Experiment 9

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Branch: BE-CSE **Section/Group:**

Semester: 5th **Date of Performance:**

Subject Name: Computer Networks **Subject Code: 22CSH-312**

1. **Aim:** Configuring DNS Server and accessing web Resources by Domain Name
2. **Objective:**

- The objective of this exercise is to configure a DNS (Domain Name System) server within a Cisco Packet Tracer environment and demonstrate how to access web resources using domain names instead of IP addresses. This setup will help understand the role of DNS in networking and improve skills in configuring network services.

3. **Requirements:**
   - Packet Tracer.
   - Server
   - Router
   - Switch
   - Wire
4. **Procedure:**

- Place two PCs, one server, and one router in Packet Tracer.
- Connect devices to the switch, router, server in packet tracer.
- Click on the router, go to the CLI tab, and enter the commands:

```
Router(config-if)#ip dhcp pool netA
Router(dhcp-config)#network 10.0.0.1 255.0.0.0
Router(dhcp-config)#default-router 10.0.0.1
Router(dhcp-config)#exit
```

```
Router(config)#ip dhcp pool netB
Router(dhcp-config)#network 20.0.0.1 255.0.0.0
Router(dhcp-config)#default-router 20.0.0.1

Router(dhcp-config)#exit
```

- Click on the server, go to the Desktop tab, and select IP Configuration and configure the dhcp server
- Assign a static IP and set the subnet mask.
- Click on the DNS server .
- Configure it with a static IP and set up a simple HTML page.
- Click on each PC, go to the Desktop tab, select IP Configuration
- Obtain an IP address automatically (if using DHCP from the router) or set a static IP in the same subnet.
- set to the IP address of the DNS server.
- On each PC, open web browser.
- Use the command
- Confirm that the PC resolves the domain name to the correct IP address.

5. Output:

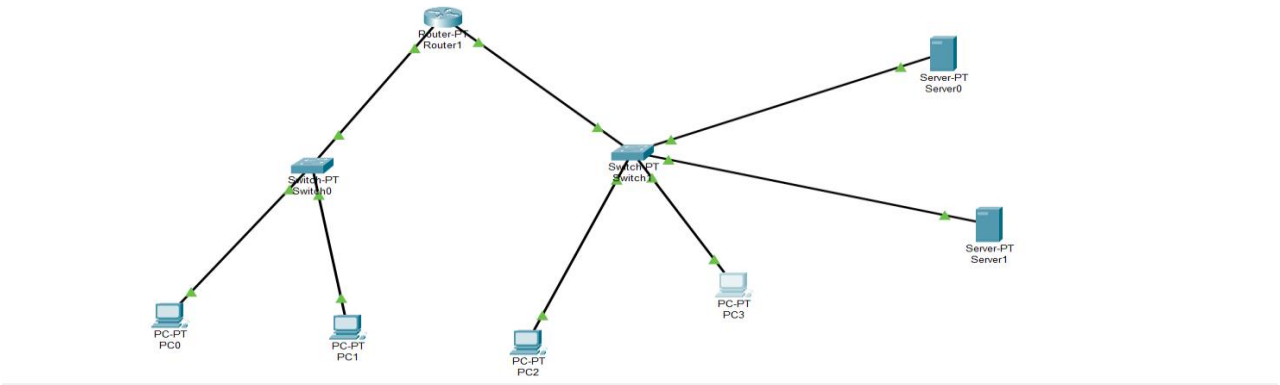

Fig 1: Connections

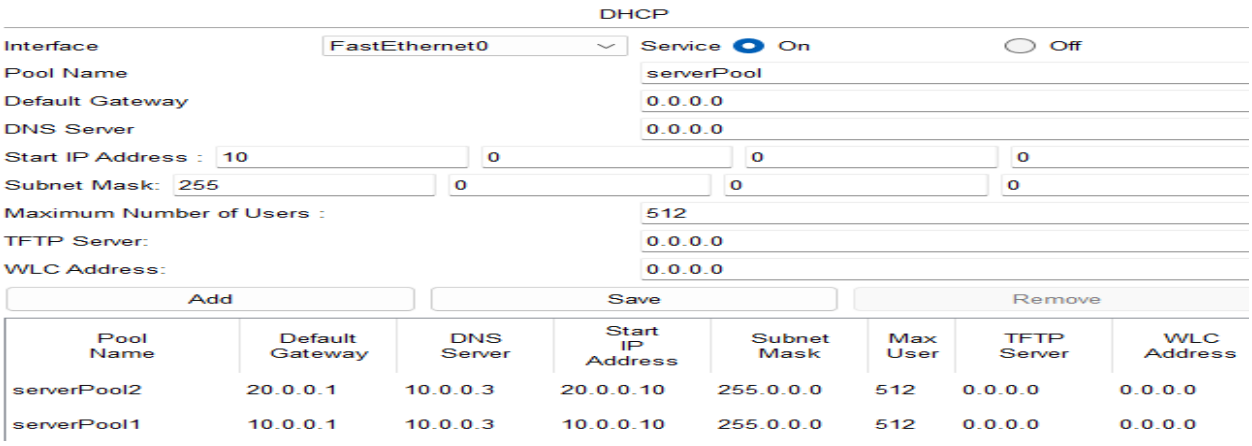

Fig 2: DHCP Server

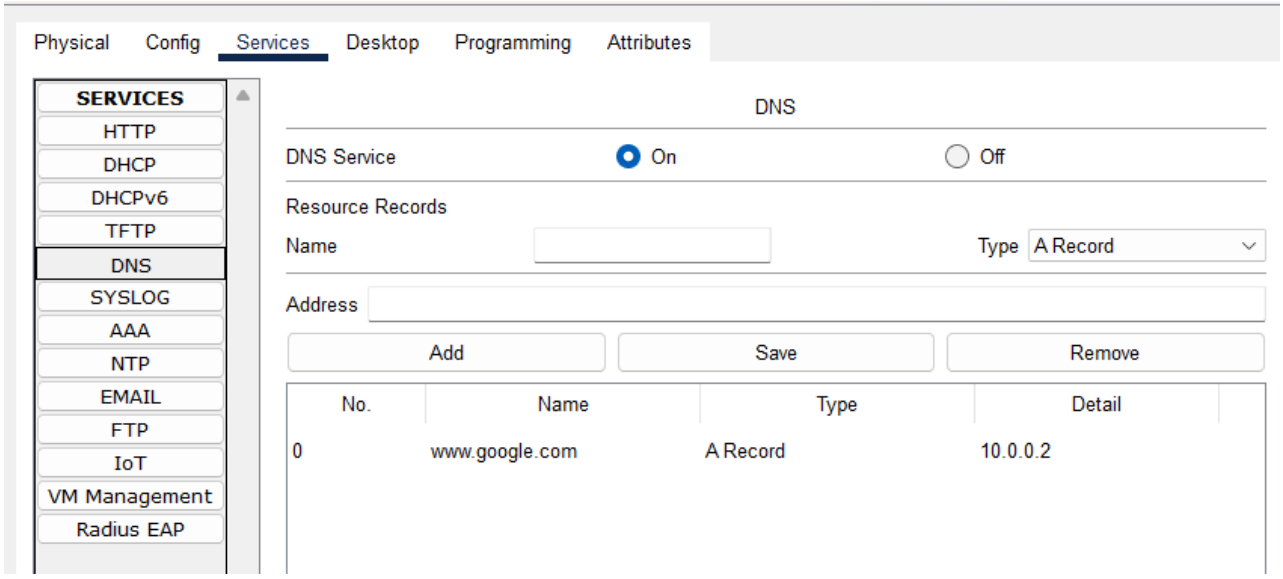

Fig 3: DNS server

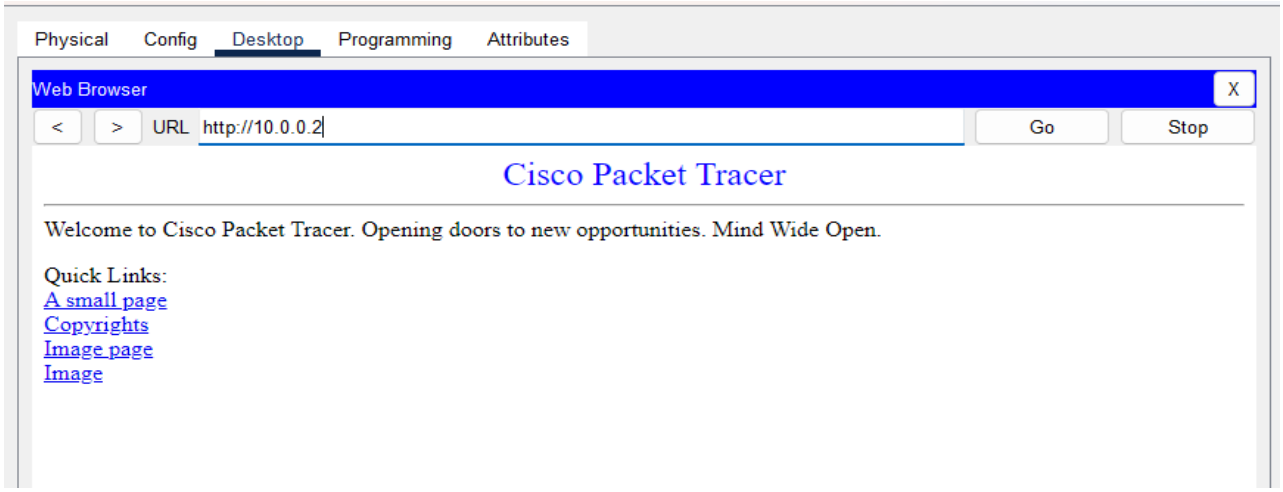

Fig 4: Opening URL

5. Learning Outcomes:

a. Explain the purpose of DNS in resolving domain names to IP addresses.

b. Set up a DNS server on a router or dedicated server in Packet Tracer.

c. Add A records for hostnames to resolve to specific IP addresses.

d. Set up client PCs to use the DNS server for name resolution

e. Successfully access web resources using domain names.