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**CLASS DAY & TIME:2-4pm, Friday, 14 August 2020**

**Lab Viewing Device MAC Addresses & Switch MAC Address Table**

**Part 1 Step 2:** Configure the IPv4 address for PC-A and PC-B**.**

c. \_\_No\_\_\_\_\_\_Because the switchs haven’t been configured the IP Address yet\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. \_\_ No\_\_\_\_\_\_Because the switchs haven’t been configured the IP Address yet\_\_\_\_\_

e. \_\_Yes\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_Because the IP address of both PCs have been configured\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f. \_\_ Yes\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_Because the IP address of both PCs have been configured\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 5:** Verify network connectivity

a. \_\_\_\_\_\_\_Yes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b.. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Yes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 2: Display, Describe, & Analyze Ethernet MAC, Step 1:** Analyze the MAC address for the PCs’ NICs

a. i) \_\_\_\_\_\_\_\_\_\_\_5C-26-0A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ii)\_\_\_\_\_\_\_24-2A-60\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| b & c |  | PC A | PC B |
|  | OUI | 98-90-96 | 98-90-96 |
|  | Serial number | 9A-44-65 | 9A-43-E3 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Step 2:** | | Analyze MAC address for the S1 F0/6 int | **Step 3**: Analyze the MAC address for the S2 F0/18 int |
| b | MAC | d4ad.71a8.c606 | b. 7035.09e2.2a12 |
| c | serial | a8.c606 | c. e2.2a12 |
| d | OUI | d4ad.71 | d. 7035.09 |
| e | Because the MAC address can be changed by a software command. The actual address (BIA) will still be present. | | |

**Part 3: Examine the Switch MAC Address Table Step 1**: Record network device MAC addresses

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a | .PC A | 98-90-96-9A-44-65 | PC B | 98-90-96-9A-43-E3 |
| b | S1 F0/1 | d4ad.71a8.c601 | S2 F 0/1 | 7035.09e2.2a01 |
| c | S1 VLAN 1 | d4ad.71a8.c640 | S2 VLAN 1 | 7035.09e2.2a40 |

**Step 2**: Display each switch’s MAC address table.

b. \_\_\_\_Yes, MAC addresses of PC A, PC B and S2 F0/1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| c | Switch 1 | | | Switch 2 | | |
|  | MAC address | switch port | device | MAC address | switch port | device |
|  | 98-90-96-9A-44-65 | Fa0/1 | PC A | 98-90-96-9A-44-65 | Fa0/1 | PC A |
|  | 98-90-96-9A-43-E3 | Fa0/18 | PC B | 98-90-96-9A-43-E3 | Fa0/6 | PC B |
|  | 7035.09e2.2a01 | Fa0/1 | Switch 2 | d4ad.71a8.c601 | Fa0/1 | Switch 1 |

d. \_\_\_I could tell via the first 6 digits of the MAC address\_(OUI)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 3:** Clear each switch’s MAC address table and display the MAC address table again

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_No\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_No\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 4**: From PC-B, ping the devices on the network and observe the switch MAC address table

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Yes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_No\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_No\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Lab – Use Wireshark to Examine Ethernet Frames**

**Step 2**. a (IP address).\_10.233.91.104\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; b (default gateway).\_10.233.0.1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c (MAC address)\_\_\_\_\_\_60-F2-62-8A-62-C7\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 4**

1. It’s a broadcast ARP (ff:ff:ff:ff:ff:ff)
2. Because the PC hasn’t got the ARP of the destination yet, just the one of source which sent to the PC. In order to check the destination, the PC will send the data to all ARP except for the source one. As the result, only the true destination is able to respond to the ping request.
3. Source MAC address: f0:1f:af:50:fd:c8
4. Source OUI: f0:1f:af
5. The first 6 digits of the MAC address
6. Source NIC serial number: 50:fd:c8