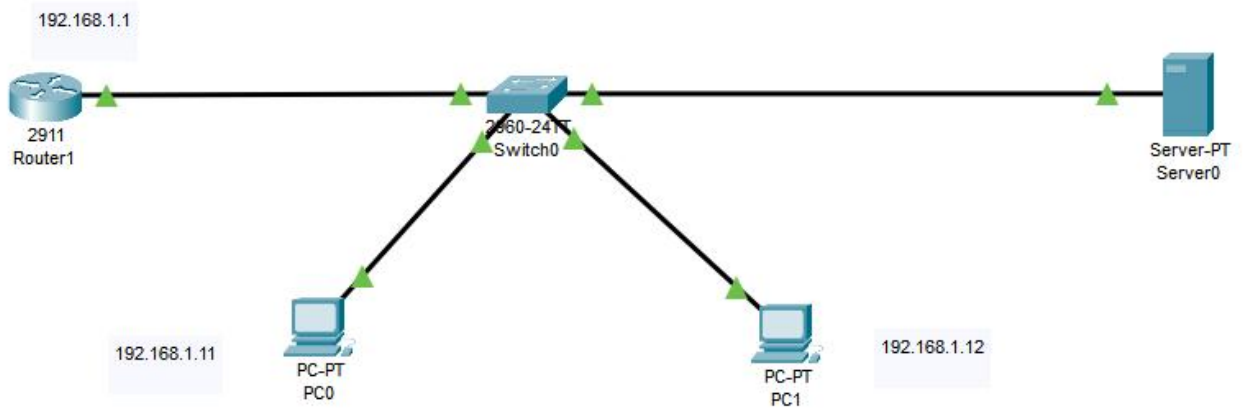


**Name : Waqar Ahmed**

**Roll No: 20P-0750**

**Task No: 05**

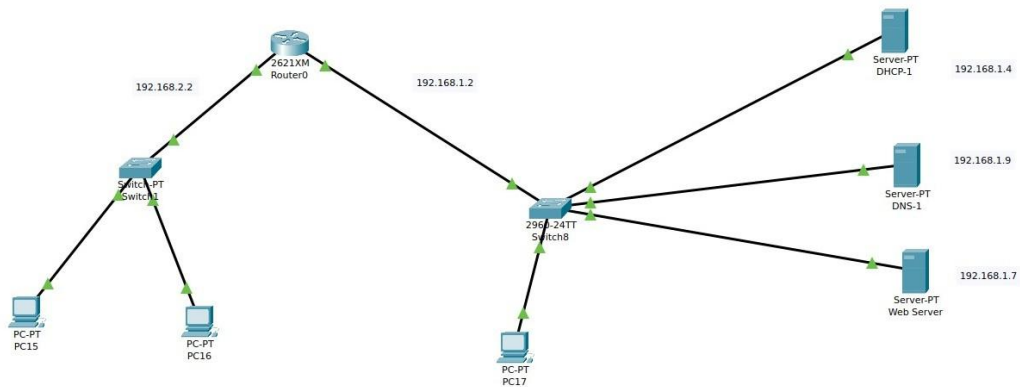
## Exp1: DNS server configuration in Packet Tracer.



## Exp:2

### Step1: Create This Topology.

Task: Configuring DHCP, DNS and Web Server configuration in cisco packet tracer



### Step2: Assign Ip address to F0/0 and F0/1 of router.

Router0

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet0/1

FastEthernet0/0

Port Status

Bandwidth

Duplex

MAC Address

IP Configuration

IPv4 Address

Subnet Mask

Tx Ring Limit

On

Auto

100 Mbps

10 Mbps

Half Duplex

Full Duplex

Auto

0002.4A9A.1A01

192.168.2.2

255.255.255.0

10

Equivalent IOS Commands

Router(config-if)#exit

Router(config)#interface FastEthernet0/1

Router(config-if)#

Router(config-if)#exit

Router(config)#interface FastEthernet0/0

Router(config-if)#

Router(config-if)#exit

Router(config)#interface FastEthernet0/1

Router(config-if)#%DHCPD-4-PING\_CONFLICT: DHCP address conflict: server pinged 192.168.1.4.

Router(config-if)#exit

Router(config)#interface FastEthernet0/0

Router(config-if)#

Top

The screenshot shows the Router0 configuration window with the 'Config' tab selected. The left sidebar contains a tree view with categories: GLOBAL (Settings, Algorithm Settings), ROUTING (Static, RIP), and INTERFACE (FastEthernet0/0, FastEthernet0/1). The main area displays the configuration for FastEthernet0/1. The 'Port Status' is 'On'. 'Bandwidth' is set to '100 Mbps'. 'Duplex' is set to 'Full Duplex'. The 'MAC Address' is '0002.4A9A.1A02'. The 'IP Configuration' section shows 'IPv4 Address' as '192.168.1.2' and 'Subnet Mask' as '255.255.255.0'. The 'Tx Ring Limit' is '10'. Below the configuration fields, a section titled 'Equivalent IOS Commands' shows a sequence of commands in a terminal window: Router(config-if)#, Router(config-if)#exit, Router(config)#interface FastEthernet0/1, Router(config-if)#, Router(config-if)#exit, Router(config)#interface FastEthernet0/0, Router(config-if)#, Router(config-if)#exit, Router(config)#interface FastEthernet0/1, Router(config-if)#, Router(config-if)#exit, Router(config)#interface FastEthernet0/1, and Router(config-if)#. At the bottom left, there is a 'Top' button.

Router0

Physical Config CLI Attributes

FastEthernet0/1

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0002.4A9A.1A02

IP Configuration

IPv4 Address 192.168.1.2

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

☐ Top

**Step3:** Open the CLI tab in the **Router0** and go the configuration mode and execute the following commands.

To Go To the configuration mode  
=> **configure terminal**

```
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip dhcp pool P1
Router(dhcp-config)#network 192.168.1.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.1.2
Router(dhcp-config)#ip dhcp pool P2
Router(dhcp-config)#network 192.168.2.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.2.2
Router(dhcp-config)#
```

**Step4:** Apply follows setting on DHCP IP configurations.

The screenshot shows a configuration window titled "DHCP-1" with tabs for Physical, Config, Services, Desktop, Programming, and Attributes. The "Desktop" tab is selected, and the "IP Configuration" section is highlighted. The "IP Configuration" section has two radio buttons: "DHCP" (unselected) and "Static" (selected). Below these are four text input fields: "IPv4 Address" (192.168.1.4), "Subnet Mask" (255.255.255.0), "Default Gateway" (192.168.1.2), and "DNS Server" (192.168.1.9). The "IPv6 Configuration" section has two radio buttons: "Automatic" (unselected) and "Static" (selected). Below these are four text input fields: "IPv6 Address" (empty), "Link Local Address" (FE80::290:2BFF:FE1C:6217), "Default Gateway" (empty), and "DNS Server" (empty). The "802.1X" section has a checkbox "Use 802.1X Security" (unchecked), a dropdown menu "Authentication" (MD5), and two text input fields "Username" and "Password" (both empty). A "Top" button is at the bottom left.

**DHCP-1**

Physical Config Services **Desktop** Programming Attributes

**IP Configuration** X

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.1.4

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.2

DNS Server: 192.168.1.9

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::290:2BFF:FE1C:6217

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

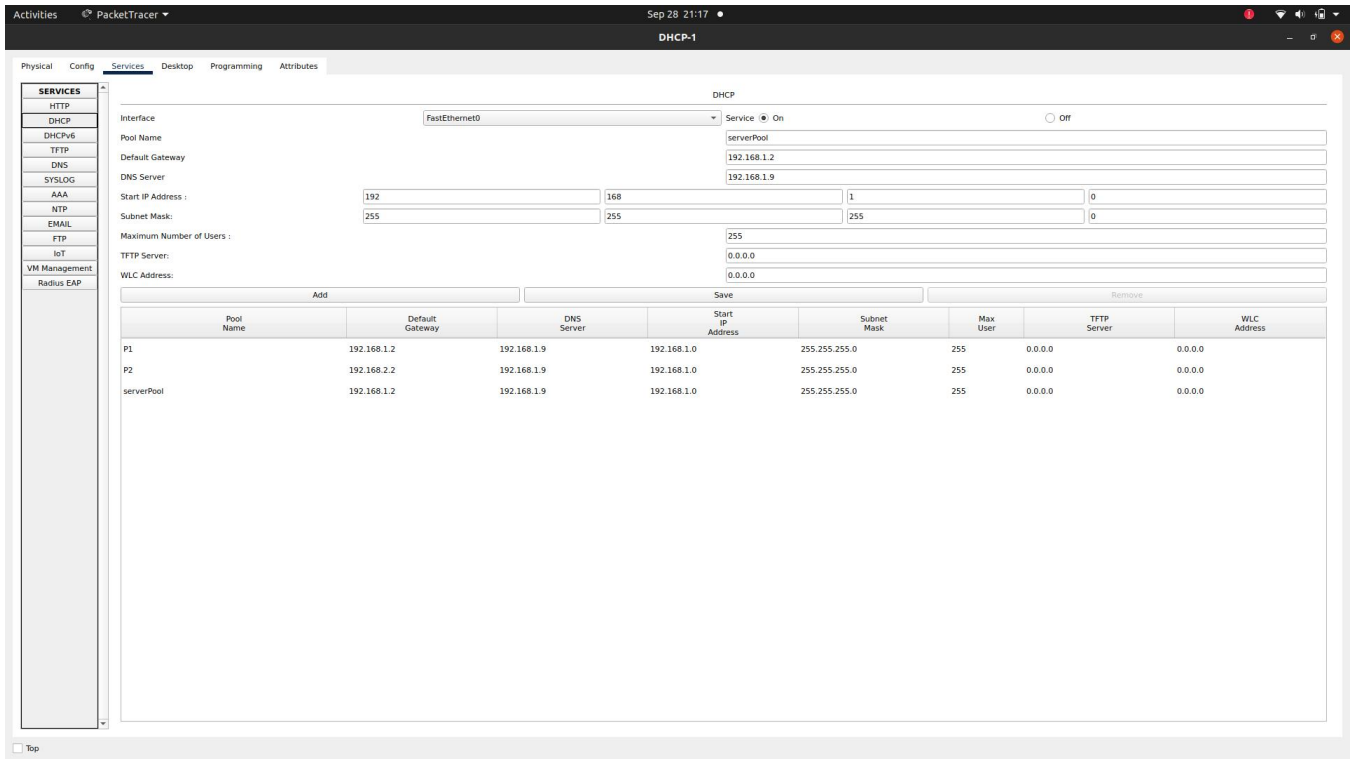
Authentication: MD5

Username:

Password:

☐ Top

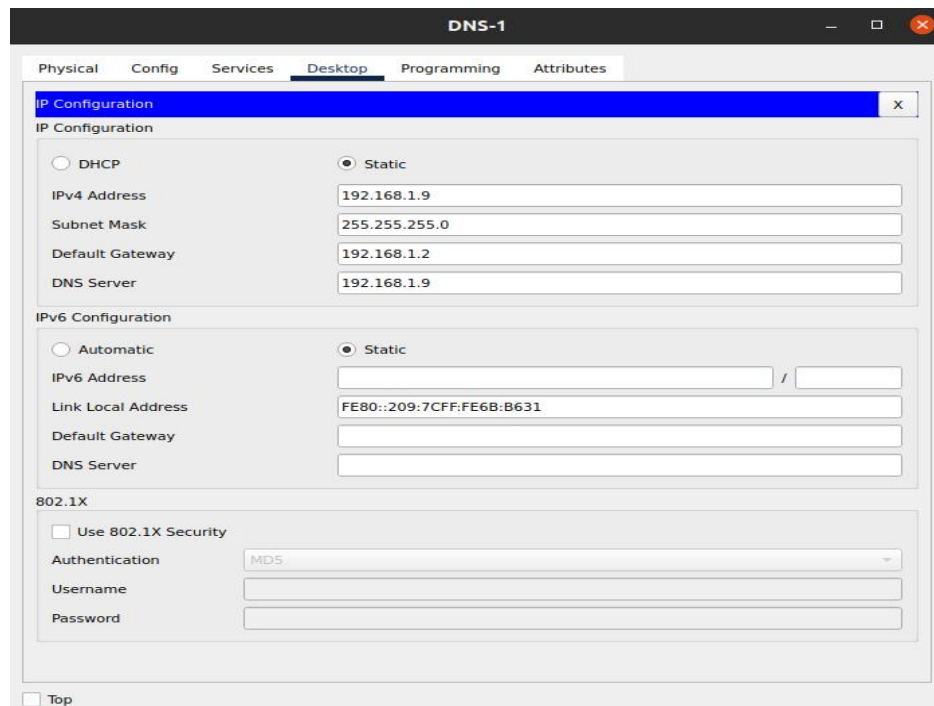
**Step5:** Open the services tab and enable DHCP Services and Add Pool P1 and Pool P2 with respective Ip Address.



The screenshot shows the DHCP-1 configuration window in PacketTracer. The 'Services' tab is selected, and the DHCP service is enabled. The configuration includes a pool named 'serverPool' with a default gateway of 192.168.1.2 and a DNS server of 192.168.1.9. The start IP address is 192.168.1.0 and the subnet mask is 255.255.255.0. The maximum number of users is 255. The TFTP server and WLC address are both 0.0.0.0.

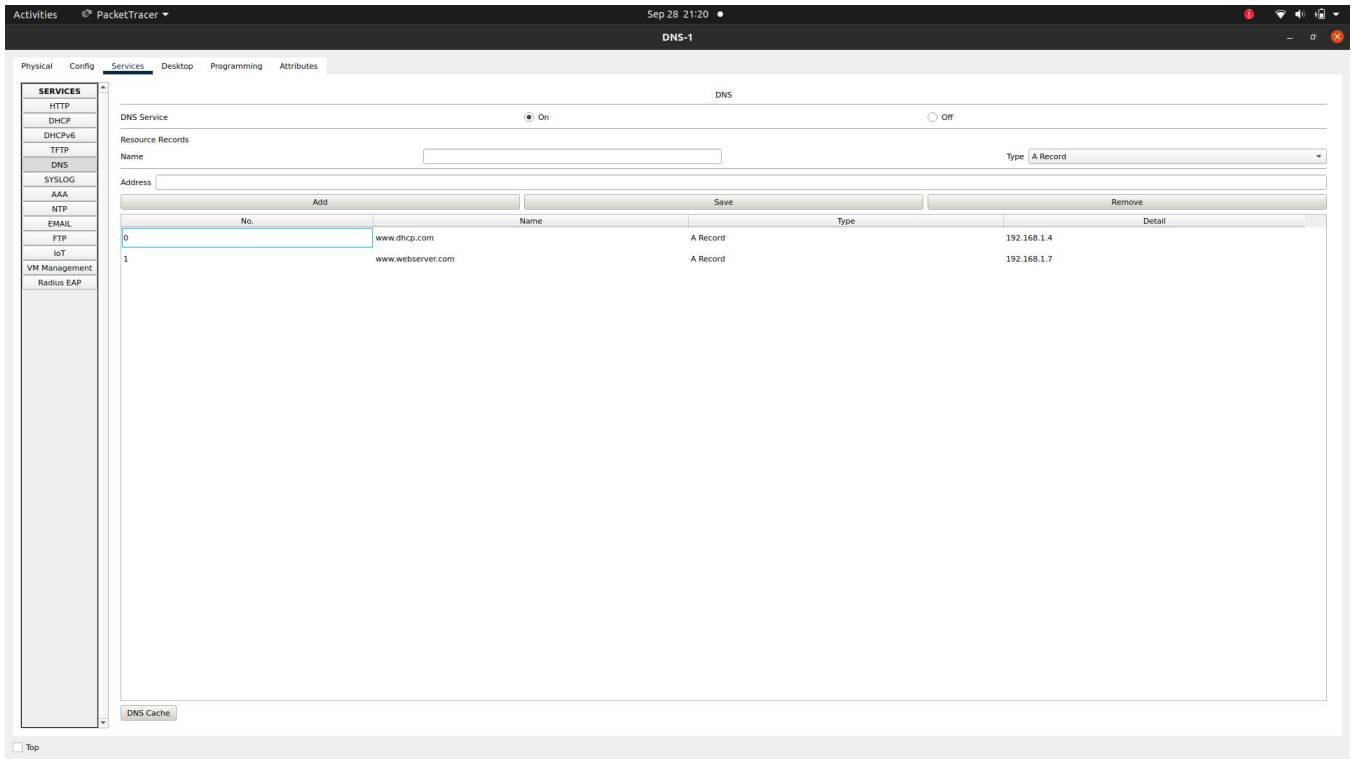
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
P1	192.168.1.2	192.168.1.9	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0
P2	192.168.2.2	192.168.1.9	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0
serverPool	192.168.1.2	192.168.1.9	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0

**Step 6:** Apply follows setting on DNS Ip configuration.



The screenshot shows the DNS-1 configuration window in PacketTracer. The 'Desktop' tab is selected, and the 'IP Configuration' section is expanded. The 'Static' radio button is selected for both IPv4 and IPv6 configurations. The IPv4 configuration includes an IPv4 address of 192.168.1.9, a subnet mask of 255.255.255.0, a default gateway of 192.168.1.2, and a DNS server of 192.168.1.9. The IPv6 configuration includes a static IPv6 address, a link local address of FE80::209:7CFF:FE6B:B631, and a default gateway. The 802.1X section is also visible, with the 'Use 802.1X Security' checkbox unchecked and the authentication method set to MD5.

**Step7:** Enable DNS Services of DNS and add two resources records. Remember ~~To On the DNS Service.~~



**Step8:** Apply following IP configuration on the Web Server.



Web Server

Physical

Config

Services

Desktop

Programming

Attributes

IP Configuration

X

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.7

Subnet Mask

255.255.255.0

Default Gateway

192.168.1.2

DNS Server

192.168.1.9

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::260:2FFF:FE92:3554

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

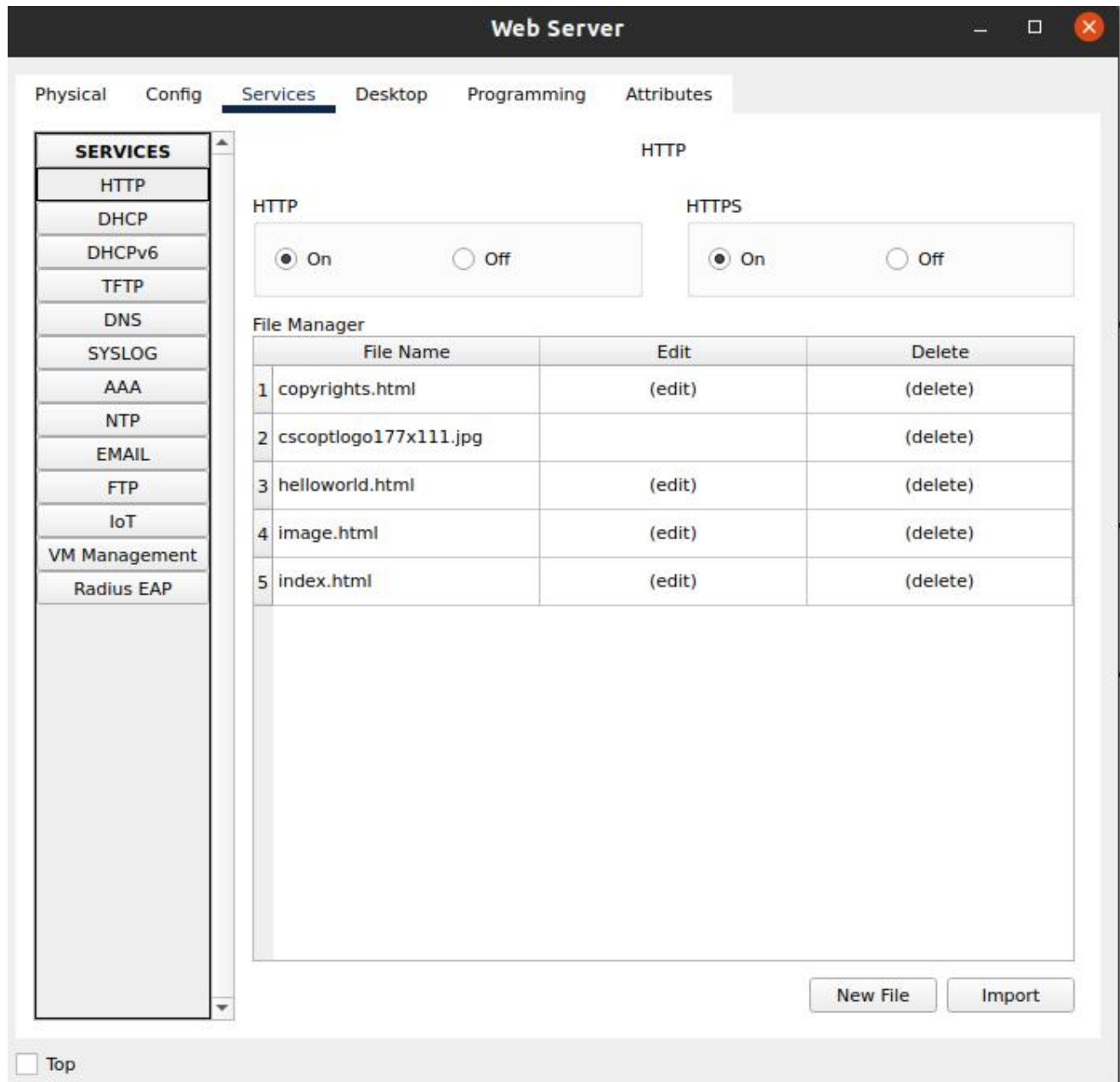
MD5

Username

Password

Top

**Step9:** Go to Services Tab and then Enable Http and Https in Web Server.



## Step10: Edit the index.html file

The screenshot shows the 'Web Server' configuration window in Cisco Packet Tracer. The 'Services' tab is selected, displaying a list of services on the left and the 'index.html' file content on the right.

**Web Server**

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

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

File Name: index.html

```
<html>
<center><font size='+2' color='blue'>Cisco Packet Tracer</font></center>
<hr>Welcome To Computer Network Lab
<p>Quick Links:
<br><a href='helloworld.html'>A small page</a>
<br><a href='copyrights.html'>Copyrights</a>
<br><a href='image.html'>Image page</a>
<br><a href='cscoptlogo177x111.jpg'>Image</a>
</html>
```

File Manager Save

☐ Top

**Step11:** Now go to every PC and on their IP configuration tabs, enable DHCP. Every PC should be able to obtain an IP address, default gateway and DNS server.

**Click PC17->Desktop->IP configuration. Then enable DHCP:**

The screenshot shows the configuration window for PC17. The 'Desktop' tab is selected, and the 'IP Configuration' sub-tab is active. The 'Interface' is set to 'FastEthernet0'. Under 'IP Configuration', the 'DHCP' radio button is selected, and a message 'DHCP request successful.' is displayed. The IPv4 fields are filled with: IPv4 Address: 192.168.1.1, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.1.2, and DNS Server: 192.168.1.9. Under 'IPv6 Configuration', the 'Static' radio button is selected. The IPv6 fields are: IPv6 Address (empty), Link Local Address: FE80::201:63FF:FE98:80D2, Default Gateway (empty), and DNS Server (empty). Under '802.1X', the 'Use 802.1X Security' checkbox is unchecked, and the 'Authentication' dropdown is set to 'MD5'. The 'Username' and 'Password' fields are empty. A 'Top' button is located at the bottom left.

PC17

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IPv4 Address 192.168.1.1

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.2

DNS Server 192.168.1.9

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::201:63FF:FE98:80D2

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top