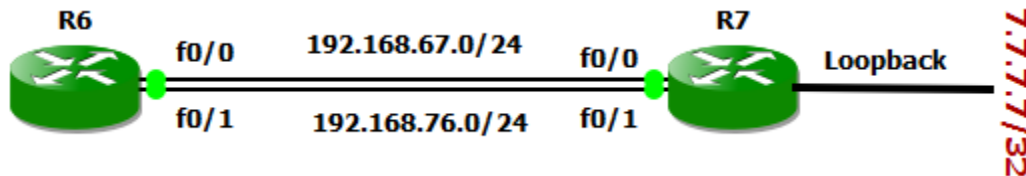


## Path Selection Optimization:

Change EIGRP metrics by manipulating the bandwidth and/or delay values. Changing the bandwidth value is not recommended because that value is used for many other reasons and features in the router. Also, configure the K-Values to influence the EIGRP metric calculation.



```
R6#show interfaces fastEthernet 0/0
FastEthernet0/0 is up, line protocol is up
Hardware is i82543 (Livengood), address is ca06.4238.0008
Internet address is 192.168.67.6/24
MTU 1500 bytes, BW 100000 kbit/sec, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255
```

Commands	Description
R6#show ip route eigrp D 7.7.7.7 [90/156160] via 192.168.76.7, F0/1 [90/156160] via 192.168.67.7, F0/0	First verify both routes in routing table Equal path load balancing
R6(config)#interface FastEthernet 0/0 R6(config-if)# bandwidth 10000	Enter interface mode Decrease the bandwidth to 10000
R6#show ip route eigrp	Verify again only one path now
R6(config)#interface FastEthernet 0/0 R6(config-if)#no bandwidth 10000	Enter interface mode Make the default bandwidth again
R6#show ip route eigrp	Check again both path back
R6(config)#interface FastEthernet 0/0 R6(config-if)#delay 200	Enter interface mode Increase the delay this time
R6#show ip route eigrp	Verify again only one path now
R6(config)#interface FastEthernet 0/0 R6(config-if)#no delay 200	Enter interface mode Make the default delay again
R6#show ip route eigrp D 7.7.7.7 [90/156160] via 192.168.76.7, F0/1 [90/156160] via 192.168.67.7, F0/0	First verify both routes in routing table Equal path load balancing
R6(config)#router eigrp 1 R6(config-router)#metric weights 0 1 1 1 1 1	Enter EIGRP mode Change k Values

R7(config)#router eigrp 1	Enter EIGRP mode
R7(config-router)#metric weights 0 1 1 1 1 1	Change K values
R6#show ip route eigrp D 7.7.7.7 [90/610]	Verify the eigrp routes different FD
R6(config)#interface FastEthernet 0/0	Enter interface mode
R6(config-if)# bandwidth 10000	Decrease the bandwidth to 10000
R6(config-if)#delay 200	Increase the delay Change metric