

BGP/OSPF Routing

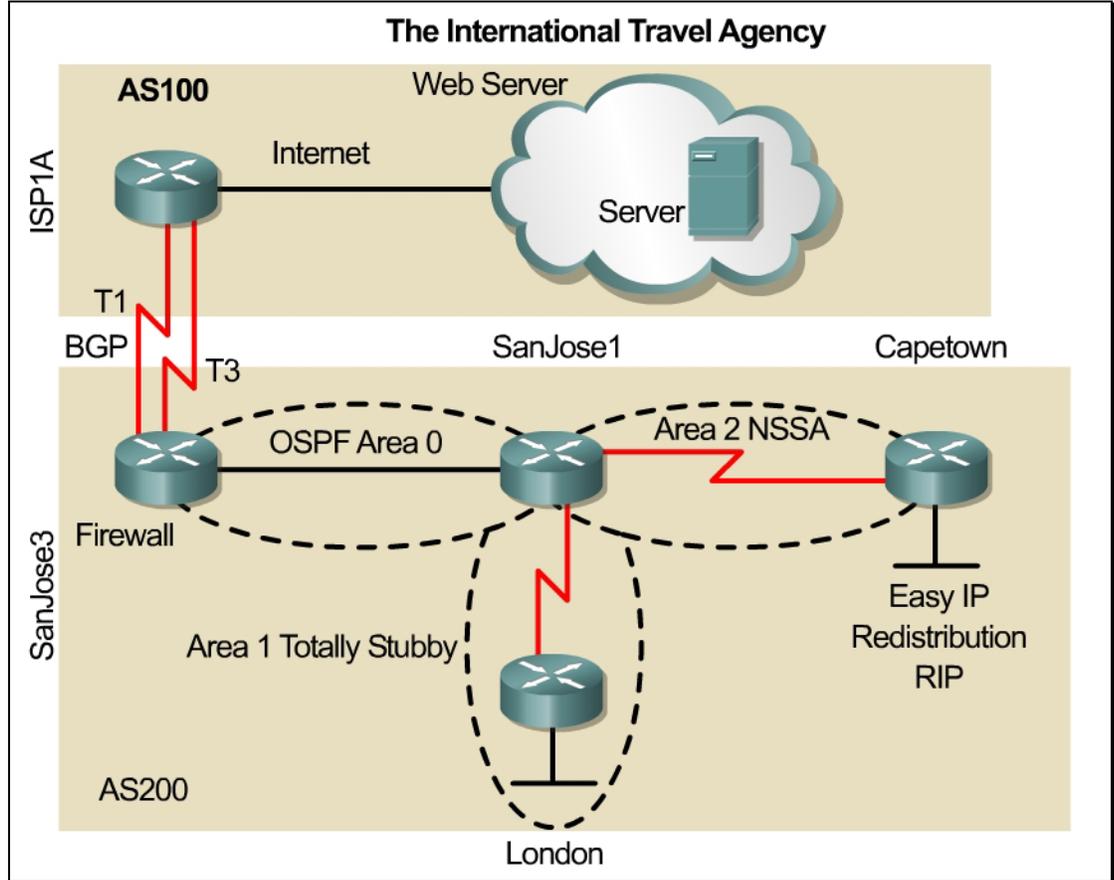
Cisco Networking Academy Program

CCNP 1: Advanced Routing v3.0

Instructions

Plan, design and implement the complex International Travel Agency BGP/OSPF network shown in the diagram and description below. Implement the design on the lab set of routers. Verify that all configurations are operational and functioning according to the guidelines.

Scenario



The International Travel Agency relies heavily on the Internet for its advertising and sales. Therefore, it has been decided to establish a primary and a backup route to the Internet. Additionally, other network changes have been planned as shown in the diagram above and described below. The responsibilities of the network engineer include creating, maintaining, and implementing changes to the network. The network will be based on and must meet the following requirements:

1. The San Jose core routers must run OSPF and be configured in Area 0.
2. The network has been allocated one Class B license.
3. Use VLSM on all serial interfaces as may be appropriate.
4. This network will have three outer areas. The London branch office in Area 1 will be a totally stubby network. The Capetown branch office in Area 2 will be an NSSA. The third area will be a RIP network.
5. Summarize all routes from each area into the core. Plan for approximately 30 networks in each area in the diagram with the exception of the core, known as Area 0.
6. Redistribute routing information from RIP into OSPF. The RIP network should use default routing to access the rest of the network and Internet.

7. In the RIP area, implement EZ IP for users.
8. This International Travel Agency network will be multihomed to ISP1A. The primary link will be a T3 connection. A backup T1 link will also be configured. All outbound and inbound traffic are to use the T3 link. The T1 link should be used only if the T3 link goes down.
9. (Optional) A firewall must be configured on the SanJose3 ASBR. This firewall should allow all traffic originating inside AS 200 to pass freely. No traffic originating from outside AS 200 should be permitted into the network.
10. Document the configuration and any difficulties that were encountered.
11. What were the implementation issues or limitations?
12. List two suggestions for improving this network configuration and design.