MIT World Peace University

Computer Networks
Second Year B. Tech, Semester 3

Configuration of Static and Dynamic NAT

Practical Report
Assignment 6

Prepared By

Krishnaraj Thadesar
Cyber Security and Forensics
Batch A1, PA 20

November 27, 2022

Contents

1 Aim and Objectives

Implement Static and Dynamic NAT Configuration with Packet Tracer

2 Devices

2.1 Devices Used

1. 1 Switch 2960 with 24 LAN Ports
2. 2 Generic PCs
3. 2 Routers.
4. 1 Server.

3 Cables

1. Straight LAN Cable to connect unlike Devices
2. Crossover LAN Cable to connect like Devices

4 Procedure to Configure the Network

1. Create the Network as shown in the figure below.
2. Connect the various components with respective cables.
3. Assign IP Addresses to the devices.
4. Execute Appropriate commands on the routers.
5. Open Web browser on PCs and Laptops and check if they are able to access the server public IP.

5 Commands

```
FOR ROUTER 0


Router>
Router>enable
Router#
Router(config-if)#clock rate 56000
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ip nat inside
Router(config-if)#exit
```

```
Router(config)#interface Serial0/2/0
Router(config-if)#ip nat outside
Router(config-if)#exit
Router(config)#ip nat inside source static 10.0.0.1 213.20.1.1
Router(config)#ip route 0.0.0.0 0.0.0.0 Serial0/2/0
%Default route without gateway, if not a point-to-point interface, may impact performance
Router(config)#
```

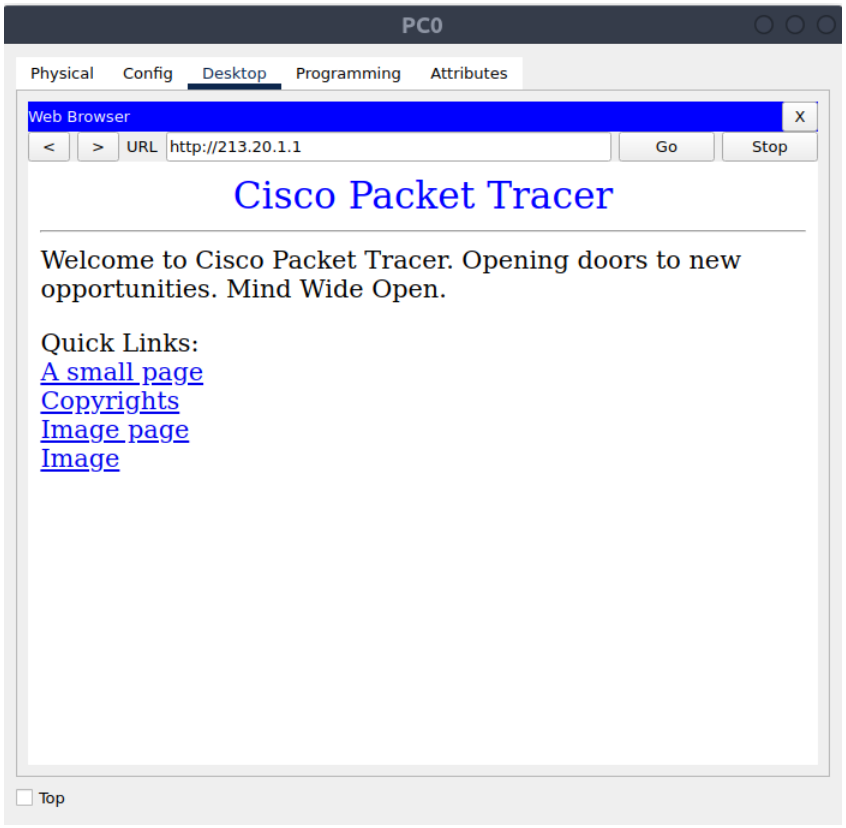
FOR ROUTER 2

```
Router>enable
Router#
Router(config-if)#clock rate 56000
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ip nat inside
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#ip nat outside
Router(config-if)#exit
Router(config)#ip nat inside source static 20.0.0.1 213.20.1.2
Router(config)#ip nat inside source static 20.0.0.2 213.20.1.2
Router(config)#
Router(config)#
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#ip route 0.0.0.0 0.0.0.0 Serial0/1/0
%Default route without gateway, if not a point-to-point interface, may impact performance
Router(config)#
```

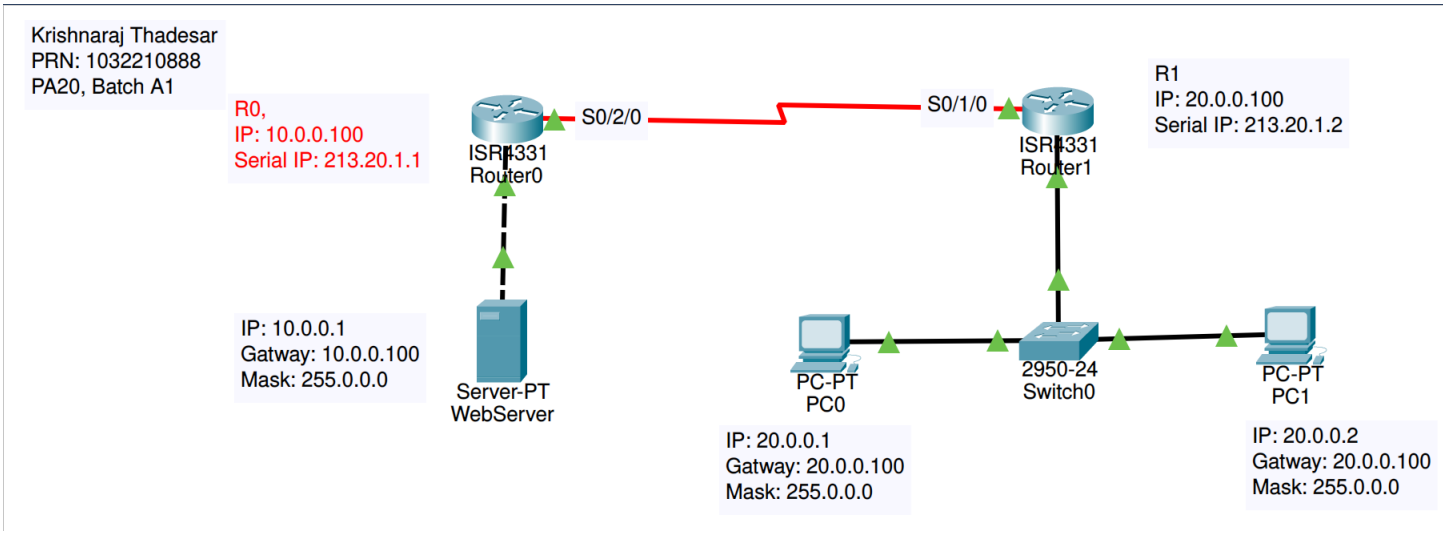
6 Platform

Operating System: Arch Linux x86-64
IDEs or Text Editors Used: Visual Studio Code
Programs Used: Cisco Packet Tracer v6.0.1

7 Output



8 Connection Screenshot



9 Conclusion

Thus routing Protocols were Executed on a simple LAN, and the connection was verified using the ping command. 3 Routing Protocols were executed successfully. RIP, OSPF and EIGRP. Their Differences were studied and understood.