Problems

Throughout this lab, we had many problems that hindered our progress in finishing the lab. One of the first problems we had was in setting up OSPFv3. We started off by setting up IPv4 on all the routers and OSPF, which worked, and everything could ping. Then, we set up IPv6 and OSPFv3, and the routers could not ping, and there was a “Destination Net Unreachable” error. After some trial and error and looking, we found out that we had one of our commands misspelled on all the routers. We misspelled the “ipv6 ospf 1 area 0” command and had it set to IPv4, so it didn’t work. After figuring this out, all the routers could ping each other.

The next big problem we had was redistributing the OSPF and EIGRP processes. We had setup EIGRP on R5, and EIGRP and OSPF on R4, but the EIGRP network could not be accessed by the other routers. After some research online, we figured out that we had to redistribute OSPF by using the redistribute command on both sides of R4. After this, we immediately began seeing improvements in that R5 was able to be pinged by the PCs and routers.

The next big problem we had was with Wireshark. We opened up Wireshark, and there were no OSPF packets. After receiving some advice, we realized that we had to setup new routers within Areas 1 and 2. Doing this would allow us to see the OSPF packets going through these areas, because before there was only one router in each of these areas. We set up the new routers 6 and 7, and still we could not find any OSPF packets. Our next mistake was a smaller mistake, we were not capturing packets through the Ethernet. After this was resolved, we finally could find LSA packets and were able to find LSA type 7s representing not-so-stubby areas, but we could not find the correct LSA type 3s representing totally stubby areas. In order to figure this out, we needed help from our teacher, and we found out that we needed to place a switch in the totally stubby area and set up SPAN on it. After we set up SPAN on this switch and began to capture packets again, we finally found the correct LSA type 3s which have default routes in them of 0.0.0.0. Overall, this lab was really helpful for us not in just learning a lot about LSAs and how to set up stubby areas, but also in how to monitor packets with Wireshark and how to troubleshoot for big problems in our networks.