Weekly Assessment – 4

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Week4- DNS & Web server Configuration

Aim:

To configure a DNS and Web Server in Cisco Packet Tracer using two servers to handle both services and ensure successful connectivity from a client PC.

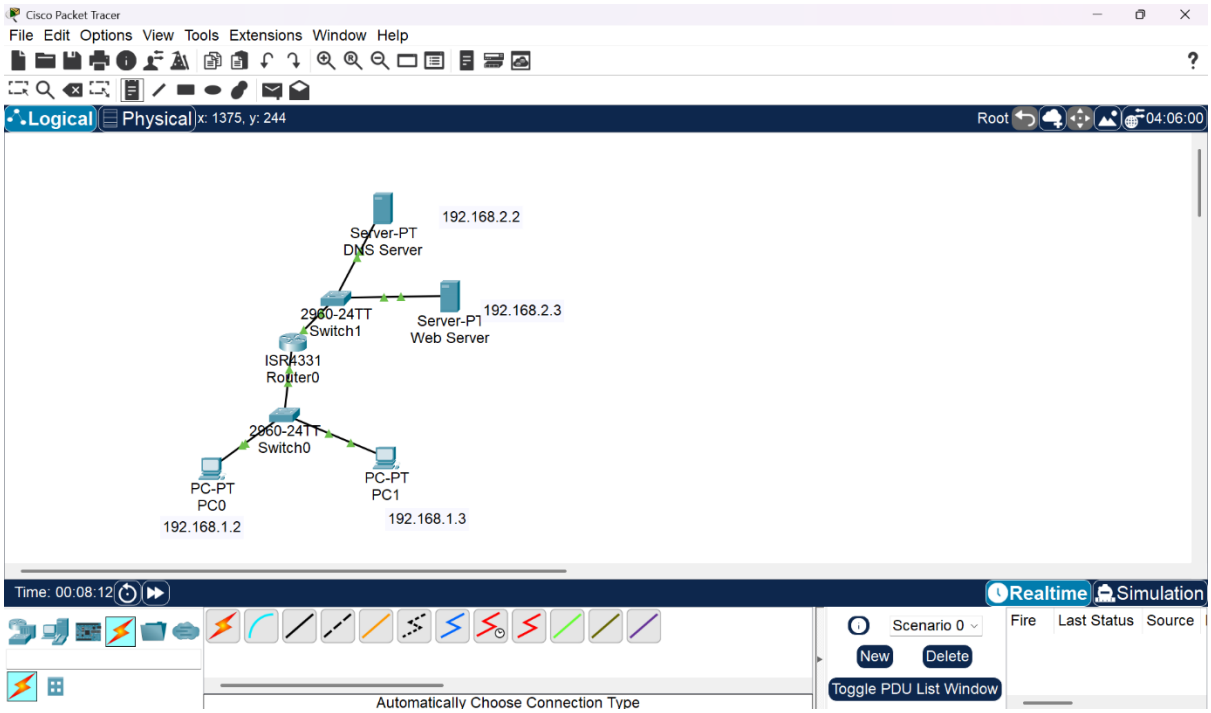
Description:

This setup involves creating a small network where a 2 servers functions as DNS and a Web Server. A router connects all devices, including two servers, two switches, and two PC. The DNS server resolves domain names to IP addresses, while the Web Server hosts a webpage accessible via a browser.

Network Topology Overview:

Devices Used:

- **1 Router**
- **2 Servers (1 for DNS & 1 for Web Server)**
- **2 Switches(here, we used 1 switch to connect the PCs while the other to connect Servers**
- **2 PCs**

- 

- **Router Configuration:**

We use the **Command Line Interface (CLI)** to configure the **router** to connect to both switches. The ports connecting to the switches will act as **default gateways** for devices within each switch's network:

- **GigabitEthernet0/0/0** → 192.168.1.1 (Gateway for PCs)
- **GigabitEthernet0/0/1** → 192.168.2.1 (Gateway for Servers)

IP Addressing Scheme:

Device	IP Address	Default Gateway
PC0	192.168.1.2	192.168.1.1
PC1	192.168.1.3	192.168.1.1
DNS Server	192.168.2.2	192.168.2.1
Web Server	192.168.2.3	192.168.2.1

Router0

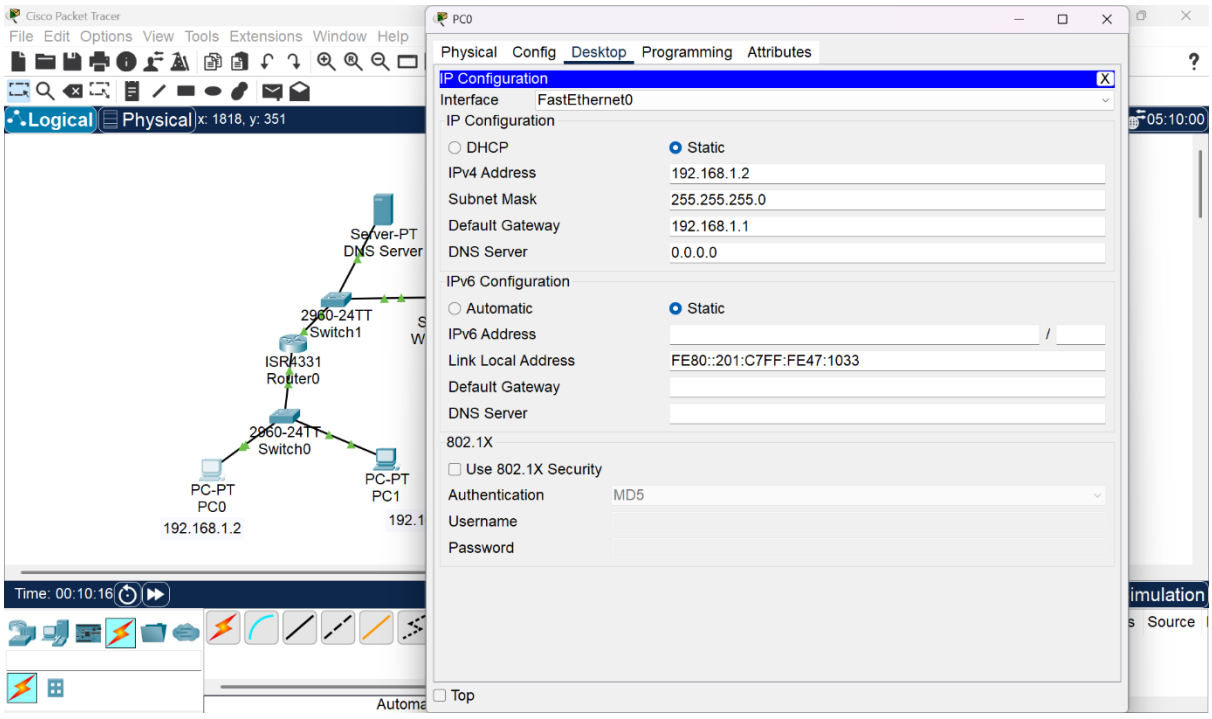
Physical Config CLI Attributes

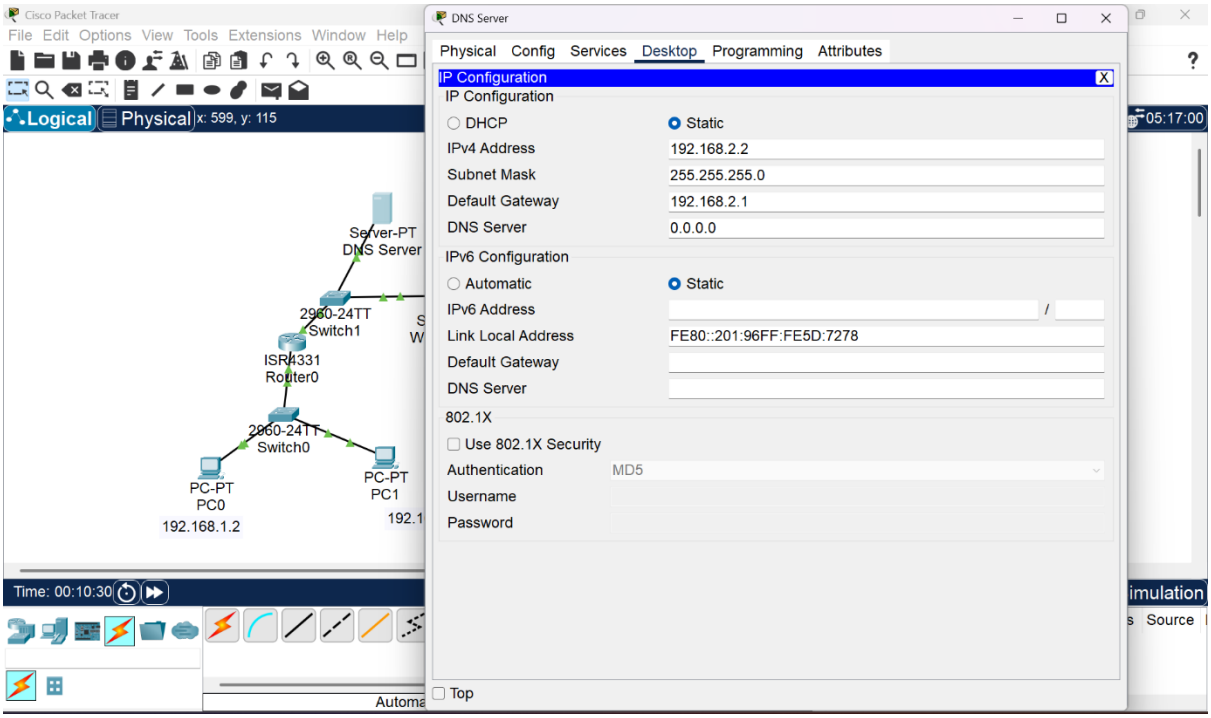
IOS Command Line Interface

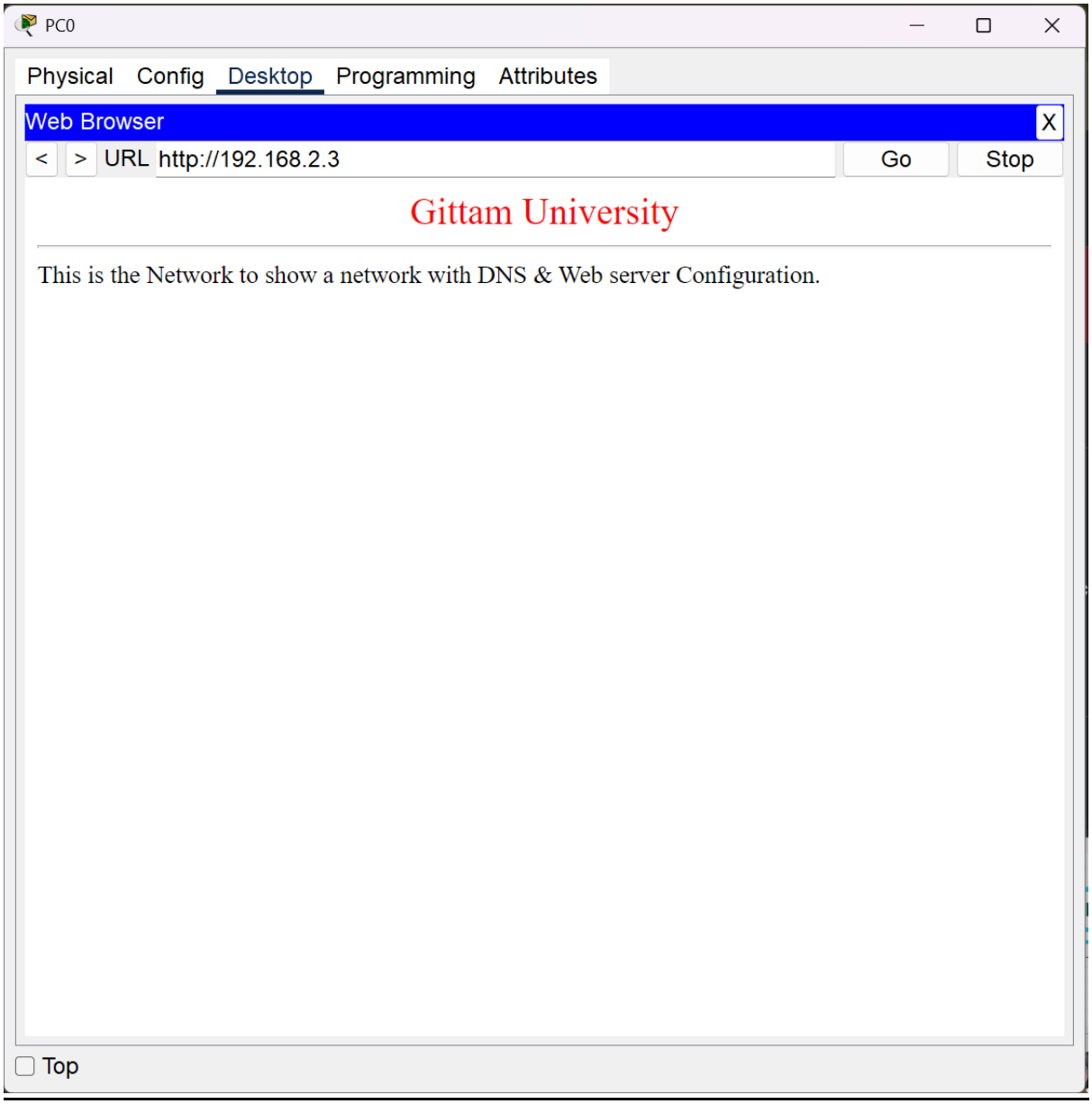
```
        --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no


Press RETURN to get started!



Router>enable
Router#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  administratively down down
GigabitEthernet0/0/1   unassigned      YES unset  administratively down down
GigabitEthernet0/0/2   unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
Router#interface GigabitEthernet0/0/0
          ^
% Invalid input detected at '^' marker.

Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

Router(config-if)#exit
Router(config)#config terminal
%Invalid hex value
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up

Router(config-if)#exit
Router(config)#
```

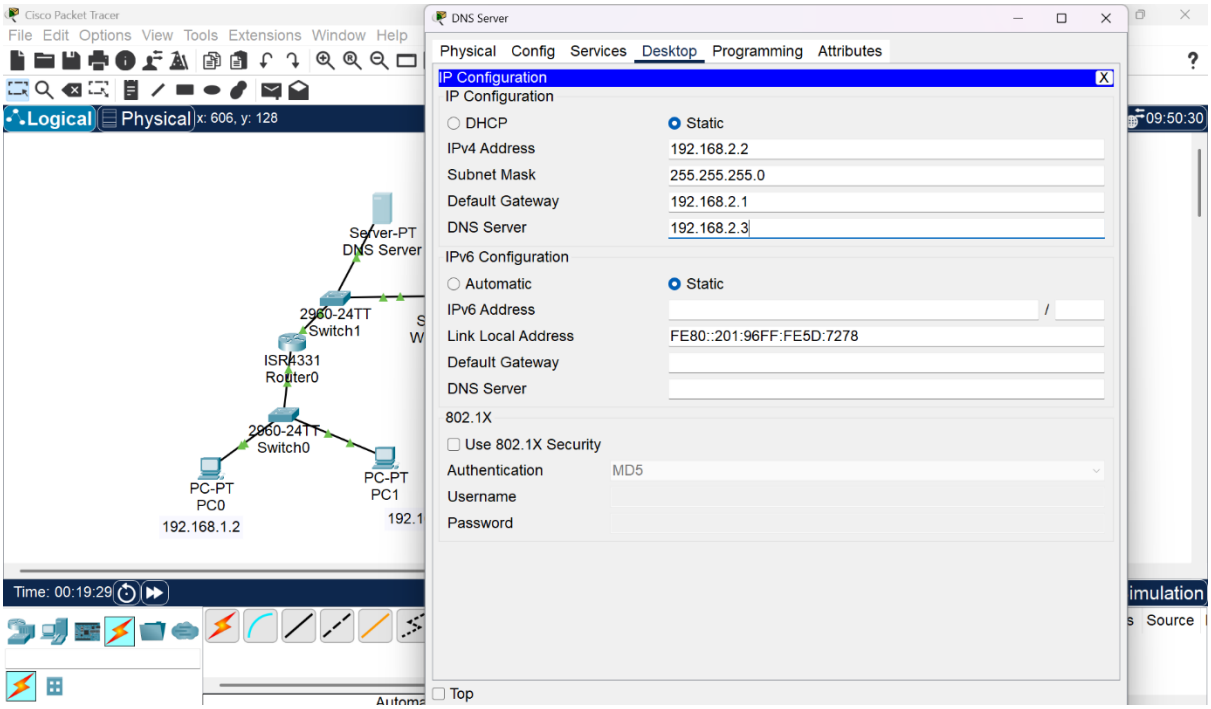
Copy Paste

Top



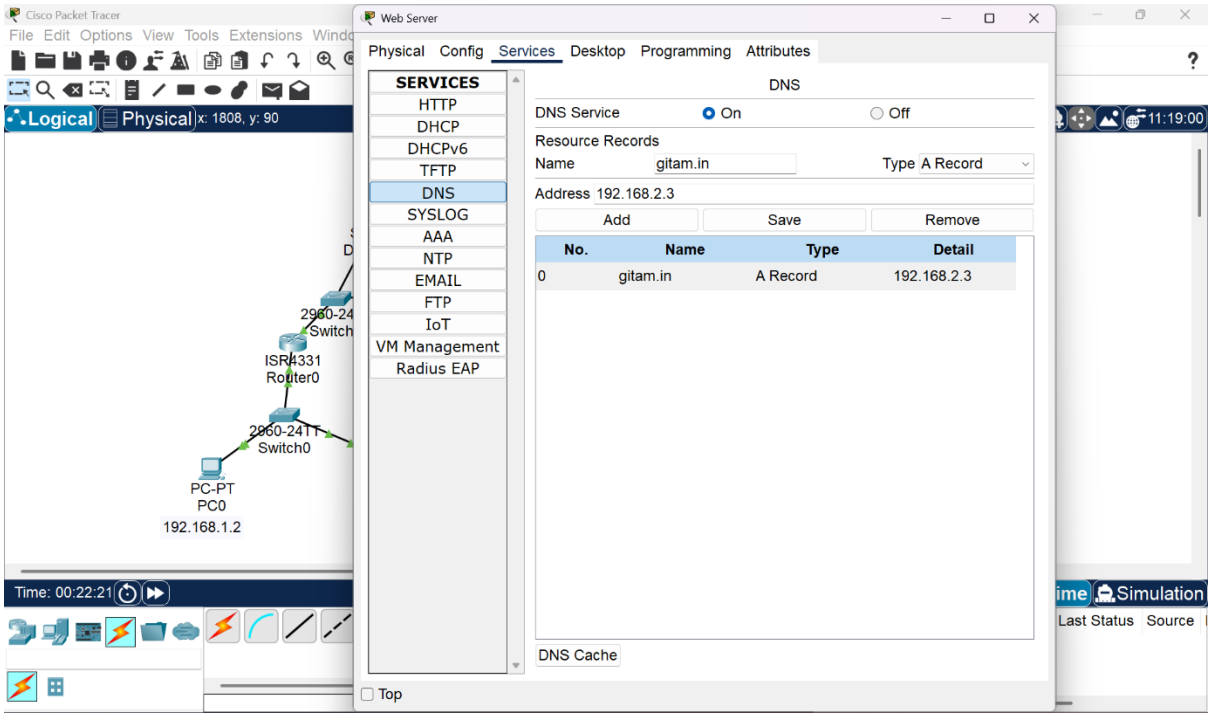

Cisco Packet Tracer
File Edit Options View Tools Extensions Window Help
Logical
Physical
x: 599, y: 115
05:17:00
Server-PT
DNS Server
2960-24TT
Switch1
ISR4331
Router0
2960-24TT
Switch0
PC-PT
PC0
192.168.1.2
PC-PT
PC1
Time: 00:10:30
imulation
Source
DNS Server
Physical Config Services Desktop Programming Attributes
IP Configuration
IP Configuration
DHCP
Static
IPv4 Address 192.168.2.2
Subnet Mask 255.255.255.0
Default Gateway 192.168.2.1
DNS Server 0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address FE80::201:96FF:FE5D:7278
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top


PC0
Physical Config Desktop Programming Attributes
Web Browser
< > URL http://192.168.2.3 Go Stop
Gittam University
This is the Network to show a network with DNS & Web server Configuration.
Top

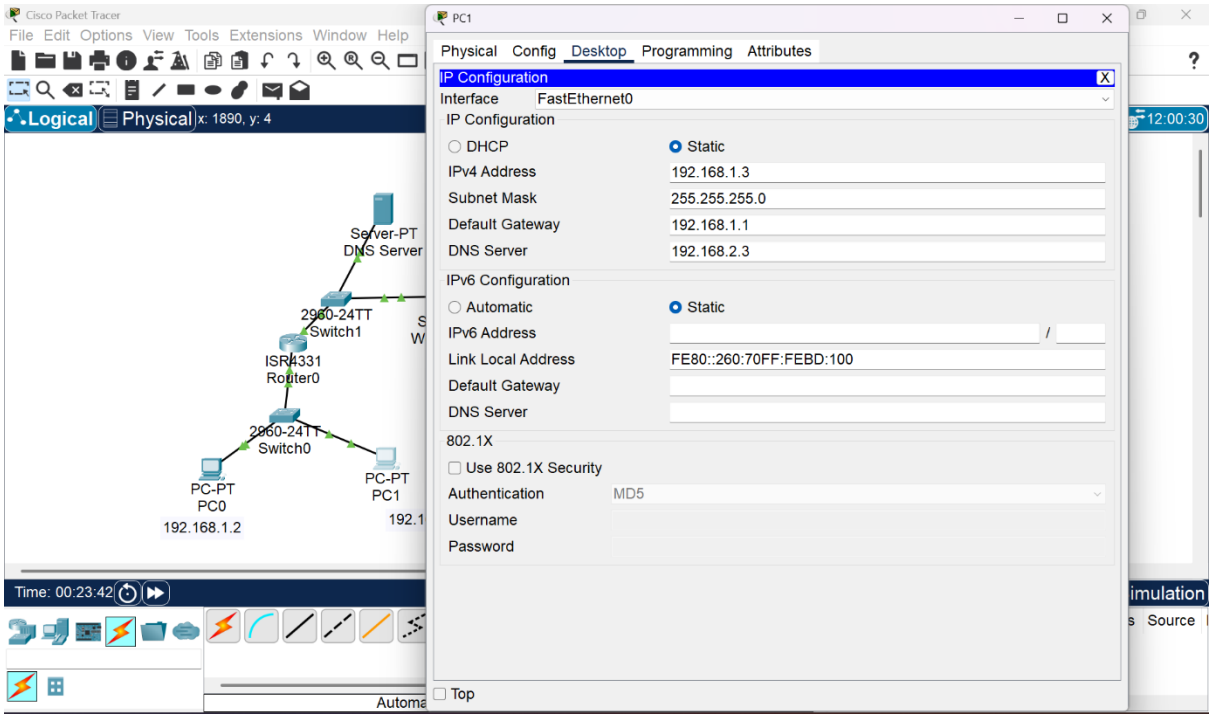


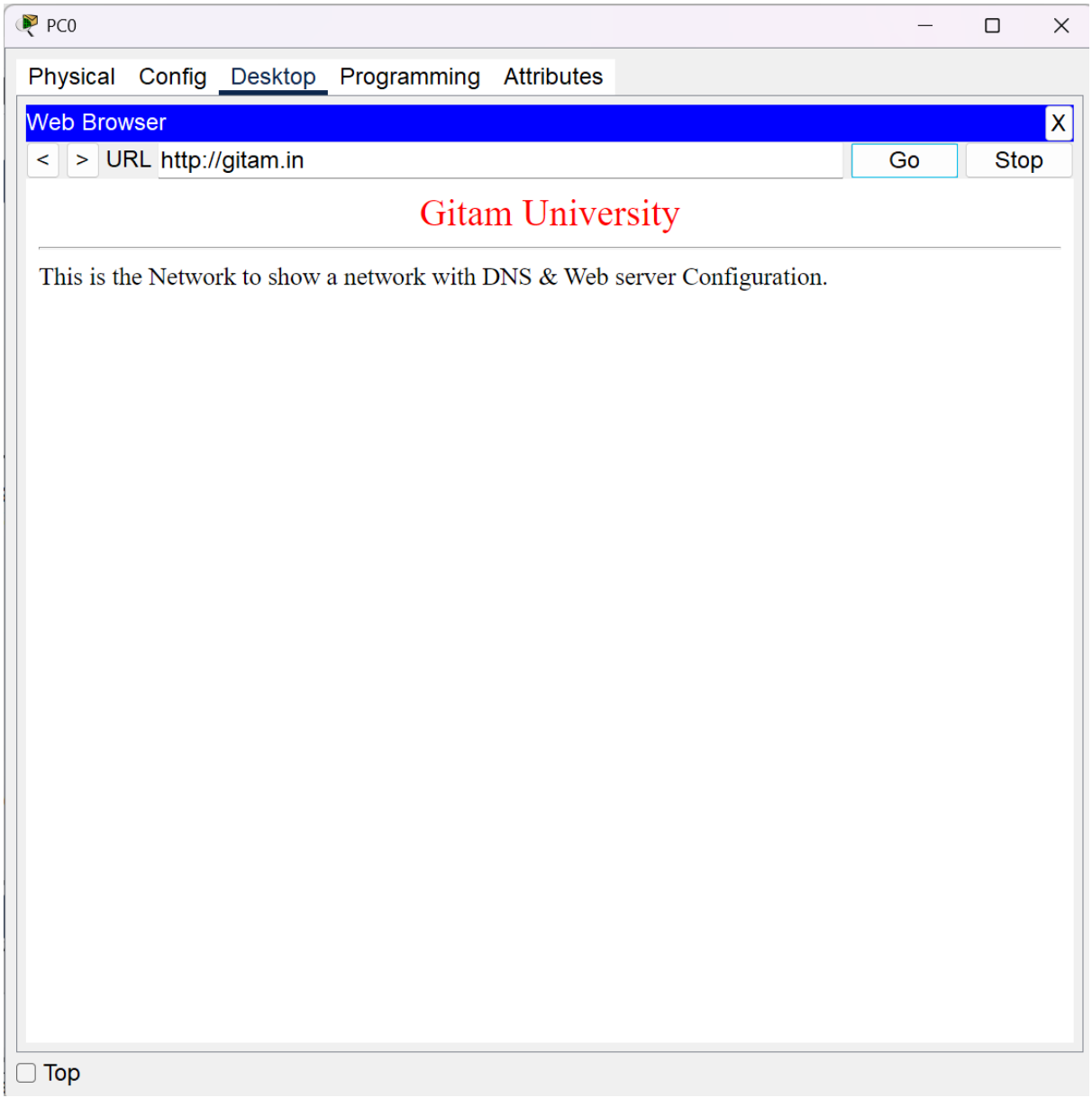
Now,if we want to open a web page which we have created we have to go to desktop in any of our PCs and type the web page's IP address but it will be tough to remember many IP address. That is when DNS Server is Useful.

- First we go to DNS Server and give the IP address of our Web Server

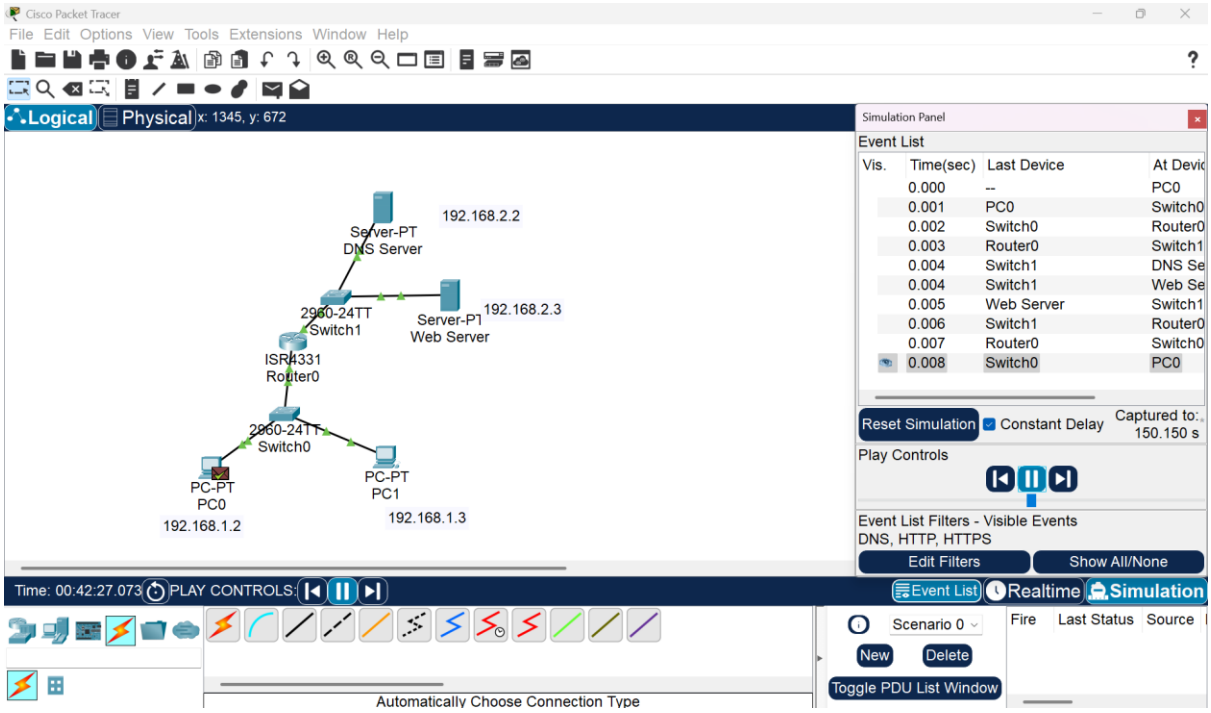


- Now we go to WEB Server and open DNS service and create the name of our Website and give the address of our DNS server.
- Now we have to give IP address of our Web Server in the DNS section of all the PCs (in IP configuration).


Cisco Packet Tracer
File Edit Options View Tools Extensions Window Help
Logical
Physical
x: 1890, y: 4
Server-PT
DNS Server
2960-24TT
Switch1
ISR4331
Router0
2960-24TT
Switch0
PC-PT
PC0
192.168.1.2
PC-PT
PC1
Time: 00:23:42
PC1
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address 192.168.1.3
Subnet Mask 255.255.255.0
Default Gateway 192.168.1.1
DNS Server 192.168.2.3
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address FE80::260:70FF:FEBD:100
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top


PC0
Physical Config Desktop Programming Attributes
Web Browser
< > URL http://gitam.in
Go
Stop
Gitam University
This is the Network to show a network with DNS & Web server Configuration.
Top

- Now , if we click on any PC and then type the website name (here, it’ s gitam.in) which we have created then we can open our web page which we created in DNS server



(in simulation mode.)

This way we can Successfully configure a DNS server and a Web Server.