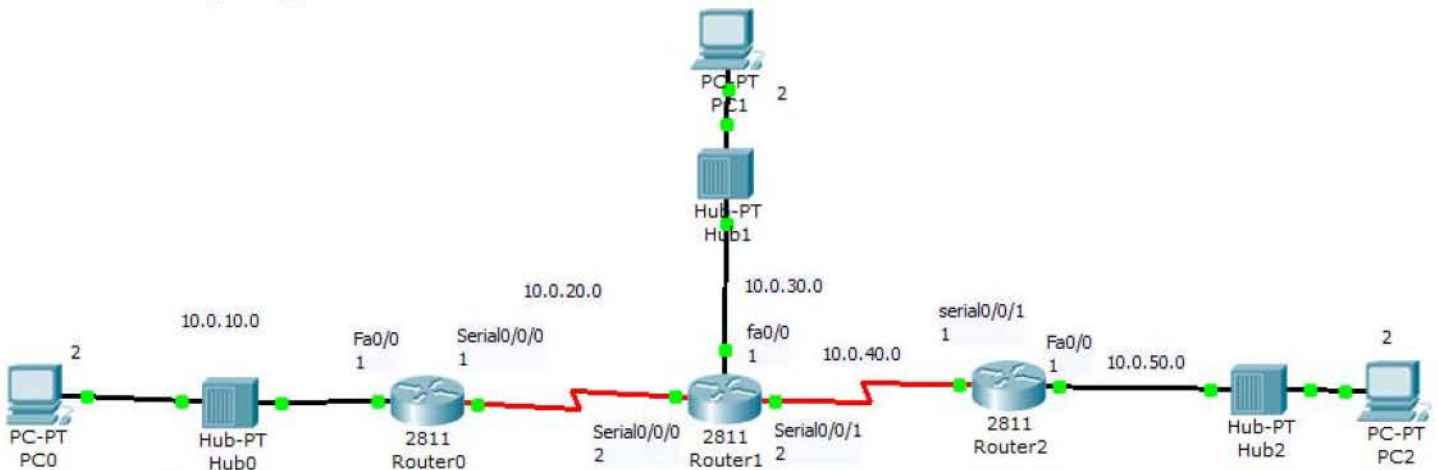


Wireless Lab 02 Enhanced Interior Gateway Routing Protocol

Equipment

#	Item
3	PCs
3	Hubs
3	Router 2811

Topology



Steps

- upgrade routers by adding "WIC-2T"



- Connect devices as shown in topology
- Configure PCs

PC0	
IP	10.0.10.2
Subnet mask	255.255.255.0
Gateway	10.0.10.1

PC1	
IP	10.0.30.2
Subnet mask	255.255.255.0
Gateway	10.0.30.1



PC2	
IP	10.0.50.2
Subnet mask	255.255.255.0
Gateway	10.0.50.1

- Routers Basic Configuration

```
R en
o config t
u interface fa0/0
t ip address 10.0.10.1 255.255.255.0
e no sh
r exit

0 interface serial0/0/0
  ip address 10.0.20.1 255.255.255.0
  no sh
  clock rate 2000000
  exit

  interface loopback 0
  ip address 1.1.1.1 255.255.255.255
  no sh
  end

copy running-config startup-config
```

```
R en
o config t
u interface fa0/0
t ip address 10.0.30.1 255.255.255.0
e no sh
r exit

1 interface serial0/0/0
  ip address 10.0.20.2 255.255.255.0
  no sh
  exit

  interface serial0/0/1
  ip address 10.0.40.2 255.255.255.0
  no sh
  clock rate 2000000
  exit

  interface loopback 0
  ip address 2.2.2.2 255.255.255.255
```



```
no sh
end
copy running-config startup-config
```

```
R en
o config t
u interface fa0/0
t ip address 10.0.50.1 255.255.255.0
e no sh
r exit
2
interface serial0/0/1
ip address 10.0.40.1 255.255.255.0
no sh
exit

interface loopback 0
ip address 3.3.3.3 255.255.255.255
no sh
end
copy running-config startup-config
```

• EIGRP Configuration

```
R en
o config t
u router EIGRP 101
t Network 10.0.10.0
e Network 10.0.20.0
r Network 1.1.1.1
exit
0 exit
copy running-config startup-config
```

```
R en
o config t
u router EIGRP 101
t Network 10.0.20.0
e Network 10.0.30.0
r Network 10.0.40.0
Network 2.2.2.2
1 exit
exit
copy running-config startup-config
```



```
R en
o config t
u router EIGRP 101
t Network 10.0.40.0
e Network 10.0.50.0
r Network 3.3.3.3
  no auto-summary
2 exit
  exit
  copy running-config startup-config
```

- Show EIGRP route

```
R show ip route EIGRP
o
u
t
e
r
```

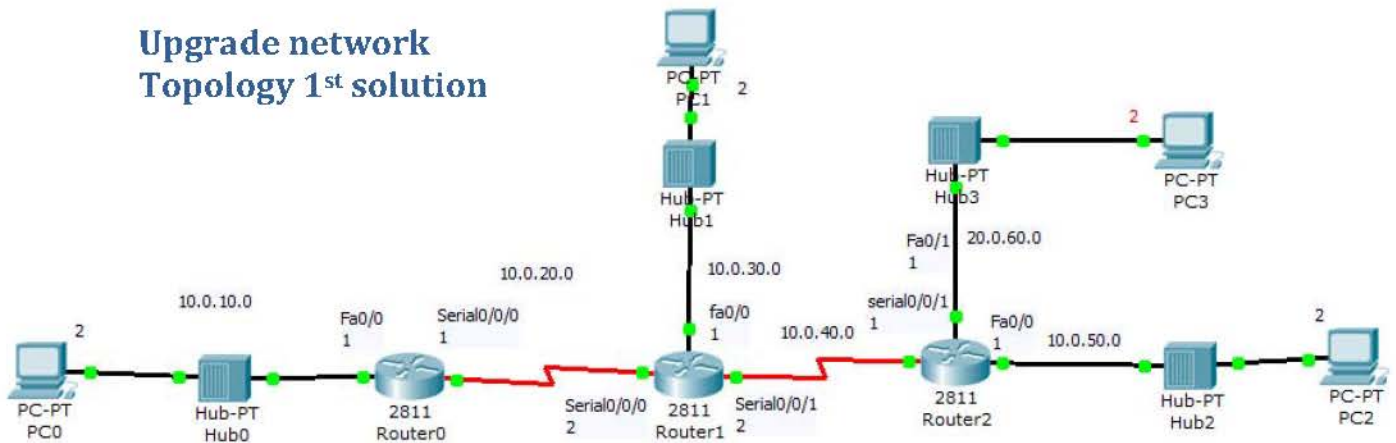
- Test connectivity

PC 00	Ping 10.0.30.2
command	Ping 10.0.50.2
prompt	Ping 2.2.2.2
	Ping 3.3.3.3

PC 01	Ping 10.0.10.2
command	Ping 10.0.50.2
prompt	Ping 1.1.1.1
	Ping 3.3.3.3

PC 02	Ping 10.0.10.2
command	Ping 10.0.30.2
prompt	Ping 1.1.1.1
	Ping 2.2.2.2

Upgrade network Topology 1st solution



PC3	
IP	20.0.60.2
Subnet mask	255.255.255.0
Gateway	20.0.60.1

- Routers Basic Configuration

```

R
o
u
t
e
r
0
en
config t
interface fa0/1
ip address 20.0.60.1 255.255.255.0
no sh
end
copy running-config startup-config

```

- Gateway of last resort and static configuration

```

R
o
u
t
e
r
0
en
config t
ip route 0.0.0.0 0.0.0.0 serial0/0/0
end
copy running-config startup-config

```

```

R
o
u
t
e
r
1
en
config t
ip route 0.0.0.0 0.0.0.0 10.0.20.2
end
copy running-config startup-config

```

```

R
o
u
t
e
r
2
en
config t
ip route 0.0.0.0 0.0.0.0 serial0/0/1
end
copy running-config startup-config

```



```
r
en
config t
1 ip route 0.0.0.0 0.0.0.0 10.0.40.1
end
copy running-config startup-config
```

```
R
o
u
t
e
en
config t
ip route 0.0.0.0 0.0.0.0 Fa0/1
end
copy running-config startup-config

r
en
config t
2 ip route 0.0.0.0 0.0.0.0 20.0.60.2
end
copy running-config startup-config
```

- Show IP route

```
R
o
u
t
e
r
show ip route
```

- Test connectivity again

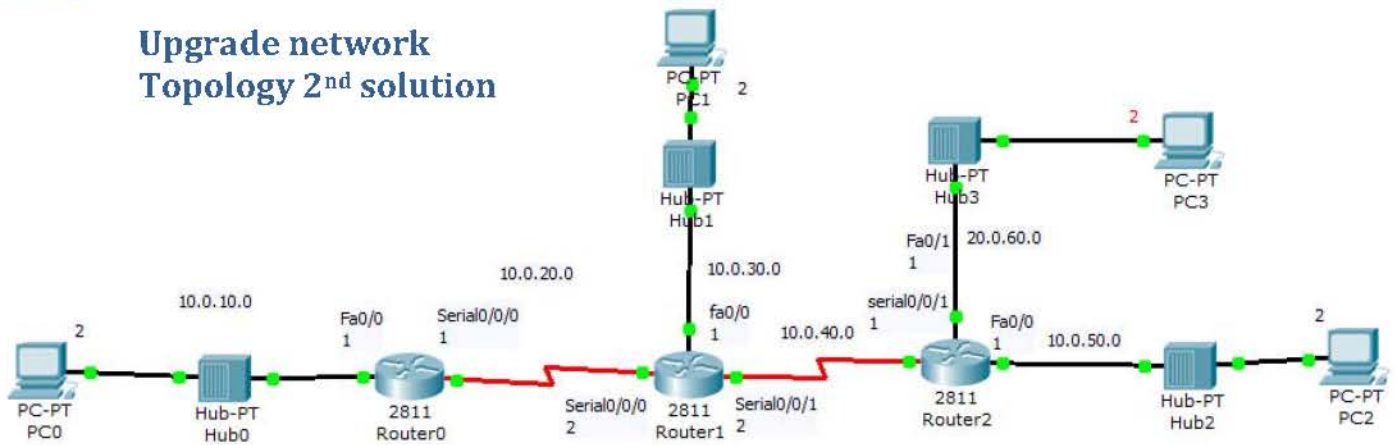
PC 00 command prompt	Ping 20.0.60.2
----------------------------	----------------

PC 01 command prompt	Ping 20.0.60.2
----------------------------	----------------

PC 02 command prompt	Ping 20.0.60.2
----------------------------	----------------

PC 03 command prompt	Ping 10.0.10.2 Ping 10.0.30.2 Ping 10.0.50.2
----------------------------	--

Upgrade network Topology 2nd solution



PC3	
IP	20.0.60.2
Subnet mask	255.255.255.0
Gateway	20.0.60.1

- Routers Basic Configuration

```

R1
en
co nfig t
u interface fa0/1
t ip address 20.0.60.1 255.255.255.0
e no sh
r end
copy running-config startup-config
0
  
```

- EIGRP Configuration

```

R2
en
co nfig t
u router EIGRP 101
t network 20.0.60.0
e end
r copy running-config startup-config
2
  
```

- Show RIP route

```

R1
show ip route
  
```




- Test connectivity again

PC 00 command prompt	Ping 20.0.60.2
----------------------------	----------------

PC 01 command prompt	Ping 20.0.60.2
----------------------------	----------------

PC 02 command prompt	Ping 20.0.60.2
----------------------------	----------------

PC 03 command prompt	Ping 10.0.10.2 Ping 10.0.30.2 Ping 10.0.50.2
----------------------------	--