

Experiment-8

Aim: DHCP Server Configuration using Cisco Packet Tracer.

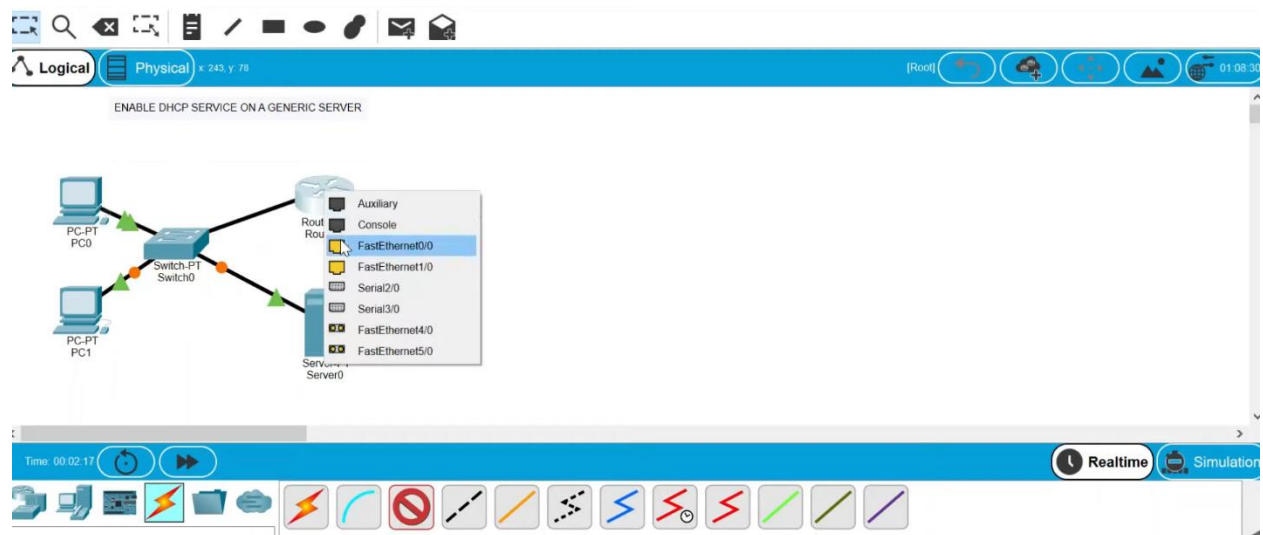
Objectives

1. Making network topology using a Server
2. DHCP service configuration
3. PC and Router settings.
4. Checking DHCP configuration.

Background: Configure a DHCP server. Allow the PCs to automatically set DHCP IP address from the DHCP server connected with the PCs.

Topology and Intermediate Steps:

Topology and Wiring:



Router Configuration:

The screenshot displays the Packet Tracer interface with a network diagram on the left and the configuration window for Router0 on the right. The network diagram shows two PCs (PC0, PC1) connected to a switch (Switch0), which is connected to a router (Router0) and a server (Server0). The configuration window for Router0 is open, showing the 'Config' tab. The 'FastEthernet0/0' interface is selected, and the 'Port Status' is set to 'On'. The 'IP Address' is set to '192.168.1.1' and the 'Subnet Mask' is set to '255.255.255.0'. A red arrow points to the 'Port Status' checkbox, and another red arrow points to the 'Subnet Mask' field. The 'Equivalent IOS Commands' section shows the following commands:

```
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

Server Configuration

The screenshot displays the Packet Tracer interface with a network diagram on the left and the configuration window for Server0 on the right. The network diagram is the same as in the Router Configuration section. The configuration window for Server0 is open, showing the 'Desktop' tab. The 'IP Configuration' section is expanded, and the 'Static' radio button is selected. The 'IP Address' is set to '192.168.1.2', the 'Subnet Mask' is set to '255.255.255.0', and the 'Default Gateway' is set to '192.168.1.1'. A red arrow points to the 'Default Gateway' field. The 'IPv6 Configuration' section is also expanded, and the 'Static' radio button is selected. The 'IPv6 Address' is set to 'FE80::230:A3FF:FE08:11CB'. The '802.1X' section is expanded, and the 'Use 802.1X Security' checkbox is unchecked.

Logical Physical x 279, y 121

ENABLE DHCP SERVICE ON A GENERIC SERVER

Time: 00:05:51

Server0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP**
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 192.168.1.1

DNS Server: 0.0.0.0

Start IP Address: 192 168 1 0

Subnet Mask: 255 255 255 0

Maximum Number of Users: 255

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 Address
serverPool	0.0.0.0	0.0.0.0	192.168.1.1	255.255.255.0	255	0.0.0.0	0.0.0.0

time Simulation

PC Configuration:

Logical Physical x 69, y 23

ENABLE DHCP SERVICE ON A GENERIC SERVER

Time: 00:05:23

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration

Dial-up

Terminal

Command Prompt

PC Wireless

VPN

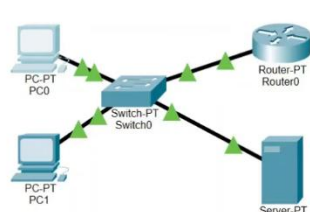
Traffic Generator

MIB Browser

time Simulation

Logical Physical x: 69, y: 23

ENABLE DHCP SERVICE ON A GENERIC SERVER



Time: 00:05:45

PC0

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address: 192.168.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::204:9AFF:FE5B:5E4

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Simulation