Lab 7

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Date:	10 April 2025

Assigning IP addresses

The software that will be used is **Cisco Packet Tracer.**

Introduction

In this laboratory exercise we will assign IP addresses to the devices in the laboratory network.

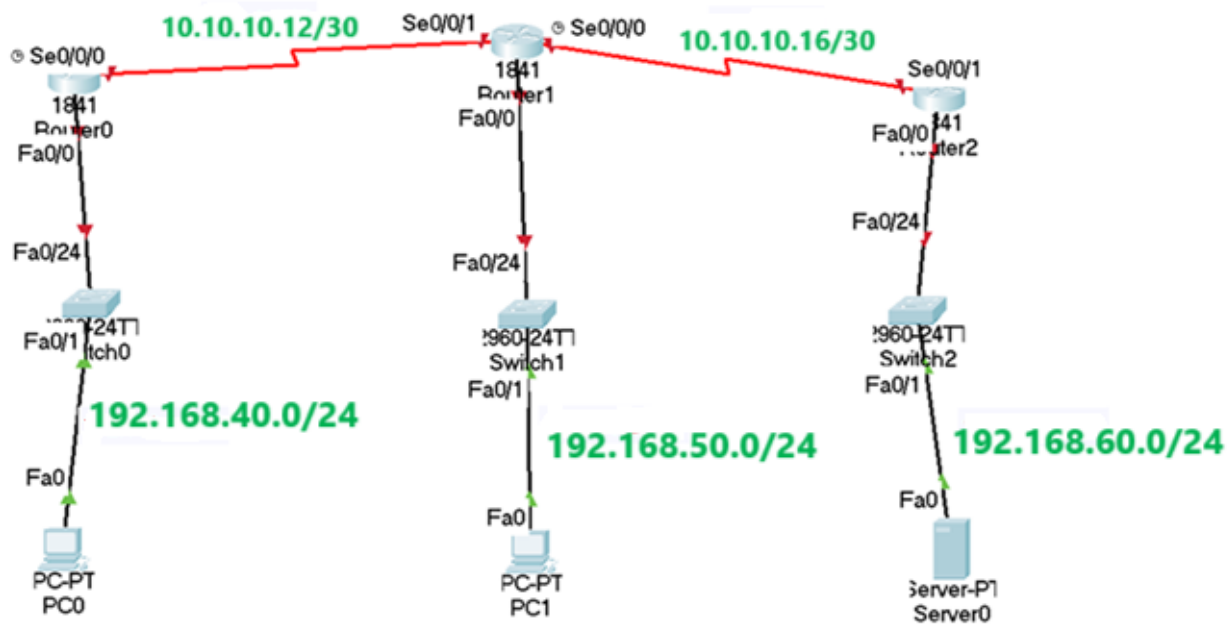


Figure 1: Network Laboratory Topology for IP Assignment

1.1. Load lab 2 into packet tracer. It should be the configuration shown in figure
1.2. **Click on PC0**, select Desktop then IP Configuration.
1.3. Static IPv4: 192.168.40.1
1.4. Subnet: 255.255.255.0
1.5. Default GW: 192.168.40.254
1.6. DNS can be left blank or the default 0.0.0.0
1.7. **Click on PC1**, select Desktop then IP Configuration.
1.8. Static IPv4: 192.168.50.1
1.9. Subnet: 255.255.255.0
1.10. Default GW: 192.168.50.254
1.11. DNS can be left blank or the default 0.0.0.0
1.12. **Click on Server**, select Desktop then IP Configuration.
1.13. Static IPv4: 192.168.60.1
1.14. Subnet: 255.255.255.0
1.15. Default GW: 192.168.60.254
1.16. DNS can be left blank or the default 0.0.0.0

Now let's configure router0.

1.17. Name router0 the hostname R1.

1.18. Go into fastEthernet 0/0.
1.19. Now assign the IP address for that interface using the following command.
1.20. R1(config-if)#ip address xxx.xxx.xxx.xxx 255.255.255.0
1.21. Now turn on the interface
1.22. R1(config-if)#no shut
1.23. Now we will setup the serial interface 0/0 of R1
1.24. R1(config)#int s0/0/0
1.25. Now configure the IP address of the interface.
1.26. R1(config-if)#ip address xxx.xxx.xxx.xxx 255.255.255.252
1.27. Now set the clock rate
1.28. R1(config-if)#clock rate 4000000
1.29. Now bring the interface up
1.30. R1(config-if)#no shut
1.31. From here you can use a shortcut to write the running config to the startup file.
1.32. R1(config-if)#do wr
1.33. R1 is now configured in terms of the IP addressing and bringing the interfaces up.

You must now configure Router1 and Router2 in the same way but using the proper IP address assignment based on the subnet mask. Make sure you save to running config to the startup config.

Also change the router hostnames for R0 to R2

Some thoughts.

Make sure you understand subnet masking. You will now know how to assign an IP address to an interface and how to bring the interface up.

How to submit

2.1. Copy your configuration file from the CLI and paste it here.

```
Current configuration : 716 bytes
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
!
!
!
!
!
!
!
no ip cef
no ipv6 cef
!
!
!
!
!
!
```

```
!
!
!
!
!
!
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
ip address 192.168.10.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/0/0
ip address 10.0.0.1 255.255.255.252
clock rate 4000000
!
interface Serial0/0/1
no ip address
clock rate 2000000
shutdown
!
interface Vlan1
no ip address
shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
```

```
!
!
!
End

Current configuration : 707 bytes
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R2
!
!
!
!
!
!
!
!
no ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
ip address 192.168.2.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/0/0
```

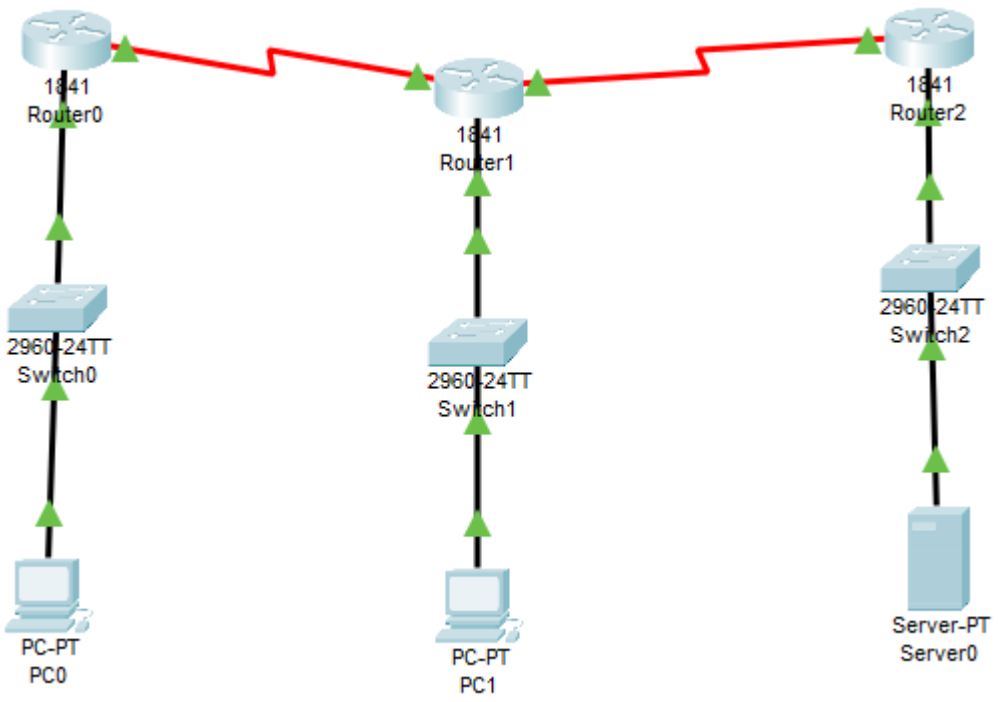
```
 ip address 10.0.0.2 255.255.255.252
 !
 interface Serial0/0/1
 ip address 10.0.0.5 255.255.255.252
 clock rate 4000000
 !
 interface Vlan1
 no ip address
 shutdown
 !
 ip classless
 !
 ip flow-export version 9
 !
 !
 !
 !
 !
 !
 !
 !
 line con 0
 !
 line aux 0
 !
 line vty 0 4
 login
 !
 !
 !
End

 Current configuration : 695 bytes
 !
 version 12.4
 no service timestamps log datetime msec
 no service timestamps debug datetime msec
 no service password-encryption
 !
 hostname R3
 !
 !
 !
 !
 !
 !
 !
 !
 no ip cef
 no ipv6 cef
 !
 !
 !
 !
```

```
!
!
!
!
!
!
!
!
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
ip address 192.168.1.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/0/0
no ip address
clock rate 2000000
shutdown
!
interface Serial0/0/1
ip address 10.0.0.6 255.255.255.252
!
interface Vlan1
no ip address
shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
```

```
        login
        !
        !
        !
End
```

2.2. Print the logical topology to the file, then paste the image here.



2.3. For R1 show the output of (sh ip int bri). Paste this output here.

```
R1>sh ip int bri
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        192.168.10.1    YES manual up                    up
FastEthernet0/1        unassigned      YES unset  administratively      down down
Serial0/0/0            10.0.0.1        YES manual up                    up
Serial0/0/1            unassigned      YES unset  administratively      down down
Vlan1                  unassigned      YES unset  administratively      down down
```

2.4. For R2 show the output of (sh ip int bri). Paste this output here.

```
R2>sh ip int bri
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        192.168.2.1     YES manual up                    up
FastEthernet0/1        unassigned      YES unset  administratively      down down
Serial0/0/0            10.0.0.2        YES manual up                    up
```

```
Serial0/0/1            10.0.0.5        YES manual up                    up
Vlan1                  unassigned      YES unset  administratively   down down
```

2.5. For R3 show the output of (sh ip int bri). Paste this output here.

```
R3>sh ip int bri
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        192.168.1.1     YES manual up                    up
FastEthernet0/1        unassigned      YES unset  administratively     down down
Serial0/0/0            unassigned      YES unset  administratively     down down
Serial0/0/1            10.0.0.6        YES manual up                    up
Vlan1                  unassigned      YES unset  administratively     down down
```

END