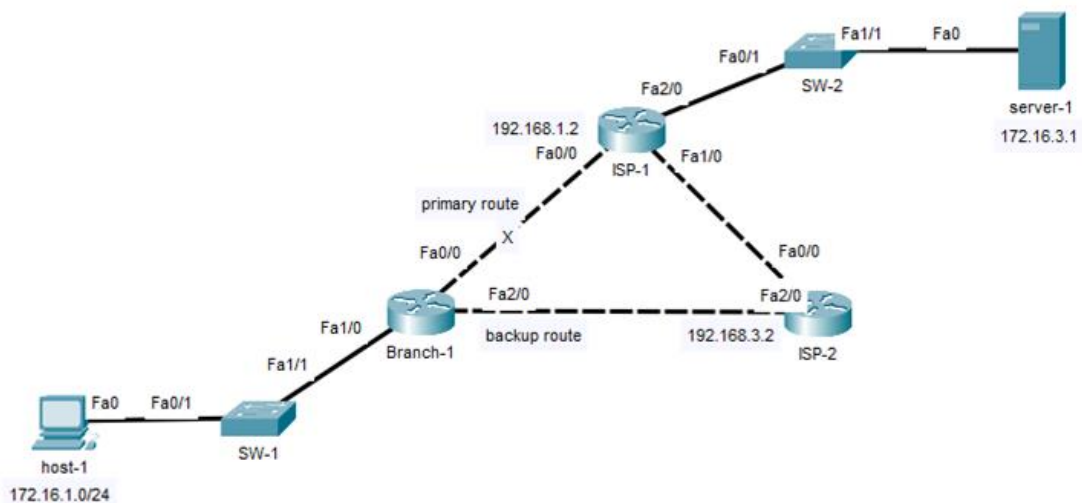


IPv4 Floating Static Route

Lab Summary

Configure a floating static route on Branch-1 so that all packets destined for subnet 172.16.3.0/24 (server-1) are forwarded to R1 interface Fa2/0 when the primary link fails. Configure an administrative distance of 2 and 192.168.3.2 as the next hop address. That is the directly connected interface of R1.

Figure 1 Lab Topology



Lab Configuration

Start Packet Tracer File: **ipv4 floating static route.pkt**

Click on *Branch-1* and select *CLI* folder.

Step 1: Enter global configuration mode

```
Branch-1> enable
```

```
Branch-1# configure terminal
```

Step 2: Configure a floating static route to destination 172.16.3.0/24 with an administrative distance of 2 and 192.168.3.2 as next hop address.

```
Branch-1(config)# ip route 172.16.3.0 255.255.255.0 192.168.3.2 2
```

Step 3: Verify Lab

Verify configuration is correct and confirm preferred route to server-1 is installed in the routing table. It is a static route with lower administrative distance (1) than the floating static route (2). Ping from host-1 to server-1 and verify routing is working correctly. In addition, verify routing path to server-1 is directly via dc-1 router.

Turn off Branch-1 router interface Fa0/0 with **shutdown** command and verify the floating static route is installed in the routing table. The local exit interface is now Branch-1 interface Fa2/0 and packets are forwarded to R1. Ping from host-1 to server-1 and verify that floating static route is working. Verify that routing path to server-1 is now via R1.

```
Branch-1# show running-config  
Branch-1# show ip route  
S 172.16.3.0 [1/0] via 192.168.1.2  
  
host-1: c:\> ping 172.16.3.1  
host-1: c:\> tracert 172.16.3.1
```

Turn off Branch-1 interface FastEthernet0/0 with the following commands:

```
Branch-1# configure terminal  
Branch-1(config)# interface fastethernet0/0  
Branch-1(config-if)# shutdown  
  
Branch-1# show ip route  
S 172.16.3.0 [2/0] via 192.168.3.2  
  
host-1: c:\> ping 172.16.3.1  
host-1: c:\> tracert 172.16.3.1
```

Lab Notes:

Static routes are deterministic and configured to explicitly specify how packets should be forwarded to a destination. It is important to configure an administrative distance to a floating static route that is lower than any enabled dynamic routing protocol. This lab is based on static and default routes for bidirectional forwarding so it was not an issue. For example, if OSPF was enabled, the floating static route AD would have to be lower than 110. That would prevent router from installing an OSPF route instead of a floating static route.