



Independent University, Bangladesh (IUB)
Department of Computer Science & Engineering

Data Communication & Networking (CSE 316)



EXPERIMENT#6: DHCP Configuration

Objective:

Your task is to configure the network such that PC-A and PC-B directly connected with Router-A. PC-C and PC-D are connected to Router A through Switch-A. Router-A should be configured as an dhcp server and Router-A will automatically assign IP address and default gateway to all four PCs.

1. Built network according to Figure 1
2. Configure Router A as a dhcp server
3. Automatic assignment of appropriate (dhcp) IP address
4. Ping from all PCs from Router-A
5. Ping All PC to all PC

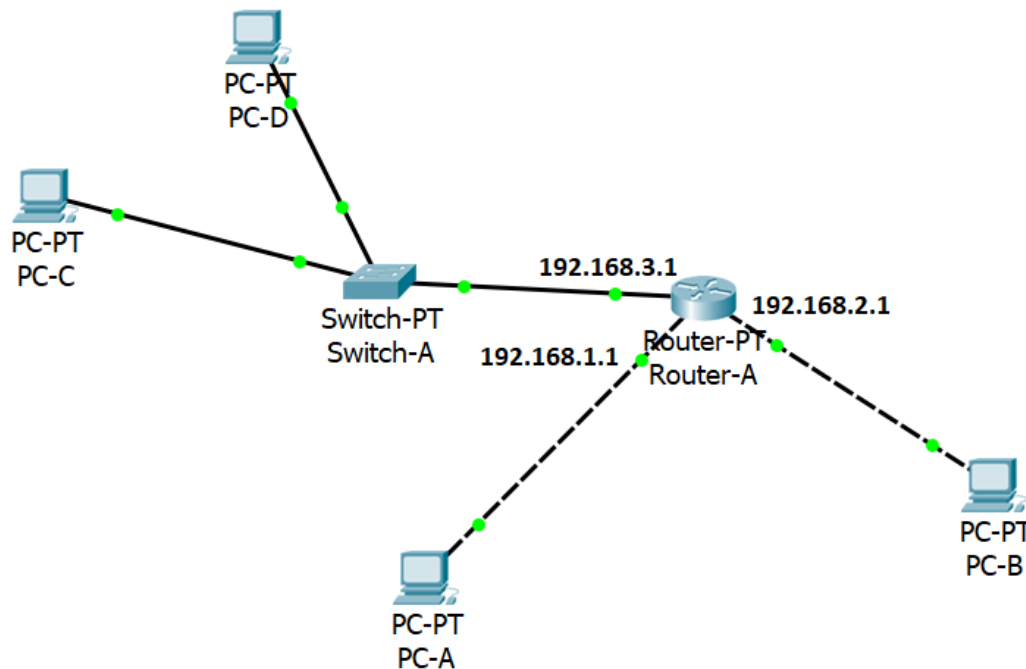


Figure 1

Tools and Materials:

In a real life Scenario:

Four Workstations with terminal Program (such as putty), one Cisco switches, One Cisco Router, three Straight-through RJ45 cables and two RJ45 cross-over RJ45 cables

For Lab Purpose:

Cisco Packet Tracer Software

Instructions:

```
Router>enable
Router#configure terminal
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#exit
```

```
Router(config)#interface FastEthernet1/0
Router(config-if)#no shutdown
Router(config-if)#exit
```

```
Router(config)#interface FastEthernet6/0
Router(config-if)#no shutdown
Router(config-if)#exit
```

```
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#exit
```

```
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#exit
```

```
Router(config)#interface FastEthernet6/0
Router(config-if)#ip address 192.168.3.1 255.255.255.0
Router(config-if)#exit
```

```
Router(config)#service dhcp
Router(config)#ip dhcp pool pool1
Router(dhcp-config)#network 192.168.1.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.1.1
Router(config-if)#exit
```

```
Router(config)#ip dhcp pool pool2
Router(dhcp-config)#network 192.168.2.0 255.255.255.0
```

```
Router(dhcp-config)#default-router 192.168.2.1
Router(config-if)#exit
```

```
Router(config)#ip dhcp pool pool3
Router(dhcp-config)#network 192.168.3.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.3.1
Router(config-if)#exit
Router(config)#exit
```

```
Router#ping 192.168.1.2
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/3/14 ms
```

```
Router#ping 192.168.2.2
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 0/0/3 ms
```

```
Router#ping 192.168.3.2
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.3.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 0/1/3 ms
```

```
Router#
Router#ping 192.168.3.3
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.3.3, timeout is 2 seconds:
.!!!!
```