

Computer Networking: Concepts

(CSE 3751)

Experiment 5

Aim:

Configuration and verification of **Network Address Translation (NAT)** on a router to allow communication between a private internal network and an external public network using Cisco Packet Tracer.

Objectives:

1. Understanding the concept of NAT used in Private Network.
2. Configuration of **Static NAT**, **Dynamic NAT** and **PAT (Port Address Translation)** in a router using both Config and CLI modes.
3. Verification of communication between internal and external networks using NAT.
4. Analysing the IP address translation through NAT table entries in a router during communication between Private internal network and external public network.

Exercises:

1. What is the purpose of NAT in IP networking? Why is NAT used in IPv4 networks?
2. What is Inside Local and Inside Global addresses?
3. What are the differences between **Static NAT**, **Dynamic NAT**, and **PAT**?
4. How does PAT allow multiple devices to share a single public IP address?
5. What command is used to view active NAT translations? How do you verify that NAT translations are working correctly in Cisco Packet Tracer?