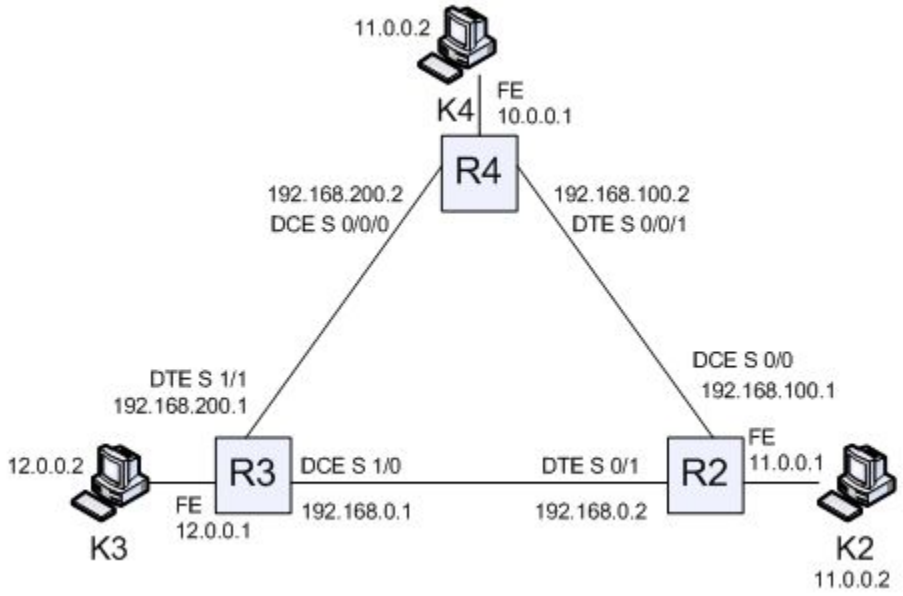
Lab Excercise: Dynamic routing RIP2



The exercise consists of 5 steps on each router:

0. (possible) router nvram clear
1. If serial interface – clockrate setting
2. setting interfaces IP addresses + netmasks
3. setting up the interface(s)
4. turing on RIPv2 protocol
5. routing activation

Ad 0.

```
enable
show run
erase startupconfig

reload <no>
```

Ad 1.

```
//Example  R2

show controllers serial 0/0                (DCE no clock )
configure
Router(config)# interfaces serial 0/0
Router(configif)# clock rate 125000
```

Ad 2.

```
//Example  R4

configure
Router(config)# interfaces serial 0/0/0
Router(config)# ip address 192.168.200.2 255.255.255.0
Router(config)# no shutdown

Router(config)# interfaces fastEthernet 0/0
Router(config)# ip address 10.0.0.1 255.0.0.0
Router(config)# no shutdown

Router(config)# exit
```

Ad 3.

```
Router(config)# no shutdown
```

```
Ad 4.
Router(config)# router rip
Router(config)# version 2
Router(config)# network 192.168.200.0
Router(config)# network 10.0.0.0
Router(config)# network 192.168.100.0
Router(config)# exit
```

```
Ad 5.
Router(config)# ip routing
```

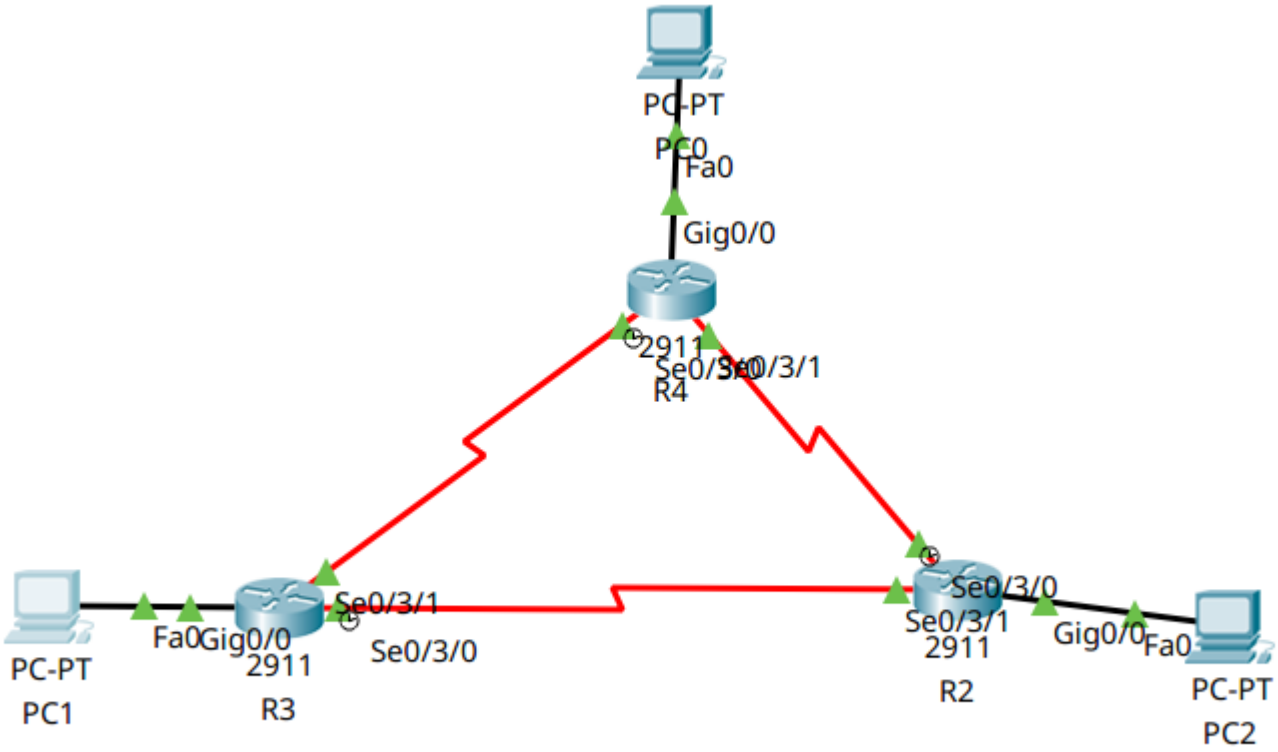
Testing case

Use permanent ping from command line on both hosts:

```
ping –t 10.0.0.2
```

verify path using : `patchping`

simulate link malfunction, note down observations




```
C:\>ping -t 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Request timed out.
Request timed out.

Ping statistics for 10.0.0.2:
    Packets: Sent = 3, Received = 0, Lost = 3 (100% loss),
```

```
C:\>tracert 10.0.0.2

Tracing route to 10.0.0.2 over a maximum of 30 hops:

  1    0 ms      1 ms      0 ms      12.0.0.1
  2    1 ms      1 ms      1 ms      192.168.200.2
  3    *         *         *         Request timed out.
  4    *         *         *         Request timed out.
  5    *         *         *         Request timed out.
  6    *
```

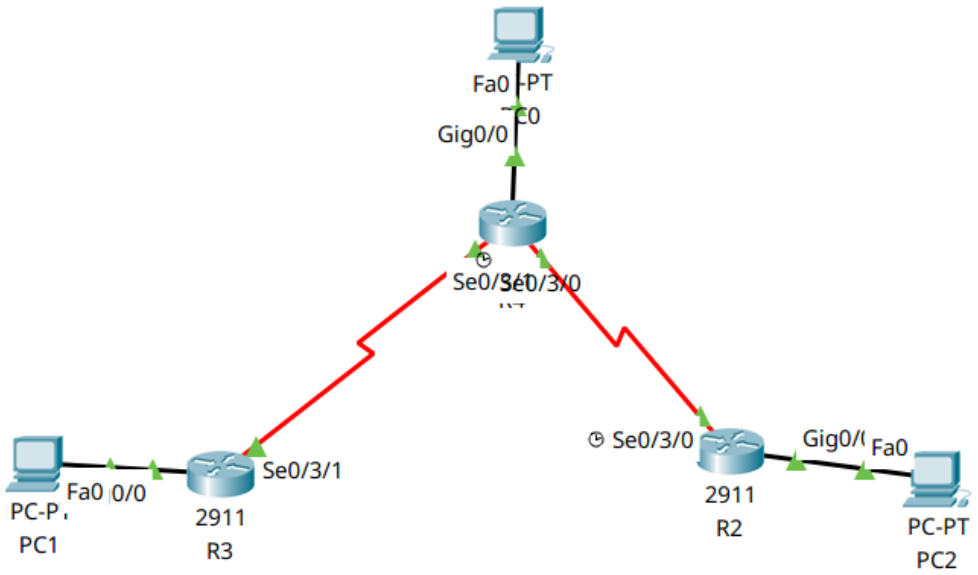
Pinging from PC1 to PC2

```
C:\>ping 11.0.0.2

Pinging 11.0.0.2 with 32 bytes of data:

Reply from 11.0.0.2: bytes=32 time=18ms TTL=125
Reply from 11.0.0.2: bytes=32 time=4ms TTL=125
Reply from 11.0.0.2: bytes=32 time=34ms TTL=125
Reply from 11.0.0.2: bytes=32 time=3ms TTL=125

Ping statistics for 11.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 34ms, Average = 14ms
```



Pinging from PC1 to PC2 after breaking the connection. I am still getting answers

```
C:\>ping 11.0.0.2

Pinging 11.0.0.2 with 32 bytes of data:

Reply from 11.0.0.2: bytes=32 time=15ms TTL=125
Reply from 11.0.0.2: bytes=32 time=2ms TTL=125
Reply from 11.0.0.2: bytes=32 time=2ms TTL=125
Reply from 11.0.0.2: bytes=32 time=4ms TTL=125

Ping statistics for 11.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 15ms, Average = 5ms
```