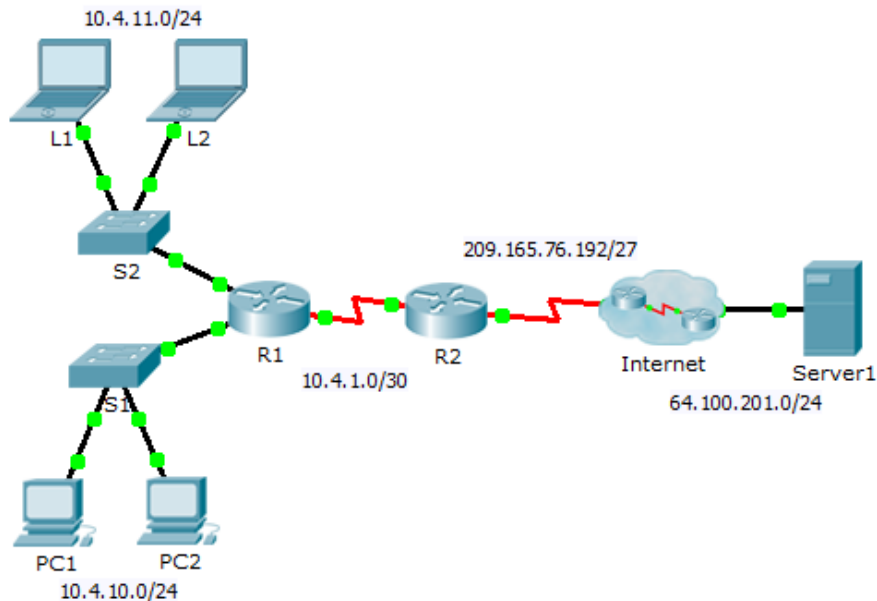# Packet Tracer – Verifying and Troubleshooting NAT Configurations

Topology

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	G0/0	10.4.10.254	255.255.255.0	N/A
	G0/1	10.4.11.254	255.255.255.0	N/A
	S0/0/1	10.4.1.2	255.255.255.252	N/A
R2	S0/0/0	209.165.76.194	255.255.255.224	N/A
	S0/0/1	10.4.1.1	255.255.255.252	N/A
Server1	NIC	64.100.201.5	255.255.255.0	64.100.201.1
PC1	NIC	10.4.10.1	255.255.255.0	10.4.10.254
PC2	NIC	10.4.10.2	255.255.255.0	10.4.10.254
L1	NIC	10.4.11.1	255.255.255.0	10.4.11.254
L2	NIC	10.4.11.2	255.255.255.0	10.4.11.254

Objectives

Part 1: Isolate Problems

Part 2: Troubleshoot NAT Configuration

Part 3: Verify Connectivity

Scenario

A contractor restored an old configuration to a new router running NAT. But, the network has changed and a new subnet was added after the old configuration was backed up. It is your job to get the network working again.

Part 1: Isolate Problems

Ping **Server1** from **PC1**, **PC2**, **L1**, **L2**, and **R2**. Record the success of each ping. Ping any other machines as needed.

Part 2: Troubleshoot NAT Configuration

Step 1: View the NAT translations on R2.

If NAT is working, there should be table entries.

Step 2: Show the running configuration of R2.

The NAT inside port should align with the private address, while the NAT outside port should align with the public address.

Step 3: Correct the Interfaces.

Assign the **ip nat inside** and **ip nat outside** commands to the correct ports.

Step 4: Ping Server1 from PC1, PC2, L1, L2, and R2.

Record the success of each ping. Ping any other machines as needed.

Step 5: View the NAT translations on R2.

If NAT is working, there should be table entries.

Step 6: Show Access-list 101 on R2.

The wildcard mask should encompass both the 10.4.10.0 network and the 10.4.11.0 network.

Step 7: Correct the Access-list.

Delete access-list 101 and replace it with a similar list that is also one statement in length. The only difference should be the wildcard.

Part 3: Verify Connectivity

Step 1: Verify connectivity to Server1.

Record the success of each ping. All hosts should be able to ping **Server1**, **R1**, and **R2**. Troubleshoot if the pings are not successful.

Step 2: View the NAT translations on R2.

NAT should display many table entries.