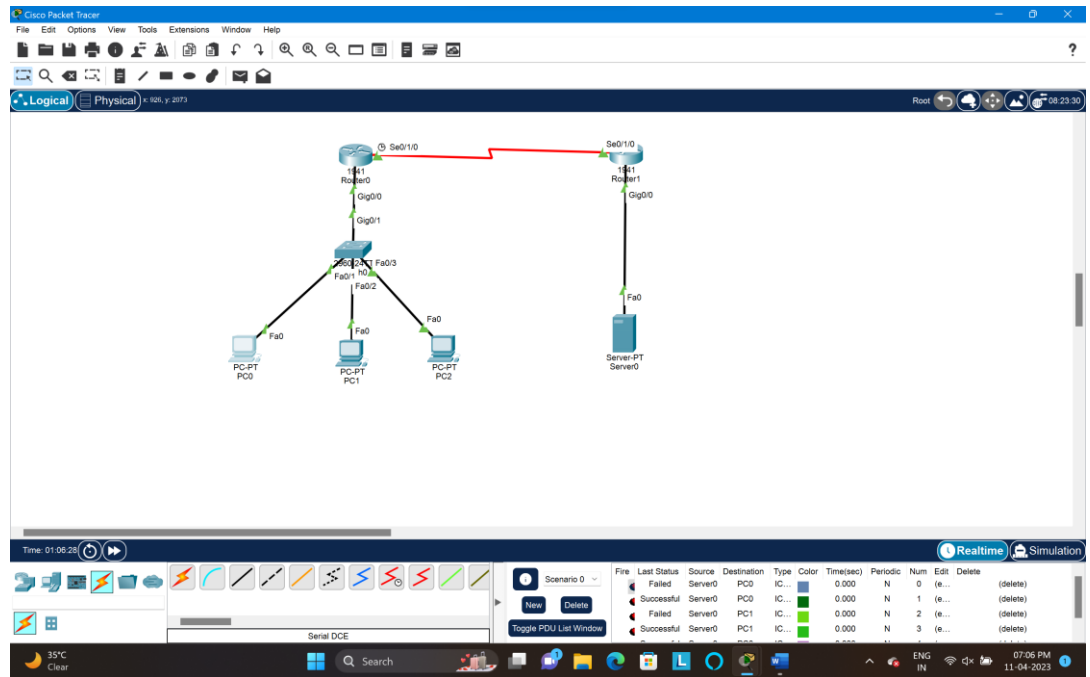# ASSIGNMENT – 7

1. Static NAT protocol

- ## NETWORK LAYOUT:

- ## CODE:
  ## Router 0 (DCE)
  >en
  #config terminal
  (config)#interface gi 0/0
  (config-if)#ip address 192.168.10.1 255.255.255.0
  (config-if)#no shutdown
  (config-if)#exit
  (config)#interface se 0/1/0
  (config-if)#ip address 10.0.0.1 255.0.0.0
  (config-if)#clock rate 64000
  (config-if)#no shutdown
  (config-if)#exit

(config)#ip route 1.0.0.0 255.0.0.0 10.0.0.0

Router 1 (DTE)
>en
#config terminal
(config)#interface gi 0/0
(config-if)#ip address 192.168.11.1 255.255.255.0
(config-if)#no shutdown
(config-if)#exit
(config)#interface se 0/1/0
(config-if)#ip address 10.0.0.1 255.0.0.0
(config-if)#no shutdown
(config-if)#exit
(config)#ip nat inside source static 192.168.11.2 1.0.0.1
(config)#interface gi 0/0
(config-if)#ip nat inside
(config-if)#exit
(config)#interface se 0/1/0
(config-if)#ip nat outside
(config-if)#exit
(config)#ip route 192.168.10.0 255.255.255.0 10.0.0.0

- **IPv4 CONFIGURATION:**
PC-PT PC0
IP Address: 192.168.10.2
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.10.1

PC-PT PC1
IP Address: 192.168.10.3
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.10.1

PC-PT PC2
IP Address: 192.168.10.4
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.10.1

Server-PT Server0
IP Address: 192.168.11.2
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.11.1

- **OUTPUT:**

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.11.2

Pinging 192.168.11.2 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.11.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 1.0.0.1

Pinging 1.0.0.1 with 32 bytes of data:

Reply from 1.0.0.1: bytes=32 time=20ms TTL=126
Reply from 1.0.0.1: bytes=32 time=16ms TTL=126
Reply from 1.0.0.1: bytes=32 time=9ms TTL=126
Reply from 1.0.0.1: bytes=32 time=18ms TTL=126

Ping statistics for 1.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 9ms, Maximum = 20ms, Average = 15ms

C:\>
```
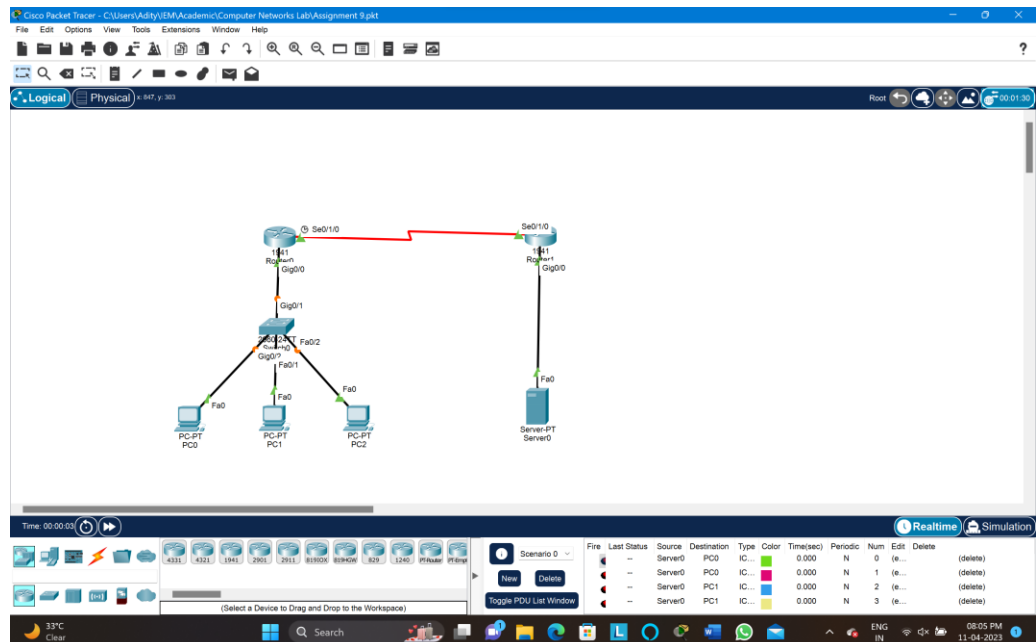
2. Dynamic NAT configuration

- ### NETWORK LAYOUT:

- ### CODE:
Router 0 (DCE)
>en

#config terminal

(config)#interface gi 0/0

(config-if)#ip address 192.168.10.1 255.255.255.0

(config-if)#no shutdown

(config-if)#exit

(config)#interface se 0/1/0

(config-if)#ip address 10.0.0.1 255.0.0.0

(config-if)#clock rate 64000

(config-if)#no shutdown

(config-if)#exit

(config)#router eigrp 2

```
(config-router)#network 192.168.10.0
(config-router)#network 10.0.0.0
(config-router)#exit
(config)#access-list 2 permit 192.168.10.0 0.0.0.255
(config)#ip nat pool a 1.0.0.1 1.0.0.2 netmask 255.0.0.0
(config)#interface gi 0/0
(config-if)#ip nat inside
(config-if)#exit
(config)#interface se 0/1/0
(config-if)#ip nat outside
(config-if)#exit
(config)#exit
#show ip nat translations
```

Router 1 (DTE)

```
>en
#config terminal
(config)#interface gi 0/0
(config-if)#ip address 192.168.11.1 255.255.255.0
(config-if)#no shutdown
(config-if)#exit
(config)#interface se 0/1/0
(config-if)#ip address 10.0.0.1 255.0.0.0
(config-if)#no shutdown
(config-if)#exit
(config)#router eigrp 2
(config-router)#network 192.168.11.0
(config-router)#network 10.0.0.0
```

- **IPv4 CONFIGURATION:**

PC-PT PC0

IP Address: 192.168.10.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.10.1

PC-PT PC1

IP Address: 192.168.10.3

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.10.1

PC-PT PC2

IP Address: 192.168.10.4

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.10.1

Server-PT Server0

IP Address: 192.168.11.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.11.1

- **OUTPUT:**

```
Pro  Inside global      Inside local       Outside local       Outside global
icmp 1.0.0.1:10         192.168.10.3:10    192.168.11.2:10     192.168.11.2:10
icmp 1.0.0.1:11         192.168.10.3:11    192.168.11.2:11     192.168.11.2:11
icmp 1.0.0.1:12         192.168.10.3:12    192.168.11.2:12     192.168.11.2:12
icmp 1.0.0.1:9          192.168.10.3:9     192.168.11.2:9      192.168.11.2:9
```