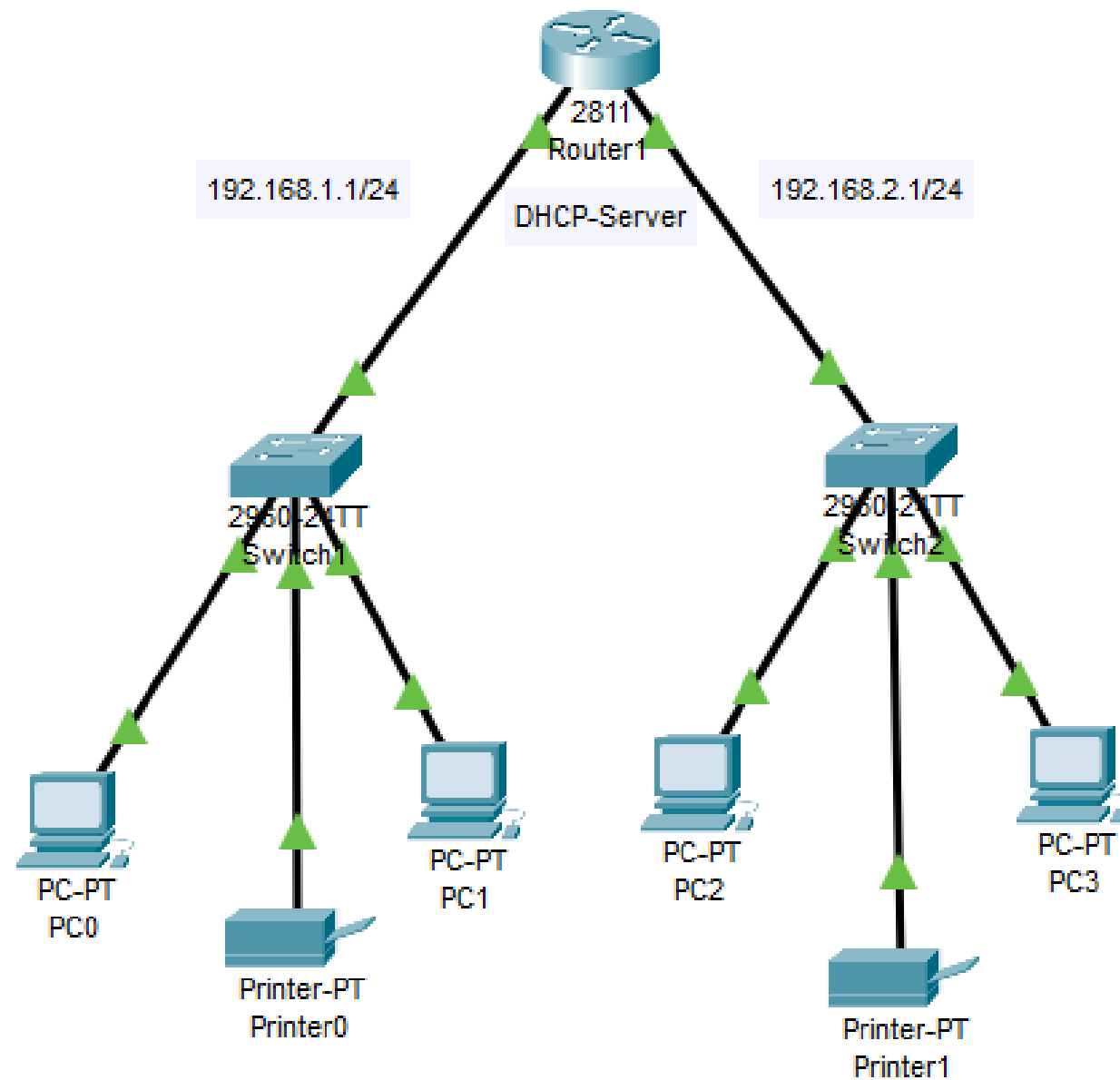


DHCP with Simple Network Design

Brahmadathan KG

Network Design



Components

router 2811

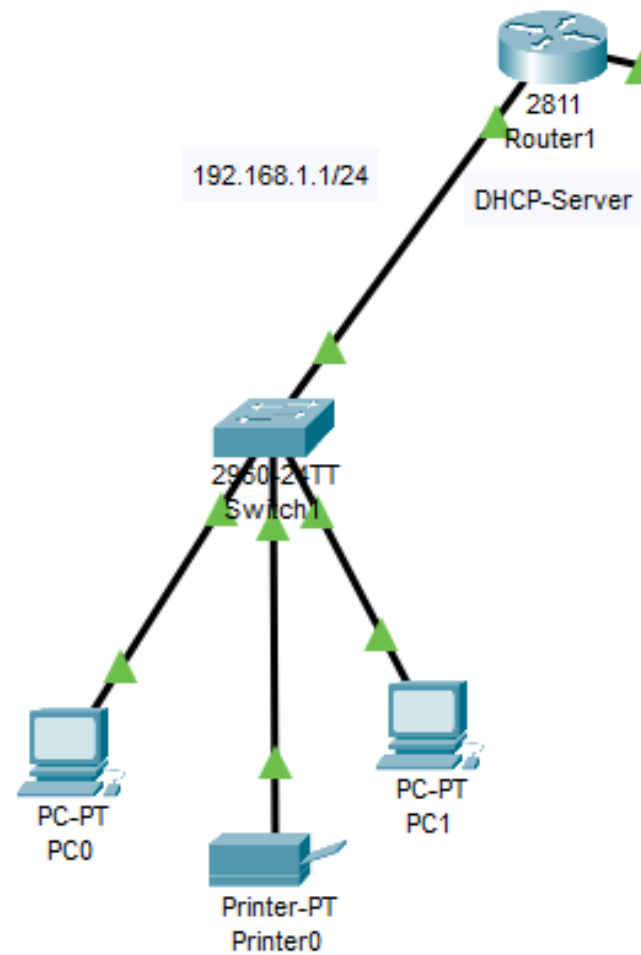
2 switches 2960 24TT

4 PC

2 printer

Copper Straight -Through Wire

Left side Configurations



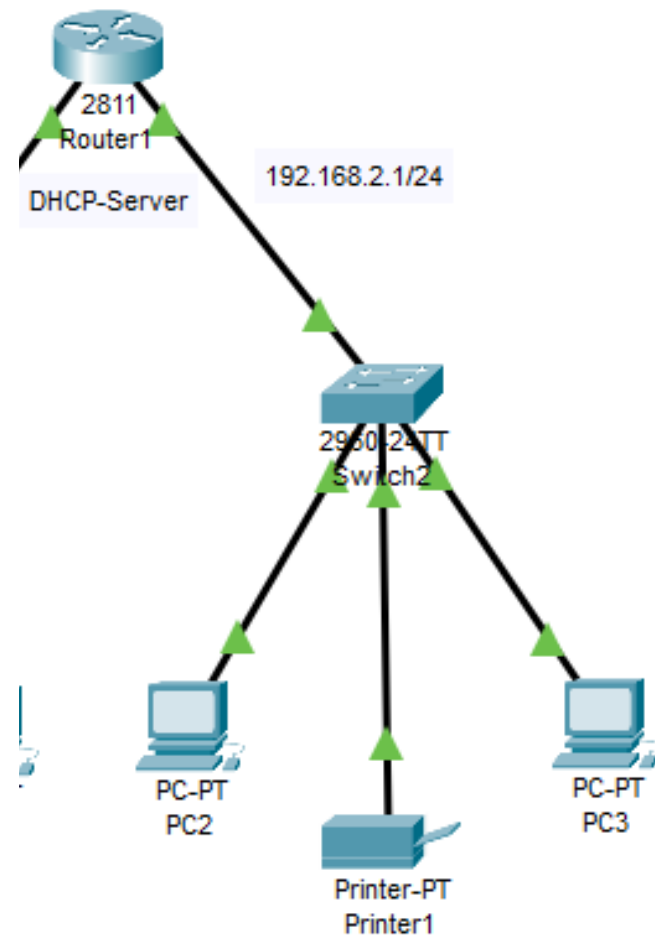
Decided the ip address pool for the left side
ip address : 192.168.1.1/24

DHCP config in router

Open router → CLI [type the following commands]

- 1.enable
- 2.conf t
- 3.hostname (hostname)
- 4.int f0/0
- 5.ip address 192.168.1.1 255.255.255.0
- 6.no shutdown

go to the next page



Right side Configurations

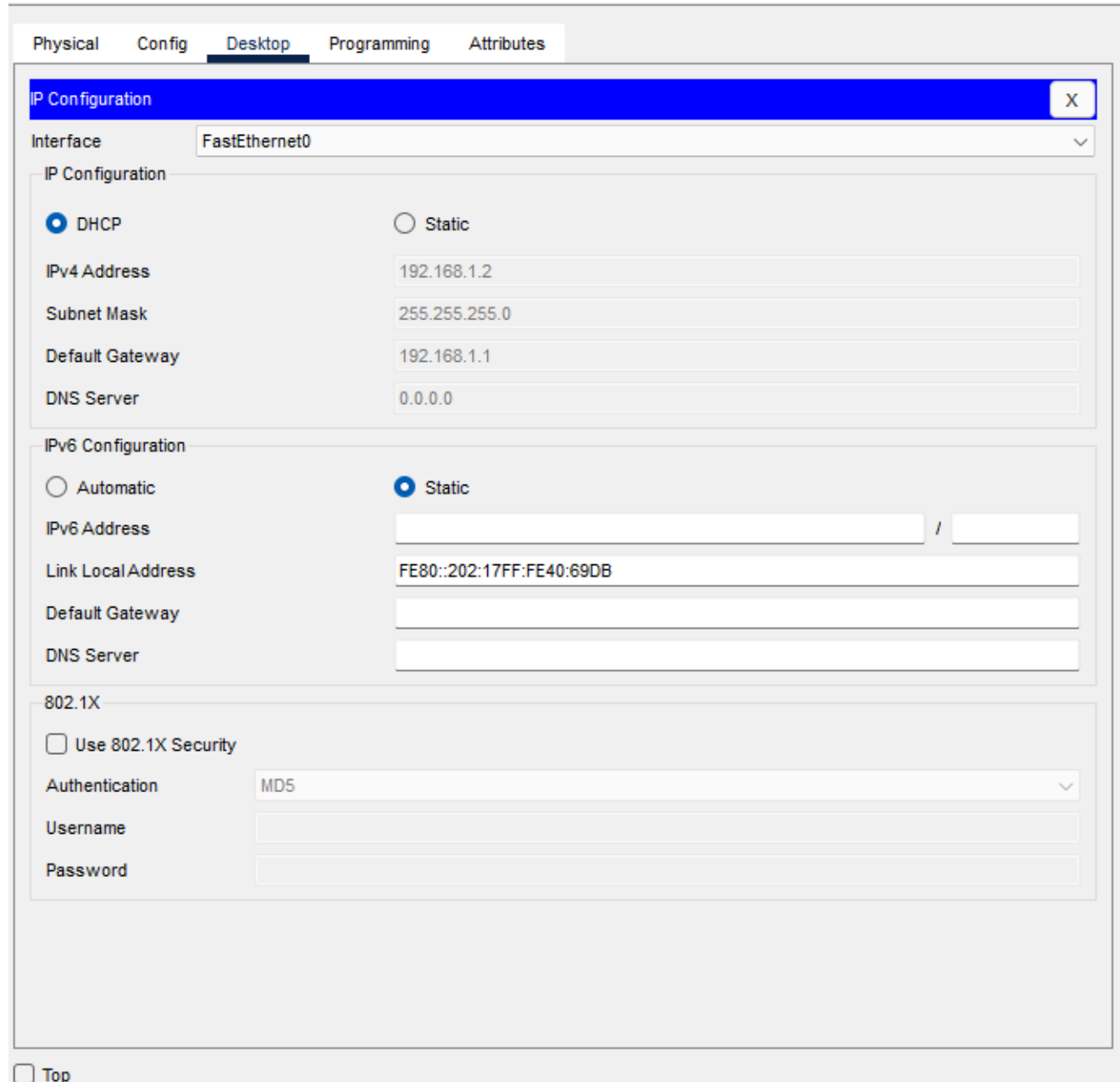
Decided the ip address pool for the left side

ip address : 192.168.2.1/24

Continue the same DHCP config in router and type the following commands

- 1.int f0/1
- 2.ip address 192.168.2.1 255.255.255.0
- 3.no shutdown
- 4.exit
- 5.dhcp pool 192.168.1.1
- 6.network 192.168.1.0 255.255.255.0 // assigning the ip address for the PC for the left side
- 7.default-router 192.168.1.1 // setting the default gateway for left side
- 8.default-router 192.168.2.1 // setting the default gateway for right side
- 9.exit
- 10.ip dhcp excluded-address 192.168.1.1 //excluding the gateway ip
- 11.ip dhcp excluded-address 192.168.2.1 //excluding the gateway ip
- 12.exit
- 13.exit
- 14.wr
- 15.close the router

Check Pc and Printer got it ip



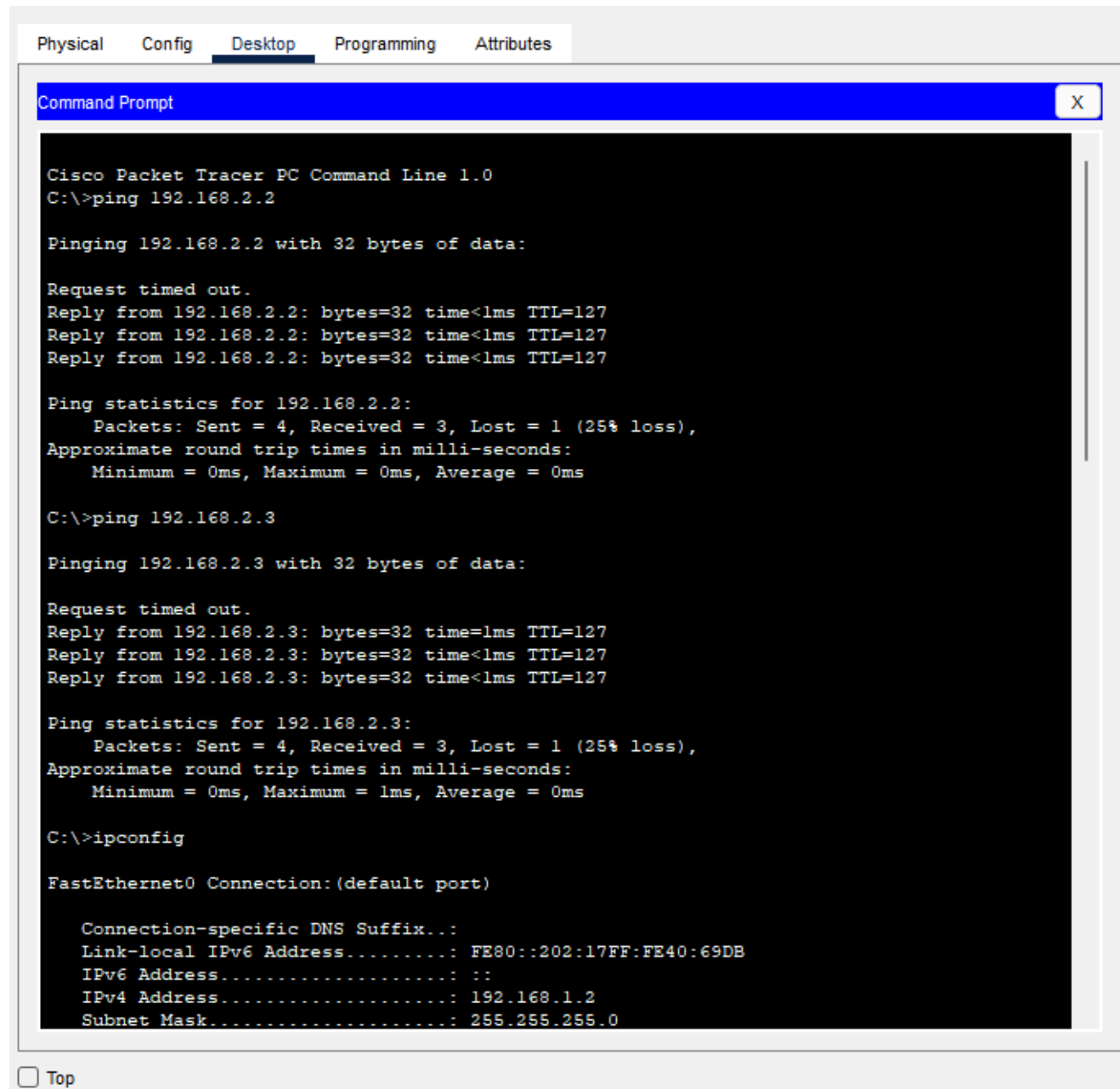
The screenshot shows a network configuration window titled "IP Configuration" with a close button (X). The "Interface" dropdown is set to "FastEthernet0". Under "IP Configuration", the "DHCP" radio button is selected, and the "Static" option is unselected. The fields for IPv4 Address, Subnet Mask, Default Gateway, and DNS Server are populated with the values 192.168.1.2, 255.255.255.0, 192.168.1.1, and 0.0.0.0 respectively. Under "IPv6 Configuration", the "Automatic" radio button is unselected and the "Static" radio button is selected. The IPv6 Address field is empty, and the Link Local Address field is populated with FE80::202:17FF:FE40:69DB. The Default Gateway and DNS Server fields for IPv6 are empty. Under "802.1X", the "Use 802.1X Security" checkbox is unchecked, and the Authentication dropdown is set to MD5. The Username and Password fields are empty. A "Top" link is located at the bottom left of the window.

Field	Value
Interface	FastEthernet0
IP Configuration	
<input checked="" type="radio"/> DHCP	<input type="radio"/> Static
IPv4 Address	192.168.1.2
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server	0.0.0.0
IPv6 Configuration	
<input type="radio"/> Automatic	<input checked="" type="radio"/> Static
IPv6 Address	
Link Local Address	FE80::202:17FF:FE40:69DB
Default Gateway	
DNS Server	
802.1X	
<input type="checkbox"/> Use 802.1X Security	
Authentication	MD5
Username	
Password	

☐ Top

open PC → Desktop → IP Configurations
then select the DHCP option and wait for some seconds and your Pc will
gets its own ip address subnet mask and default gateway
follow this for every other pc
for the printer
select the printer → config → select the DHCP option
your printer will get the Ip automatically

Check for Ping



The screenshot shows the Cisco Packet Tracer interface with the 'Desktop' tab selected. A 'Command Prompt' window is open, displaying the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.3: bytes=32 time<1ms TTL=127
Reply from 192.168.2.3: bytes=32 time<1ms TTL=127
Reply from 192.168.2.3: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ipconfig

FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: FE80::202:17FF:FE40:69DB
    IPv6 Address . . . . . : ::
    IPv4 Address . . . . . : 192.168.1.2
    Subnet Mask . . . . . : 255.255.255.0
```

At the bottom left of the window, there is a 'Top' button.

Open any PC and Ping to rest of the other Pc and printer
to get the IP address for the other PC Open PC → Desktop → Command prompt
Type ipconfig
look for the IPv4 Address that's your Ip address of the corresponding PC
To get the Ip of printer
Open printer → config → FastEthernet0
look for the IPv4 Address that's your Ip address of the corresponding Printer
To perform Ping
Open PC → Desktop → Command prompt
Type ping [Ip address of the Pc or Printer]

Thank you

Hope this helps you