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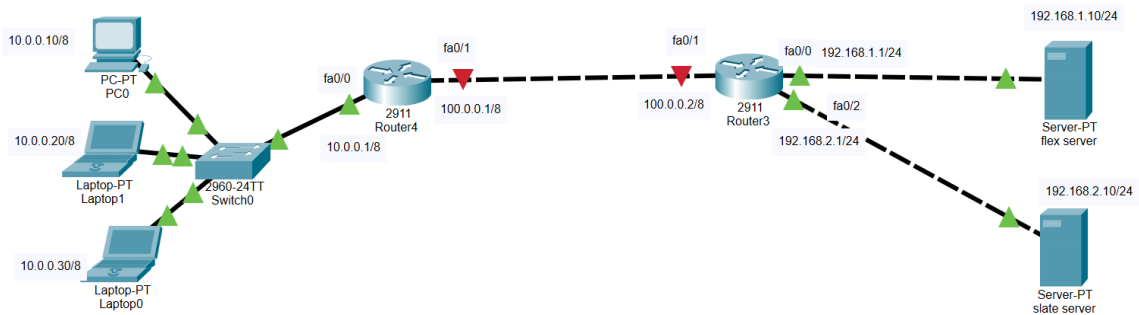
Course Name: Computer Networks LAB

Submitted to : Mam Hurmat Hidayat

TASK: Implement the S-NAT for web server of (flex and slate) in a single topology.

Step 1:

Build a network topology.



Step 2: configure static IP in PCs & servers.

PCS:

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 10.0.0.10

Subnet Mask: 255.0.0.0

Default Gateway: 10.0.0.1

DNS Server: 0.0.0.0

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 10.0.0.20

Subnet Mask: 255.0.0.0

Default Gateway: 10.0.0.1

DNS Server: 0.0.0.0

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 10.0.0.30

Subnet Mask: 255.0.0.0

Default Gateway: 10.0.0.1

DNS Server: 0.0.0.0

Servers:

IP Configuration [X]

IP Configuration

☐ DHCP ☒ Static

IP Address: 192.168.1.10

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS Server: 0.0.0.0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

File Name: index.html

```
<html>
<center><font size='+2' color='blue'>FLEX STUDENT</font></center>
<hr>Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
<p>Quick Links:
<br><a href='helloworld.html'>A small page</a>
<br><a href='copyrights.html'>Copyrights</a>
<br><a href='image.html'>Image page</a>
<br><a href='image.html'>Flex</a>
<br><a href='cscoptlogo177x111.jpg'>Image</a>
</html>
```

IP Configuration

IP Configuration

☐ DHCP
☒ Static

IP Address

192.168.2.10

Subnet Mask

255.255.255.0

Default Gateway

192.168.2.1

DNS Server

0.0.0.0

Physical
Config
Services
Desktop
Programming
Attributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

File Name:

index.html

```

<html>
<center><font size='+2' color='blue'>SLATE</font></center>
<hr>Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
<p>Quick Links:
<br><a href='helloworld.html'>A small page</a>
<br><a href='copyrights.html'>Copyrights</a>
<br><a href='image.html'>Image page</a>
<br><a href='cscoptlogo177x111.jpg'>Image</a>
</html>

```

Step 3: configuring router:

Router 1:

```

Router(config)#hostname R1
R1(config)#interface fa0/0
%Invalid interface type and number
R1(config)#interface Gig0/0
R1(config-if)#ip address 10.0.0.1 255.0.0.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#

```

```

R1(config)#interface Gig0/1
R1(config-if)#ip address 100.0.0.1 255.0.0.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#

```

Router2:

```
Router(config)#hostname R2
R2(config)#interface Gig0/0
R2(config-if)#ip address 192.168.1.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#interface Gig0/1
R2(config-if)#ip address 100.0.0.2 255.0.0.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#interface Gig0/2
R2(config-if)#ip address 192.168.2.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#
```

Step 3: static NAT router configuration:

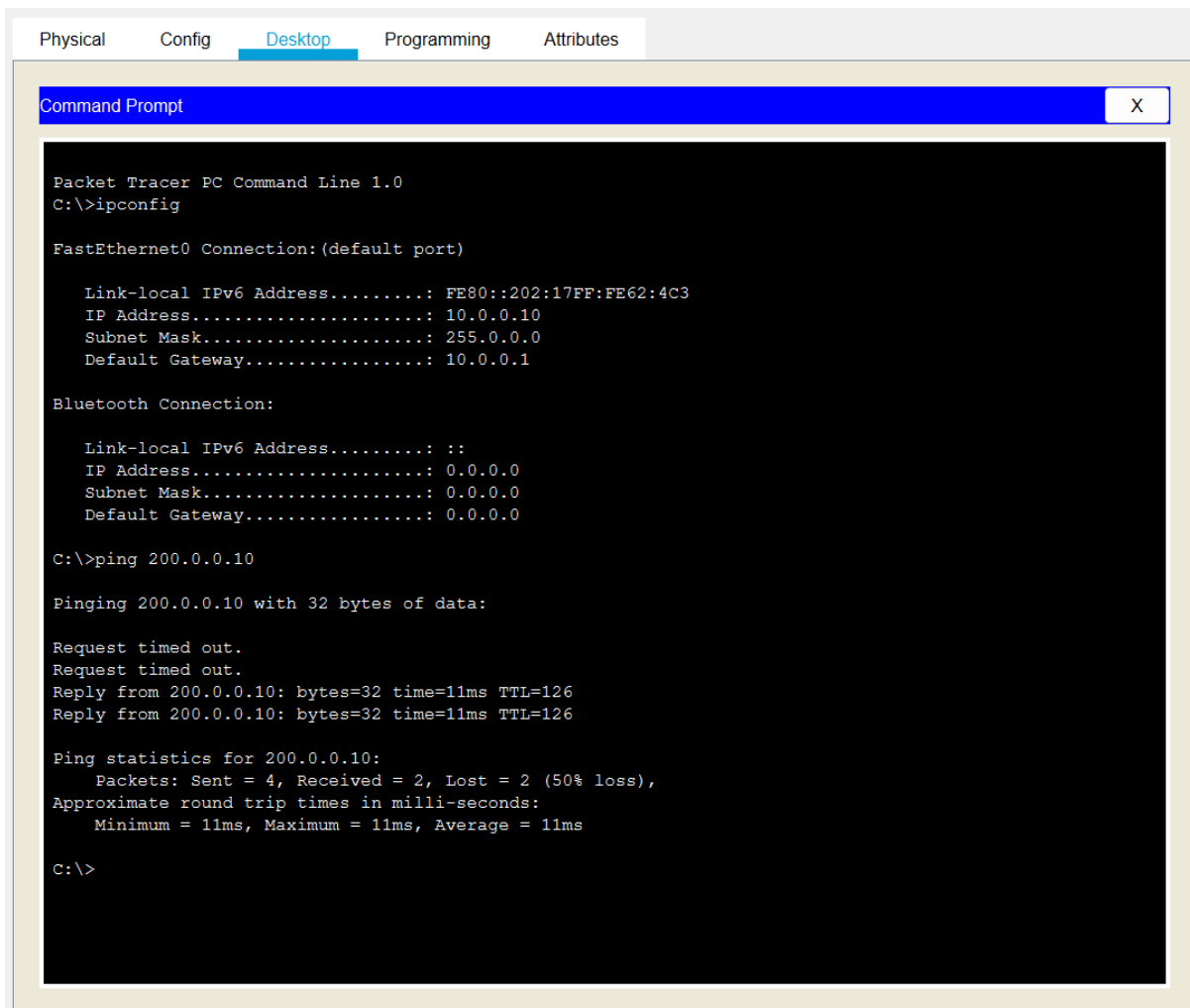
R1:

```
R1(config)#ip nat inside source static 10.0.0.10 50.0.0.10
R1(config)#interface FastEthernet 0/0
%Invalid interface type and number
R1(config)#interface Gig 0/0
R1(config-if)#ip nat inside
R1(config-if)#exit
R1(config)#
R1(config)#interface Gig 0/1
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#ip nat inside source static 10.0.0.20 50.0.0.20
R1(config)#ip nat inside source static 10.0.0.30 50.0.0.30
R1(config)#
```

R2:

```
R2(config)#ip nat inside source static 192.168.1.10 200.0.0.10
R2(config)#ip nat inside source static 192.168.2.10 200.0.0.20
R2(config)#interface FastEthernet 0/1
%Invalid interface type and number
R2(config)#interface Gig0/1
R2(config-if)#ip nat inside
R2(config-if)#exit
R2(config)#
R2(config)#interface Gig0/0
R2(config-if)#ip nat outside
R2(config-if)#exit
R2(config)#
R2(config)#interface Gig0/2
R2(config-if)#ip nat outside
R2(config-if)#exit
R2(config)#
```

Step 4: checking it by pinging:



The screenshot shows the Packet Tracer Desktop tab with a Command Prompt window open. The window title is "Command Prompt" with a close button (X). The text inside the window is as follows:

```
Packet Tracer PC Command Line 1.0
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address.....: FE80::202:17FF:FE62:4C3
    IP Address.....: 10.0.0.10
    Subnet Mask.....: 255.0.0.0
    Default Gateway.....: 10.0.0.1

Bluetooth Connection:

    Link-local IPv6 Address.....: ::
    IP Address.....: 0.0.0.0
    Subnet Mask.....: 0.0.0.0
    Default Gateway.....: 0.0.0.0

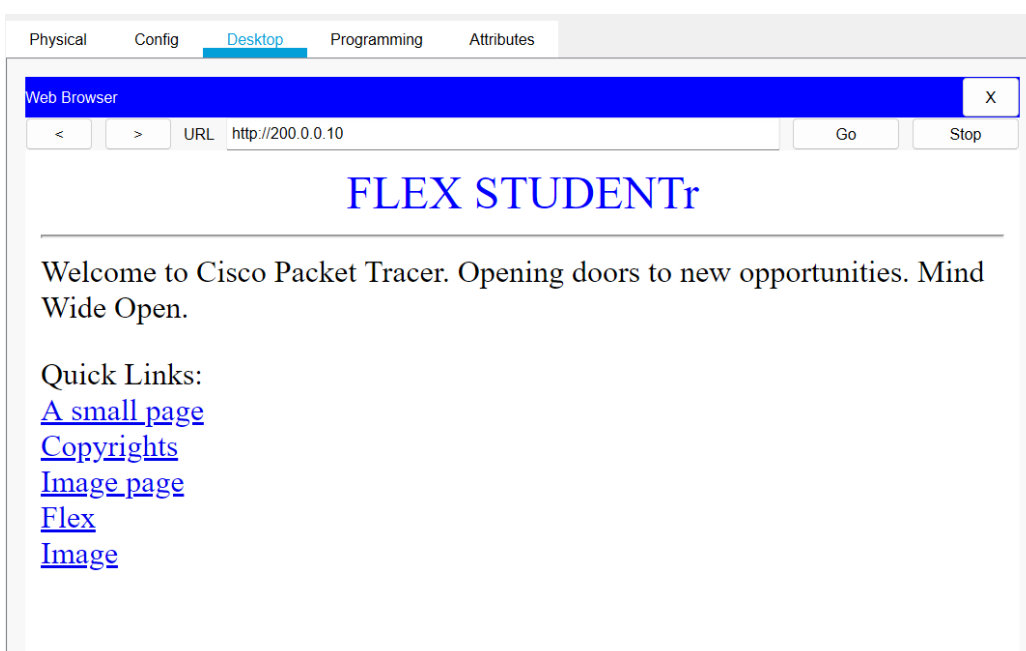
C:\>ping 200.0.0.10

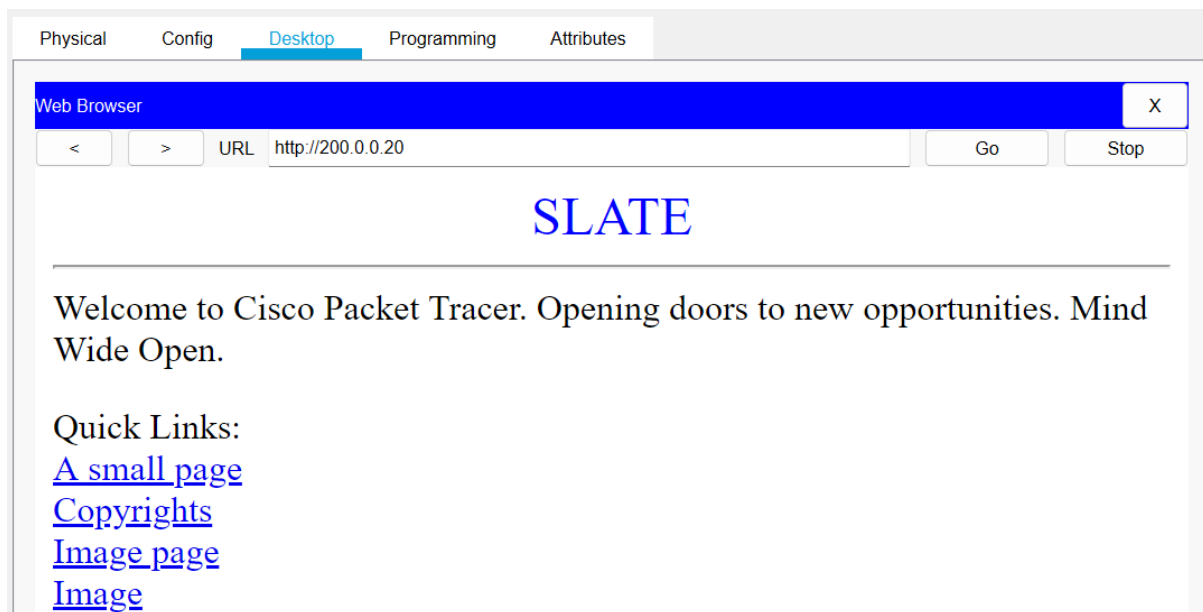
Pinging 200.0.0.10 with 32 bytes of data:

Request timed out.
Request timed out.
Reply from 200.0.0.10: bytes=32 time=11ms TTL=126
Reply from 200.0.0.10: bytes=32 time=11ms TTL=126

Ping statistics for 200.0.0.10:
    Packets: Sent = 4, Received = 2, Lost = 2 (50% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 11ms, Maximum = 11ms, Average = 11ms

C:\>
```





THE END

