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Internetworking  
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**Lab 5 Lab Report**

**Lab Description:**   
Set up a Network with Static Line Functionality using Routers, Switches, and PC’s.   
  
**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 |
| Encapsulation dot1q xx | Sets up a VLAN in IEEE 802.1Q within a router | ROUTER Line Configuration Mode(within a sub interface) |
| Ip route (ip) (SM) (ip) | Sets up a static IP Route | Interface Mode |

**Verification:**

C)  
Text

Description automatically generated with medium confidencePC1 – Router1

Text

Description automatically generatedPC2-Router2

Text

Description automatically generatedPC3-Router3

Text

Description automatically generatedPC4-Router4

D)

Text

Description automatically generatedIP Route Table from Router1

E)  
Text, letter

Description automatically generatedPing from Router1-Router4. I am also able to ping every other Router, thus having full connectivity.

F)  
A picture containing graphical user interface

Description automatically generatedPing and a Tracert from PC1-PC4. I can do PC1 to any other PC, thus having full connectivity.

**Conclusion:**

This Lab wasn’t too hard compared to Lab 4 as it took much less time to set up the basic network. I ran into some confusion when it came to the static routing, but once I checked my notes again it clicked, and I was able to complete this Lab to have full connectivity.