CSIS 330 – Lab 10: Packet Tracer Address Resolution Protocol

Answer Template

1. Complete this template with your answers.
2. Fill in your answers Bold and Red
3. Examine an ARP Request
   1. Generate ARP requests by pinging 172.16.31.3 from 172.16.31.2.
      1. Open the PDU and record the destination MAC address. Is this address listed in the table above? **No**
      2. How many copies of the PDU did **Switch1** make? **3**
      3. What is the IP address of the device that accepted the PDU? **172.16.31.3**
      4. Open the PDU and examine Layer 2. What happened to the source and destination MAC addresses?

**Source became the destination. FFFF:FFFF:FFFF turned into MAC address of 172.16.31.3**

* + 1. Click **Capture/Forward** until the PDU returns to **172.16.31.2**. How many copies of the PDU did the switch make during the ARP reply? **1**
  1. Examine the ARP table.
     1. Note that the ICMP packet reappears. Open the PDU and examine the MAC addresses. Do the MAC addresses of the source and destination align with their IP addresses? **Yes**
     2. To what IP address does the MAC address entry correspond? **172.16.31.3**
     3. In general, when does an end device issue an ARP request?

**When it does not know the receiver’s MAC address**

1. Examine a Switch MAC Address Table
   1. Generate additional traffic to populate the switch MAC address table.
      1. Enter the **ping 10.10.10.3** command. How many replies were sent and received?

**4 sent, 4 received**

* 1. Examine the MAC address table on the switches.
     1. Click **Switch1**and then the **CLI** tab. Type enable and then Enter the **show mac-address-table** command. Do the entries correspond to any of those in the **table above?** **Yes**
     2. Click **Switch0**, then the **CLI** tab. Enter the **show mac-address-table** command. Do the entries correspond to any of those in the **table above?** **No**
  2. Hint: We did not ping across the router or 10.10.10.x Network
     1. Why are two MAC addresses associated with one port?
  3. Because both devices connect to one port through the Access Point

**Deliverables:**

Save your Answer Template using the convention of [your first initial] + [your last name] + “\_Lab10”.

For example: Joe Smith will save his file template as JSmith\_Lab10.doc .

Submit This **Answer Template** to Blackboard by attaching it to the appropriate assignment link.

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