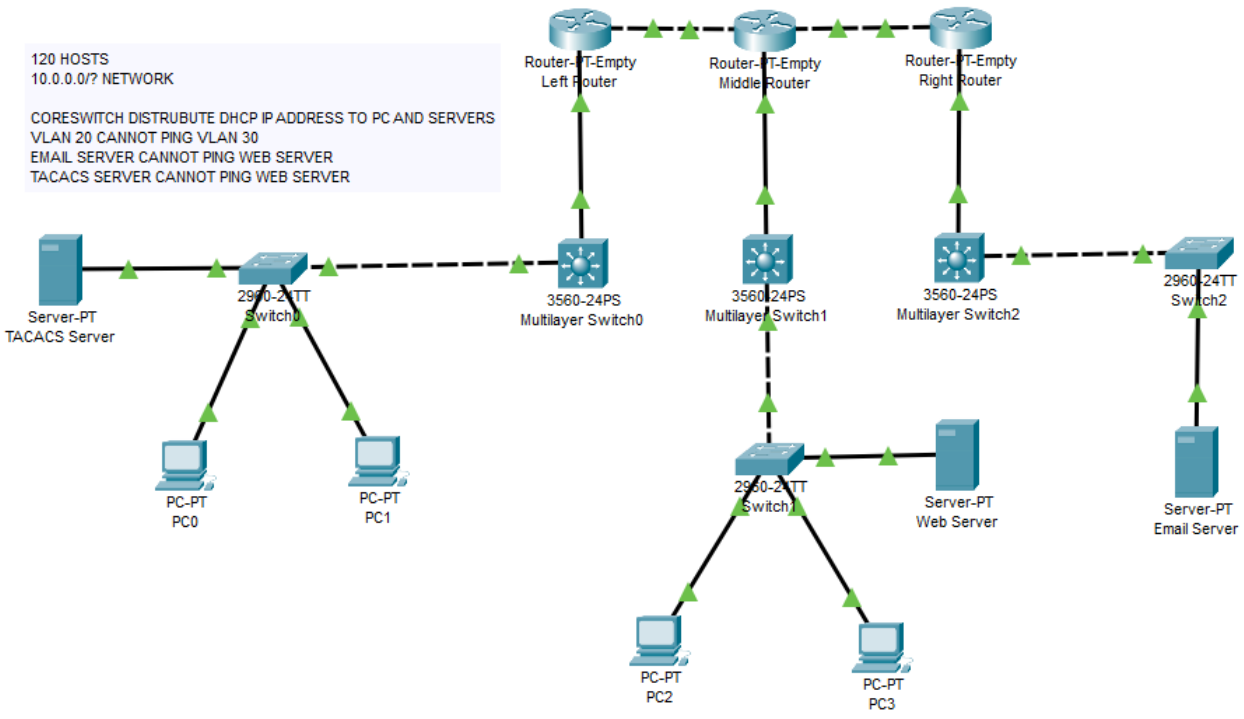
JOHNNA QUEVEDO **NETWORK SECURITY 1**

BSIT - IT31B **FINAL EXAM**



DHCP CONFIGURATION

Left Switch

```
en
conf t
vlan 10
vlan 20

in fa 0/2
sw mo a
sw a vlan 10

in ra fa 0/3-4
sw mo a
sw a vlan 20

do wr
```

Left Core Switch

```
en
conf t
vlan 10
vlan 20

in ra fa 0/1-2
sw tr enc dot
sw mo tr

in vlan 10
ip add 10.0.0.1 255.255.255.128

in vlan 20
ip add 10.0.0.129 255.255.255.128

ip dh po vlan10
net 10.0.0.0 255.255.255.128
def 10.0.0.1

ip dh po vlan20
net 10.0.0.128 255.255.255.128
def 10.0.0.129

ip dh ex 10.0.0.1 10.0.0.10
ip dh ex 10.0.0.129 10.0.0.140

ip routing
do wr
```

Left Router

```
en
conf t
host Left_Router
in fa 1/0
no shut

in fa 1/0.10
enc dot 10
ip add 10.0.0.2 255.255.255.128

in fa 1/0.20
enc dot 20
ip add 10.0.0.130 255.255.255.128

in fa 0/0
no shut
ip add 10.0.1.1 255.255.255.128

do wr
```

Middle Switch

```
en
conf t
vlan 30
vlan 40
in ra fa 0/2-3
sw mo a
sw a vlan 30
in fa 0/4
sw mo a
sw a vlan 40

do wr
```

Middle Core Switch

```
en
conf t
vlan 30
vlan 40

in ra fa 0/1-2
sw tr enc dot
sw mo tr

in vlan 30
ip add 10.0.2.1 255.255.255.128

in vlan 40
ip add 10.0.2.129 255.255.255.128

ip dh po vlan30
net 10.0.2.0 255.255.255.128
def 10.0.2.1

ip dh po vlan40
net 10.0.2.128 255.255.255.128
def 10.0.2.129

ip dh ex 10.0.2.1 10.0.2.10
ip dh ex 10.0.2.129 10.0.2.140

ip routing
do wr
```

Middle Router

```
en
conf t
host Middle_Router

in fa 1/0
no shut

in fa 1/0.30
enc dot 30
ip add 10.0.2.2 255.255.255.128

in fa 1/0.40
enc dot 40
ip add 10.0.2.130 255.255.255.128

in fa 0/0
no shut
ip add 10.0.1.2 255.255.255.128

in fa 2/0
no shut
ip add 10.0.3.1 255.255.255.128

do wr
```

Right Switch

```
en
conf t
vlan 50
in fa 0/2
sw mo a
sw a vlan 50

do wr
```

Right Core Switch

```
en
conf t
vlan 50
in vlan 50
in ra fa 0/1-2
sw tr enc dot
sw mo tr

in vlan 50
ip add 10.0.4.1 255.255.255.128

ip dh po vlan50
net 10.0.4.0 255.255.255.128
def 10.0.4.1

ip dh ex 10.0.4.1 10.0.4.10

ip routing
do wr
```

Right Router

```
en
conf t
host Right_Router
in fa 1/0
no shut

in fa 1/0.50
enc dot 50
ip add 10.0.4.2 255.255.255.128

in fa 2/0
no shut
ip add 10.0.3.2 255.255.255.128

do wr
```

IP ROUTING

Left Core Switch:

ip route 10.0.0.0 255.255.255.128 10.0.0.2
ip route 10.0.0.128 255.255.255.128 10.0.0.2
ip route 10.0.1.0 255.255.255.128 10.0.0.2
ip route 10.0.2.0 255.255.255.128 10.0.0.2
ip route 10.0.2.128 255.255.255.128 10.0.0.2
ip route 10.0.3.0 255.255.255.128 10.0.0.2
ip route 10.0.4.0 255.255.255.128 10.0.0.2

do wr

Middle Core Switch:

ip route 10.0.0.0 255.255.255.128 10.0.2.2
ip route 10.0.0.128 255.255.255.128 10.0.2.2
ip route 10.0.1.0 255.255.255.128 10.0.2.2
ip route 10.0.2.0 255.255.255.128 10.0.2.2
ip route 10.0.2.128 255.255.255.128 10.0.2.2
ip route 10.0.3.0 255.255.255.128 10.0.2.2
ip route 10.0.4.0 255.255.255.128 10.0.2.2

do wr

Right Core Switch:

ip route 10.0.0.0 255.255.255.128 10.0.4.2
ip route 10.0.0.128 255.255.255.128 10.0.4.2
ip route 10.0.1.0 255.255.255.128 10.0.4.2
ip route 10.0.2.0 255.255.255.128 10.0.4.2
ip route 10.0.2.128 255.255.255.128 10.0.4.2
ip route 10.0.3.0 255.255.255.128 10.0.4.2
ip route 10.0.4.0 255.255.255.128 10.0.4.2

do wr

Left Router:

ip route 10.0.0.0 255.255.255.128 10.0.1.2
ip route 10.0.0.128 255.255.255.128 10.0.1.2
ip route 10.0.1.0 255.255.255.128 10.0.1.2
ip route 10.0.2.0 255.255.255.128 10.0.1.2
ip route 10.0.2.128 255.255.255.128 10.0.1.2
ip route 10.0.3.0 255.255.255.128 10.0.1.2
ip route 10.0.4.0 255.255.255.128 10.0.1.2

do wr

Middle Router:

```
ip route 10.0.0.0 255.255.255.128 10.0.1.1
ip route 10.0.0.128 255.255.255.128 10.0.1.1
ip route 10.0.1.0 255.255.255.128 10.0.1.1
ip route 10.0.2.0 255.255.255.128 10.0.1.1
ip route 10.0.2.128 255.255.255.128 10.0.1.1
ip route 10.0.3.0 255.255.255.128 10.0.1.1
ip route 10.0.4.0 255.255.255.128 10.0.1.1

ip route 10.0.0.0 255.255.255.128 10.0.3.2
ip route 10.0.0.128 255.255.255.128 10.0.3.2
ip route 10.0.1.0 255.255.255.128 10.0.3.2
ip route 10.0.2.0 255.255.255.128 10.0.3.2
ip route 10.0.2.128 255.255.255.128 10.0.3.2
ip route 10.0.3.0 255.255.255.128 10.0.3.2
ip route 10.0.4.0 255.255.255.128 10.0.3.2


do wr
```

Right Router:

```
ip route 10.0.0.0 255.255.255.128 10.0.3.1
ip route 10.0.0.128 255.255.255.128 10.0.3.1
ip route 10.0.1.0 255.255.255.128 10.0.3.1
ip route 10.0.2.0 255.255.255.128 10.0.3.1
ip route 10.0.2.128 255.255.255.128 10.0.3.1
ip route 10.0.3.0 255.255.255.128 10.0.3.1
ip route 10.0.4.0 255.255.255.128 10.0.3.1


do wr
```

DENY IP

VLAN 20 Cannot Ping VLAN 30	Email Server Cannot Ping Web Server	TACACS Server Cannot Ping Web Server

Left Core Switch

```
en
conf t
ip access-list extended 100
deny icmp 10.0.0.128 0.0.0.127 10.0.2.0 0.0.0.127
permit ip any any

interface vlan 20
ip access-group 100 in

ip access-list extended 101
deny icmp host 10.0.0.11 host 10.0.2.141
permit ip any any

interface vlan 10
ip access-group 101 in

do wr
```

Middle Core Switch

```
en
conf t
ip access-list extended 100
deny icmp 10.0.0.128 0.0.0.127 10.0.2.0 0.0.0.127
permit ip any any

interface vlan 30
ip access-group 100 in

ip access-list extended 101
deny icmp host 10.0.0.11 host 10.0.2.141
deny icmp host 10.0.4.11 host 10.0.2.141
permit ip any any

in vlan 40
ip access-group 101 in

do wr
```

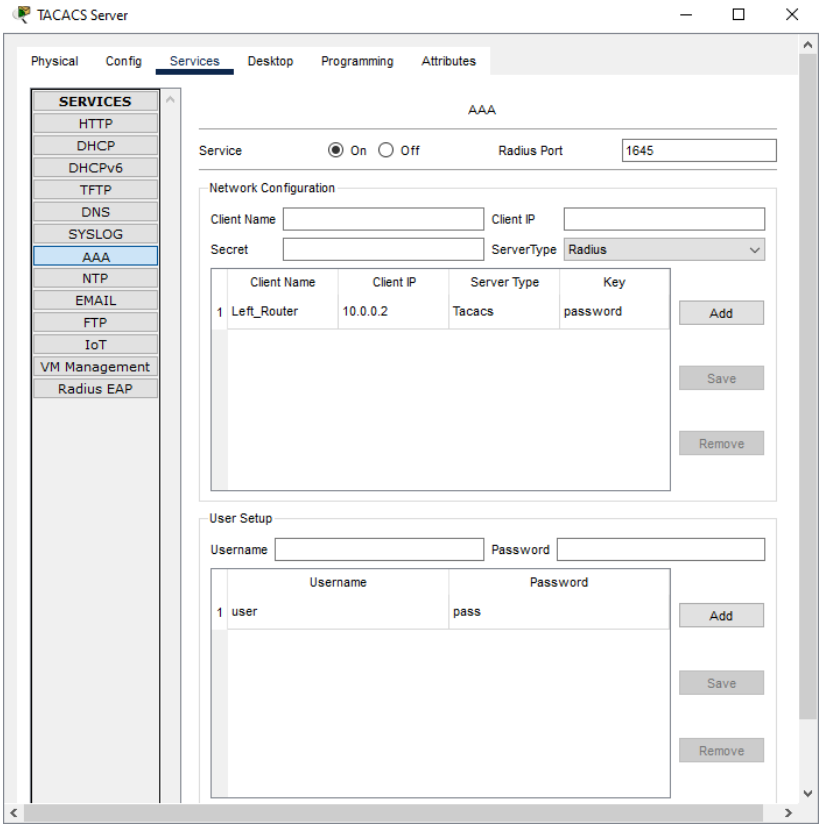
Right Core Switch

```
en
conf t
ip access-list extended 100
deny icmp host 10.0.4.11 host 10.0.2.141
permit ip any any

in vlan 50
ip access-group 100 in

do wr
```

TACACS CONFIGURATION

Client Name: Left_Router
Client IP: 10.0.0.2
Server Type: TACACS
Key: password

Username: user
Password: pass



Left Router

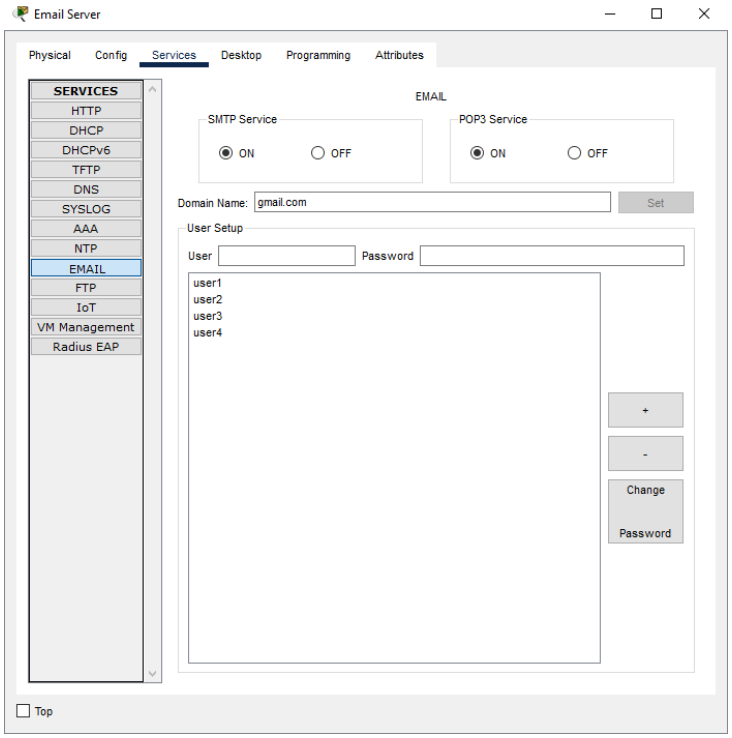
en
conf t

aaa new-model
aaa authentication login def group tacacs+ local
aaa authentication ena def group tacacs+ local

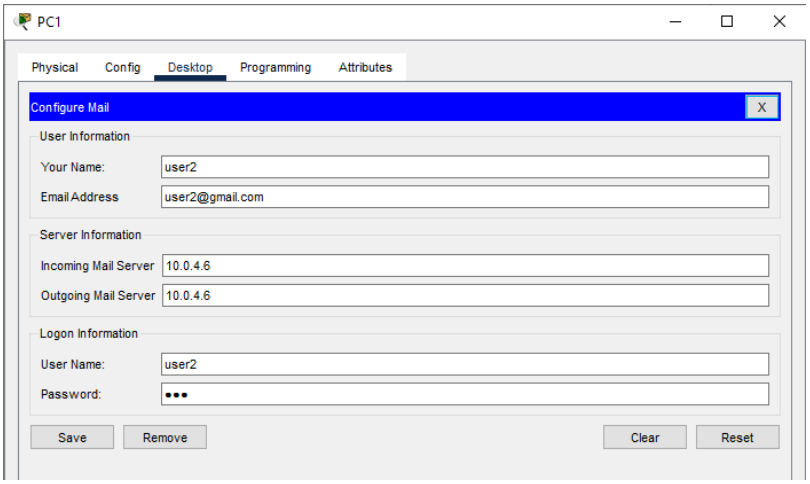
tacacs-server host 10.0.0.11 key password
line vty 0 4
login authentication def

do wr

EMAIL SERVER CONFIGURATION



Domain Name: gmail.com (Set)



Configure all PC