

Module 4: Spring 2009

CIS 380

BUSINESS

- × Midterm next week
- × 30 questions from chaps 1-7, 8, 11, slides (but mostly slides are from the chaps).

USING NAT

× Main Reasons

- + IP Space limits

- + Internal flexibility

- + Obscurity

- + Network Independence from Outside changes

- + Disadvantages

 - × Overhead

 - × Traceability

 - × Security issues (apps which don't work)

 - × Increased Management Issues with Firewalling

NAT TYPES

- ✘ Static – One to One addressing
 - + Servers or Other inbound connections
- ✘ Dynamic – Pool Assignment from a range
 - + DHCP Enabled machines
- ✘ Overloaded – (PAT/NAPT)
 - + Typical Approach for DHCP

CISCO NATTING

- ✘ Inside Local – Inside Source Address
- ✘ Outside Local – Name of destination before translation
- ✘ Inside Global – Inside post translation address
- ✘ Outside Global – Destination after translation
 - + Normally you work with inside local and Inside Global addresses

CONFIGURE STATIC NAT

- ✘ Ip nat inside source static i.i.i.i o.o.o.o
 - + Where I is the inside address
 - + Where o is the outside address
- ✘ Also must configure the interface
 - + Int eth 0/0
 - + Ip nat inside
 - + Int eth 0/1
 - + Ip nat outside
- ✘ This setup would then allow the I address to nat to the outside.

ACL

- ✘ Don't forget you have to use the acl to allow the communications to go out.
- ✘ This can be complicated with nat since the acl will now depend upon where it is applied
 - + E.g.
 - ✘ Access-list 101 permit tcp i.i.i.i eq 80
 - ✘ Very different from
 - ✘ Access-list 101 permit tcp o.o.o.o eq 80
 - ✘ But both would work depending on where they are applied.

ACL 2

- ✘ I usually apply these to the outside interface
 - + So access-l 101 permit tcp 0.0.0.0 eq 80
 - + Is normal.

DNAT POOLS

- ✘ Ip nat pool labpool 198.7.244.150
198.7.244.155 netmask 255.255.255.0
- ✘ Ip nat inside source list 1 pool labpool
- ✘ Be sure and define the inside and outside interfaces (see static).
 - + This would establish 150 – 155 as outside ip addresses which could be used in a “static” like fashion on the fly. It is limited to 5 users concurrently.

OVERLOADING

- × Ip nat pool labpat 198.7.244.150
198.7.244.150 netmask 255.255.255.0
- × Ip nat inside source list 1 pool labpat overload
- × Define the interfaces.

TESTING NAT

- × Show ip nat translation
- × Debug ip nat