025	172.168.1.20:1025	172.31.7.1:23	172.31.7.1:23

Gateway#show ip nat statistics

Total translations: 2 (1 static, 1 dynamic, 1 extended)

Outside Interfaces: Serial0/0/1

Inside Interfaces: GigabitEthernet0/1

Hits: 36 Misses: 10

Expired translations: 9

Dynamic mappings:

Gateway#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top



## Task 3:

Gateway

Physical

Config

CLI

Attributes

IOS Command Line Interface

If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com).

Cisco CISCO1941/K9 (revision 1.0) with 491520K/32768K bytes of memory.  
Processor board ID FTX152400KS  
2 Gigabit Ethernet interfaces  
2 Low-speed serial(sync/async) network interface(s)  
DRAM configuration is 64 bits wide with parity disabled.  
255K bytes of non-volatile configuration memory.  
249856K bytes of ATA System CompactFlash 0 (Read/Write)

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up

User Access Verification

Password:

Gateway>en

Password:

Gateway#clear ip nat translation \*

Gateway#clear ip nat statistics

% Invalid input detected at '^' marker.

Gateway#clear ip nat s

Gateway#clear ip nat s

Gateway#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

Gateway

PhysicalConfigCLIAttributes

IOS Command Line Interface

DRAM configuration is 64 bits wide with parity disabled.  
255K bytes of non-volatile configuration memory.  
249856K bytes of ATA System CompactFlash 0 (Read/Write)  
  
Press RETURN to get started!  
  
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up  
  
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up  
  
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up  
  
User Access Verification  
  
Password:  
  
Gateway>en  
Password:  
Gateway#clear ip nat translation \*  
Gateway#clear ip nat statistics  
                                  ^  
% Invalid input detected at '^' marker.  
  
Gateway#clear ip nat s  
Gateway#clear ip nat s  
Gateway#access-list 1 permit 172.168.1.0 0.0.0.255  
                                  ^  
% Invalid input detected at '^' marker.  
  
Gateway#conf t  
Enter configuration commands, one per line. End with CNTL/Z.  
Gateway(config)#access-list 1 permit 172.168.1.0 0.0.0.255  
Gateway(config)#

Ctrl+F6 to exit CLI focus

CopyPaste

☐ Top

Gateway

PhysicalConfigCLIAttributes

IOS Command Line Interface

User Access Verification

Password:

Gateway>en

Password:

Gateway#clear ip nat translation \*

Gateway#clear ip nat statistics

% Invalid input detected at '^' marker.

Gateway#clear ip nat s

Gateway#clear ip nat s

Gateway#access-list 1 permit 172.168.1.0 0.0.0.255

% Invalid input detected at '^' marker.

Gateway#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Gateway(config)#access-list 1 permit 172.168.1.0 0.0.0.255

Gateway(config)#show ip nat statistics

% Invalid input detected at '^' marker.

Gateway(config)#^Z

Gateway#

%SYS-5-CONFIG\_I: Configured from console by console

Gateway#show ip nat statistics

Total translations: 1 (1 static, 0 dynamic, 0 extended)

Outside Interfaces: Serial0/0/1

Inside Interfaces: GigabitEthernet0/1

Hits: 0 Misses: 0

Expired translations: 0

Dynamic mappings:

Gateway#

Ctrl+F6 to exit CLI focus

CopyPaste

☐ Top

## IOS Command Line Interface

```
% Invalid input detected at '^' marker.

Gateway#clear ip nat s
Gateway#clear ip nat s
Gateway#access-list 1 permit 172.168.1.0 0.0.0.255
^
% Invalid input detected at '^' marker.

Gateway#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#access-list 1 permit 172.168.1.0 0.0.0.255
Gateway(config)#show ip nat statistics
^
% Invalid input detected at '^' marker.

Gateway(config)#^Z
Gateway#
%SYS-5-CONFIG_I: Configured from console by console

Gateway#show ip nat statistics
Total translations: 1 (1 static, 0 dynamic, 0 extended)
Outside Interfaces: Serial0/0/1
Inside Interfaces: GigabitEthernet0/1
Hits: 0 Misses: 0
Expired translations: 0
Dynamic mappings:
Gateway#conf t
Translating "conf t"
% Unknown command or computer name, or unable to find computer address

Gateway#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#ip nat pool public_access 210.185.200.242
% Incomplete command.
Gateway(config)#ip nat pool public_access 210.185.200.242 210.185.200.254 netmask 255.255.255.224
Gateway(config)#
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

## IOS Command Line Interface

```
% Invalid input detected at '^' marker.

Gateway#clear ip nat s
Gateway#clear ip nat s
Gateway#access-list 1 permit 172.168.1.0 0.0.0.255
^
% Invalid input detected at '^' marker.

Gateway#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#access-list 1 permit 172.168.1.0 0.0.0.255
Gateway(config)#show ip nat statistics
^
% Invalid input detected at '^' marker.

Gateway(config)#^Z
Gateway#
%SYS-5-CONFIG_I: Configured from console by console

Gateway#show ip nat statistics
Total translations: 1 (1 static, 0 dynamic, 0 extended)
Outside Interfaces: Serial0/0/1
Inside Interfaces: GigabitEthernet0/1
Hits: 0 Misses: 0
Expired translations: 0
Dynamic mappings:
Gateway#conf t
Translating "conf t"
% Unknown command or computer name, or unable to find computer address

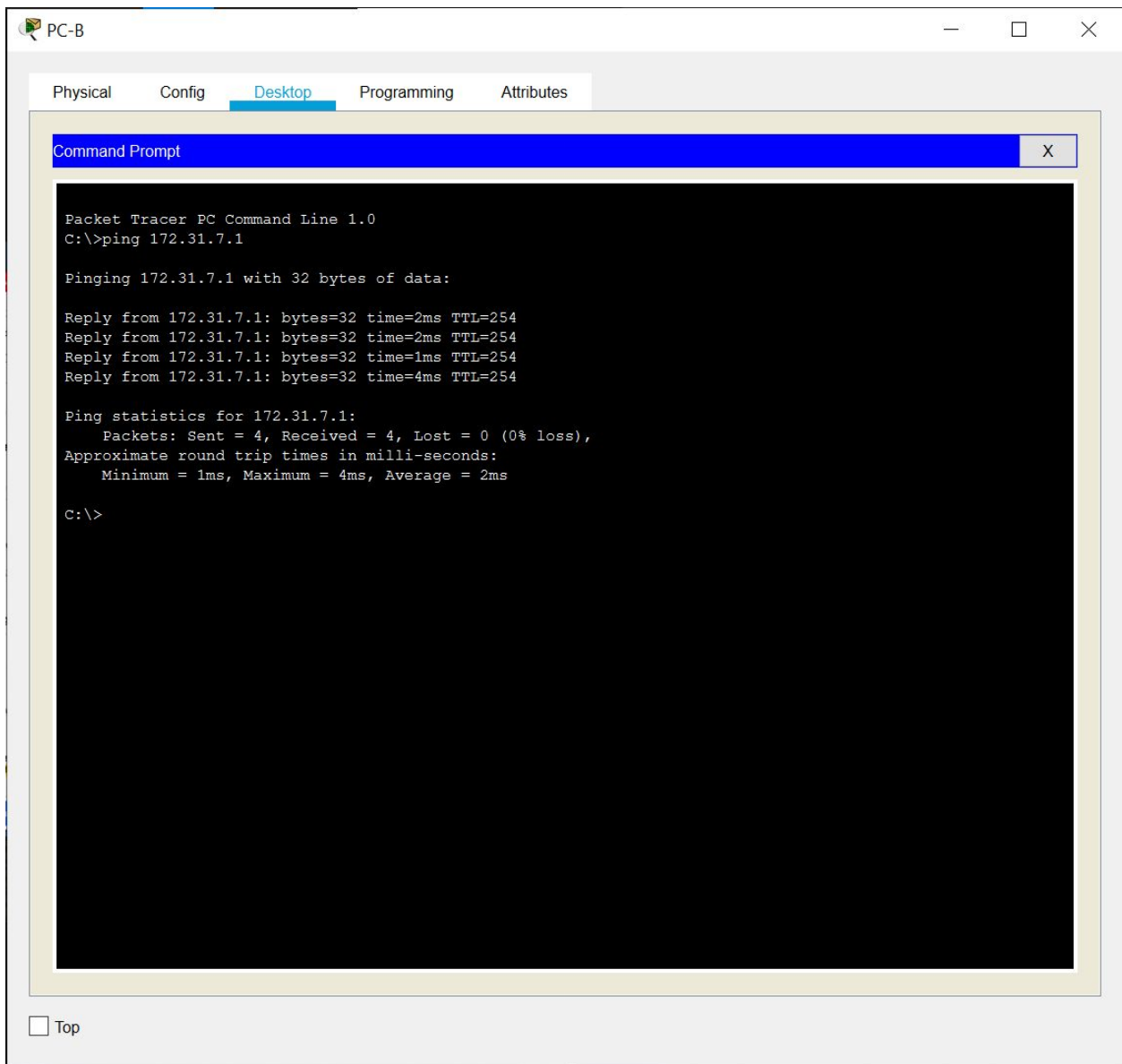
Gateway#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#ip nat pool public_access 210.185.200.242
% Incomplete command.
Gateway(config)#ip nat pool public_access 210.185.200.242 210.185.200.254 netmask 255.255.255.224
Gateway(config)#ip nat inside source list 1 pool public_access
Gateway(config)#
```

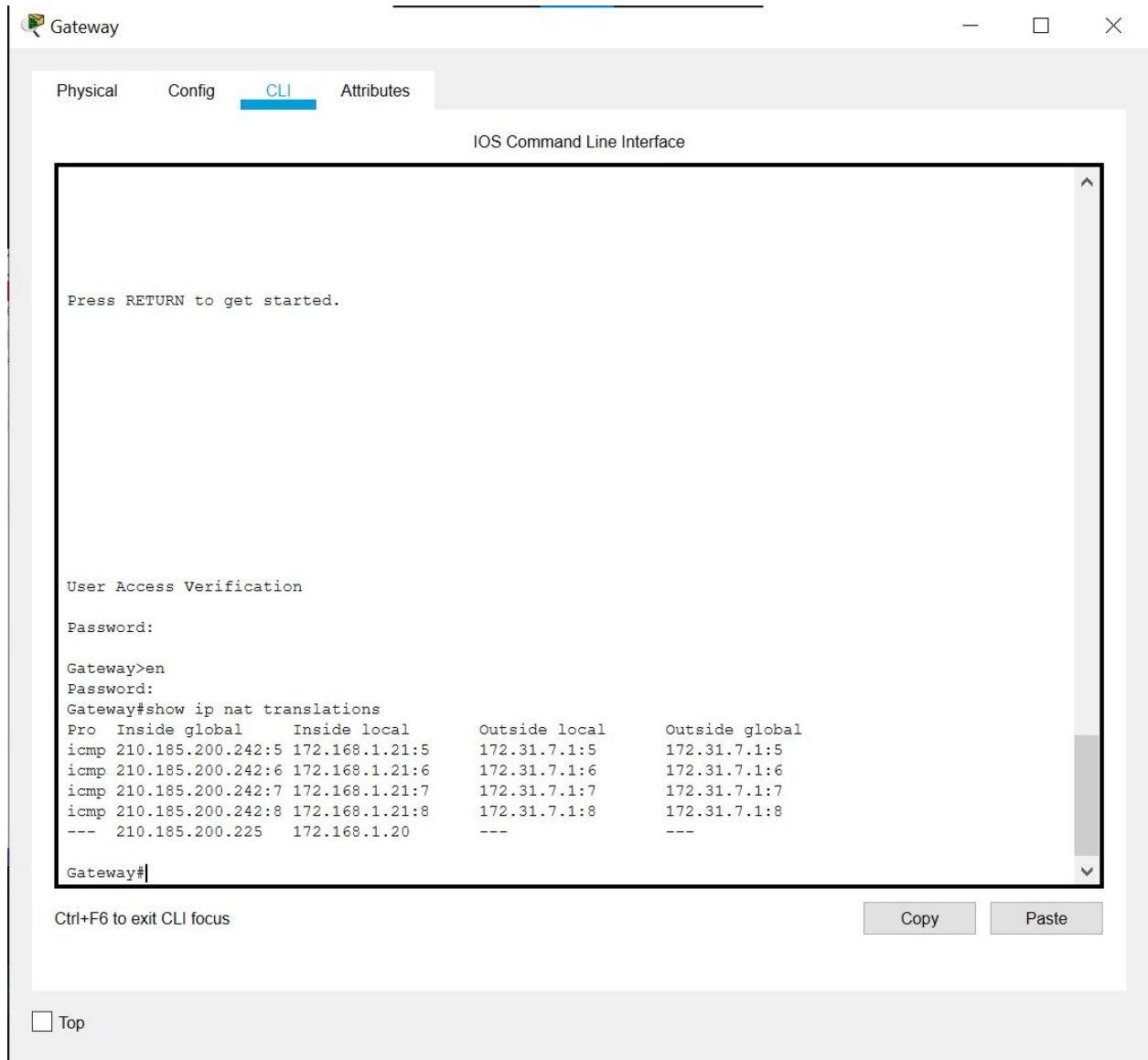
Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top





What is the translation of the inside local host address for PC-B?

172.168.1.21 = **210.185.200.242**

What port number was used in this ICMP exchange?

**4 port numbers were used for 4 ICMP exchanges for 4 pings. They are 5, 6, 7, and 8.**



Physical

Config

CLI

Attributes

## IOS Command Line Interface

```
!  
ip flow-export version 9  
!  
!  
access-list 1 permit 172.168.1.0 0.0.0.255  
!  
!  
!  
!  
!  
line con 0  
  password 7 0822455D0A16  
  logging synchronous  
  login  
!  
line aux 0  
!  
line vty 0 4  
  password 7 0822455D0A16  
  login  
!  
!  
!  
end|  
  
Gateway#  
Gateway#  
Gateway#  
Gateway#  
Gateway#  
Gateway#conf t  
Enter configuration commands, one per line. End with CNTL/Z.  
Gateway(config)#no ip nat inside source static 172.168.1.20 210.185.200.225
```

Ctrl+F6 to exit CLI focus

Copy

P

☐ Top



## Command Prompt

X

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.31.7.1

Pinging 172.31.7.1 with 32 bytes of data:

Reply from 172.31.7.1: bytes=32 time=2ms TTL=254
Reply from 172.31.7.1: bytes=32 time=6ms TTL=254
Reply from 172.31.7.1: bytes=32 time=1ms TTL=254
Reply from 172.31.7.1: bytes=32 time=1ms TTL=254

Ping statistics for 172.31.7.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 6ms, Average = 2ms

c:\>|
```

## Command Prompt

```
Reply from 172.31.7.1: bytes=32 time=2ms TTL=254
Reply from 172.31.7.1: bytes=32 time=1ms TTL=254
Reply from 172.31.7.1: bytes=32 time=4ms TTL=254

Ping statistics for 172.31.7.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 4ms, Average = 2ms

C:\>ping 172.31.7.1

Pinging 172.31.7.1 with 32 bytes of data:

Reply from 172.31.7.1: bytes=32 time=1ms TTL=254
Reply from 172.31.7.1: bytes=32 time=7ms TTL=254
Reply from 172.31.7.1: bytes=32 time=1ms TTL=254
Reply from 172.31.7.1: bytes=32 time=5ms TTL=254

Ping statistics for 172.31.7.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 7ms, Average = 3ms

C:\>ping 172.31.7.1

Pinging 172.31.7.1 with 32 bytes of data:

Reply from 172.31.7.1: bytes=32 time=1ms TTL=254
Reply from 172.31.7.1: bytes=32 time=1ms TTL=254
Reply from 172.31.7.1: bytes=32 time=7ms TTL=254
Reply from 172.31.7.1: bytes=32 time=2ms TTL=254

Ping statistics for 172.31.7.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 7ms, Average = 2ms

C:\>|
```

## IOS Command Line Interface

Press RETURN to get started.

User Access Verification

Password:

Password:

Gateway>en

Password:

Gateway#show ip nat translations

Pro	Inside global	Inside local	Outside local	Outside global
icmp	210.185.200.243:13	172.168.1.21:13	172.31.7.1:13	172.31.7.1:13
icmp	210.185.200.243:14	172.168.1.21:14	172.31.7.1:14	172.31.7.1:14
icmp	210.185.200.243:15	172.168.1.21:15	172.31.7.1:15	172.31.7.1:15
icmp	210.185.200.243:16	172.168.1.21:16	172.31.7.1:16	172.31.7.1:16
icmp	210.185.200.244:5	172.168.1.20:5	172.31.7.1:5	172.31.7.1:5
icmp	210.185.200.244:6	172.168.1.20:6	172.31.7.1:6	172.31.7.1:6
icmp	210.185.200.244:7	172.168.1.20:7	172.31.7.1:7	172.31.7.1:7
icmp	210.185.200.244:8	172.168.1.20:8	172.31.7.1:8	172.31.7.1:8

Gateway#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

## IOS Command Line Interface

```
Gateway#
Gateway#
Gateway#
Gateway#
Gateway#
Gateway#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Gateway(config)#no ip nat inside source static 172.168.1.20 210.185.200.225
Gateway(config)#no
% Incomplete command.
Gateway(config)#
Gateway(config)#no
% Incomplete command.
Gateway(config)#clear ip nat translation *
^
% Invalid input detected at '^' marker.

Gateway(config)#^Z
Gateway#
%SYS-5-CONFIG_I: Configured from console by console

Gateway#clear ip nat translation *
Gateway#show ip nat statistics
Total translations: 4 (0 static, 4 dynamic, 4 extended)
Outside Interfaces: Serial0/0/1
Inside Interfaces: GigabitEthernet0/1
Hits: 18 Misses: 18
Expired translations: 14
Dynamic mappings:
-- Inside Source
access-list 1 pool public_access refCount 4
 pool public_access: netmask 255.255.255.224
   start 210.185.200.242 end 210.185.200.254
   type generic, total addresses 13 , allocated 1 (7%), misses 0
Gateway#
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top