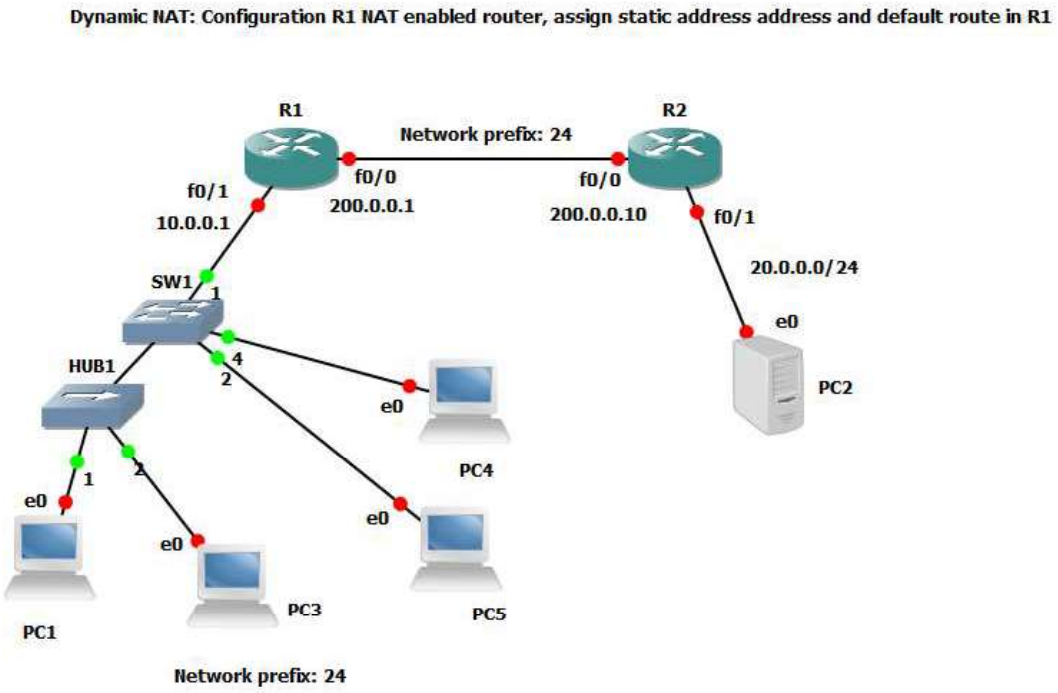
Chapter 11

Lab 10: Dynamic NAT configuration using one NAT enabled router

11.1 Objective

Design a NATed network to demonstrate using GNS3 and explain packet capture. Add a server (PC icon changed) to router R2 on network 20.0.0.0/24. Connect network 10.0.0.0/24 as a private network to NAT enabled router R1. Ping the server from any PC in the private network. Let public address pool include 200.0.0.2 to 200.0.0.5.



11.2 Procedure

1. Configure the router interfaces of R1 and R2 as shown in the Section 1.2.4. While declaring interface f0/1 in R1, configure it as the interface for the private network. While declaring interface f0/0 in R1, configure it as the interface for the public network.

2. For dynamic routing configure as shown in Section 7.2.

3. For configuring NAT in R1 follow the steps below.

   R1(config)#ip nat pool my_pub_ips 200.0.0.2 200.0.0.5 netmask 255.255.255.0
   R1(config)#access-list 1 permit 10.0.0.0 0.0.0.255
   R1(config)#ip nat inside source list 1 pool my_pub_ips

R1(config)#ip nat log translations syslog

4. For PC assign IP address as given in Section 1.2.4

11.3 Analyses

1. Show the NAT translations
2. Show routing tables in R1 and R2 (you can use static or dynamic routing).
3. Show the ping operation by pinging PC2 from PC1. Show packet capture and write port numbers, IP addresses of each Echo request and reply. Explain ping statistics.
4. Do the opposite of step 3 and explain what happened.