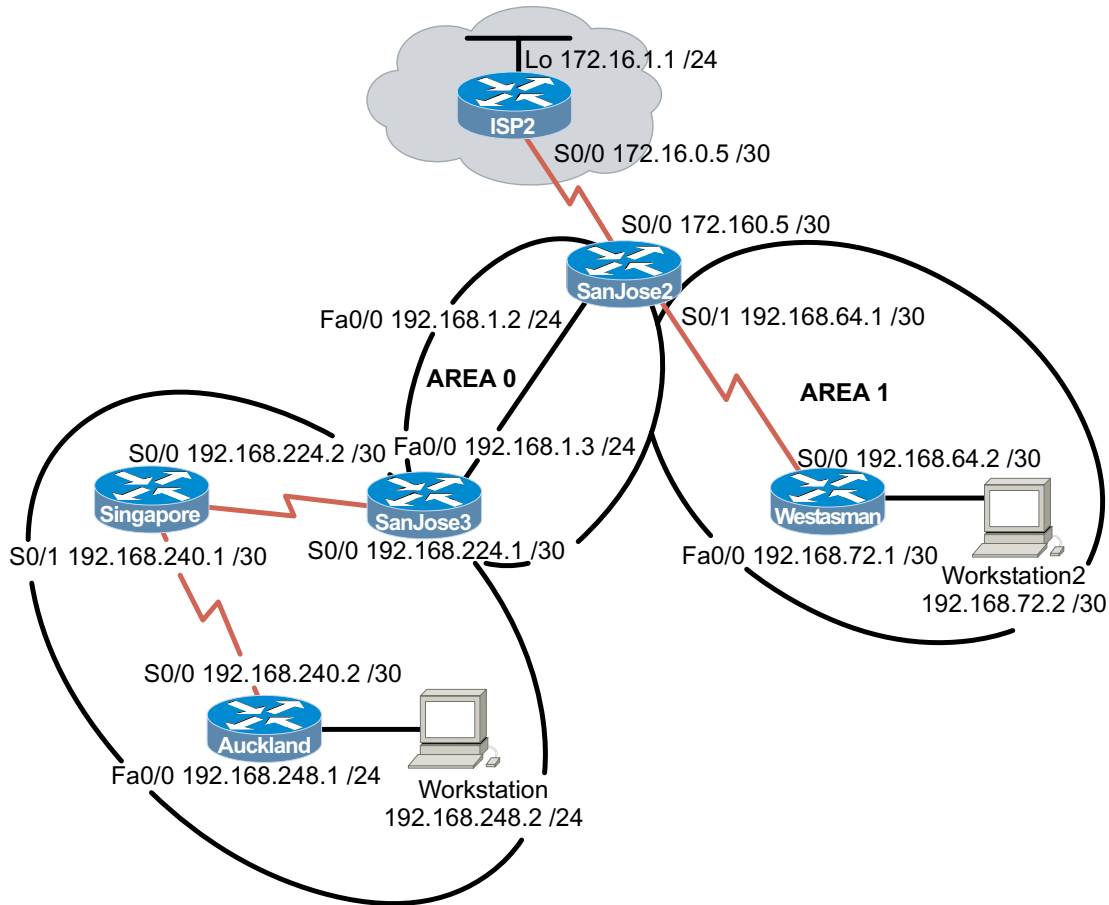


5.9.1 OSPF Challenge Lab



Objective

In this lab, you create a multiarea OSPF autonomous system that includes a totally stubby area and a persistent default route toward the ISP.

Scenario

As the Enterprise Network Administrator for International Travel Agency, you are responsible for designing and implementing internetwork connectivity. To ensure success by reducing complexity, you start scaling the network by connecting only the Asia region and one local site, West Tasman, to the San Jose corporate headquarters and ISP2. When you are satisfied with the results, you will implement all other regions and sites.

Design Considerations

At this point, West Tasman is in stub Area 1 with one egress point and no need to redistribute external routes. The router at West Tasman has been in service for several years and might not be able to keep up with a large OSPF internetwork. Your autonomous system also has only one egress point to the Internet. Instead of the administrative burden of many static routes, you want a stable default route advertised through OSPF, but you are concerned about route flapping if your WAN link to ISP2 is unstable. When provisioning the network, you upgraded the memory and processor on SanJose2, intending it to be the ASBR and the DR for any area it is a member of.

Implementation Requirements

- Configure Area 1 as a Totally Stubby Area.
- Advertise a persistent default route from SanJose2 through OSPF.
- SanJose2 will always be the DR in Area 0.
- SanJose3 will never be the DR in Area 0.

Implementation Completion Tests

- Successful pings to ISP2 from workstation1 and workstation2.
- Only a default route in the Westasman route table.
- The `show` command verifies that SanJose2 is DR.
- Two minutes after a WAN link failure (disconnect the serial cable from ISP2), an E2 default route is still present in Auckland.