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Networking Fundamentals

Lab 5 – Switch Troubleshoot

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Introduction:

By completing this lab, you will get to put your troubleshooting skills to the test. This will allow you to apply your knowledge and figure out issues that are in the network and resolve them to make sure all devices work.

Methodology:

First, I took notes on what devices were connected to what ports and what vlan’s each devices needs to be on. Next, I went through each device one by one to add them to the correct vlan and encapsulation. I also made sure that each vlan was on and running. Then by pinging each device you can make sure your configurations work correctly.

Observation:

|  |  |  |
| --- | --- | --- |
| Problem Description | Diagnostic Command | Resolution Command |
| Interface et0/1 is not native on vlan 1 | Show interface trunk | Conf t  Int et0/1  Switchport trunk native vlan 1 |
| Switch 1: vlan 1 admin down | Show ip interface brief | Conf t  Int vlan 1  No shutdown |
| Switch 2: vlan 10 shutdown | Show vlan brief | Conf t  Int vlan 10  No shutdown |
| Switch 2: A1, A2, A3 are not in vlan 10 | Show vlan brief | Conf t  Int et1/1, et1/2, et1/3  Switchport mode access  Switchport access vlan 10 |
| Switch 2: int e0/1 admin is down | Show ip interface brief | Conf t  Int et0/1  No shutdown |
| Switch 2: vlan 1 admin is down | Show ip interface brief | Conf t  Int vlan 1  No shutdown |
| Switch 3: ports not on dot1q encapsulation | Show interface trunk | Conf t  Int range et01/0-3  Switchport trunk encapsulation dot1q |
| Switch 3: Vlan 1 admin is down | Show ip interface brief | Conf t  Int vlan 1  No shutdown |

Analysis:

Troubleshooting can be difficult at times. Finding each little piece that is wrong with a device can be hard to find. Writing down what needs to be done and keeping thoughts in order is the best way to make sure you troubleshoot everything accordingly.

Conclusion:

It was difficult to find all the issues wrong with the network. Keeping my thoughts in order was the best way to keep everything in order. Drawing out a table and what was done to fix the issue helped keep my thoughts in order and see what I had already done. Looking back over past labs for troubleshooting techniques to help find issues was a big thing that helped me.