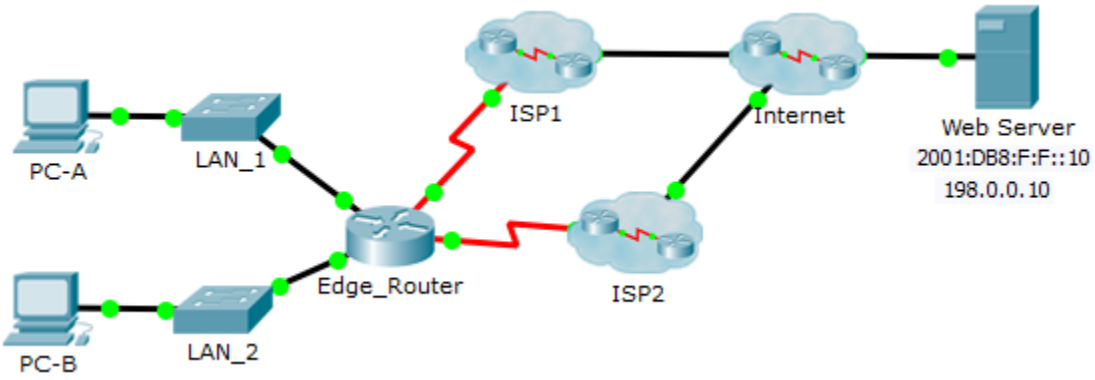
Packet Tracer - Configuring Floating Static Routes

Topology



Objectives

Part 1: Configure an IPv4 Floating Static Route

Part 2: Test Failover to the IPv4 Floating Static Route

Part 3: Configure and Test Failover for an IPv6 Floating Static Route

Background

In this activity, you will configure IPv4 and IPv6 floating static routes. These routes are manually configured with an 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 routes, and then restore connectivity to the primary route.

Part 1: Configure an IPv4 Floating Static Route

Step 1: Configure an IPv4 static default route.

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

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

c. What command is used to trace a path from a PC to a destination? tracert <destination IP>

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.

Step 2: Configure an IPv4 floating static route.

a. What is the administrative distance of a static route? It is by default 1 .

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

c. View the running configuration and verify that the IPv4 floating static default route is there, as well as the IPv4 static default route.

d. Display the contents of the routing table. Is the IPv4 floating static route visible in the routing table? Explain

```
C       192.168.11.0/24 is directly connected, GigabitEthernet0/1
L       192.168.11.1/32 is directly connected, GigabitEthernet0/1
S*   0.0.0.0/0 is directly connected, Serial0/0/0
```

The IPv4 floating static route is visible in the routing table, as has a higher administrative distance and signifying that it is a backup route.

Part 2: Test Failover to the IPv4 Floating Static Route

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

b. Verify that the IPv4 floating static route is now in the routing table.

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

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.

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

Part 3: Configure and Test Failover to an IPv6 Floating Static Route

Step 1: Configure an IPv6 floating static route.

a. The IPv6 static default route to **ISP1** is already configured. Configure an IPv6 floating static default route with an administrative distance of 5. The route should point to IPv6 address (**2001:DB8:A:2::1**) of **ISP2**.

b. View the running configuration to verify that the IPv6 floating static default route is now listed under the IPv6 static default route.

Step 2: Test Failover to the IPv6 Floating Static Route.

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

b. Verify that the IPv6 floating static route is now in the routing table.

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

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.

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

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**	