Date: 14/08/2024

Lab Practical #06:

Study the application layer protocol DNS, DHCP, FTP.

Practical Assignment #06:

1. Implement the application layer protocol DNS, DHCP, and FTP. Also check connectivity between them using ping command or PDU utility.

DNS Configuration:

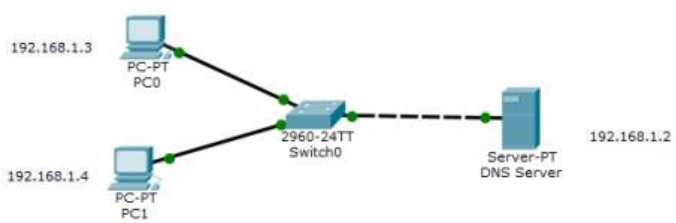
Steps :-

- Add One PC , One Switch, One Server .
- Connect the devices.
- Assign an IP address(192.168.1.1) in server.
- On Http and Https on button in Http in services.
- Turn on the DNS Service by clicking the On button.
- Add a DNS record like Name: google , Address: 192.168.1.1
- Assign an IP address(192.168.1.2), subnet mask(255.255.255.0), and DNS server(192.168.1.1) address.
- In PC0, go to the Desktop tab.
- Open the Web Browser.
- Enter http://google in the URL field and click Go.
- The web browser should attempt to connect to 192.168.1.1.

⇨ Devices: 1 Server, 2 PCs

⇨ Configuration:

- Configure one of the servers as a DNS server.
- Assign a static IP address to the DNS server, e.g., 192.168.1.1.
- Add DNS records (e.g., for FTP Server).



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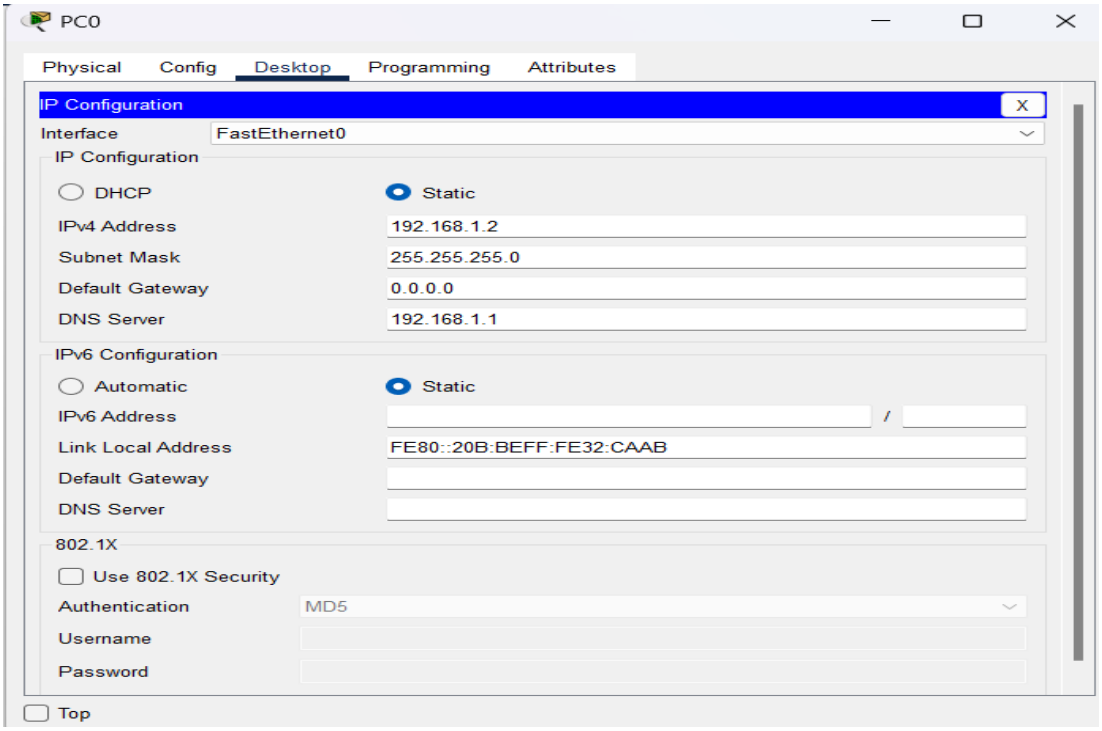

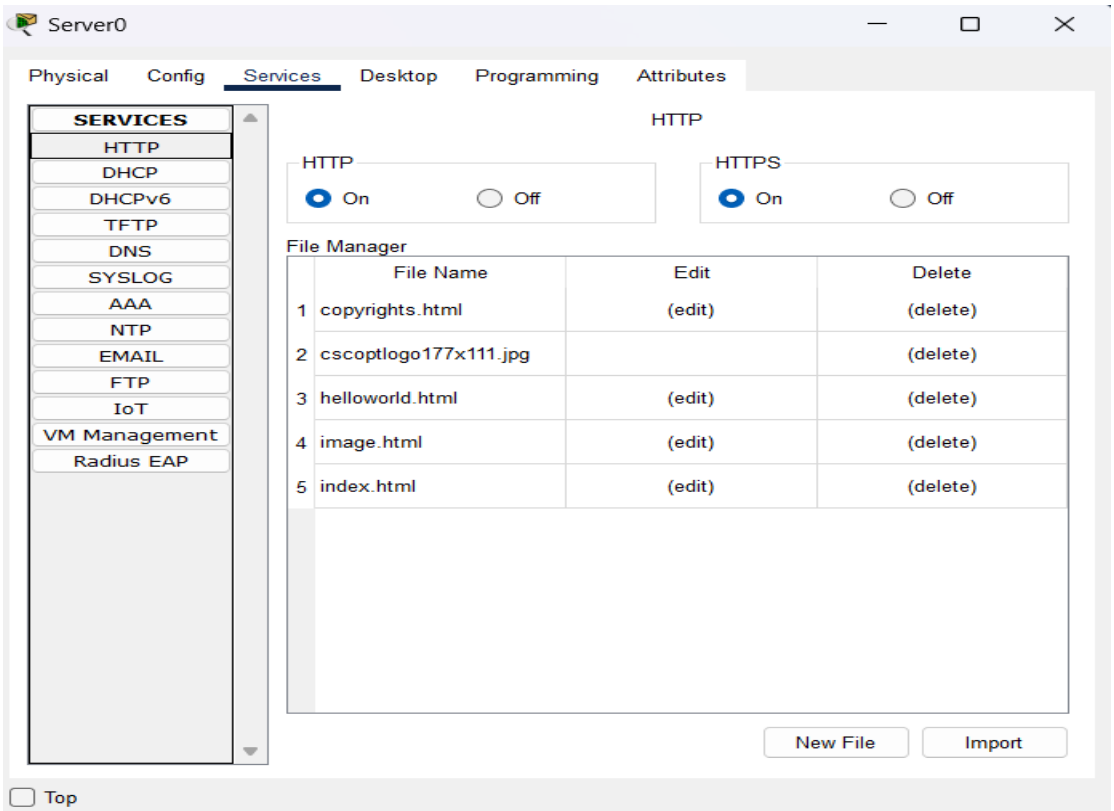

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DHCP Server:

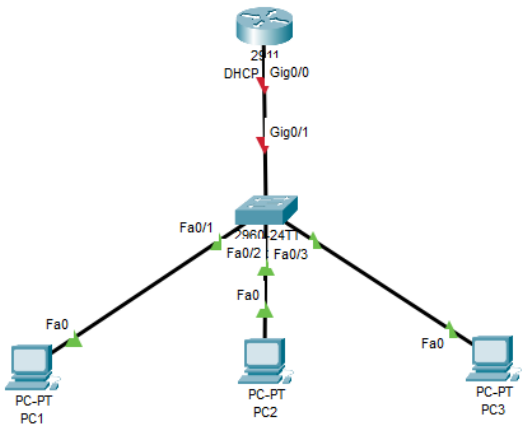
Steps :-

- Add Two PC , One Switch, One Server .
- Connect the devices.
- Turn on the DHCP Service by clicking the On button.
- Pool Name: serverPool , Default Gateway: 192.168.1.1 , DNS Server: 192.168.1.1 ,

Start IP Address: 192.168.1.2, Subnet Mask: 255.255.255.0.

- Click Add to save the DHCP pool configuration.
- Turn on the DHCP desktop and configure IPaddress to static.
- Configure the PCs , Set the IP configuration to DHCP.

- Assign a static IP address (e.g., 192.168.1.3).
- Configure DHCP services under Services > DHCP.
- Set the IP address range to be assigned to clients.
- Use the Label tool in Cisco Packet Tracer to mark the IP addresses on each device.
- Capture the command prompt screen showing successful ping responses.



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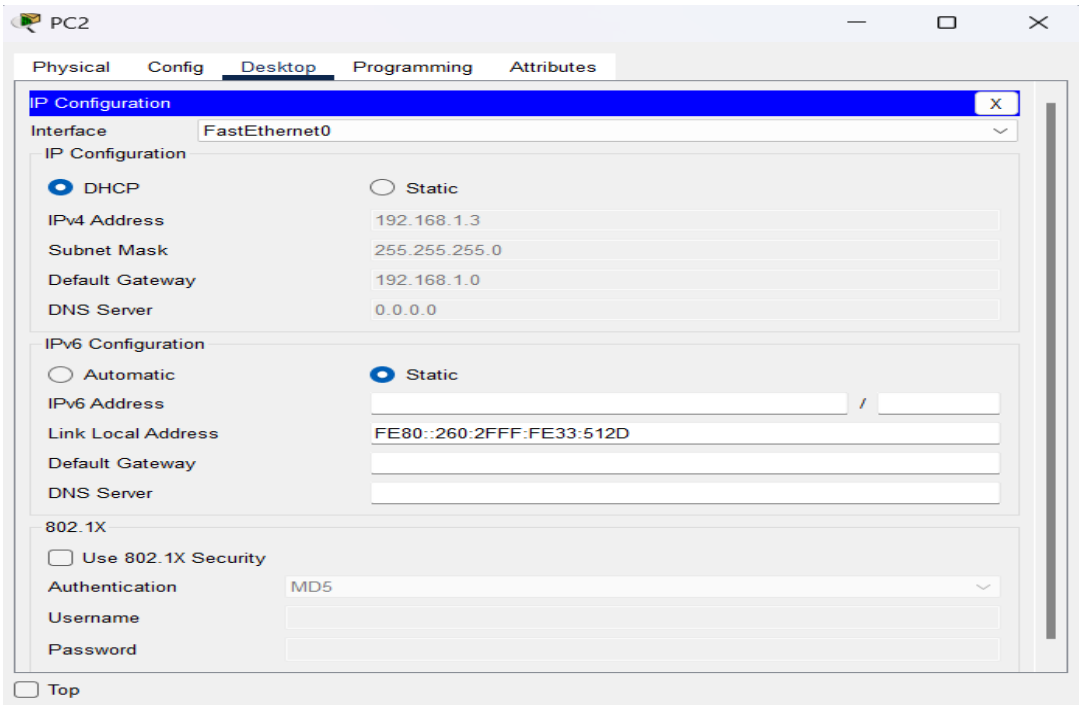

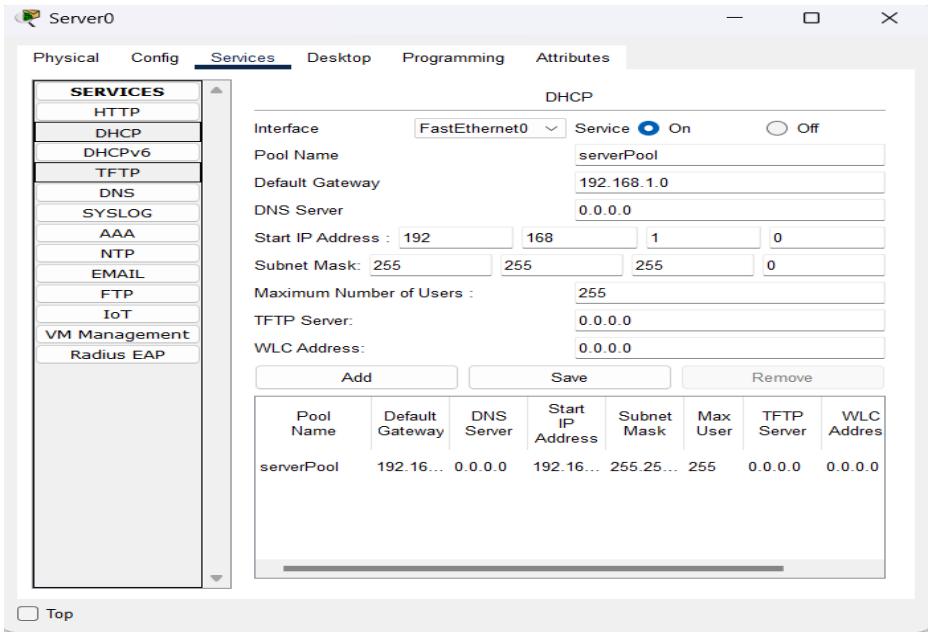

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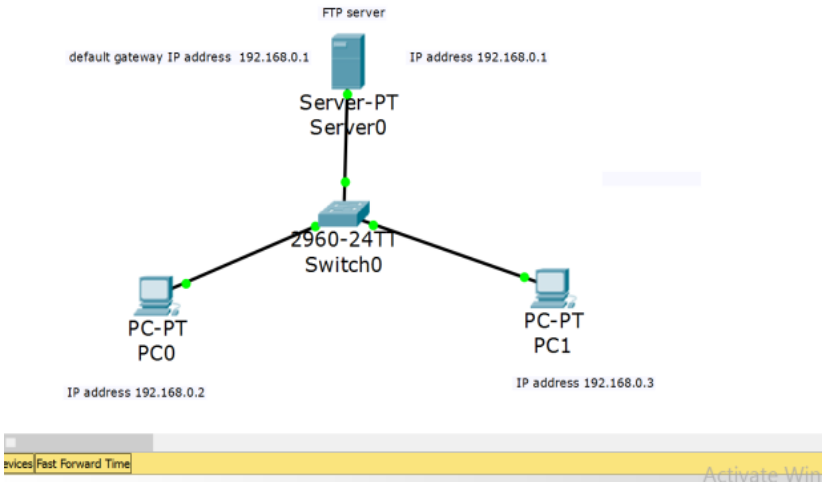
FTP Server:

Steps :-

- Add Two PC ,One Switch, One Router,One Server .
- Connect the devices.
- Assign IPaddress (10.10.10.0) in sever.
- Turn on the FTP Service by clicking the On button.
- Configure username(cisco 1) and password (text) and allow permission and click add button.
- Now one text file(hello.txt) created in text editor in desktop .
- Now open command prompt in desktop in server.
- Write ftp IPaddress (10.10.10.0) after enter username and password .
- After login write dir to check filename.
- Assign ipaddress(10.10.10.20) , subnetmask(255.255.255.0), default gateway(10.10.10.0) in client.
- Now open command prompt in desktop in client.
- Write ftp IPaddress after enter username and password .
- Now write get textfilename.

- Assign a static IP address (e.g., 192.168.1.2).
- Enable FTP services under Services > FTP. Set the IP address range to be assigned to clients.
- Use the Label tool in Cisco Packet Tracer to mark the IP addresses on each device.
- Capture the command prompt screen showing successful ping responses.



- Use the Add Simple PDU tool to create a PDU from one device to another.

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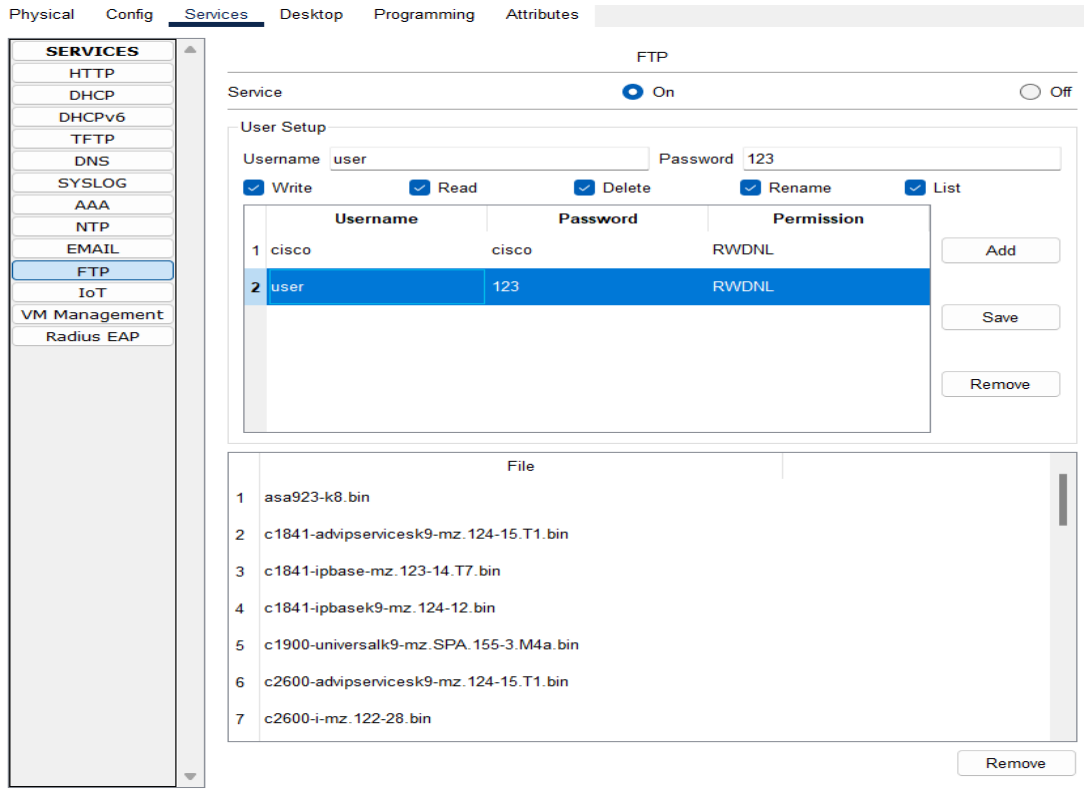


```
C:\>ftp 10.10.10.0
Trying to connect...10.10.10.0
Connected to 10.10.10.0
220- Welcome to PT Ftp server
Username:user
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>
```

```
ftp>put ducn.html

Writing file ducn.html to 10.10.10.0:
File transfer in progress...

[Transfer complete - 20 bytes]

20 bytes copied in 0.043 secs (465 bytes/sec)
ftp>
```