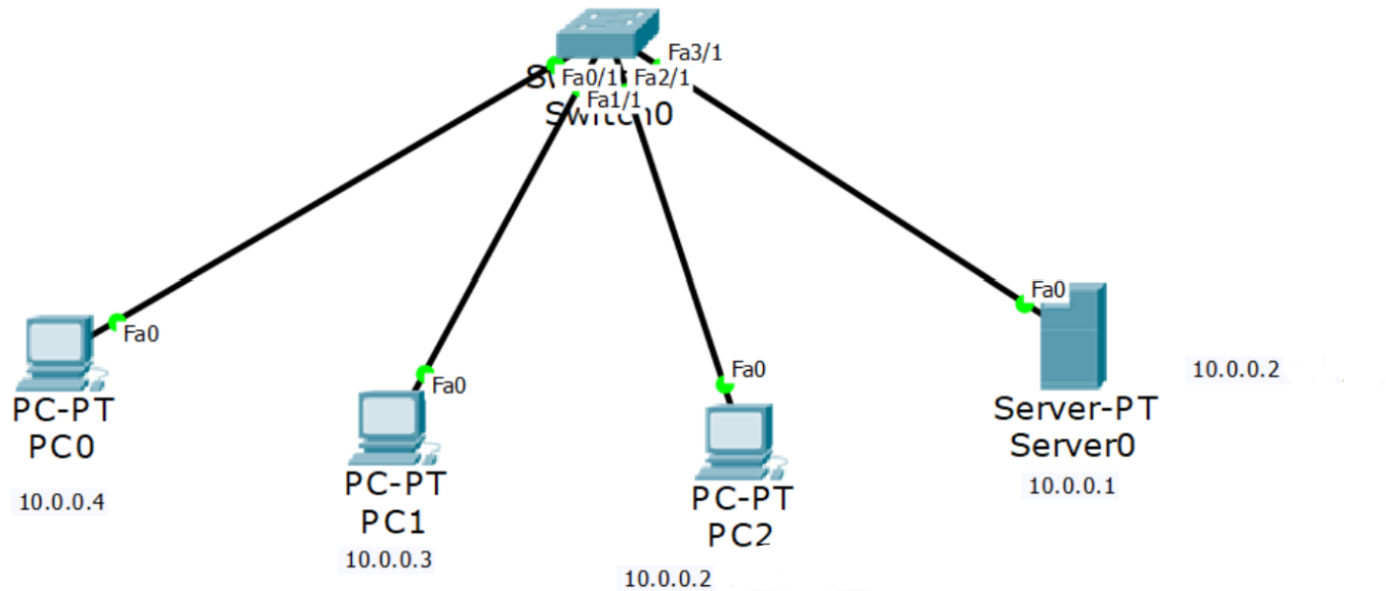


## Experiment - 4

Aim: Configure DHCP within a LAN and outside LAN.





Physical

Config

Services

Desktop

Custom Interface

## SERVICES ▲

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

## DHCP

Interface

FastEthernet0 ▼

Service



On



Off

Pool Name

serverPool

Default Gateway

10.0.0.20

DNS Server

0.0.0.0

Start IP Address :

10

0

0

2

Subnet Mask:

255

0

0

0

Maximum number of Users :

512

TFTP Server:

0.0.0.0

Add

Save

Remove

| Pool Name  | Default Gateway | DNS Server | Start IP Address | Subnet Mask | Max User | TFTP Server |
|------------|-----------------|------------|------------------|-------------|----------|-------------|
| serverPool | 10.0.0.20       | 0.0.0.0    | 10.0.0.2         | 255.0.0.0   | 512      | 0.0.0.0     |



## Command Prompt

Packet Tracer PC Command Line 1.0

PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=1ms TTL=128

Reply from 10.0.0.2: bytes=32 time=1ms TTL=128

Reply from 10.0.0.2: bytes=32 time=0ms TTL=128

Reply from 10.0.0.2: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time=1ms TTL=128

Reply from 10.0.0.3: bytes=32 time=12ms TTL=128

Reply from 10.0.0.3: bytes=32 time=0ms TTL=128

Reply from 10.0.0.3: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.3:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

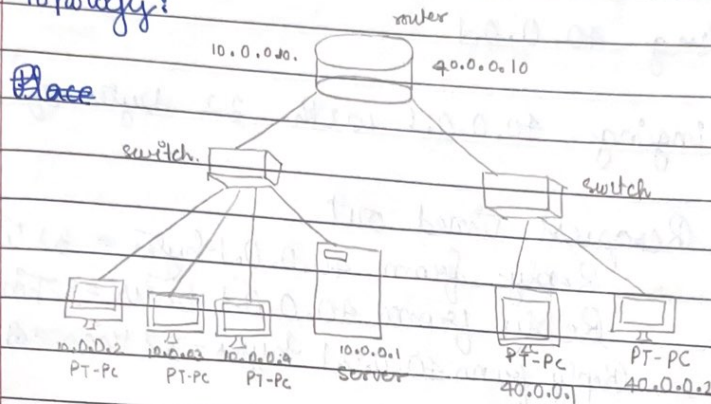
Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 12ms, Average = 3ms

## DYNAMIC HOST CONFIGURATION PROTOCOL

aim: To configure DHCP within a LAN and outside LAN

Topology:



Procedure :

- Place 3 PT-PC's and a server under a switch onto the logical interface.
- Place 2 PT-PC's under another switch
- Place a router and connect the switches to it.
- configure IP address for the router.
- In the server when the services tab and DHCP services, then add two server pools with respective gateways and starting IP address
- Open CLI of the router to which the server is not connected and type as mentioned below:

```
> ip helper-address 10.0.0.10
```



- Use ~~wire~~ <sup>copper straight through</sup> wire to connect the devices
- configure gateways on end devices
- Ping message from PC0 to PC1

Output:

Ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Request timed out.

Reply from 40.0.0.1: bytes = 32 time = 20 ms

Reply from 40.0.0.1: bytes = 32 time = 9 ms

Reply from 40.0.0.1: bytes = 32 time = 21 ms TTL=125

Ping statistics for 40.0.0.1:

Packets sent = 4, Received = 3, Lost = 1 (25%)

Approximate round trip times in milliseconds:

min = 9 ms, Max = 21, Avg = 16 ms

9/10

18/7/22