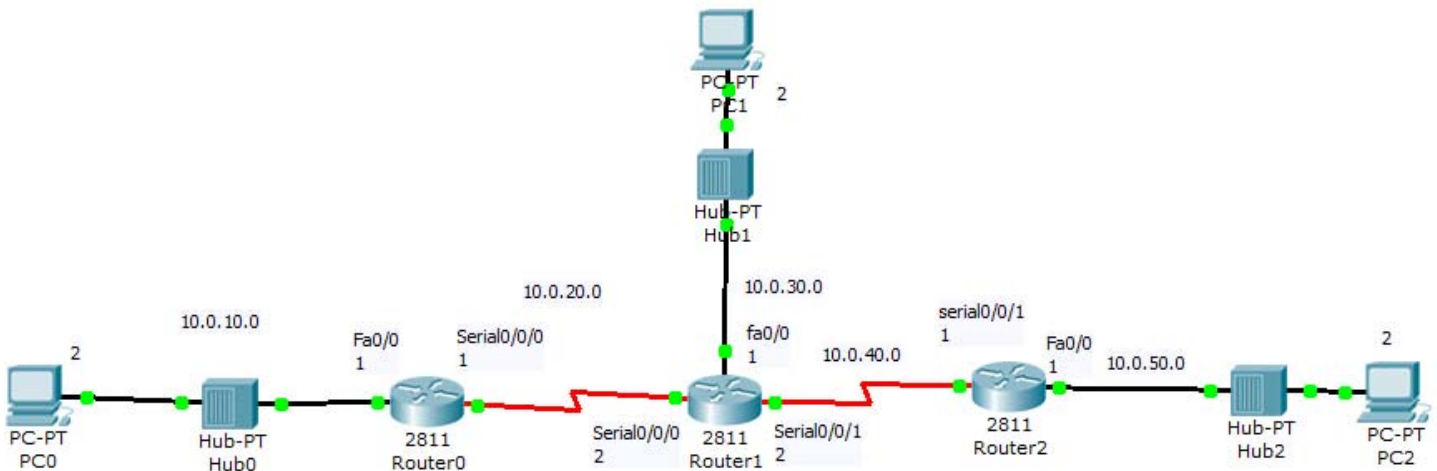


## Wireless Lab 01 Routing Information Protocols

### Equipment

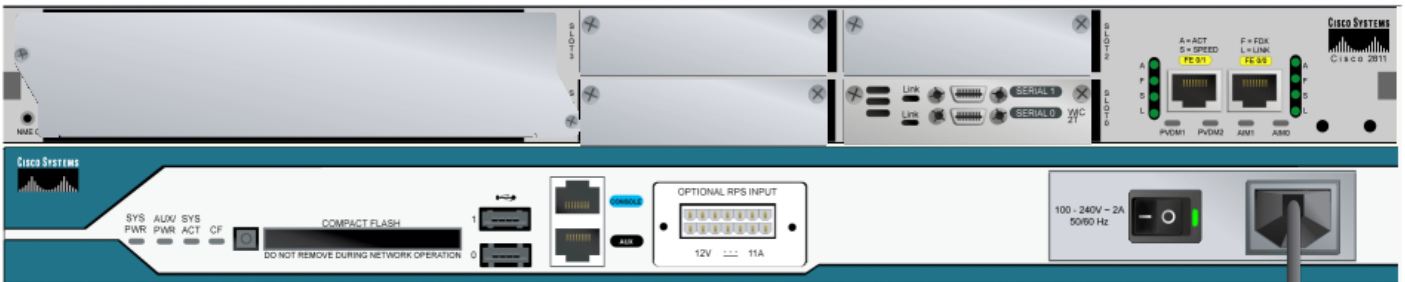
#	Item
4	PCs
4	Hubs
3	Router 2811

### 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
```

- RIP Configuration

```
R en
o config t
u router rip
t network 10.0.10.0
e network 10.0.20.0
r network 1.1.1.1
end
0 copy running-config startup-config
```

```
R en
o config t
u router rip
t network 10.0.20.0
e network 10.0.30.0
r network 10.0.40.0
network 2.2.2.2
1 end
copy running-config startup-config
```

```
R en
o config t
```



```
u router rip
t network 10.0.40.0
e network 10.0.50.0
r network 3.3.3.3
  end
2 copy running-config startup-config
```

- Show RIP route

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

- Test connectivity

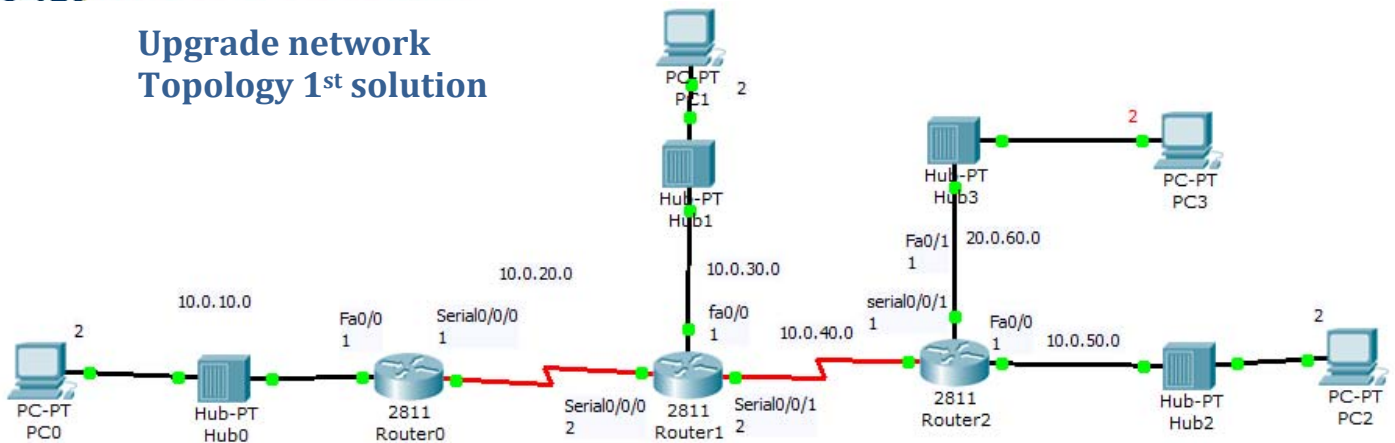
PC 00	Ping 10.0.30.2
command	Ping 10.0.50.2
prompt	Ping 2.2.2.2
	Ping 3.3.3.3

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 1<sup>st</sup> solution



PC3	
IP	20.0.60.2
Subnet mask	255.255.255.0
Gateway	20.0.60.1

- Routers Basic Configuration

```

R1>en
R1>conf t
R1>interface fa0/1
R1>ip address 20.0.60.1 255.255.255.0
R1>no sh
R1>end
R1>copy running-config startup-config
  
```

- Gateway of last resort and static configuration

```

R1>en
R1>conf t
R1>ip route 0.0.0.0 0.0.0.0 serial0/0/0
R1>end
R1>copy running-config startup-config
  
```

```

R2>en
R2>conf t
R2>ip route 0.0.0.0 0.0.0.0 10.0.20.2
R2>end
R2>copy running-config startup-config
  
```

```

R2>en
R2>conf t
R2>ip route 0.0.0.0 0.0.0.0 serial0/0/1
R2>end
R2>copy running-config startup-config
R2>en
  
```



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

```
R en
o config t
u ip route 0.0.0.0 0.0.0.0 Fa0/1
t end
e 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
```

- Broadcasting static configuration to other routers through RIP protocol

```
R en
o config t
u route rip
t default-information originate
e end
r copy running-config startup-config
0
```

```
R en
o config t
u route rip
t default-information originate
e end
r copy running-config startup-config
1
```

```
R en
o config t
u route rip
t default-information originate
e end
r copy running-config startup-config
2
```



- Show RIP route

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

- Test connectivity again

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

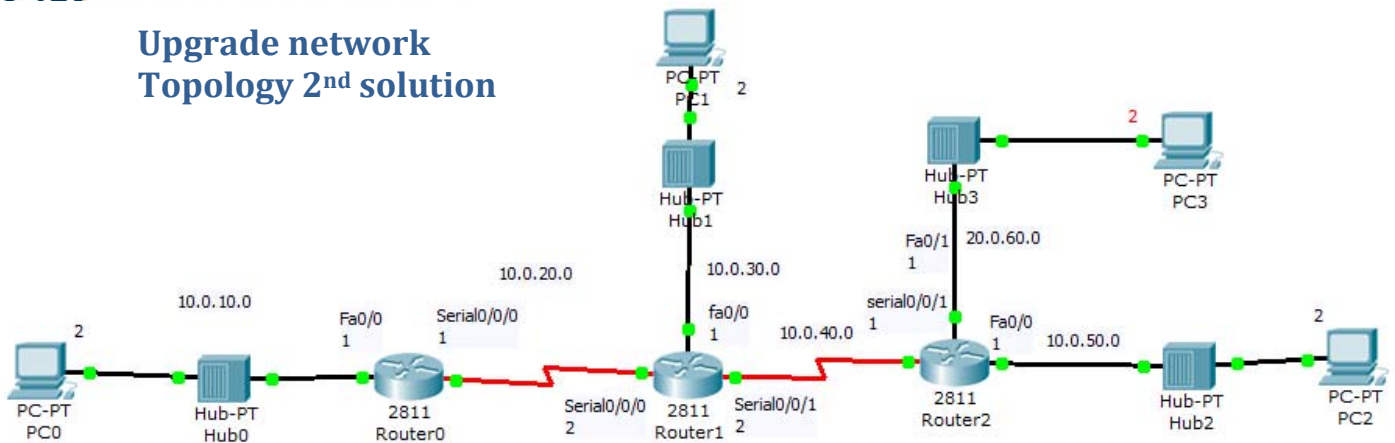
PC 01 command prompt	Ping 20.0.60.2
----------------------------	----------------

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
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## Upgrade network Topology 2<sup>nd</sup> solution



PC3	
IP	20.0.60.2
Subnet mask	255.255.255.0
Gateway	20.0.60.1

- Routers Basic Configuration

```

R1>en
R1>conf t
R1>interface fa0/1
R1>ip address 20.0.60.1 255.255.255.0
R1>no sh
R1>end
R1>copy running-config startup-config
0
  
```

- RIP Configuration

```

R1>en
R1>conf t
R1>router rip
R1>network 20.0.60.0
R1>end
R1>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
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