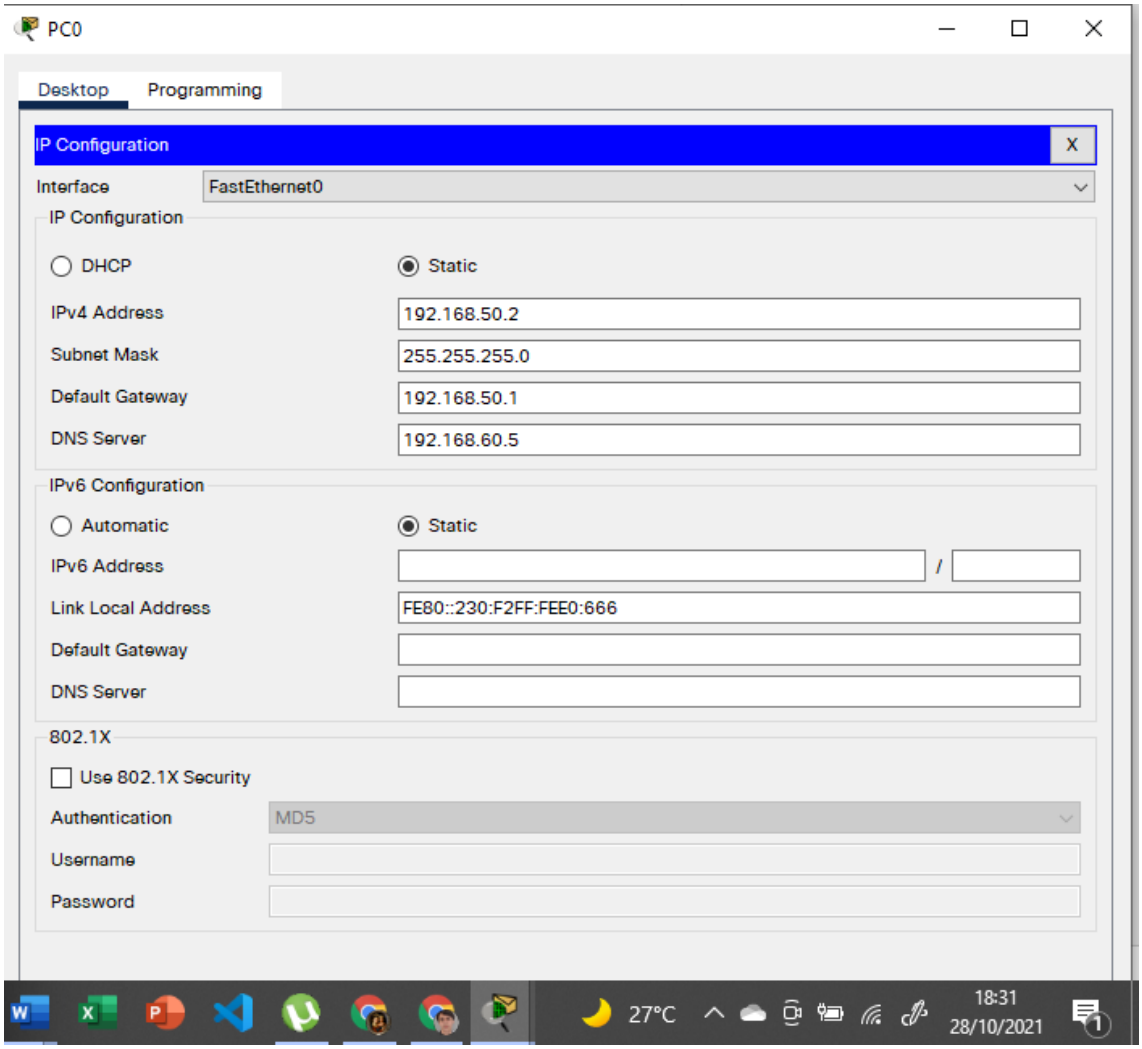
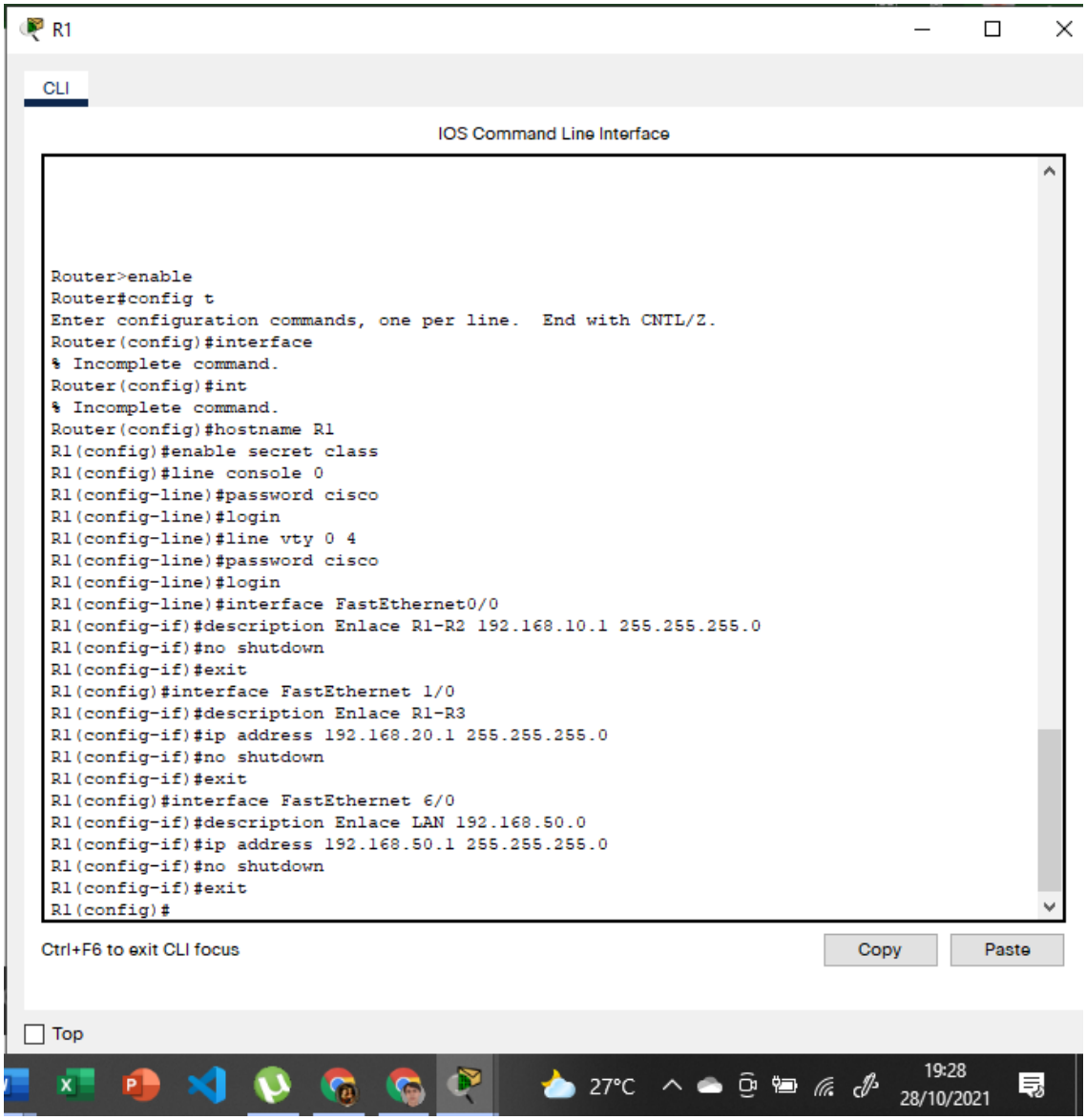

PC0
Desktop
Programming
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.50.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.50.1
DNS Server
192.168.60.5
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::230:F2FF:FEE0:666
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
27°C
18:31
28/10/2021

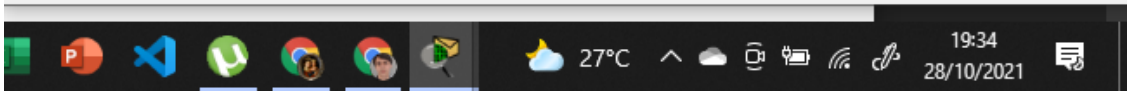

R1
CLI
IOS Command Line Interface
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface
% Incomplete command.
Router(config)#int
% Incomplete command.
Router(config)#hostname R1
R1(config)#enable secret class
R1(config)#line console 0
R1(config-line)#password cisco
R1(config-line)#login
R1(config-line)#line vty 0 4
R1(config-line)#password cisco
R1(config-line)#login
R1(config-line)#interface FastEthernet0/0
R1(config-if)#description Enlace R1-R2 192.168.10.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#interface FastEthernet 1/0
R1(config-if)#description Enlace R1-R3
R1(config-if)#ip address 192.168.20.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#interface FastEthernet 6/0
R1(config-if)#description Enlace LAN 192.168.50.0
R1(config-if)#ip address 192.168.50.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
27°C
19:28
28/10/2021

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R2
R2(config)#enable secret class
R2(config)#line console 0
R2(config-line)#password cisco
R2(config-line)#login
R2(config-line)#line vty 0 4
R2(config-line)#password cisco
R2(config-line)#login
R2(config-line)#interface FastEthernet0/0
R2(config-if)#description Enlace R2-R1 192.168.10.0
R2(config-if)#ip address 192.168.10.2 255.255.255.0
R2(config-if)#no shutdown exit
R2(config-if)#interface FastEthernet1/0
R2(config-if)#description Enlace R2-R4
R2(config-if)#ip address 192.168.30.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top

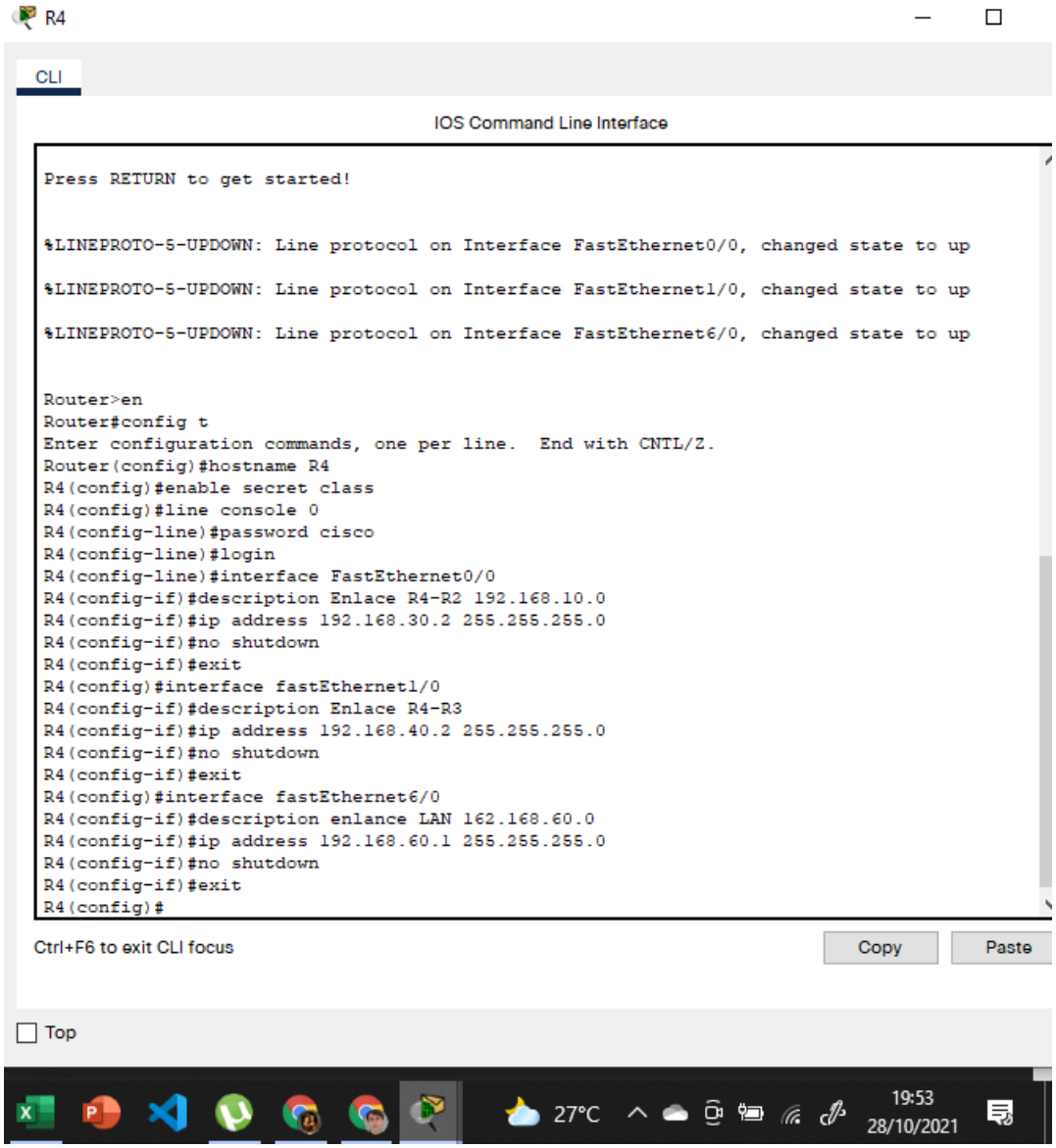


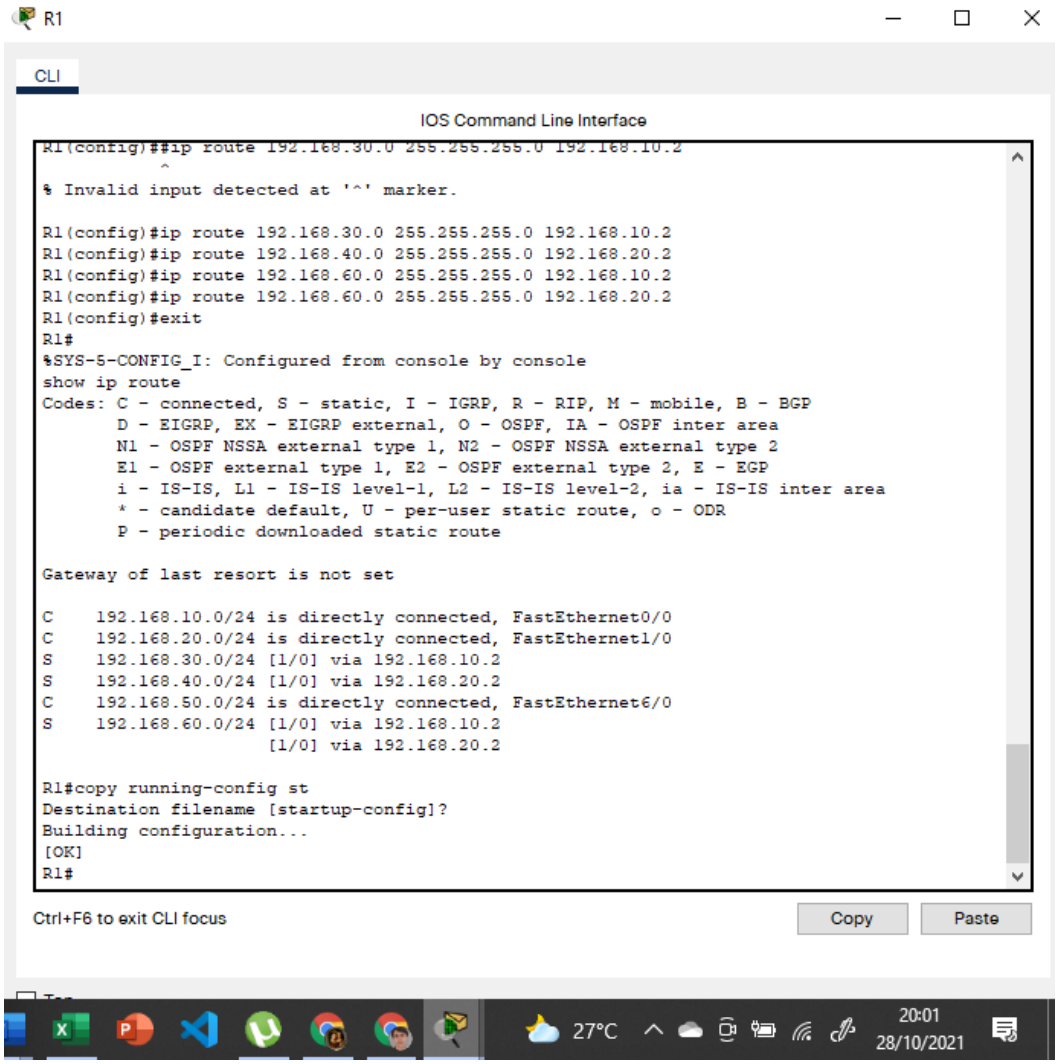

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R3
R3(config)#enable secret class
R3(config)#line console 0
R3(config-line)#password cisco
R3(config-line)#login
R3(config-line)#line vty 0 4
R3(config-line)#password cisco
R3(config-line)#login
R3(config-line)#interface FastEthernet0/0
R3(config-if)#description Enlace R3-R4
R3(config-if)#ip address 192.168.40.1 255.255.255.0
% 192.168.40.0 overlaps with FastEthernet1/0
R3(config-if)#no shutdown
R3(config-if)#exit
R3(config)#
```

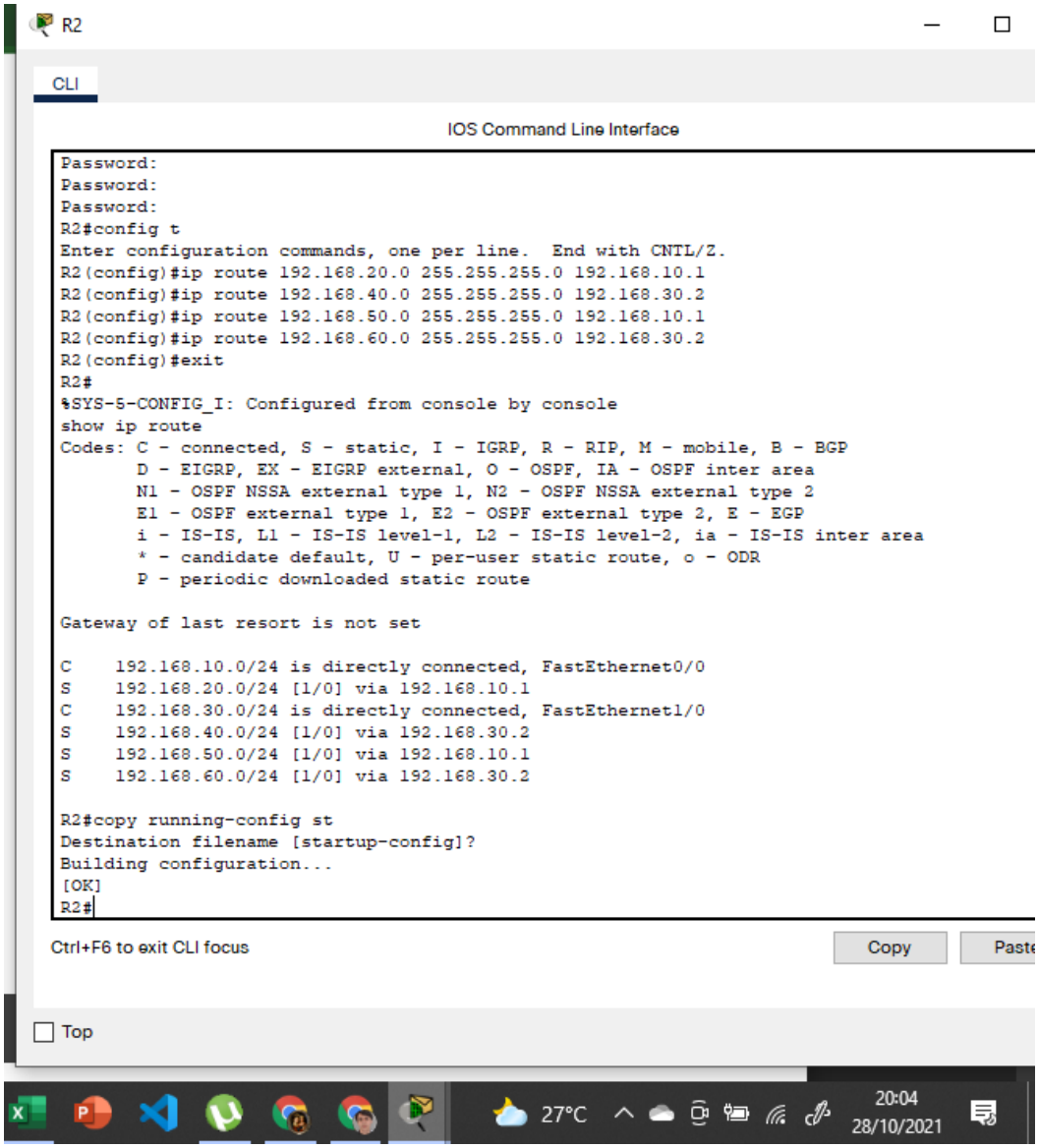
trl+F6 to exit CLI focus

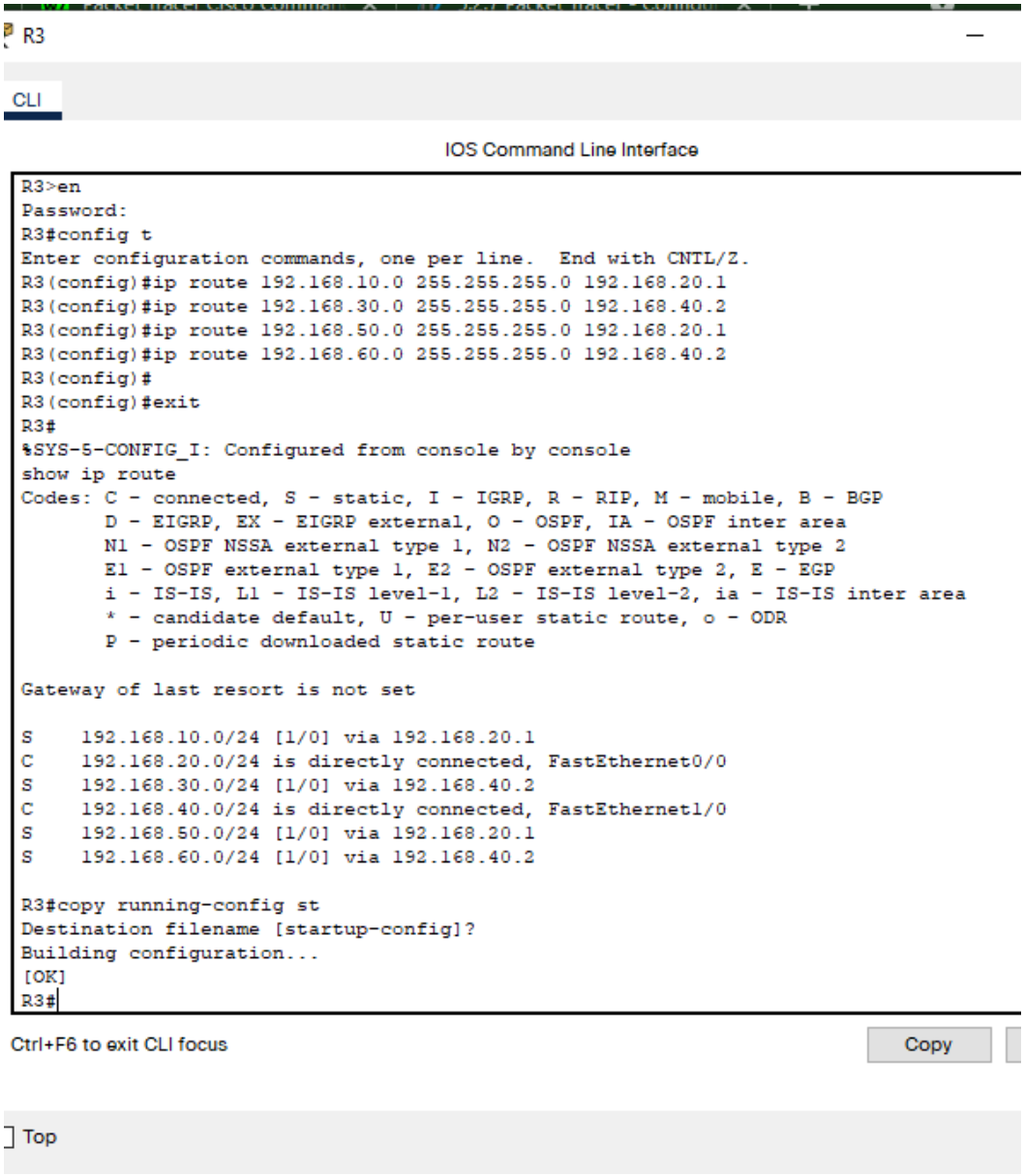
Copy Paste

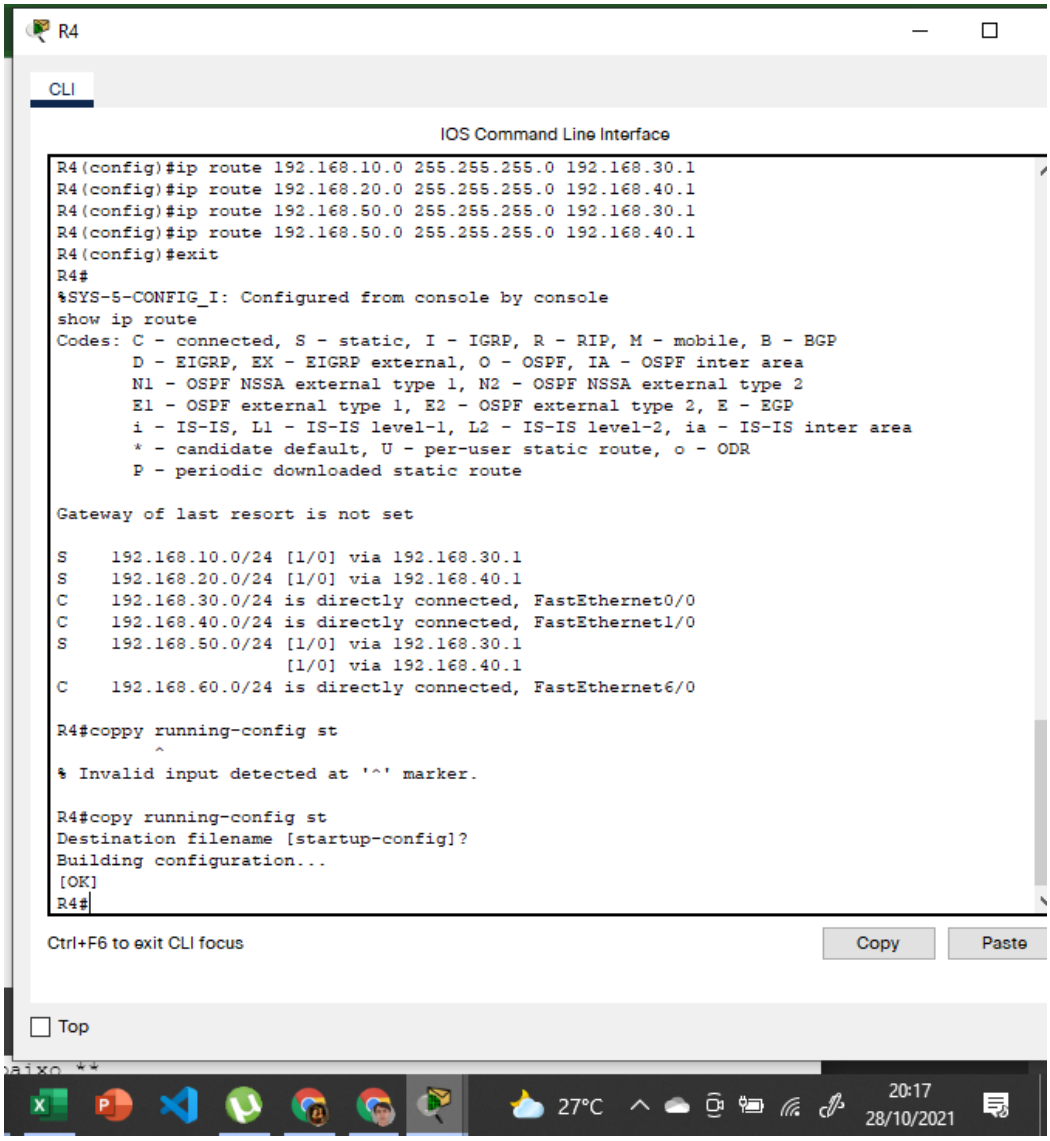
Top

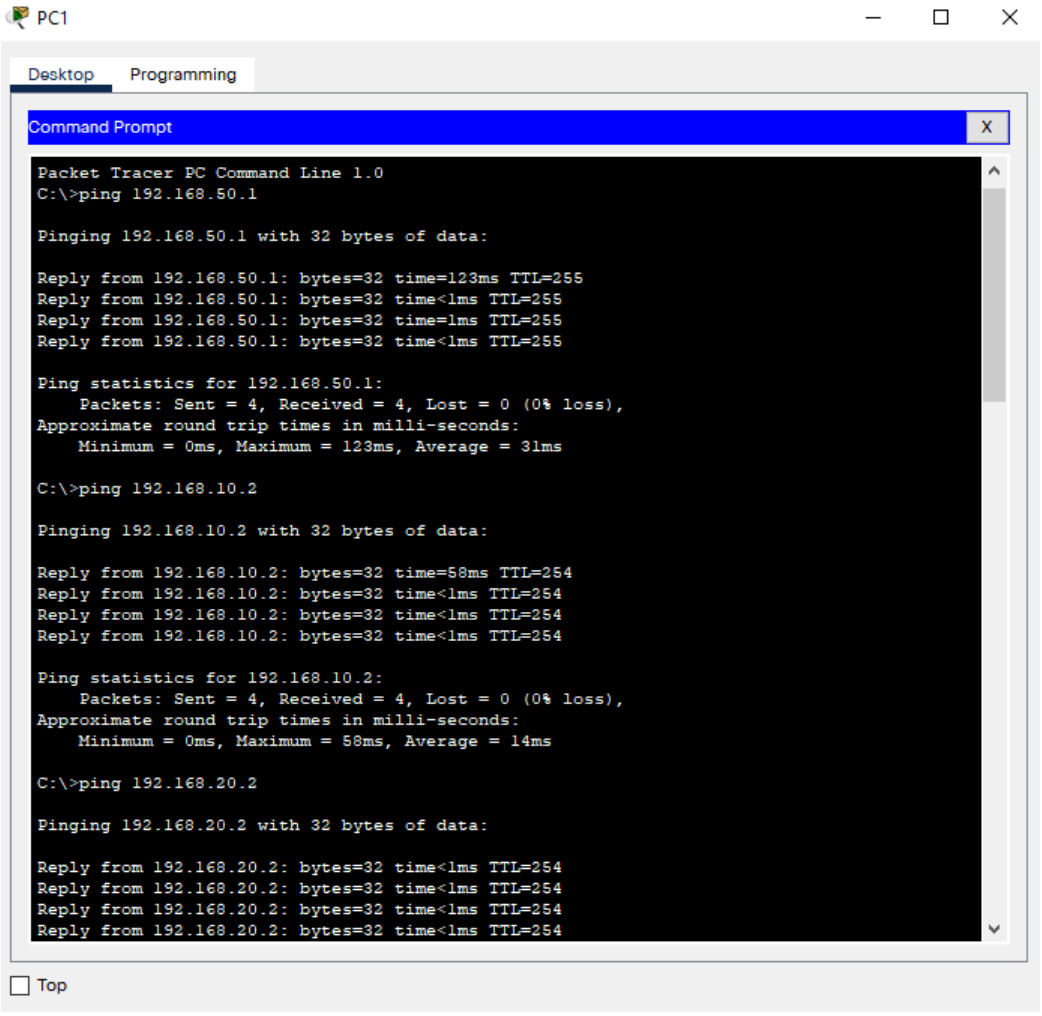

R4
CLI
IOS Command Line Interface
Press RETURN to get started!
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet6/0, changed state to up
Router>en
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R4
R4(config)#enable secret class
R4(config)#line console 0
R4(config-line)#password cisco
R4(config-line)#login
R4(config-line)#interface FastEthernet0/0
R4(config-if)#description Enlace R4-R2 192.168.10.0
R4(config-if)#ip address 192.168.30.2 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
R4(config)#interface fastEthernet1/0
R4(config-if)#description Enlace R4-R3
R4(config-if)#ip address 192.168.40.2 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
R4(config)#interface fastEthernet6/0
R4(config-if)#description enlance LAN 162.168.60.0
R4(config-if)#ip address 192.168.60.1 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
R4(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
27°C
19:53
28/10/2021

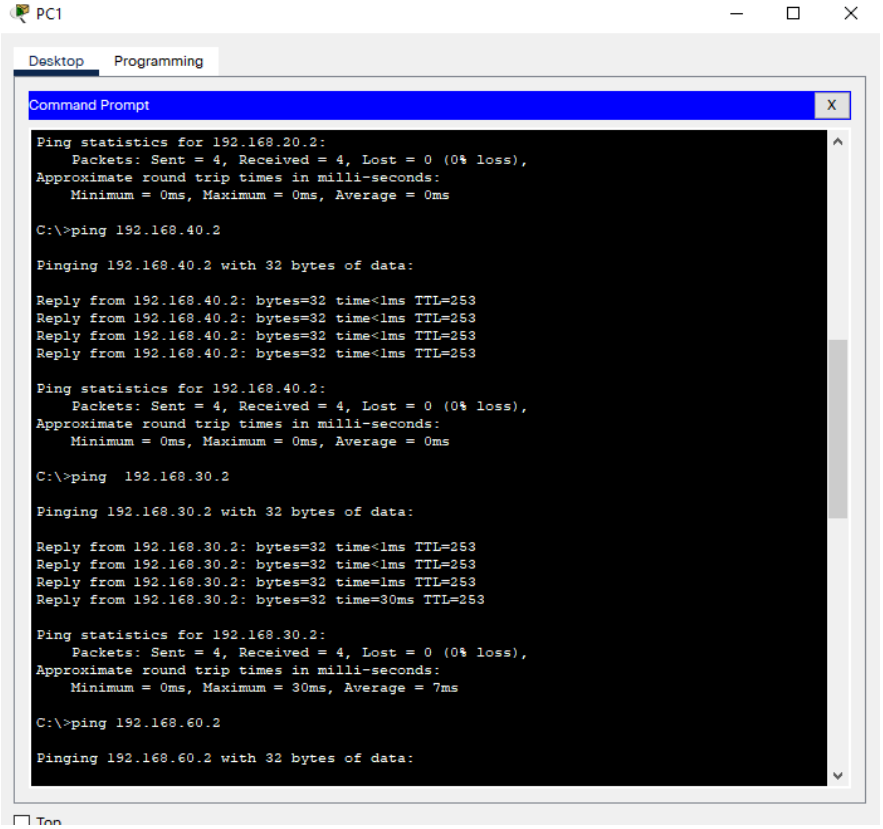

R1
CLI
IOS Command Line Interface
R1(config)##ip route 192.168.30.0 255.255.255.0 192.168.10.2
% Invalid input detected at '^' marker.
R1(config)#ip route 192.168.30.0 255.255.255.0 192.168.10.2
R1(config)#ip route 192.168.40.0 255.255.255.0 192.168.20.2
R1(config)#ip route 192.168.60.0 255.255.255.0 192.168.10.2
R1(config)#ip route 192.168.60.0 255.255.255.0 192.168.20.2
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, 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
C 192.168.10.0/24 is directly connected, FastEthernet0/0
C 192.168.20.0/24 is directly connected, FastEthernet1/0
S 192.168.30.0/24 [1/0] via 192.168.10.2
S 192.168.40.0/24 [1/0] via 192.168.20.2
C 192.168.50.0/24 is directly connected, FastEthernet6/0
S 192.168.60.0/24 [1/0] via 192.168.10.2
[1/0] via 192.168.20.2
R1#copy running-config st
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
Ctrl+F6 to exit CLI focus
Copy
Paste
27°C
20:01
28/10/2021


R2
CLI
IOS Command Line Interface
Password:
Password:
Password:
R2#config t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip route 192.168.20.0 255.255.255.0 192.168.10.1
R2(config)#ip route 192.168.40.0 255.255.255.0 192.168.30.2
R2(config)#ip route 192.168.50.0 255.255.255.0 192.168.10.1
R2(config)#ip route 192.168.60.0 255.255.255.0 192.168.30.2
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, 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
C 192.168.10.0/24 is directly connected, FastEthernet0/0
S 192.168.20.0/24 [1/0] via 192.168.10.1
C 192.168.30.0/24 is directly connected, FastEthernet1/0
S 192.168.40.0/24 [1/0] via 192.168.30.2
S 192.168.50.0/24 [1/0] via 192.168.10.1
S 192.168.60.0/24 [1/0] via 192.168.30.2
R2#copy running-config st
Destination filename [startup-config]?
Building configuration...
[OK]
R2#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
27°C
20:04
28/10/2021

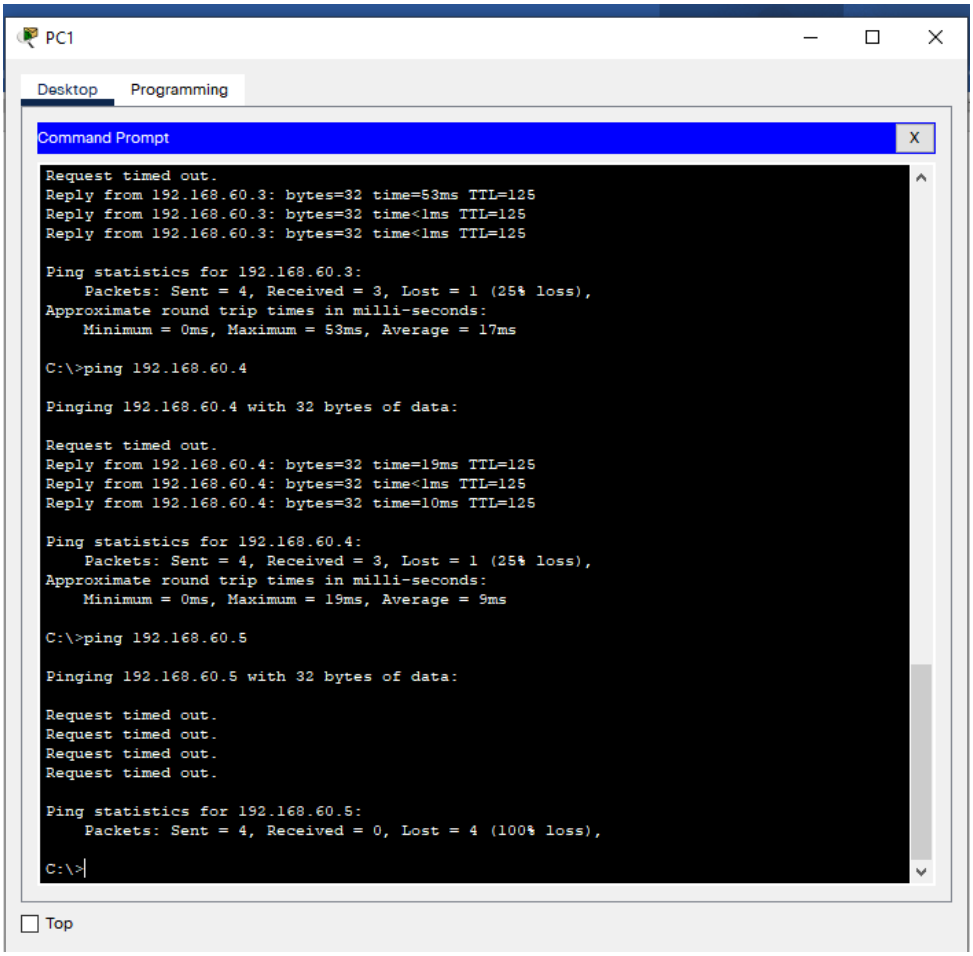

R3
CLI
IOS Command Line Interface
R3>en
Password:
R3#config t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#ip route 192.168.10.0 255.255.255.0 192.168.20.1
R3(config)#ip route 192.168.30.0 255.255.255.0 192.168.40.2
R3(config)#ip route 192.168.50.0 255.255.255.0 192.168.20.1
R3(config)#ip route 192.168.60.0 255.255.255.0 192.168.40.2
R3(config)#
R3(config)#exit
R3#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, 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
S 192.168.10.0/24 [1/0] via 192.168.20.1
C 192.168.20.0/24 is directly connected, FastEthernet0/0
S 192.168.30.0/24 [1/0] via 192.168.40.2
C 192.168.40.0/24 is directly connected, FastEthernet1/0
S 192.168.50.0/24 [1/0] via 192.168.20.1
S 192.168.60.0/24 [1/0] via 192.168.40.2
R3#copy running-config st
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
Ctrl+F6 to exit CLI focus
Copy
Top

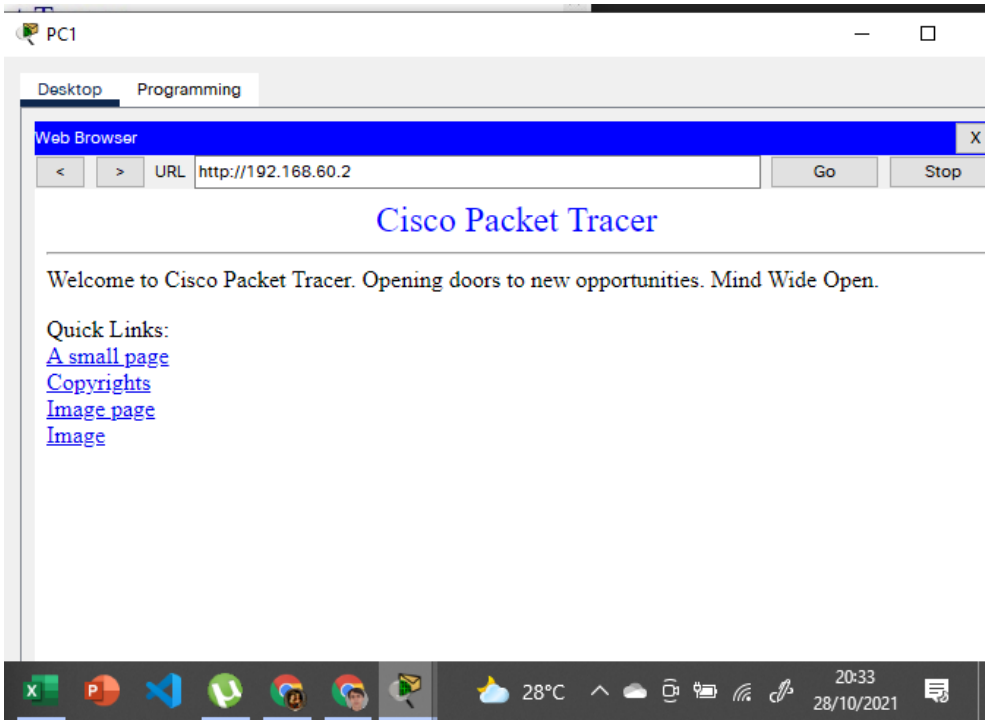

R4
CLI
IOS Command Line Interface
R4(config)#ip route 192.168.10.0 255.255.255.0 192.168.30.1
R4(config)#ip route 192.168.20.0 255.255.255.0 192.168.40.1
R4(config)#ip route 192.168.50.0 255.255.255.0 192.168.30.1
R4(config)#ip route 192.168.50.0 255.255.255.0 192.168.40.1
R4(config)#exit
R4#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, 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
S 192.168.10.0/24 [1/0] via 192.168.30.1
S 192.168.20.0/24 [1/0] via 192.168.40.1
C 192.168.30.0/24 is directly connected, FastEthernet0/0
C 192.168.40.0/24 is directly connected, FastEthernet1/0
S 192.168.50.0/24 [1/0] via 192.168.30.1
[1/0] via 192.168.40.1
C 192.168.60.0/24 is directly connected, FastEthernet6/0
R4#coppy running-config st
^
% Invalid input detected at '^' marker.
R4#copy running-config st
Destination filename [startup-config]?
Building configuration...
[OK]
R4#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
27°C
20:17
28/10/2021


PC1
Desktop
Programming
Command Prompt
X
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.50.1
Pinging 192.168.50.1 with 32 bytes of data:
Reply from 192.168.50.1: bytes=32 time=123ms TTL=255
Reply from 192.168.50.1: bytes=32 time<1ms TTL=255
Reply from 192.168.50.1: bytes=32 time=1ms TTL=255
Reply from 192.168.50.1: bytes=32 time<1ms TTL=255
Ping statistics for 192.168.50.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 123ms, Average = 31ms
C:\>ping 192.168.10.2
Pinging 192.168.10.2 with 32 bytes of data:
Reply from 192.168.10.2: bytes=32 time=58ms TTL=254
Reply from 192.168.10.2: bytes=32 time<1ms TTL=254
Reply from 192.168.10.2: bytes=32 time<1ms TTL=254
Reply from 192.168.10.2: bytes=32 time<1ms TTL=254
Ping statistics for 192.168.10.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 58ms, Average = 14ms
C:\>ping 192.168.20.2
Pinging 192.168.20.2 with 32 bytes of data:
Reply from 192.168.20.2: bytes=32 time<1ms TTL=254
Reply from 192.168.20.2: bytes=32 time<1ms TTL=254
Reply from 192.168.20.2: bytes=32 time<1ms TTL=254
Reply from 192.168.20.2: bytes=32 time<1ms TTL=254
Top


PC1
Desktop
Programming
Command Prompt
X
Ping statistics for 192.168.20.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 192.168.40.2
Pinging 192.168.40.2 with 32 bytes of data:
Reply from 192.168.40.2: bytes=32 time<1ms TTL=253
Reply from 192.168.40.2: bytes=32 time<1ms TTL=253
Reply from 192.168.40.2: bytes=32 time<1ms TTL=253
Reply from 192.168.40.2: bytes=32 time<1ms TTL=253
Ping statistics for 192.168.40.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 192.168.30.2
Pinging 192.168.30.2 with 32 bytes of data:
Reply from 192.168.30.2: bytes=32 time<1ms TTL=253
Reply from 192.168.30.2: bytes=32 time<1ms TTL=253
Reply from 192.168.30.2: bytes=32 time=1ms TTL=253
Reply from 192.168.30.2: bytes=32 time=30ms TTL=253
Ping statistics for 192.168.30.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 30ms, Average = 7ms
C:\>ping 192.168.60.2
Pinging 192.168.60.2 with 32 bytes of data:

v


PC1
Desktop
Programming
Command Prompt
X
Request timed out.
Reply from 192.168.60.3: bytes=32 time=53ms TTL=125
Reply from 192.168.60.3: bytes=32 time<1ms TTL=125
Reply from 192.168.60.3: bytes=32 time<1ms TTL=125
Ping statistics for 192.168.60.3:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 53ms, Average = 17ms
C:\>ping 192.168.60.4
Pinging 192.168.60.4 with 32 bytes of data:
Request timed out.
Reply from 192.168.60.4: bytes=32 time=19ms TTL=125
Reply from 192.168.60.4: bytes=32 time<1ms TTL=125
Reply from 192.168.60.4: bytes=32 time=10ms TTL=125
Ping statistics for 192.168.60.4:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 19ms, Average = 9ms
C:\>ping 192.168.60.5
Pinging 192.168.60.5 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.60.5:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
Top


PC1
Desktop
Programming
Web Browser
X
<
>
URL
http://192.168.60.2
Go
Stop
Cisco Packet Tracer
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image
28°C
20:33
28/10/2021

```
R1(config)#interface fastEthernet 6/0
R1(config-if)#ip helper-address 192.168.60.3
R1(config-if)#end
```

```
C:\>ping 192.168.60.2

Pinging 192.168.60.2 with 32 bytes of data:

Reply from 192.168.60.2: bytes=32 time=1ms TTL=125
Reply from 192.168.60.2: bytes=32 time=14ms TTL=125
Reply from 192.168.60.2: bytes=32 time=1ms TTL=125
Reply from 192.168.60.2: bytes=32 time=10ms TTL=125

Ping statistics for 192.168.60.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 14ms, Average = 6ms
```

PC0

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

- (•) DHCP
- ( ) Static

IPv4 Address	192.168.50.4
Subnet Mask	255.255.255.0
Default Gateway	192.168.50.1
DNS Server	192.168.60.5

Server3

Physical | Config | Services | Desktop | Programming | Attributes

SERVICES
- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

FTP

Service: (•) On ( ) Off

User Setup

Username: _____ Password: _____

[ ] Write [ ] Read [ ] Delete [ ] Rename [ ] List

	Username	Password	Permission
1	cisco	cisco	RWDNL
2	xico	1234	RWDNL

Add

Save

```
R1(config)#interface fastEthernet 6/0
R1(config-if)#ip helper-address 192.168.60.3
R1(config-if)#end
```

```
C:\>ping 192.168.60.2

Pinging 192.168.60.2 with 32 bytes of data:

Reply from 192.168.60.2: bytes=32 time=1ms TTL=125
Reply from 192.168.60.2: bytes=32 time=14ms TTL=125
Reply from 192.168.60.2: bytes=32 time=1ms TTL=125
Reply from 192.168.60.2: bytes=32 time=10ms TTL=125

Ping statistics for 192.168.60.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 14ms, Average = 6ms
```

PC0

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

- (•) DHCP
- ( ) Static

IPv4 Address	192.168.50.4
Subnet Mask	255.255.255.0
Default Gateway	192.168.50.1
DNS Server	192.168.60.5

Server3

Physical | Config | Services | Desktop | Programming | Attributes

SERVICES
- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

FTP

Service: (•) On ( ) Off

User Setup

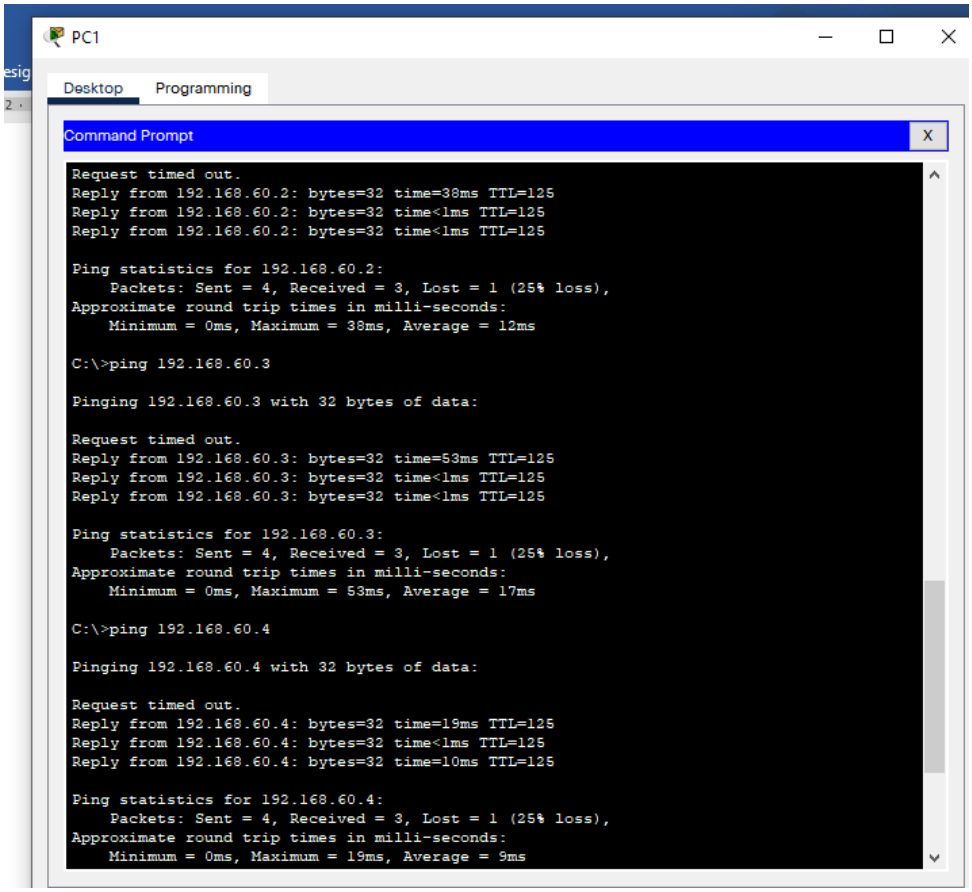
Username: _____ Password: _____

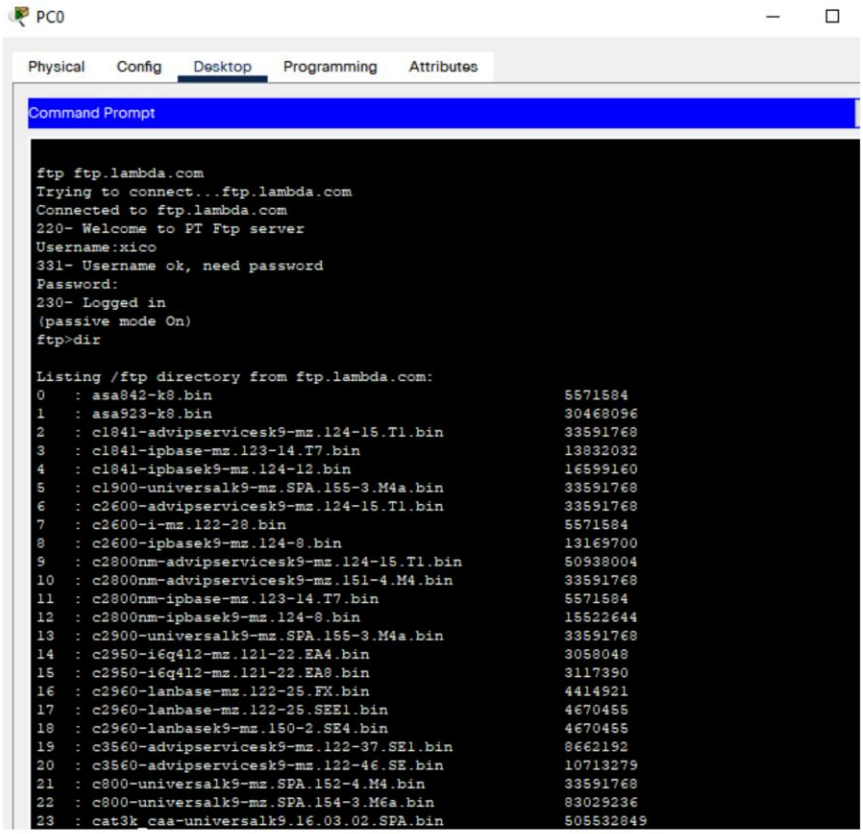
[ ] Write [ ] Read [ ] Delete [ ] Rename [ ] List

	Username	Password	Permission
1	cisco	cisco	RWDNL
2	xico	1234	RWDNL

Add

Save


PC1
Desktop
Programming
Command Prompt
X
Request timed out.
Reply from 192.168.60.2: bytes=32 time=38ms TTL=125
Reply from 192.168.60.2: bytes=32 time<1ms TTL=125
Reply from 192.168.60.2: bytes=32 time<1ms TTL=125
Ping statistics for 192.168.60.2:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 38ms, Average = 12ms
C:\>ping 192.168.60.3
Pinging 192.168.60.3 with 32 bytes of data:
Request timed out.
Reply from 192.168.60.3: bytes=32 time=53ms TTL=125
Reply from 192.168.60.3: bytes=32 time<1ms TTL=125
Reply from 192.168.60.3: bytes=32 time<1ms TTL=125
Ping statistics for 192.168.60.3:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 53ms, Average = 17ms
C:\>ping 192.168.60.4
Pinging 192.168.60.4 with 32 bytes of data:
Request timed out.
Reply from 192.168.60.4: bytes=32 time=19ms TTL=125
Reply from 192.168.60.4: bytes=32 time<1ms TTL=125
Reply from 192.168.60.4: bytes=32 time=10ms TTL=125
Ping statistics for 192.168.60.4:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 19ms, Average = 9ms




```
23  : cat3k_caa-universalk9.16.03.02.SPA.bin            505532849
24  : cgr1000-universalk9-mz.SPA.154-2.CG               159487552
25  : cgr1000-universalk9-mz.SPA.156-3.CG               184530138
26  : ir800-universalk9-bundle.SPA.156-3.M.bin          160968869
27  : ir800-universalk9-mz.SPA.155-3.M                  61750062
28  : ir800-universalk9-mz.SPA.156-3.M                  63753767
29  : ir800_yocto-1.7.2.tar                             2877440
30  : ir800_yocto-1.7.2_python-2.7.3.tar                6912000
31  : pt1000-i-mz.122-28.bin                            5571584
32  : pt3000-i6q412-mz.121-22.EA4.bin                   3117390
ftp>help
        ?
        cd
        delete
        dir
        get
        help
        passive
        put
        pwd
        quit
        rename
ftp>
```