

Assignment

Network systems assignment 5

OBJECTIVE:

Design and configure a network in Cisco Packet Tracer with two separate LANs. The first LAN contains six PCs and a DNS Server connected to a switch. The second LAN contains three target servers (e.g., flipkart.com, amazon.com, lenskart.com) connected to a switch. Connect these two LANs using a router and access the target servers from each PC in LAN 1 through the DNS Server by mapping the domain name given in each PC to the corresponding IP address of the target server. Assign IP addresses to each PC either manually or through DHCP.

Following are the network details:

Network 1:

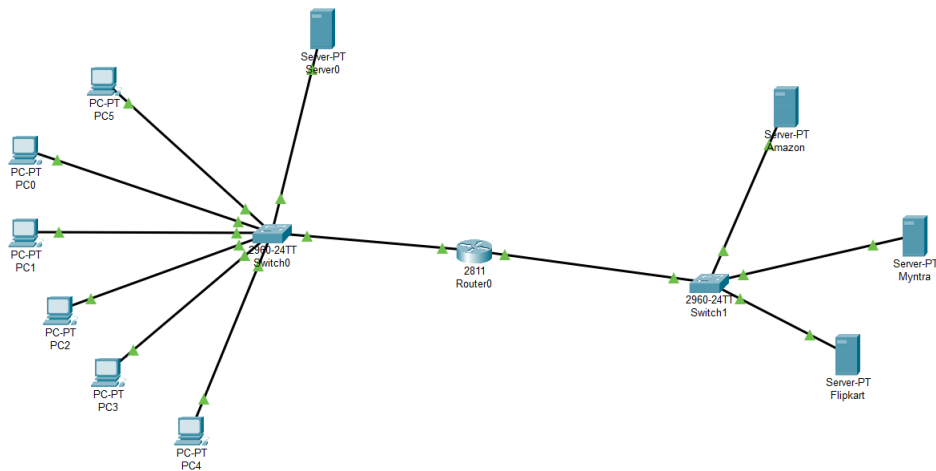
- Starting IP Address: 192.168.15.10
- DNS Server: (Assign an appropriate IP address within the same subnet)

Network 2:

- 192.168.16.10
- 192.168.16.12
- 192.168.16.13

Establish a successful connection and verify the DNS Server implementation. Attach all screenshots (including IP configuration, DNS Server configuration, target server configuration, router configuration, web browser screenshots from PCs showing the mapping of domain names to IP addresses, and network structure) along with a description in a PDF file and submit.

Network Structure



Router configuration

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.15.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 192.168.16.1 255.255.255.0
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)#
```

DHCP → Server to PCs

The screenshot shows the 'Server0' configuration window with the 'Services' tab selected. The 'DHCP' service is configured for the 'FastEthernet0' interface. The 'Service' is set to 'On'. The 'Pool Name' is 'serverPool'. The 'Default Gateway' is '192.168.15.1'. The 'DNS Server' is '192.168.15.10'. The 'Start IP Address' is '192.168.15.10'. The 'Subnet Mask' is '255.255.255.0'. The 'Maximum Number of Users' is '246'. The 'TFTP Server' is '0.0.0.0'. The 'WLC Address' is '0.0.0.0'. Below the configuration fields is a table showing the DHCP pool configuration.

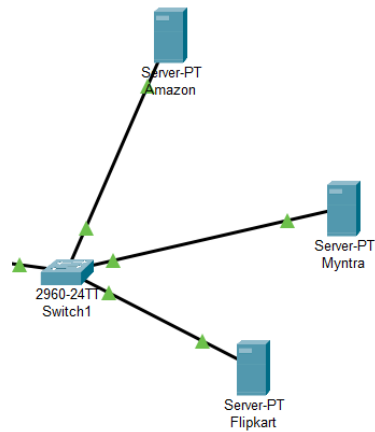
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.15.1	192.168.15.10	192.168.15.10	255.255.255.0	246	0.0.0.0	0.0.0.0

- Configure the IP and Set DNS server as 192.168.15.10 and start the Service

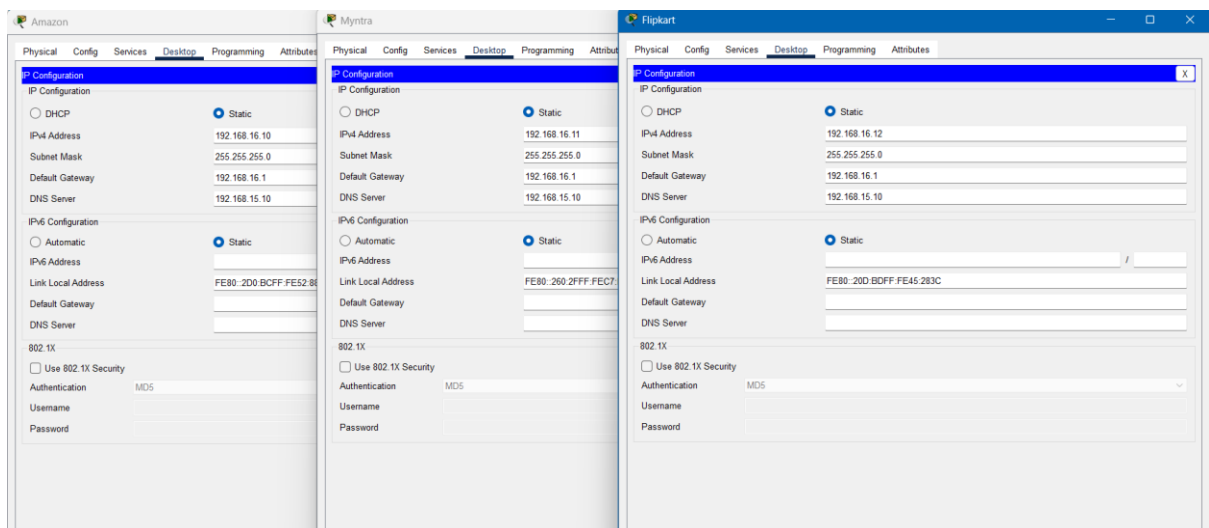
DHCP configured on PC 1 -

The screenshot shows the 'PC5' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded. The 'Interface' is 'FastEthernet0'. The 'IP Configuration' is set to 'Static'. The 'IPv4 Address' is '192.168.15.2'. The 'Subnet Mask' is '255.255.255.0'. The 'Default Gateway' is '192.168.15.1'. The 'DNS Server' is '192.168.15.10'. The 'IPv6 Configuration' section is also expanded, showing 'Automatic' selected, 'IPv6 Address' as 'FE80::260:47FF:FE00:D831', 'Link Local Address' as 'FE80::260:47FF:FE00:D831', 'Default Gateway' as 'FE80::260:47FF:FE00:D831', and 'DNS Server' as 'FE80::260:47FF:FE00:D831'. The '802.1X' section is also expanded, showing 'Use 802.1X Security' as 'MD5', 'Authentication' as 'MD5', 'Username' as 'PC5', and 'Password' as 'PC5'.

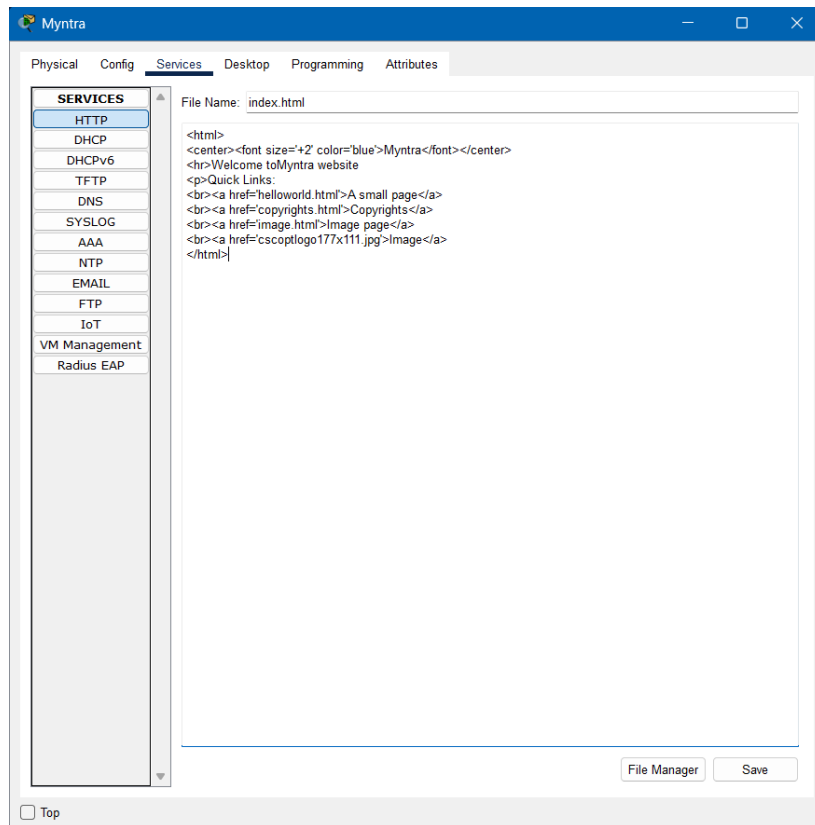
Setup another LAN network with servers



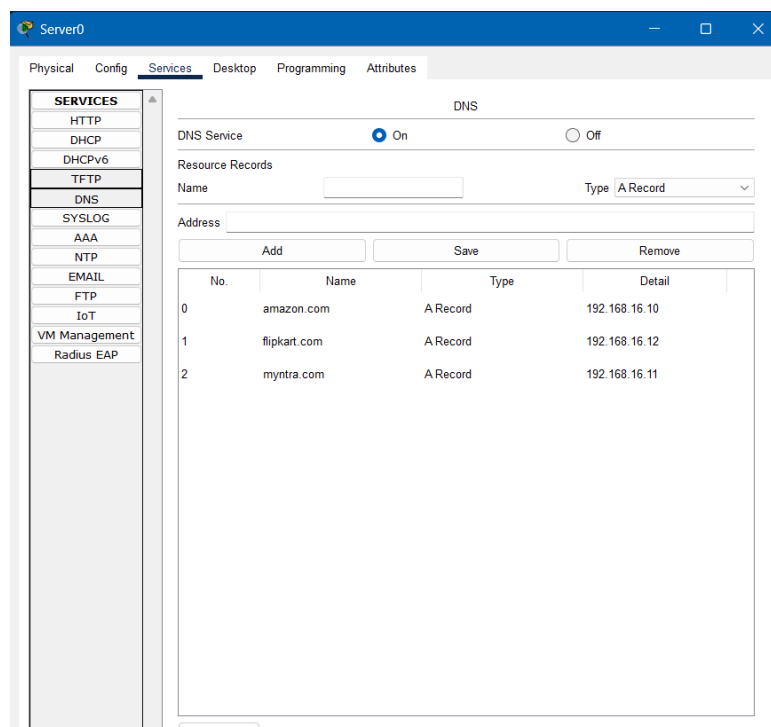
Configure those Server's IP



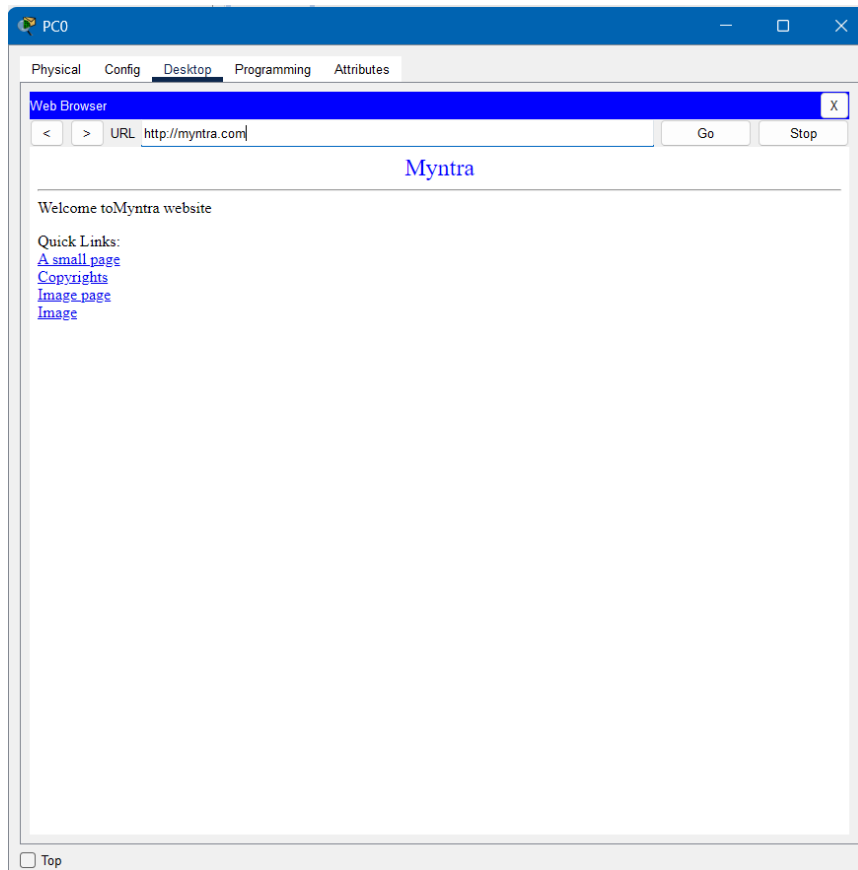
Change the HTML of the pre-existing page into the sites name



Input those DNS server details in the LAN 1 server with it 's IP



Ping the Web Server using the Web browser in PC



Submitted By **Neeraj Jayesh**

SOCSE 241037