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Batch: A1

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Title: Static and Dynamic NAT Configuration

Aim: Implement Static and Dynamic NAT Configuration with Packet Tracer

Objective: To understand and learn the concept of NAT by static and dynamic methods

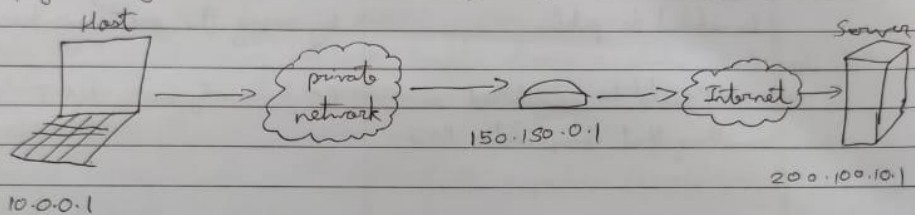
Writeup:

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OS CN Lab Assignment

Theory:

i) Definition of NAT with diagram: NAT stands for network address translation. It's a way to map multiple local private addresses to a public one transferring the information. Organizations that want multiple devices to occupy a single IP address use NAT, as do most home routers.



ii) Method - Static & Dynamic

Static mapping:-

- Creates a table that associates the logical address to the physical address
- Needs to update periodically

Dynamic mapping:-

- Each time a machine knows one of two addresses, it can use a protocol to find the other one
- ARP, RARP are some examples

iii) Which command will show us the translators active on your computer?

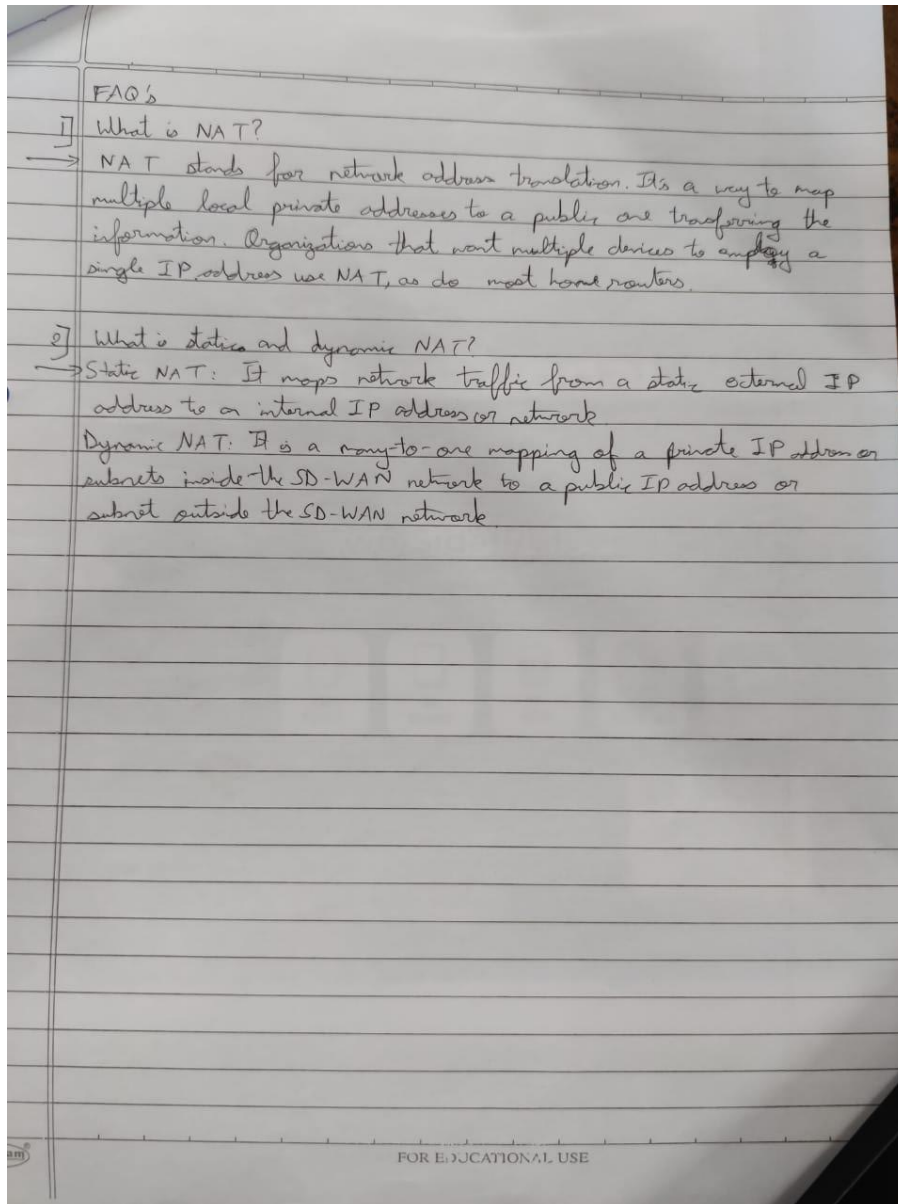
→ The command shows ip nat translations will show you the translation table containing all the active NAT entries

iv) What's the difference b/w NAT & PAT?

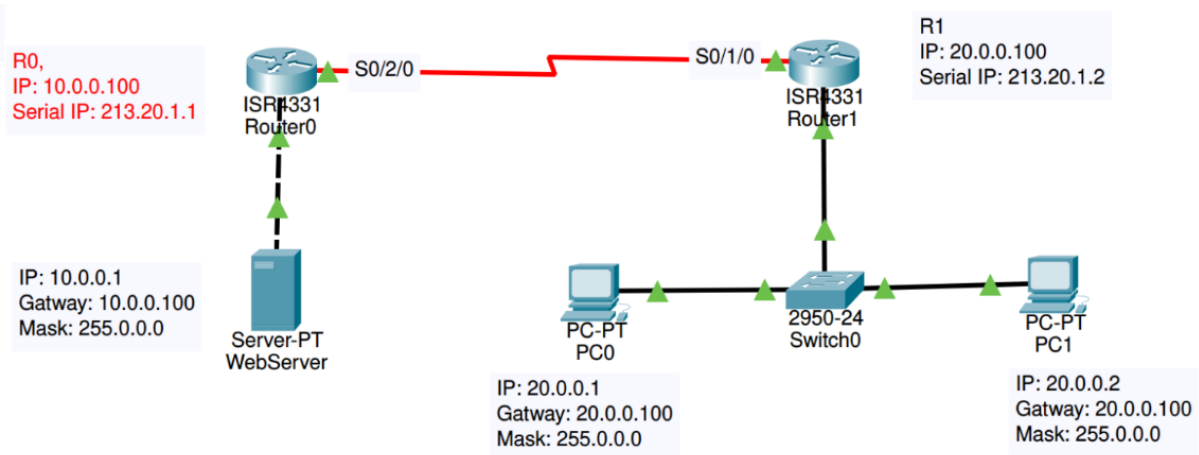
NAT	PAT
<ul style="list-style-type: none">• Stands for network address translation	<ul style="list-style-type: none">• Port Address Translation
<ul style="list-style-type: none">• In NAT, private IP addresses are translated to public	<ul style="list-style-type: none">• In PAT, the same procedure is done but by using the port number
<ul style="list-style-type: none">• NAT could be considered as something that encapsulates PAT	<ul style="list-style-type: none">• PAT is a dynamic NAT

v) Advantage of NAT:

- It enhances security for private networks by keeping internal addressing private from the external network
- Reuse of private IP addresses
- Connecting a large number of hosts to the global internet using a smaller no.



Screenshot:



Output:

