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Internetworking  
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**Lab 8 Lab Report**

**Lab Description:**   
Set up a Network, Static Routing, and Dynamic OSPF routing in both IPv4 and IPv6.

**Topography:**  
Diagram, map

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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 |
| Router rip | Sets the Router into RIP mode | Global Configuration |
| Version 2 | Sets the RIP version to version 2 | Global Configuration |
| Network (ip address) | Sets the Network for RIPv2 networking | Global Configuration |
| Ipv6 router ospf 1 | Sets the router to have OSPFv3 enabled | Global Configuration |
| Passive-interface (interface) | Will set the selected interface as a passive interface in OSPFv3 | Router Line Configuration mode |
| Ipv6 ospf 1 area 0 | Sets the passive interface in area 0 | Interface Configuration |

**Verification:**A)  
Text, letter

Description automatically generated

B)  
Graphical user interface, text

Description automatically generated

C)  
Text

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D)  
Text

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E)  
Text

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**Conclusion:**I couldn’t get the routing for IPv6 to work properly, as each time I attempted to resolve this issue, it continued to not function. I am unsure as to why this is happening as I believe I set up ipv6 static routing properly. This whole lab was a little bit of a learning curve as I have never used IPv6 before this point.