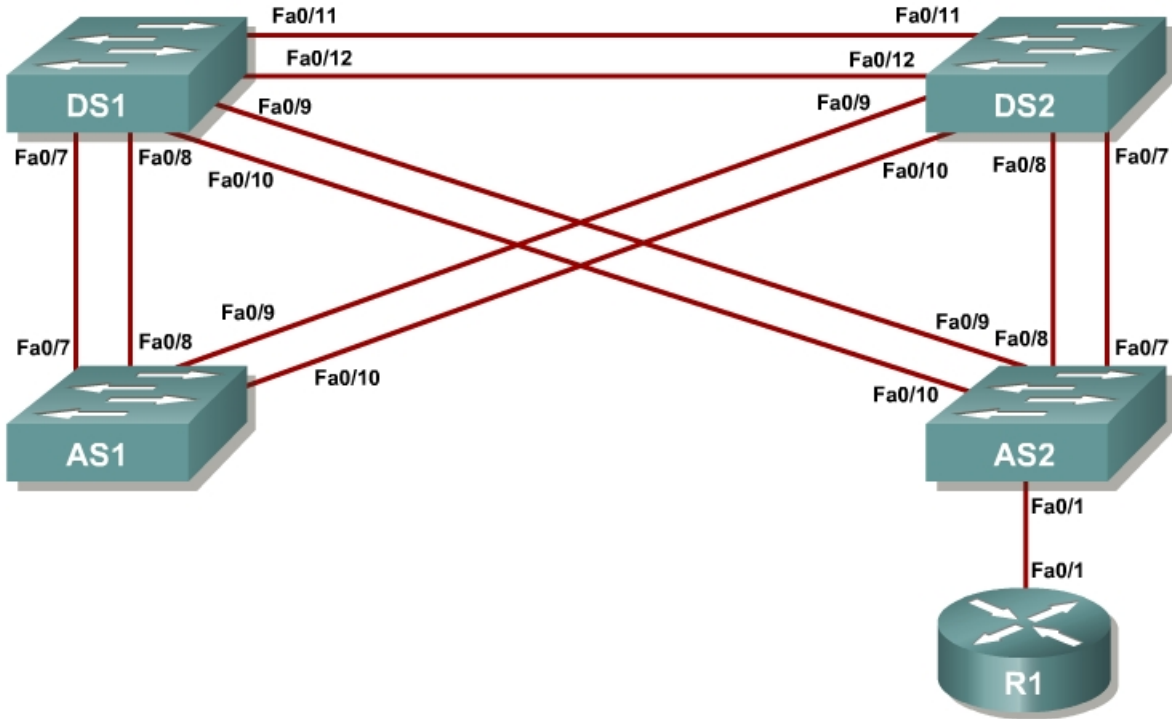


Case Study 1 VLANs, VTP and Inter-VLAN Routing



VLAN	Name
10	Red
20	Blue
30	Orange
40	Green

Instructions

Plan, design, and implement the International Travel Agency switched network as shown in the diagram and described below. Implement the design on the lab set of switches. Verify that all configurations are operational and functioning according to the guidelines given.

Scenario

You will need to configure a group of switches for the International Travel Agency. It has two distribution switches, DLS1 and DLS2, and two access layer

switches, which are ALS1 and ALS2. You will have to design the addressing scheme to use here. The address space you can use is the 172.16.0.0/16 range. You may subnet it any way you want, although it is recommended for simplicity purposes to use /24 subnets.

- Disable the links between the access layer switches.
- Place all switches in the VTP domain CISCO. Make DLS1 the VTP server and all other switches VTP clients.
- Create the VLANs shown in the VLAN table and assign the names given. For subnet planning, allocate a subnet for each VLAN.
- Make DLS1 the primary spanning-tree root for all VLANs. Make DLS2 the backup root.
- Make F0/12 between DLS1 and DLS2 a layer 3 link and assign a subnet to it.
- Create a loopback interface on DLS1 and assign a subnet to it.
- Make F0/11 between DLS1 and DLS2 an ISL trunk link.
- Configure all other trunk links using 802.1q.
- Make sure that all inter-switch links are statically set as trunks.
- The links from DLS1 to each access switch must be bound together in an EtherChannel.
- Enable portfast on all access ports.
- Put F0/15 through F0/17 on ALS1 and ALS2 in VLAN 10. Place F0/18 and F0/19 on ALS1 and ALS2 in VLAN 20. Place F0/20 on ALS1 and ALS2 in VLAN 30.
- Create an 802.1q trunk link between R1 and ALS2. Allow only VLANs 10 and 40 to pass through the trunk.
- Give R1 subinterfaces in VLANs 10 and 40.
- Create an SVI interface on DLS1 in VLANs 20, 30 and 40. Create an SVI interface on DLS2 in VLAN 10, an SVI interface on ALS1 in VLAN 30, and an SVI interface on ALS2 in VLAN 40.
- Enable IP routing on DLS1. On R1 and DLS1, configure EIGRP for the whole major network (172.16.0.0/16) and disable automatic summarization.