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[Fall 233 CSE 324/CSE 3712 \(B\)](#)

[7 December - 13 December](#)

[Lab Final](#)

**Started on** Monday, 11 December 2023, 11:30 AM

**State** Finished

**Completed on** Monday, 11 December 2023, 12:35 PM

**Time taken** 1 hour 5 mins

**Grade** 8.00 out of 30.00 (27%)

Question **1**  
Not answered  
Marked out of 1.00

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.64/26  
You need to configure the LAN-2 DHCP for auto IP Configuration. Now write down the Subnet-Mask of LAN-2 Default gateway address.

Answer:

Question **2**

Not answered

Marked out of 2.00

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.8/29 and the public network address is 201.179.201.0/29

You want to configure NAT for the following roles,

To configure Static NAT you use the 1st Public IP address for the Web Server and the 2nd Public IP address for the E-mail Server.

To configure Dynamic NAT you use 3rd and 4th Public IP addresses.

Write down the configuration of Static NAT.

Question **3**

Complete

Mark 2.00 out of 2.00

Refer to the given "Topology" with the following network address,

LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.8/29 and the public network address is 201.179.201.0/29

You want to configure NAT, so you need to configure routing on the LAN Side correctly. Write down the required routing and Addresses for Router R3.

```
Router(config)#router rip
```

```
Router(config-router)#net 192.168.1.0
```

```
Router(config-router)#net 192.168.2.8
```

```
Router(config-router)#net 192.168.201.0
```

```
Router(config-router)#exit
```

Question **4**  
Complete  
Mark 0.00 out of 2.00

Refer to the given "Topology" with the following network address,

LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.8/29 and the public network address is 201.129.204.0/29

You want to configure NAT, write down the ISP Side routing with next hop ip address.

```
ip route 201.129.204.0 255.255.255.248 <ISP-next-hop-IP>  
ip route 0.0.0.0 0.0.0.0 <Your-ISP-Gateway-IP>
```

Question **5**  
Complete  
Mark 2.00 out of 2.00

Refer to the given "Topology" with the following network address,

LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.64/26

You need to configure the LAN-2 DHCP for auto IP Configuration. You will reserve 1st 2 IP address for static IP uses. Now write down the File server IP address.

Answer: 192.168.2.65

Question **6**  
Complete  
Mark 0.00 out of 2.00

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.96/28  
You need to configure the LAN-2 DHCP for auto IP Configuration. Now write down the DHCP Configuration.

```
ip dhcp pool LAN-2
network 192.168.2.96 255.255.255.240
default-router 192.168.2.97
dns-server <DNS_SERVER_IP>
interface <LAN-2_Interface>
ip address 192.168.2.97 255.255.255.240
ip helper-address <DHCP_SERVER_IP>
```

Question **7**  
Complete  
Mark 0.00 out of 1.00

Which type of Access Control List (ACL) is defined using the number range 1 to 99?

Answer: 

Extended ACL is defined using the number range 100 TO 199

## Question 8

Complete

Mark 0.00 out of 1.00

Refer to the following code,

Which method of the socket module allows a server socket to accept requests from a client socket from another host?

```
from socket import *  
host="127.0.0.1"  
port=4446  
s = socket(AF_INET, SOCK_STREAM)  
s.bind((host,port))  
s.listen(1)  
print ("Listening for connections.. ")  
q,addr=s.accept()  
print("Connected with "+addr[0]+'.' + str(addr[1]))  
data=input("Enter data to be send: ")  
q.send(data.encode())  
s.close()
```

Select one:

- ☐ a.  
s.listen()
- ☒ b.  
socket(AF\_INET, SOCK\_STREAM)
- ☐ c.  
s.bind()
- ☐ d.  
s.accept()

## Question 9

Complete

Mark 0.00 out of 1.00

Refer to the given "Topology", you want to configure NAT, so in which router you will configure a default route?

edge router or border router.

## Question 10

Complete

Mark 1.00 out of 1.00

What is the difference between the TCP and UDP protocols, and how do you implement them in Python with the socket module?

Select one:

- ☒ a.  
TCP is connection-oriented, while UDP is not
- ☐ b.  
There are no differences
- ☐ c.  
TCP is not connection-oriented, while UDP is
- ☐ d.  
TCP is compatible with Python, while UDP is not

Question 11

Complete

Mark 0.00 out of 2.00

Refer to the given "Topology" with the following network address,

LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.8/29 and the public network address is 201.159.202.0/29

You want to configure NAT for the following roles,

To configure Static NAT you use the 1st Public IP address for the Web Server and the 2nd Public IP address for the E-mail Server.

To configure Dynamic NAT you use 3rd and 4th Public IP addresses.

After NAT is correctly configured, if a LAN-2 PC 1 will browse the **Public Server**. What will be the NAT Table (output of the “show ip nat translations”)? Write down the Inside global address.

201.159.202.2:80 is the Inside Global address.

192.168.2.1:49152



Question **12**  
Not answered  
Marked out of 1.50

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.96/28  
You need to configure the LAN-2 DHCP for auto IP Configuration. Now write down the default gateway IP address for LAN-2.

Question **13**  
Complete  
Mark 0.00 out of 1.50

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.32/27  
Write down the LAN-2 Access Control List (ACL) Wildcard Mask.

Answer: LAN-2 is 0.0.0.31.

## Question 14

Complete

Mark 1.00 out of 1.00

The client in socket programming must know which information?

Select one:

- ☐ a.  
IP address of Server
- ☐ b.  
Only its own IP address
- ☐ c.  
Port number
- ☒ d.  
Both IP address of Server & Port number

## Question 15

Complete

Mark 1.00 out of 1.00

From the following socket programming code, identify what type of Socket it is, (Chose any two)

```
from socket import *  
host="127.0.0.1"  
port=4446  
s=socket(AF_INET, SOCK_STREAM)  
s.connect((host,port))  
msg = s.recv(1024)  
print ("Message from server : " + msg.decode())  
s.close()
```

Select one or more:

- ☒ a.  
Client socket
- ☐ b.  
UDP type connections
- ☐ c.  
Server socket
- ☒ d.  
TCP type connections

Question **16**

Complete

Mark 0.00 out of 2.00

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.64/26  
You need to configure the LAN-2 DHCP for auto IP Configuration. You will reserve 1st 10 IP address for static IP uses. Now write down the command.

R2(config)#ip dhcp excluded-address 192.168.2.32 192.1

Question **17**  
Not answered  
Marked out of 1.50

Refer to the given "Topology", which interfaces of **NAT-Router** will you configure as “**inside**” and which interfaces as “**outside**”?



Question **18**

Not answered

Marked out of 1.50

Refer to the given "Topology" with the following network address,  
LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.96/28  
you will configure an ACL to prevent the **LAN-2 Network** from accessing the **LAN-1 Network**.  
write the router name and router interface you will apply the ACL and whether it is in or  
outbound.

## Question 19

Complete

Mark 1.00 out of 1.00

From the following socket programming code, identify what type of Socket it is, (Chose any two)

```
from socket import *  
host="127.0.0.1"  
port=4446  
s = socket(AF_INET, SOCK_STREAM)  
s.bind((host,port))  
s.listen(1)  
print ("Listening for connections.. ")  
q,addr=s.accept()  
print("Connected with "+addr[0]+ ':' + str(addr[1]))  
data=input("Enter data to be send: ")  
q.send(data.encode())  
s.close()
```

Select one or more:

- ☒ a.  
TCP type connections
- ☐ b.  
UDP type connections
- ☒ c.  
Server Socket
- ☐ d.  
Client Socket

Question **20**  
Not answered  
Marked out of 2.00

Refer to the given "Topology" with the following network address,

LAN-1: 192.168.1.0/24 and LAN-2: 192.168.2.8/29 and the public network address is 201.159.202.0/29

You want to configure NAT for the following roles,  
To configure Static NAT you use the 1st Public IP address for the Web Server and the 2nd Public IP address for the E-mail Server.  
To configure Dynamic NAT you use 3rd and 4th Public IP addresses.

Write down the configuration how to create of Dynamic NAT Pool.

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 Data retention summary