Lab 3: Spanning Tree Protocol and Physical Security

Overview: In this lab project, Spanning Tree Protocol (STP) is configured on the 3 switches in the lab environment. The version of STP must be supported by the device deployed on the network. Additionally, physical network security and inline documentation is required for all ports and VLANs.

Deploy the following architecture where **XX** is the assigned Laboratory Group #.

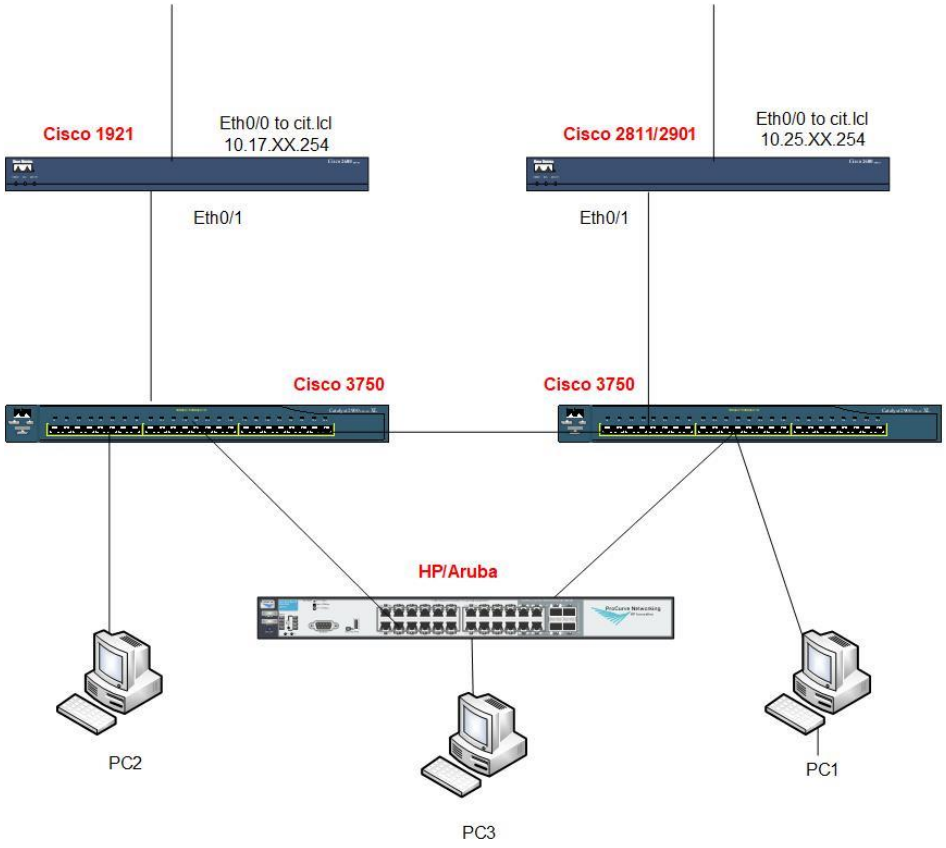

Figure 1 – Network Architecture for Lab 3

Primary Objectives

- Form the loop between the 3 switches in the diagram to prepare to implement Spanning Tree Protocol (STP) the network shown above in Figure 1.
- Configure MST protocol for all VLANs on the network.
    - Use 2 Instances within MST to provide the VLAN XX on one instance and VLAN 1XX and VLAN 2XX on the other instance. Have VLAN XX is set to have the frames to travel primarily on the left side of the network and VLAN 1XX and VLAN 2XX are travel on the right side of the network.
    - Configure end device ports for use on the STP configuration.
- Show traffic patterns by using appropriate methods to determine the path of the frame/packet through the network.
- Configure all networking devices (Switches and Routers) with proper names following the g**XX**sw**Y** or g**XX**rtr**Y** where **XX** is the assigned group number and **Y** is an assigned number by the network administrator.

- Verify all passwords are not set to a default.
- Place appropriate descriptions on all used interfaces and VLANS for the switches and routers for inline documentation purposes.
- Shutdown all unused ports on all networking devices within you network for physical security purposes.
- Test all ports and VLANs with device to test network connectivity through the newly configured Spanning Tree protocol on the network.
- Demonstrate knowledge of where the Root Bridge is located.
- Demonstrate knowledge of where the Blocking Ports, Root Ports, and Designated Ports are located on the Network Diagram.
- Identify priorities of all switches in the STP configuration.