Justin Sterlacci  
Internetworking  
Professor Cannistra  
February 2nd , 2023

**Lab 2 Lab Report**

**Lab Description:**   
Create a topology that will allow multi-connection switches to be set up, as well as creating and setting up new VLANs. You must also Set up Spanning-Tree Protocol and VTP Configuration.   
  
**Topography:**  
Diagram

Description automatically generated  
  
Syntax:

CLI Command Description Mode of Cisco OIS

|  |  |  |
| --- | --- | --- |
| ping | Used to ping ip addresses from a PC. You can ping other PC’s or switches with this. | Windows CMD |
| Logging synchronous | Forces error messages to be on its own line, rather than interrupt a line that you’re typing on. | Console Line |
| Enable | Enter Privileged Mode | User Mode |
| Conf t | Enter Global Configurator Mode | Privileged Mode |
| Line con 0 | Enter the Console Line | Global Configurator Mode |
| Hostname | Used to name a switch or PC | Privileged Mode |
| Password | Used to set a password | Privileged Mode |
| Login | Used to require the password to utilize User Mode | Global Configurator Mode |
| Enable password | Used to set an unencrypted Privileged Password | Global Configurator Mode |
| Show ip interface brief (sh ip int brief) | Displays a brief list of all interfaces | Privileged Mode |
| vtp domain INETLAB | Renames the VTP domain from NULL to INETLAB | Global Configurator Mode |
| Vtp password cisco | Set a password within the VTP Domain | Global Configurator Mode |
| Vtp mode server/client | Sets the vtp mode between server or client, in the case of this lab. | Global Configurator Mode |
| Switchport mode access | Changes the mode of a switchport to access mode | Line configuration Mode (within a vlan) |
| Switchport trunk encapsulation dot1q | Sets up the switch to switch connect to use IEEE 802.1Q encapsulation | Within a vlan with a multi-Connection switch |
| Switchport mode trunk | Sets the mode for the switchport to trunk | Within a vlan |
| Spanning-tree vlan xx root primary | Setting up a spanning tree within a vlan, and setting it to root primary | Privileged mode |

**Verification:**  
F) from PC1 to PC3  
Text

Description automatically generated

G) From Switch1 to Switch 4  
Text, letter

Description automatically generated

H) Status of STP:  
Vlan 13:  
 Text

Description automatically generated  
Vlan 24:  
Text, letter

Description automatically generated  
Vlan 56:   
Text, letter

Description automatically generated

**Conclusion:**

This lab was quite a bit more complex than the last, mainly due to the addition of STP and VTP configurations. I ran into a bit of a hiccup at the end of the lab, where my PC’s couldn’t reach each other, however this was quickly solved as I realized I forgot to fully set up all of the Fast Ethernet ports. Originally I only set up the vlan’s that PC’s were connected to, instead of PC’s and switches. This lab took quite a bit of thinking, but retrospectively wasn’t terribly difficult due to most of the switches needing the same commands to set it up fully.