

PRACTICAL NO: 4

AIM: Configure DHCP server and client for DHCP service

Steps to perform practical:

Step 1 : Add router, switch and end user clients to the switches.

Step 2 : Connect all the devices with straight through cable.

Step 3 : Give IP to each port of router

enable

configure terminal

interface gig0/0/0

ip address 192.168.10.1 255.255.255.0

no shutdown

exit

Step 4 : Apply DHCP to the router

configure terminal

ip dhcp pool pool_name

network 192.168.10.0 255.255.255.0

default-router 192.168.10.1

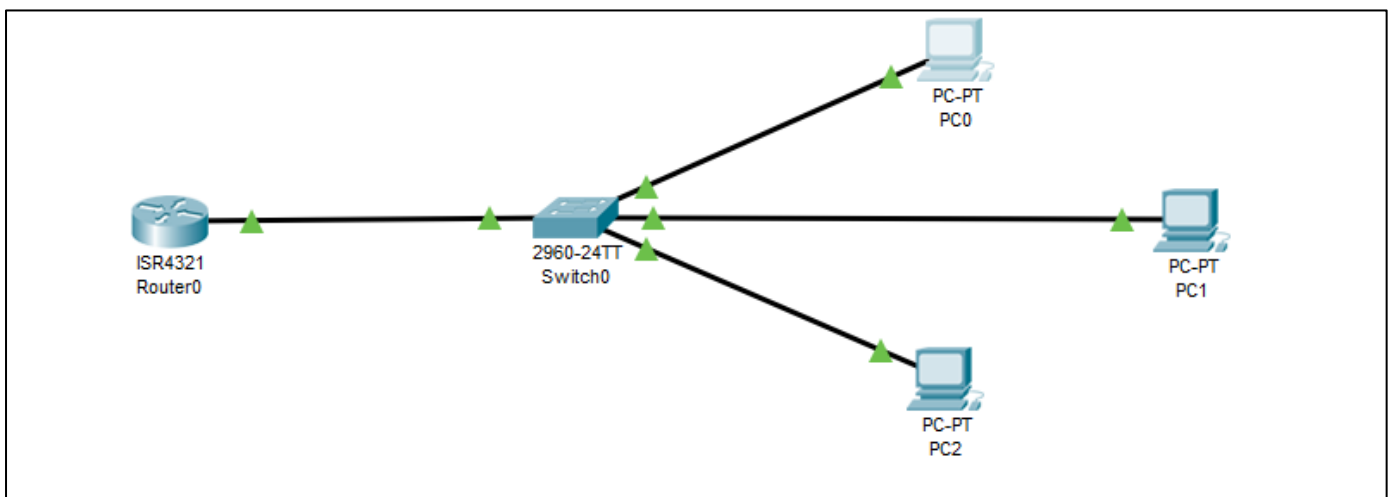
exit

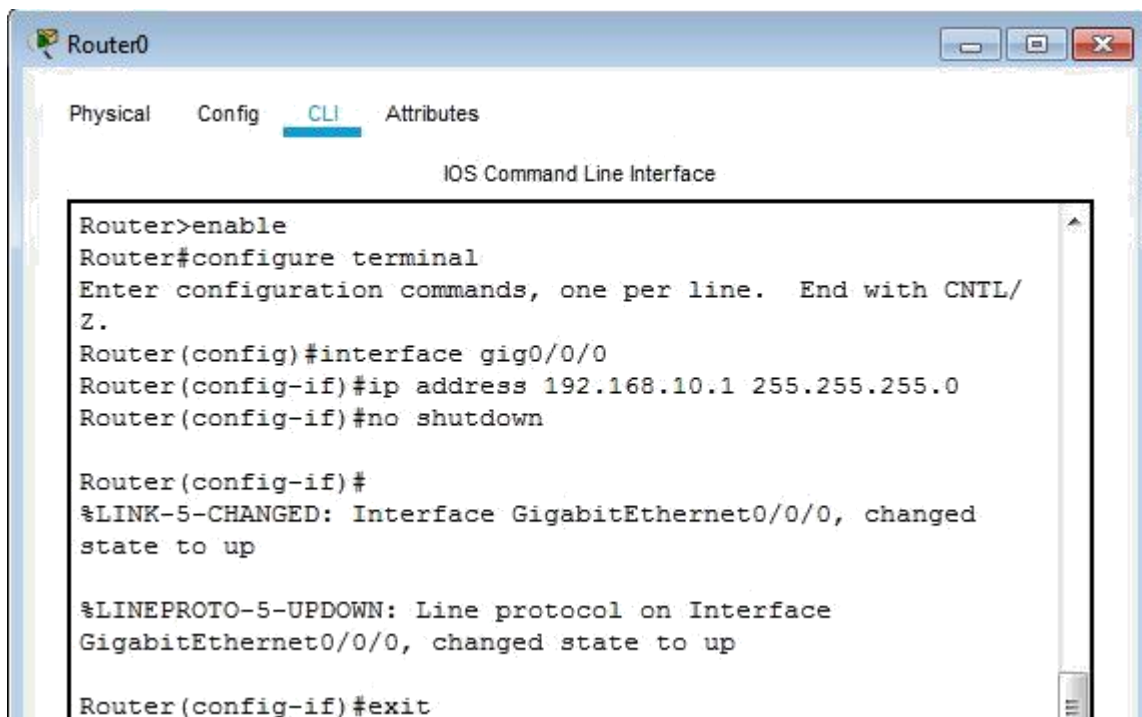
ip dhcp excluded-address 192.168.10.2 192.168.10.10 exit

Step 5 : Show DHCP ip address to each end user clients.

System > Desktop tab > ip configuration > select dhcp.

DHCP automatically assign ip address to each client.

NETWORK TOPOLOGY:

i) Router Configuration:-**Set IP addresses to routers:-**

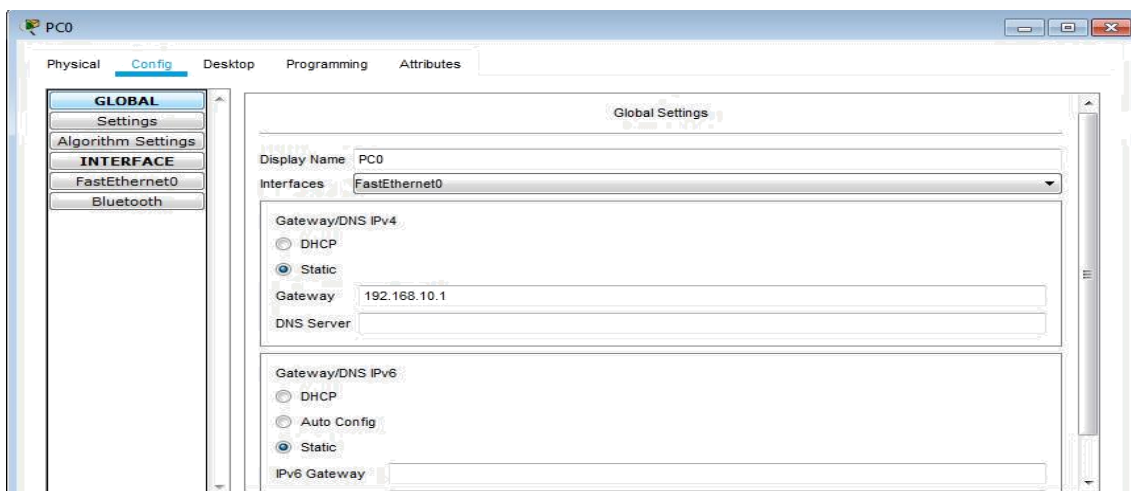
The screenshot shows the Router0 CLI window with the 'CLI' tab selected. The command history shows the following sequence of commands and responses:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface gig0/0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#no shutdown

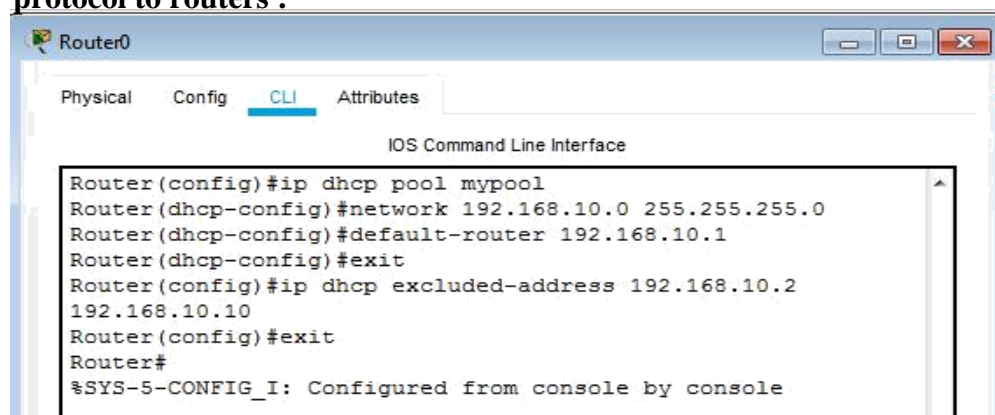
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

Router(config-if)#exit
```

ii)End User Client Configuration :**a)Set Gateway to end user client:**

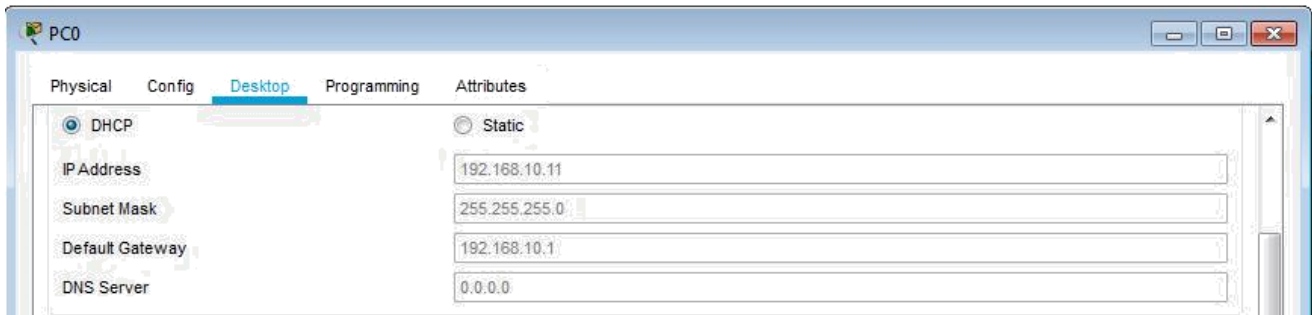
Set Gateways to all remaining end user client.

Set DHCP protocol to routers :

The screenshot shows the Router0 CLI window with the 'CLI' tab selected. The command history shows the following sequence of commands and responses:

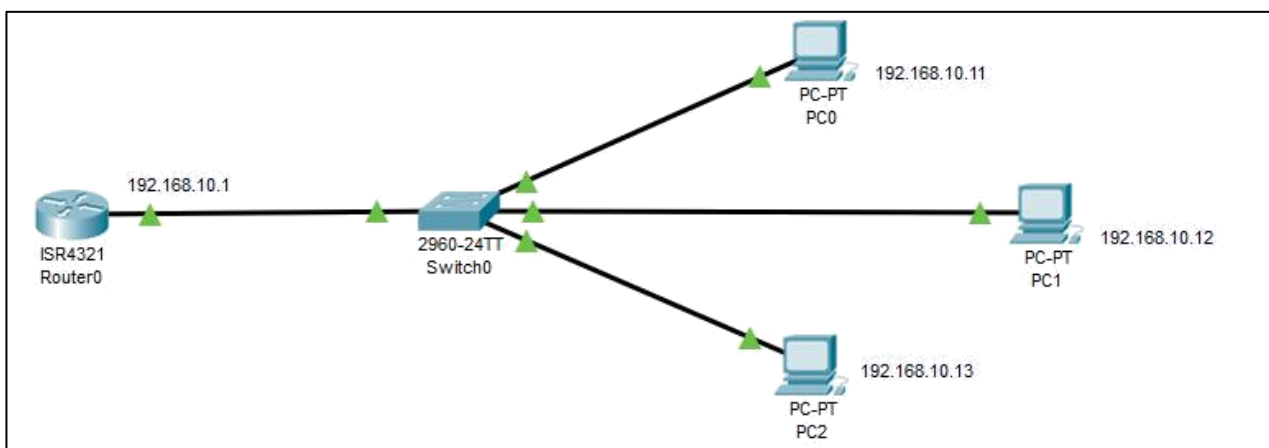
```
Router(config)#ip dhcp pool mypool
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.1
Router(dhcp-config)#exit
Router(config)#ip dhcp excluded-address 192.168.10.2 192.168.10.10
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Show DHCP ip address to each end user clients.



Show DHCP ip address to all remaining end user clients as shown above.

FINAL TOPOLOGY:



Conclusion:- We have learnt to create DHCP server with client service as shown above.