Lab 6 - Configuring Port Address Translation (PAT)

Objectives

Part 1: Configure Dynamic NAT with Overload

Part 2: Verify Dynamic NAT with Overload Implementation

Part 3: Configure PAT using an Interface

Part 4: Verify PAT Interface Implementation

Part 1: Configure Dynamic NAT with Overload

Step 1: Configure traffic that will be permitted.

On **R1**, configure one statement for ACL 50 to permit any address belonging to 10.10.0.0/16.

QUESTION 1 Notice there are two LANs connected to R1 in the topology and both of them have a prefix of /24. As such, why are we matching addresses using a prefix of /16 in our ACL here?

Before proceeding, go to the "Lab 6 - Configuring Port Address Translation (PAT) – QUESTIONS 2025" quiz on the Brightspace page and enter your answer for question 1. Leave the quiz open while you complete the rest of the lab sheet.

Step 2: Configure a pool of address for NAT.

Configure **R1** with a NAT pool that uses the two useable addresses in the 209.165.200.236/30 address space.

QUESTION 2 What are the two usable addresses in this address space?

Before proceeding, return to the quiz on the Brightspace page and enter your answer for question 2. Leave the quiz open while you complete the rest of the lab sheet.

Step 3: Associate ACL 50 with the NAT pool and allow addresses to be reused.

Step 4: Configure the NAT interfaces.

Configure **R1** interfaces with the appropriate inside and outside NAT commands.

Part 2: Verify Dynamic NAT with Overload Implementation

Step 1: Access services across the internet.

From the web browser of each of the PCs that use **R1** as their gateway (**PC1**, **L1**, **PC2**, and **L2**), access the web page for **Server1**.

QUESTION 3 Which, if any, of the connection attempts to Server1 were successful?

Before proceeding, return to the quiz on the Brightspace page and enter your answer for question 3. Leave the quiz open while you complete the rest of the lab sheet.

Step 2: View NAT translations.

View the NAT translations on **R1**.

```
R1# show ip nat translations
```

QUESTION 4 How many different inside global **IP addresses** are being used for the NAT translations?

QUESTION 5 How many different inside global **port numbers** are being used for the NAT translations?

Before proceeding, return to the quiz on the Brightspace page and enter your answers for questions 4 & 5. Leave the quiz open while you complete the rest of the lab sheet.

Part 3: Configure PAT using an Interface

Step 1: Configure traffic that will be permitted.

On **R2**, configure one statement for ACL 10 to permit any address belonging to 172.17.0.0/16.

Step 2: Associate ACL 10 with the NAT interface and allow addresses to be reused.

Enter the **R2** NAT statement to use the interface connected to the internet and provide translations for all internal devices.

Step 3: Configure the NAT interfaces.

Configure **R2** interfaces with the appropriate inside and outside NAT commands.

Part 4: Verify PAT Interface Implementation

Step 1: Access services across the internet.

From the web browser of each of the PCs that use **R2** as their gateway (**PC3**, **L3**, **PC4**, and **L4**), access the web page for **Server1**.

QUESTION 6 Which, if any, of the connection attempts to Server1 were successful?

Before proceeding, return to the quiz on the Brightspace page and enter your answer for question 6. Leave the quiz open while you complete the rest of the lab sheet.

Step 2: View NAT translations.

View the NAT translations on **R2**.

QUESTION 7 Which command did you use to view the translations?

Before proceeding, return to the quiz on the Brightspace page and enter your answer for question 7.

If you have correctly configured all parts of the lab your activity score should now be showing as 100%. If so, click on "check results" in the activity window. Return to the Brightspace quiz one last time and enter the code into the appropriate question box (Q8) of the quiz.

You have completed the lab – please submit the Brightspace quiz