



**DALHOUSIE
UNIVERSITY**

**Network Security
(CSCI-6708)**

Assignment - 4

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- a) Static (1-1) NAT
- b) Dynamic Many to a Pool NAT
- c) Dynamic Many to a 1 NAT
- d)
 - 1) Message from A to Google server at Point P1.
Source IP: 10.50.6.1
Source Port: 50000
Destination IP: 172.217. 13.195
Destination Port: 80
 - 2) Message from A to Google server at Point P2.
Source IP: 129.73.1.1
Source Port: 50001
Destination IP: 172.217. 13.195
Destination Port: 80
 - 3) Message from A to Google server at Point P3.
Source IP: 129.73.1.1
Source Port: 50001
Destination IP: 10.1.1.1
Destination Port: 80
 - 4) Message from B to Google server at Point P1.
Source IP: 10.50.2.3
Source Port: 50002
Destination IP: 172.217. 13.195
Destination Port: 80
 - 5) Message from B to Google server at Point P2.
Source IP: 129.73.1.2
Source Port: 50003
Destination IP: 172.217. 13.195
Destination Port: 80
 - 6) Message from B to Google server at Point P3.
Source IP: 129.73.1.2
Source Port: 50003
Destination IP: 10.1.1.1
Destination Port: 80
 - 7) Reply Message from Google server to A at Point P3.
Source IP: 10.1.1.1
Source Port: 80
Destination IP: 129.73.1.1
Destination Port: 50001

8) Reply Message from Google server to A at Point P2.

Source IP: 172.217. 13.195

Source Port: 80

Destination IP: 129.73.1.1

Destination Port: 50001

9) Reply Message from Google server to A at Point P1.

Source IP: 172.217. 13.195

Source Port: 80

Destination IP: 10.50.6.1

Destination Port: 50000

10) Message from X to S1 at Point P2.

Source IP: 150.2.3.4

Source Port: 50009

Destination IP: 129.73.1.2

Destination Port: 80

11) Message from X to S1 at Point P1.

Source IP: 150.2.3.4

Source Port: 50010

Destination IP: 10.50.1.2

Destination Port: 80

12) Message from Y to S2 at Point P2.

Source IP: 200.1.2.3

Source Port: 50011

Destination IP: 129.73.1.3

Destination Port: 25

13) Message from Y to S2 at Point P1.

Source IP: 200.1.2.3

Source Port: 50012

Destination IP: 10.50.1.3

Destination Port: 25

14) Reply Message from S1 to X at Point P1.

Source IP: 10.50.1.2

Source Port: 80

Destination IP: 150.2.3.4

Destination Port: 50010

15) Reply Message from S1 to X at Point P2.

Source IP: 129.73.1.2

Source Port: 80

Destination IP: 150.2.3.4

Destination Port: 50009

e) NAT Table for F1:

129.73.1.1 <-> 10.50.6.1 (if Client A is active)

129.73.1.1 <-> 10.50.2.3 (if Client B is active)

129.73.1.2 <-> 10.50.1.2 (Static)

129.73.1.3 <-> 10.50.1.3 (Static)

NAT Table for F2:

10.1.1.1, 50000 <-> 172.217.13.195, 60000