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| **Sheridan College** | | |
| **Course** | **TELE33324: Data Network Design and Configuration – Routers and Switches** | |
| **Professor** | **Ida Leung** | |
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| **Table number** |  | |
| **Lab 7 : NAT/PAT** | | |
| **Performed Date** | **01/08/2018** | |
| **Instructor's Sign** |  | **(marks)** |

**Follow the procedure to configure your topology:**

1. Reuse everything you have in lab6. Remove any ACL on any router. Set R3 back to area 0 and no more stub area. Shutdown the link from R5 to R3. So, all traffic from R5 to R3 should go via the R5-R4-R1-R2-R3 path. We will only use the routers for this lab. Please make sure each router is pingable to another router
2. Create a local username and password with privilege 15 on each router.

R(config)#Username telnet password telnet privilege 15

1. Configure the vty to allow telnet to the router from remote

R(config)#line vty 0 10

R(config-line)# login local

R(config-line)#transport output telnet

1. Check if you can telnet to any router from any router. Make sure the loopback address for each router is correct. You can telnet via loopback address or point to point address on the target router.
2. Now apply ACL on R3 line vty configuration to allow only source address 172.20.192.1 /32 to telnet to the R3 router. List your ACL and configuration on vty below:

access-list 110 permit tcp host 172.20.192.1 any eq telnet

access-list 110 deny ip any any

1. Can you able to telnet to R3 from any router? If not, why? If yes, then your ACL need to fix.

NO, the presence of acl on vty line 0 10 prevent any telnet request passing into router R3 from router R2 which result into connection refuse by remote host.

1. Now go to R2 to create a dynamic PAT pool to allow any telnet session from R1, R4 and R5 via R2 to R3. Now, telnet to R3 from R1. Can you telnet to R3? If so, why?

I can telnet from R2, because dynamic NAT translate all incoming telnet request to specific ip 172.20.192.1 which is allowed in ACL in router R3.

1. Expand your telnet from R4 to R3 and R5 to R3. Are they all succeed? If so, why?

Request send by all router passing through R2 due to availability of one path in network and setting up dynamic NAT on router R2 result into converting all telnet request on IP 172.20.192.1 possible to make telnet request successfully.

1. Go to R2 and do the “show ip nat trans” to verify your PAT configuration. Capture and shown below:

Pro Inside global Inside local Outside local Outside global

tcp 172.20.192.1:1024 10.0.8.22:1025 8.0.0.1:23 8.0.0.1:23

tcp 172.20.192.1:1025 10.0.4.10:1025 8.0.0.1:23 8.0.0.1:23

tcp 172.20.192.1:1028 10.0.0.5:1028 8.0.0.1:23 8.0.0.1:23



Figure 1 Network Topology