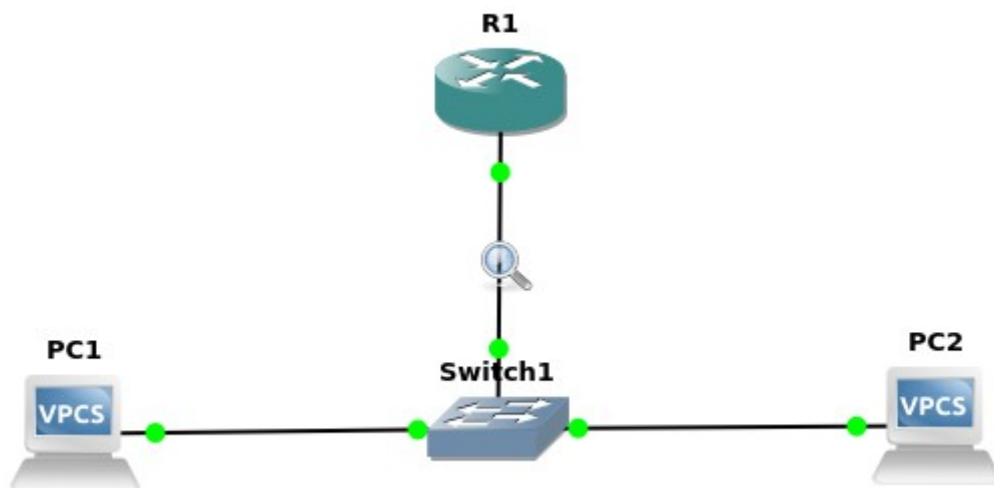


Computer Networks Lab 8:STUDY OF DHCP PROTOCOL

LAB EXERCISES



```
R1(config)#IP dhcp pool NAME
R1(dhcp-config)#Network 192.168.3.0 255.255.255.0
R1(dhcp-config)#Default-router 192.168.3.1
```

```
R1(config)#Interface fastEthernet 0/0
R1(config-if)#No shutdown
R1(config-if)#ip address 192.168.3.1 255.255.255.0
```

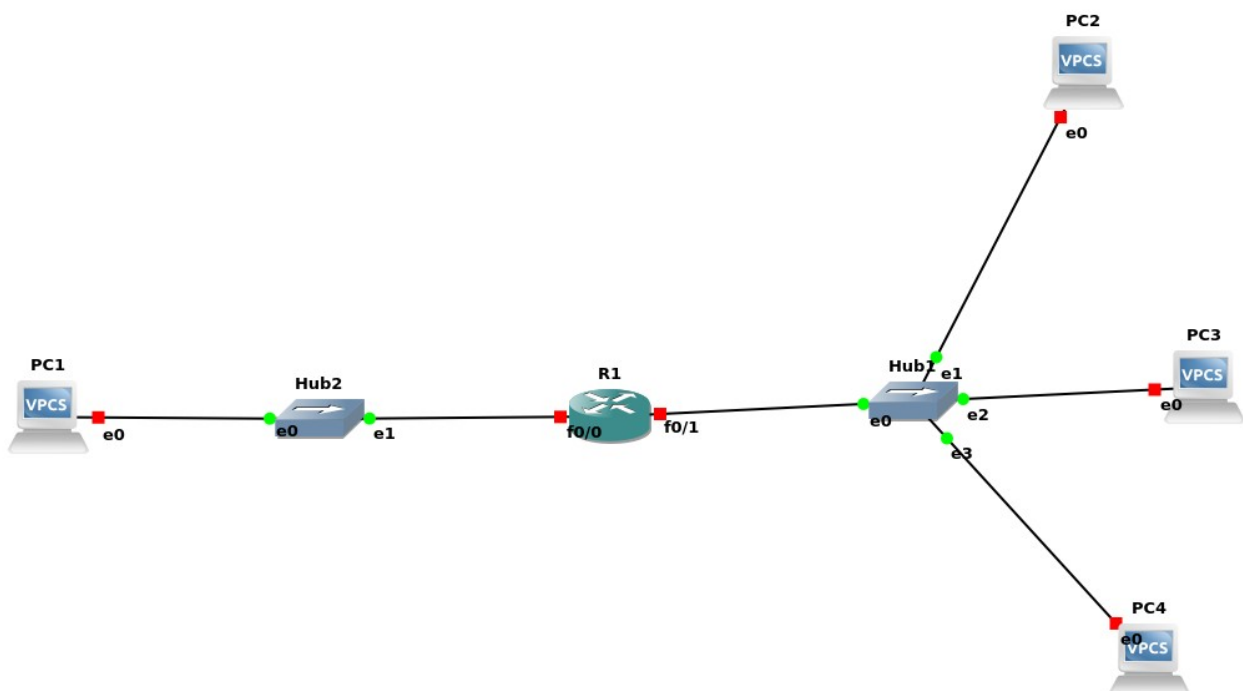
```
R1(config)#IP dhcp pool NAME
R1(dhcp-config)#Network 192.168.3.0 255.255.255.0
R1(dhcp-config)#Default-router 192.168.3.1
R1(dhcp-config)#end
R1#
*Mar  1 00:05:33.207: %SYS-5-CONFIG_I: Configured from console by console
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#Interface fastEthernet 0/0
R1(config-if)#No shutdown
R1(config-if)#
*Mar  1 00:05:54.835: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Mar  1 00:05:55.835: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1(config-if)#ip address 192.168.3.1 255.255.255.0
R1(config-if)#end
R1#
*Mar  1 00:06:06.723: %SYS-5-CONFIG_I: Configured from console by console
R1#
```

```
PC1> dhcp
DDORA IP 192.168.3.2/24 GW 192.168.3.1
```

```
PC2> dhcp
DDORA IP 192.168.3.3/24 GW 192.168.3.1
```

3	6.457242	0.0.0.0	255.255.255.255	DHCP	406 DHCP Discover - Transaction ID 0xa5bdf878
4	6.465288	192.168.3.1	192.168.3.3	DHCP	342 DHCP Offer - Transaction ID 0xa5bdf878
5	7.457287	0.0.0.0	255.255.255.255	DHCP	406 DHCP Request - Transaction ID 0xa5bdf878
6	7.459658	192.168.3.1	192.168.3.3	DHCP	342 DHCP ACK - Transaction ID 0xa5bdf878

2. Network Prefixes and Routing



a. Configure the hosts and the router to conform to the topology shown in Figure 8.2, using the IP addresses as given in Table 9.1. Note that PC2, PC3, and PC4 have different netmasks.

```
R1(config)#inter f0/0
R1(config-if)#ip address 10.0.1.1 255.255.255.0
R1(config-if)#no shut
R1(config-if)#end
R1#
*Mar  1 00:02:18.271: %SYS-5-CONFIG_I: Configured from console by console
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#inter f0/1
R1(config-if)#ip address 10.0.2.138 255.255.255.0
R1(config-if)#no shut
R1(config-if)#
*Mar  1 00:03:01.111: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
*Mar  1 00:03:02.111: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
R1(config-if)#end
R1#
*Mar  1 00:03:03.603: %SYS-5-CONFIG_I: Configured from console by console
R1#
```

b. Add Router1 as default gateway on all hosts. (PC1, PC2, PC3, and PC4).

```
PC1> ip 10.0.1.10/24 10.0.1.1
Checking for duplicate address...
PC1 : 10.0.1.10 255.255.255.0 gateway 10.0.1.1
```

```
PC2> ip 10.0.2.10/24 10.0.2.138
Checking for duplicate address...
PC2 : 10.0.2.10 255.255.255.0 gateway 10.0.2.138
```

```
PC3> ip 10.0.2.137/29
Checking for duplicate address...
PC3 : 10.0.2.137 255.255.255.248
```

```
PC4> ip 10.0.1.139/24
Checking for duplicate address...
PC4 : 10.0.1.139 255.255.255.0
```