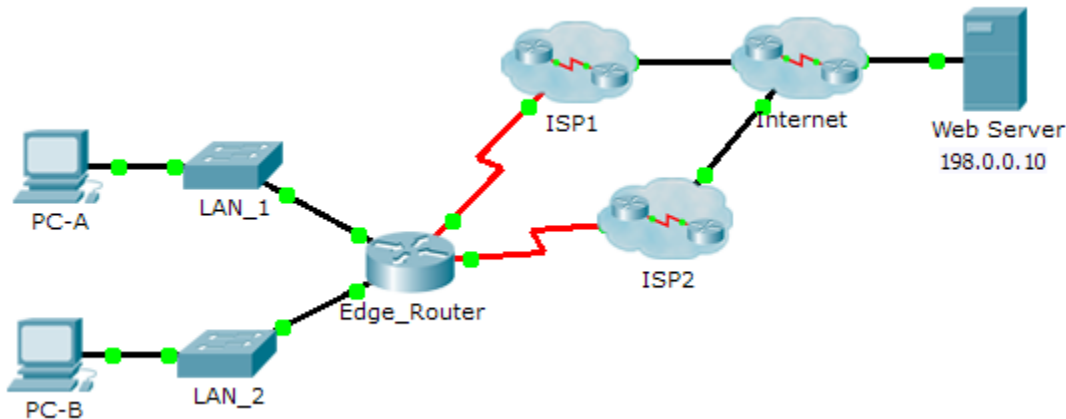# Packet Tracer - Configuring a Floating Static Route (Instructor Version)

Instructor Note: Red font color or Gray highlights indicate text that appears in the instructor copy only.

Topology

Objectives

Part 1: Configure a Floating Static Route

Part 2: Test Failover to the Backup Route

Background

In this activity, you will configure a floating static route which is used as a backup route. This route has a manually configured administrative distance greater than that of the primary route and, therefore, would not be in the routing table until the primary route fails. You will test failover to the backup route, and then restore connectivity to the primary route.

Part 1: Configuring a Floating Static Route

Step 1:   Configure a directly attached static default route.

a. Configure a directly attached static default route from **Edge_Router** to the Internet. The primary default route should be through **ISP1**.

```
Edge_Router(config)# ip route 0.0.0.0 0.0.0.0 s0/0/0
```

b. Display the contents of the routing table. Verify that the default route is visible in the routing table.

```
Edge_Router# show ip route

<output omitted>
S*   0.0.0.0/0 is directly connected, Serial0/0/0
```

c. What command is used to trace a path from a PC to a destination? `tracert`

From **PC-A**, trace the route to the **Web Server**. The route should start at the default gateway 192.168.10.1 and go through the 10.10.10.1 address. If not, check your static default route configuration.

```
PC> tracert 198.0.0.10
```

```
Tracing route to 198.0.0.10 over a maximum of 30 hops:

  1   3 ms       0 ms       0 ms     192.168.10.1
  2   0 ms       1 ms       0 ms     10.10.10.1
  3   1 ms       2 ms       0 ms     198.0.0.10

Trace complete.
```

Step 2: Configure a floating static route.

a. What is the administrative distance of a static route? 0 for directly attached and 1 for recursive

b. Configure a directly attached floating static default route with an administrative distance of 5. The route should point to **ISP2**.

```
Edge_Router(config)# ip route 0.0.0.0 0.0.0.0 s0/0/1 5
```

c. View the running configuration and verify that the floating static default route is there, as well as the static default route.

```
Edge_Router# show run
Building configuration...

Current configuration : 781 bytes
!
<output omitted>
ip route 0.0.0.0 0.0.0.0 Serial0/0/0
ip route 0.0.0.0 0.0.0.0 Serial0/0/1 5
!
```

d. Display the contents of the routing table. Is the floating static route visible in the routing table? Why or why not? No. It is not being displayed because it is not the primary route. Routers will only place the best path in the routing table and since this is the backup route, it will only be visible in the routing table when the primary route goes down.

Part 2: Test Failover to the Backup Route

a. On **Edge_Router**, administratively disable the exit interface of the primary route.

```
Edge_Router(config)# interface s0/0/0
Edge_Router(config-if)# shutdown
```

b. Verify that the backup route is now in the routing table.

```
Edge_Router# show ip route

<output omitted>
S*   0.0.0.0/0 is directly connected, Serial0/0/1
```

c. Trace the route from **PC-A** to the **Web Server**.

```
PC> tracert 198.0.0.10

Tracing route to 198.0.0.10 over a maximum of 30 hops:

  1   0 ms       0 ms       0 ms     192.168.10.1
  2   0 ms       0 ms       2 ms     10.10.10.5
```

```
   3    0 ms       2 ms       0 ms       198.0.0.10
```

```
Trace complete.
```

Did the backup route work? If not, wait a few more seconds for convergence and then re-test. If the backup route is still not working, investigate your floating static route configuration.

d. Restore connectivity to the primary route.

```
Edge_Router(config)# interface s0/0/0
Edge_Router(config-if)# no shutdown
```

e. Trace the route from **PC-A** to the **Web Server** to verify that the primary route is restored.

```
PC> tracert 198.0.0.10
```

```
Tracing route to 198.0.0.10 over a maximum of 30 hops:
```

```
   1    3 ms       0 ms       0 ms       192.168.10.1
   2    0 ms       1 ms       0 ms       10.10.10.1
   3    1 ms       2 ms       0 ms       198.0.0.10
```

```
Trace complete.
```

Suggested Scoring Rubric

Activity Section	Question Location	Possible Points	Earned Points
Part 1: Configuring a Floating Static Route	Step 1c	2	
	Step 2a	3	
	Step 2d	5	
Part 1 Total		**10**	
Packet Tracer Score		**90**	
Total Score		**100**	