PLATINUM JUBLEE

Celebrating 75 years of WCE & 20 years of Department

20 YEARS OF EXELLENCE

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Department of Information Technology

Computer Networks Lab

EVEN SEMESTER AY 2021-22

Submitted by

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Batch: S2

Course Code: 5IT272

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Department of Information Technology

2021-22

Experiment Number: 4

Experiment Name: Implement class A or B or C network with auto IP configuration using DHCP protocol on router
and observe IP configuration on host machine (PC).

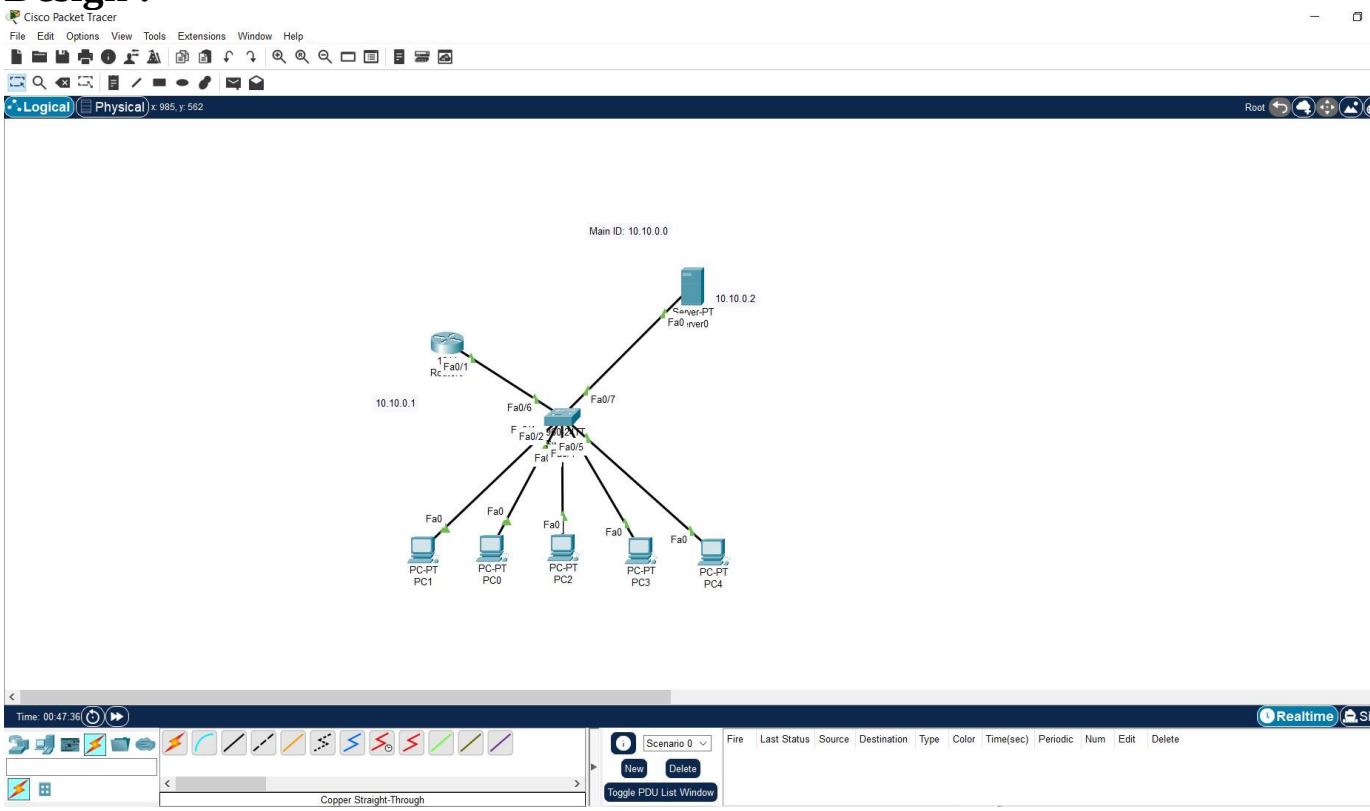
Contents:

Problem Statement : Implement class A or B or C network with auto IP configuration using DHCP protocol on router
and observe IP configuration on host machine (PC).

Platform : CISCO packet tracer

Devices Required : PC , Switch (2960-24TT), Router (1841) .

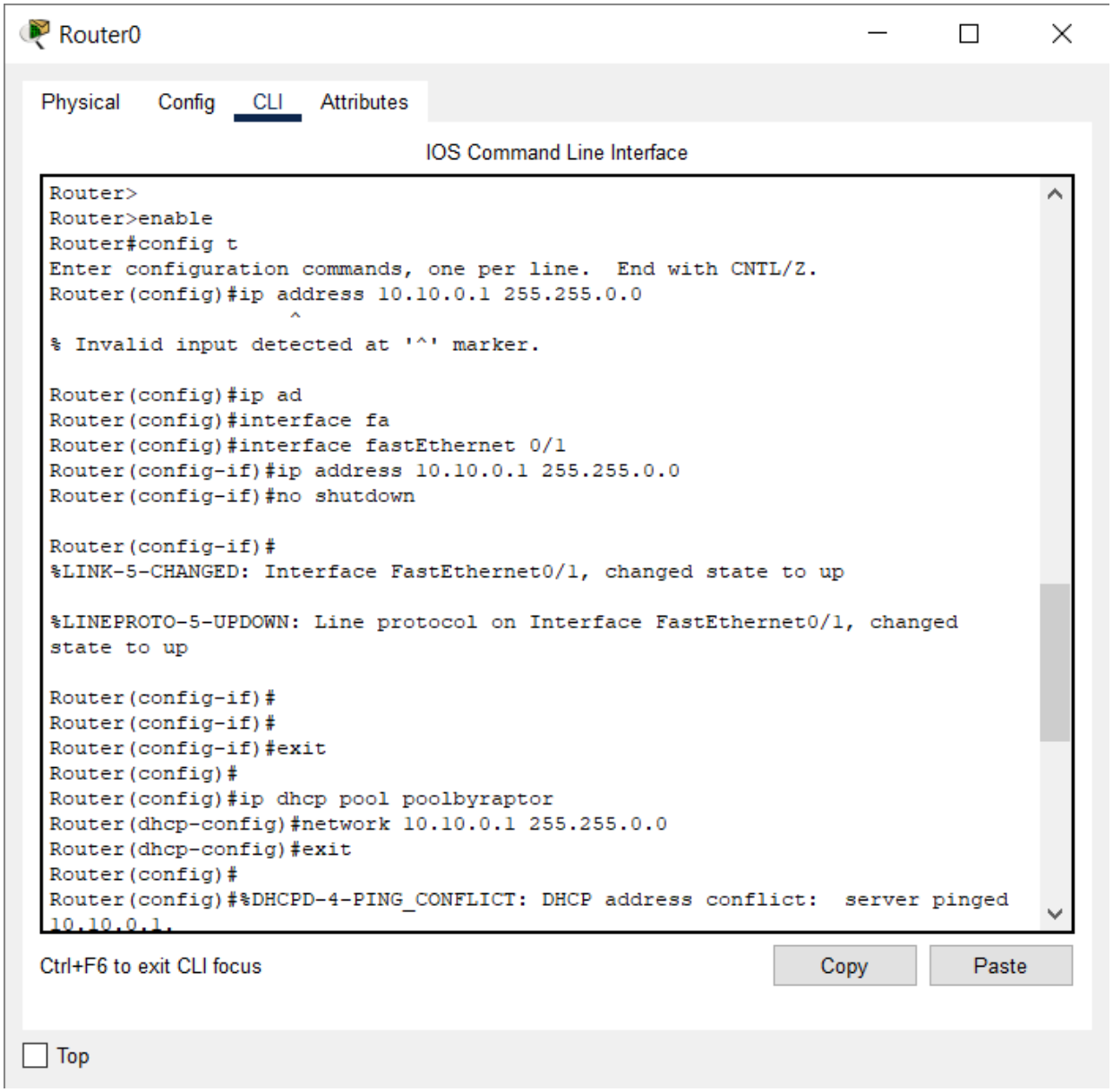
Design :

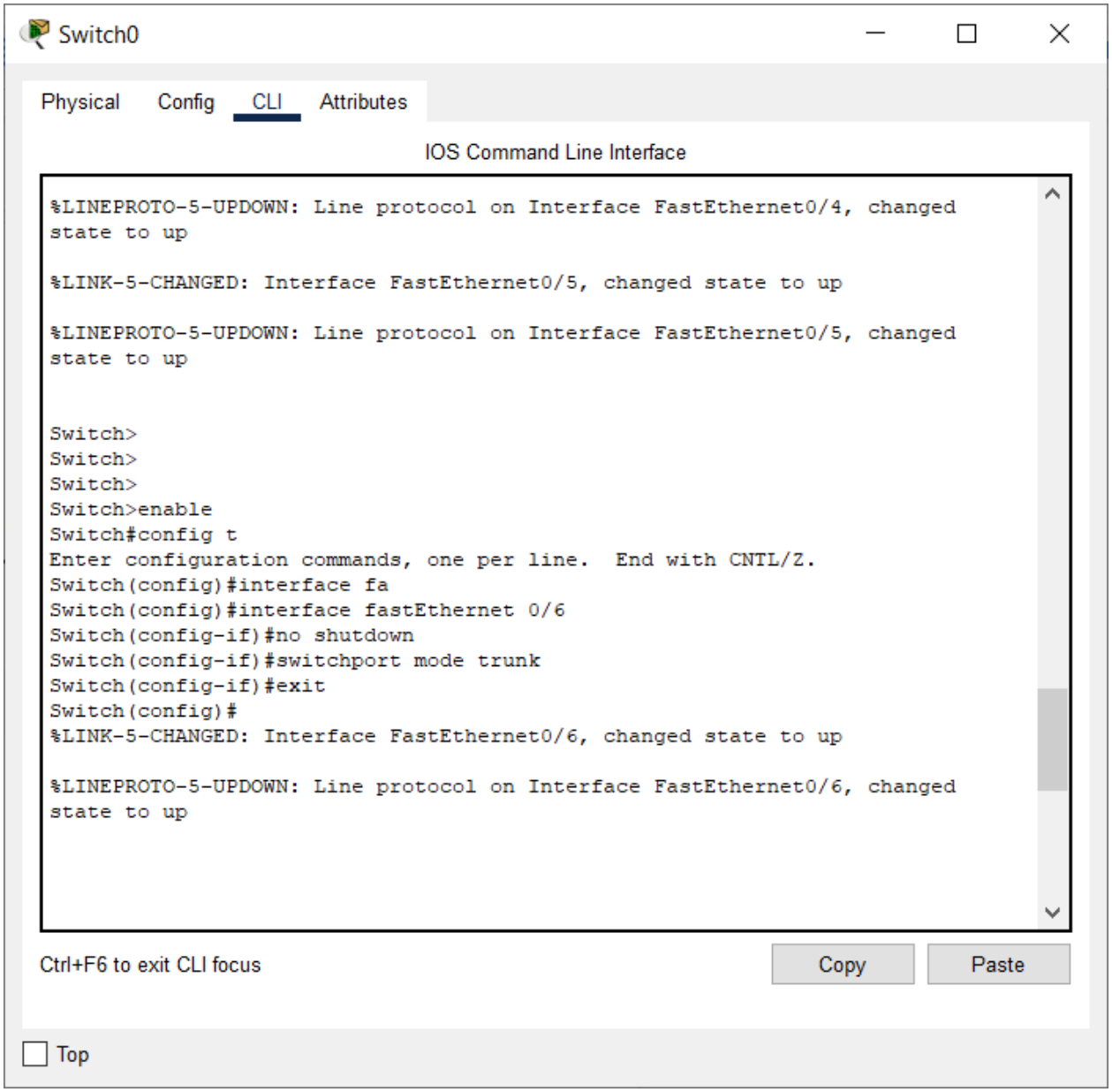


Implementation :

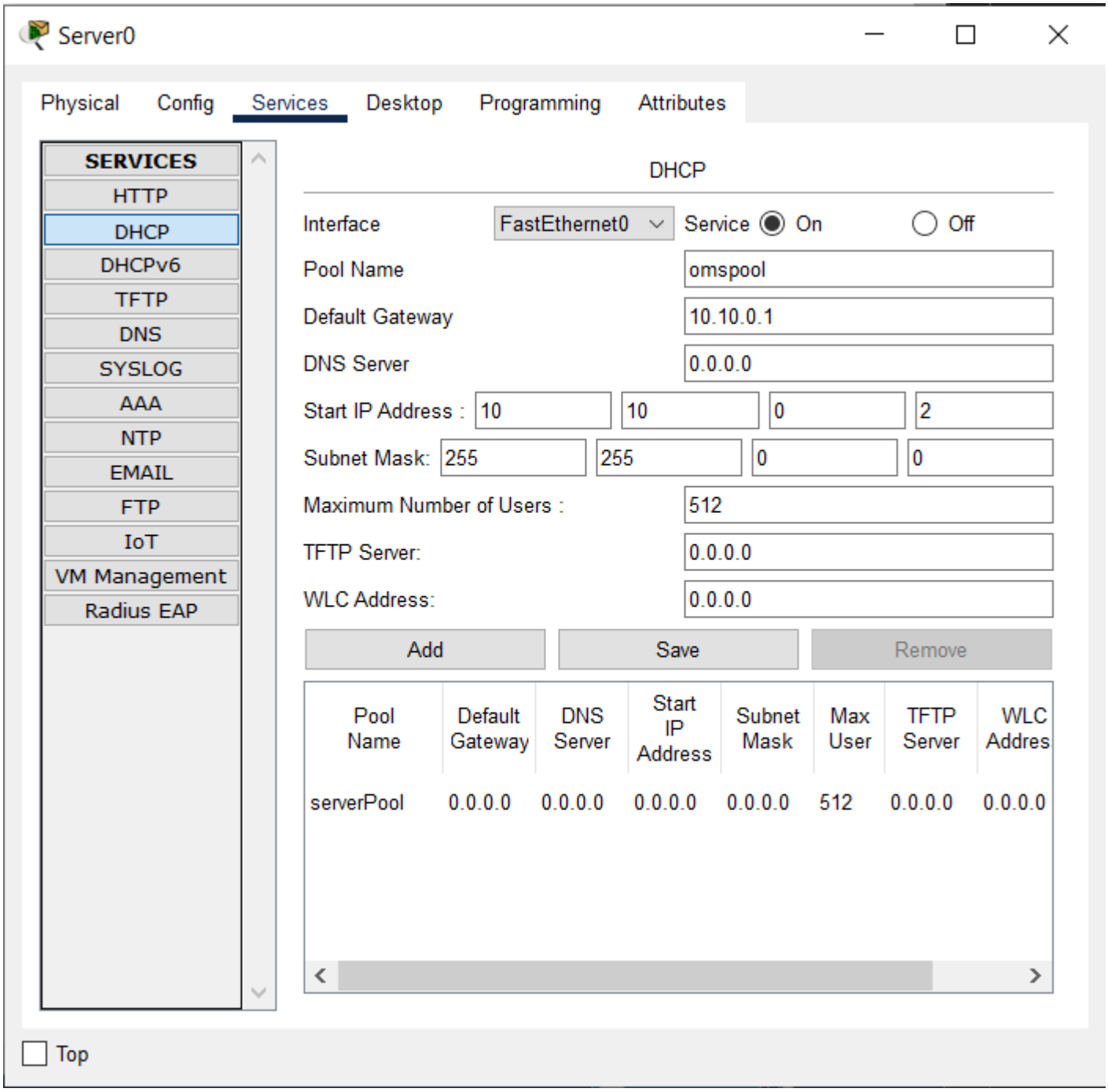
i) Create the topology as shown in the above image.

ii) After creating the topology configure the network

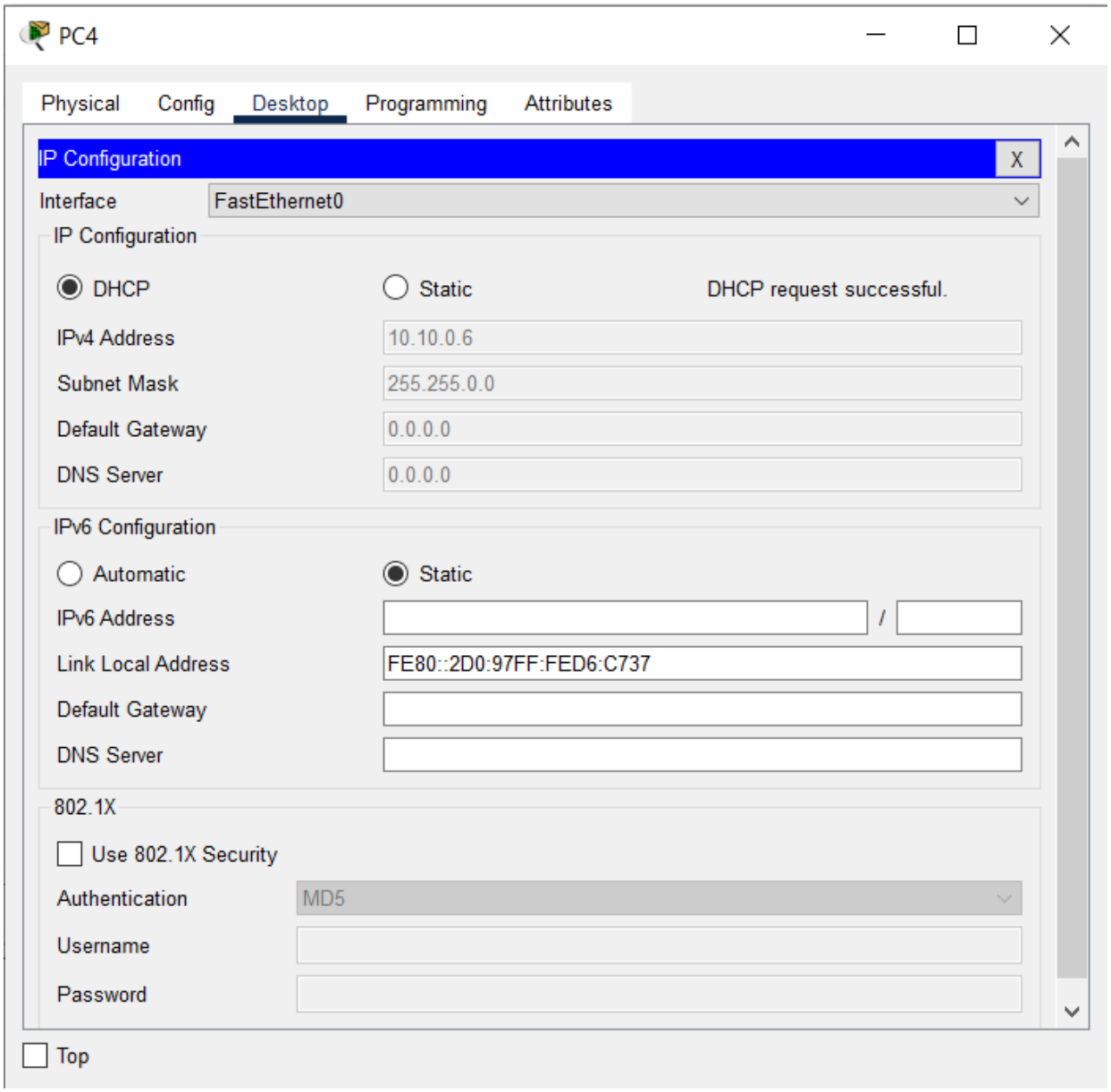

Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip address 10.10.0.1 255.255.0.0
^
% Invalid input detected at '^' marker.
Router(config)#ip ad
Router(config)#interface fa
Router(config)#interface fastEthernet 0/1
Router(config-if)#ip address 10.10.0.1 255.255.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed
state to up
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#ip dhcp pool poolbyraptor
Router(dhcp-config)#network 10.10.0.1 255.255.0.0
Router(dhcp-config)#exit
Router(config)#
Router(config)#%DHCPD-4-PING_CONFLICT: DHCP address conflict: server pinged
10.10.0.1.
Ctrl+F6 to exit CLI focus
Copy
Paste
Top



iii) Configure the server and turn on the DHCP, add server pool to the server.


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
omspool
Default Gateway
10.10.0.1
DNS Server
0.0.0.0
Start IP Address :
10
10
0
2
Subnet Mask:
255
255
0
0
Maximum Number of Users :
512
TFTP Server:
0.0.0.0
WLC Address:
0.0.0.0
Add
Save
Remove
Pool Name
Default Gateway
DNS Server
Start IP Address
Subnet Mask
Max User
TFTP Server
WLC Addres
serverPool
0.0.0.0
0.0.0.0
0.0.0.0
0.0.0.0
512
0.0.0.0
0.0.0.0
Top

iv) Turn on the DHCP in every system to give the ip to the computers.



Results: DHCP protocols gives the IP to every end system in the network.

Dr. P. K. Kharat

(Course Teacher)