## 7.2.7 Lab – View Network Device MAC Addresses Answers

## Part 1:  Configure Devices and Verify Connectivity

### Step 2:  Configure the IPv4 address for the PC.

1. Were the pings successful? Explain.

Answer: No. The switch has not been configured yet.

### Step 4:  Verify network connectivity.

1. Were the pings successful?

Answer: The pings should be successful.

## Part 2:  Display, Describe, and Analyze Ethernet MAC Addresses

### Step 1:  Analyze the MAC address for the PC-A NIC.

1. What is the OUI portion of the MAC address for this device?

Answer: 5C-26-0A

1. What is the serial number portion of the MAC address for this device?

Answer: 24-2A-60

1. Using the example above, find the name of the vendor that manufactured this NIC.

Answer: Dell Inc.

1. From the command prompt on PC-A, issue the **ipconfig /all**command and identify the OUI portion of the MAC address for the NIC of PC-A.

Answer: 00-90-21

1. Identify the serial number portion of the MAC address for the NIC of PC-A.

Answer: b1-8b-39

1. Identify the name of the vendor that manufactured the NIC of PC-A.

Answer: Cisco systems

### Step 2:  Analyze the MAC address for the S1 F0/6 interface.

1. What is the MAC address for VLAN 1 on S1?

Answer: 0060.5ca7.38cc

1. What is the MAC serial number for VLAN 1?

Answer: a7-38-cc

1. What is the OUI for VLAN 1?

Answer: 00-60-5c

1. Based on this OUI, what is the name of the vendor?

Answer: Cisco Systems.

1. What does bia stand for?

Answer: Burned in address.

1. Why does the output show the same MAC address twice?

Answer: The MAC address can be changed via a software command. The actual address (bia) will still be there. It is shown in the parenthesis.

1. What Layer 2 addresses are displayed on S1?

Answer: S1 VLAN 1 and PC-A MAC addresses

1. What Layer 3 addresses are displayed on S1?
2. Answer: S1 and PC-A IP addresses

### Step 3:  View the MAC addresses on the switch.

1. Did the switch display the MAC address of PC-A? If you answered yes, what port was it on?

Answer: Yes. Port should be F0/6.

# Reflection Questions

1. Can you have broadcasts at the Layer 2 level? If so, what would the MAC address be?

Answer: You can have broadcasts at Layer 2. ARP will use broadcasts to find MAC address information. The broadcast address is FF.FF.FF.FF.FF.FF.

1. Why would you need to know the MAC address of a device?

Answer: There could be a variety of reasons. In a large network, it may be easier to pinpoint location and identity of a device by its MAC address instead of its IP address. The MAC OUI will list the manufacturer, which may help narrow down the search. Security measures can be applied at Layer 2, so knowledge of allowable MAC addresses is needed.