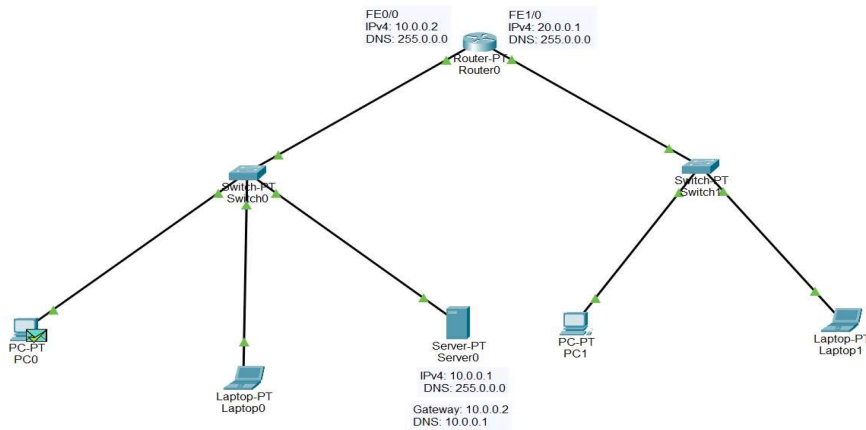


# LABORATORY PROGRAM – 7(B)

To Configure IP addresses of the host using DHCP server outside a LAN.



Server0

Physical Config Services Desktop Programming Attributes

SERVICES

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

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool1

Default Gateway: 10.0.0.2

DNS Server: 10.0.0.1

Start IP Address: 10.0.0.0

Subnet Mask: 255.0.0.0

Maximum Number of Users: 512

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool1	10.0.0.2	10.0.0.1	10.0.0.0	255.0.0.0	512	0.0.0.0	0.0.0.0
serverPool2	20.0.0.1	10.0.0.1	20.0.0.0	255.0.0.0	512	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	10.0.0.0	255.0.0.0	512	0.0.0.0	0.0.0.0

Laptop0

Physical Config Desktop Programming Attributes

GLOBAL

- Settings
- Algorithm Settings

INTERFACE

- FastEthernet0
- Bluetooth

FastEthernet0

Port Status: ☒ On ☐ Off

Bandwidth: 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address: 00E0.F968.7CD6

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 10.0.0.4

Subnet Mask: 255.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

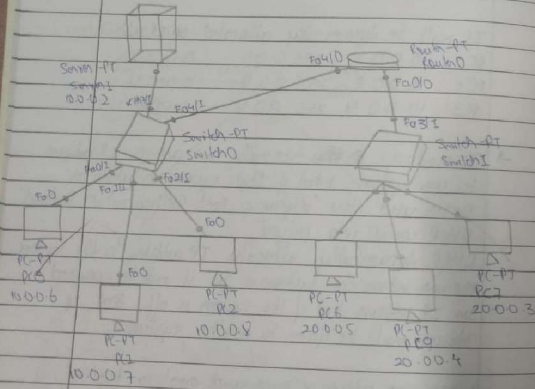
Link Local Address: FE80:2E0:F9FF:FE68:7CD6

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	Laptop0	ICMP		0.000	N	0	(edit)	
	Successful	PC1	Laptop1	ICMP		0.004	N	1	(edit)	

## Outside LAN

→ Aim: We are dynamically assigning IP address to system using server, routers and switches. We are not only dynamically assigning address inside a LAN but to other Network too using a router.

### Topology:



### Procedure

- ③ add another router, switch and 3 end device
- ④ Connect Switch 0 to router and connect Router to Switch 1 and Switch 1 to 3 end device

② Server → IP Address: 10.0.0.2  
def gateway: 10.0.0.1

Server → DHCP →

Pool Name: Switch0  
def gateway: 20.0.0.1  
start IP Address: 20.0.0.3  
max: 100  
users

⑤ Router → CLI

enable  
conf terminal  
interface fastEthernet 4/0  
ip address 10.0.0.1 255.0.0.0  
ip helper-address 10.0.0.2  
no shut  
exit

interface fastEthernet 0/0

ip address 20.0.0.1 255.0.0.0  
ip helper-address 10.0.0.2  
no shut  
exit

⑥ Now go to PCs → desktop → ipconfig → DHCP

4 will dynamically allocate IP address  
PC 6: 20.0.0.5  
PC 9: 20.0.0.4  
PC 7: 20.0.0.3