NAT – Static and Dynamic

Agenda

- Final theory exam: **Tue Dec 13 @ 2pm** room **AT302** (Azrieli bldg, Carleton)
  (Please double-check to make sure I haven't made any typos!)
- Questions about anything so far?
- Live Demo: NAT as used in NetLab
- Continue NAT: Static & Dynamic NAT, PAT ("overloaded" NAT)
  Slidedeck for NAT has been tweaked and re-posted.

Assignments and Lab work

- Lab 10 post-lab: due **before** Thu Nov 24 @ 11:59pm
- No pre-lab for Lab 11
- Lab 11: NAT for IPv4
- Looking ahead:
  - Lab 12 = GRE (likely IPv6-over-IPv4-GRE)
  - Lab 13 = SBA practice (aiming for exact same topology as SBA)
- Readings from ENSA textbook or online at NetAcad:
  Module 6: NAT for IPv4; by today!
  Module 8: VPNs by Mon Nov 28, especially seciton 8.2.4 on GRE

Essential Items with NAT

- Understand the four terms for addresses:
  Inside Local, Inside Global, Outside Local, Outside Global

- It may be helpful to think of NAT/PAT as a "secret" because *no other device knows it's happening* except for the device doing the NAT. Neither the "client" (Inside device) nor the "server" (Outside device) have any clue or indication that adresses are being swapped! (Well, except for IPSec, but that's something for NET3007.)

- Given a scenario, be able to state the exact address that would appear in the IP header of packet at a specific point along it's path from origin to termination.

- There's only a small difference between configuring straight NAT vs PAT with a single-external IP:
  NAT: (config)*# ip nat inside source list 1 pool {pool-name}*
  PAT: (config)*# ip nat inside source list 1 interface {I/F-name}* ***overload***
  ... and no need to define a pool.

- Notice that there is *no* keyword "pat"; it's synonymous with NAT + overload