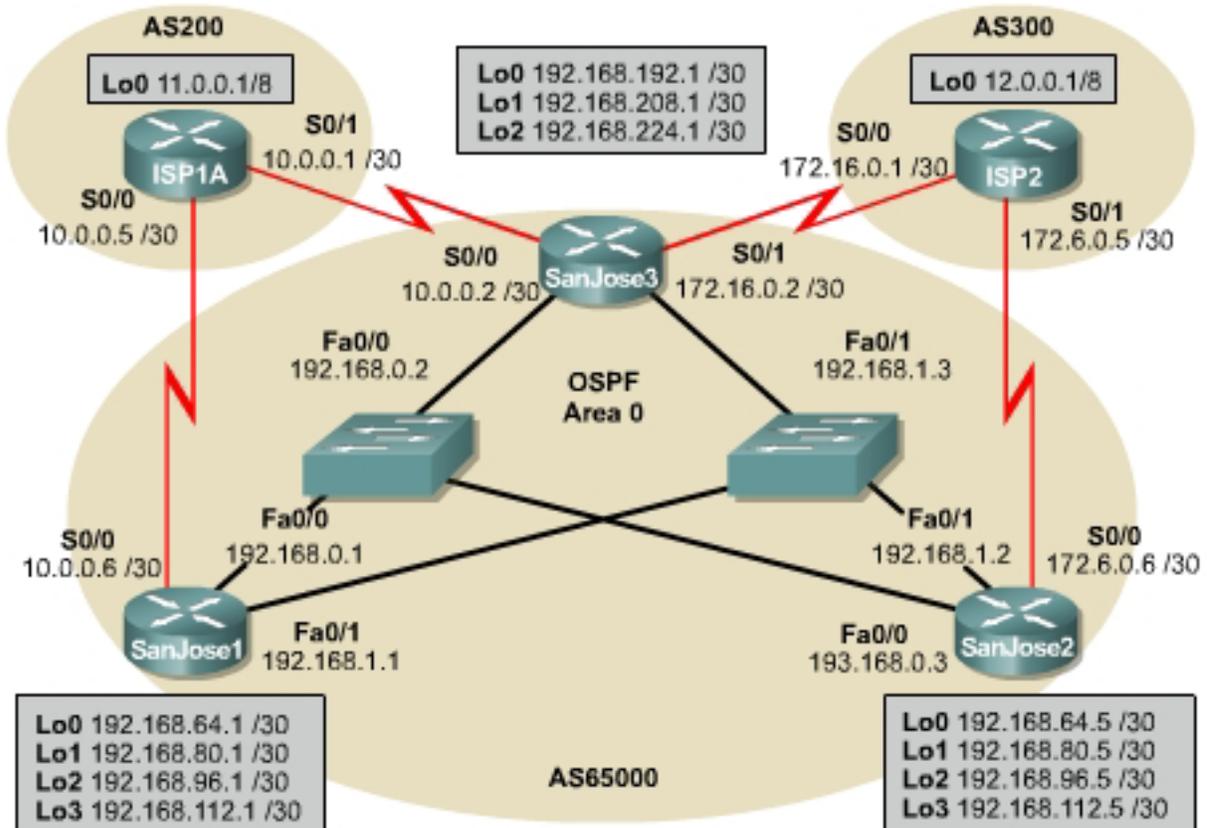


Lab 9.12.1 BGP Challenge Lab



Objective

Configure EBGP between the company's core routers and the two ISP routers. Configure IBGP with peers to create a network that will provide the International Travel Agency with a fully meshed, reliable, and efficient core network.

Scenario

The International Travel Agency relies heavily on the Internet for advertisement, sales, and communication within the company and with their customers throughout the world. They have, therefore, decided to contract with two ISPs. They are connected as shown in the figure. The company requires its network to be readily available and reliable at all times. The loopback addresses on the ISP1A and ISP2 routers represent other customers. The loopback addresses on the San Jose routers represent networks to regional headquarters and local branch offices.

Implementation Requirements

- Configure EBGP between the International Travel Agency core routers and ISP1A and ISP2.
- Configure IBGP between the International Travel Agency core routers.

- Only the internal 192.168.0.0 network should be advertised to ISP1A and ISP2 distributed access lists.
- SanJose1 should be able to communicate with ISP2 through SanJose3. SanJose2 should be able to communicate with ISP1A through SanJose3 using next-hop-self.
- SanJose1 will use ISP1A as its primary ISP through its direct link, and SanJose2 will use ISP2 as its primary ISP.
- If either direct link of SanJose1 or SanJose2 fails for any reason, all traffic should automatically be routed through SanJose3 to either ISP1A or ISP2.
- The International Travel Agency's AS number 65000 should be prevented from being advertised beyond the ISP1A and ISP2 routers to the outside world. It also should not be advertised to their other customer networks, for example, loopback addresses.

Implementation Completion Tests

- A successful `ping` to every network interface from every router.
- The `show` command verifies that routing tables contain the routes specified by the requirements.