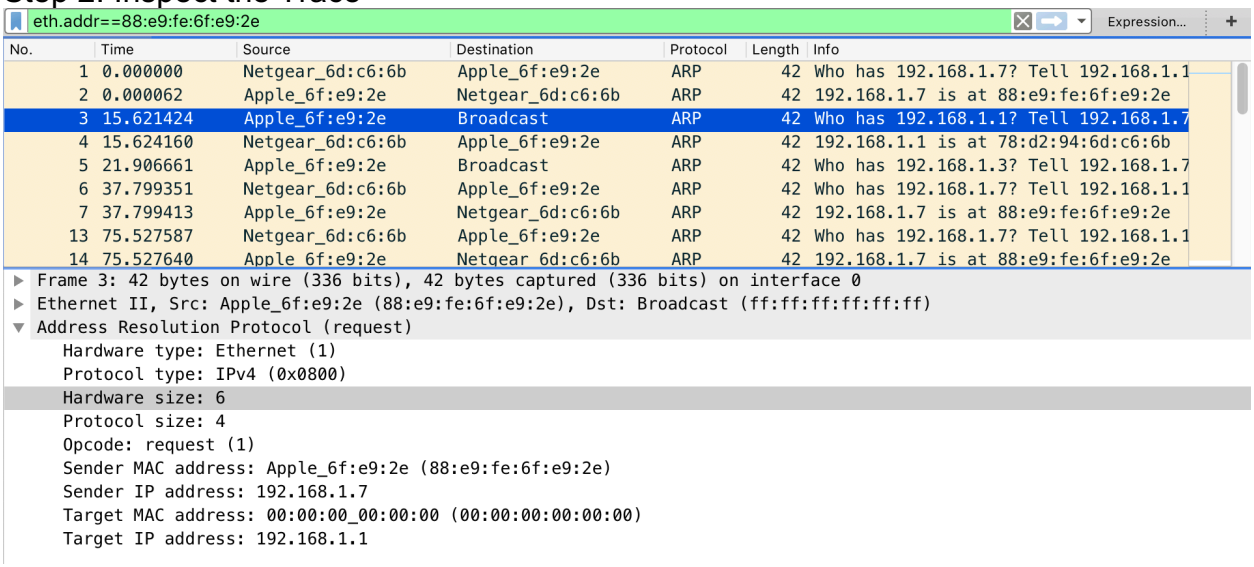
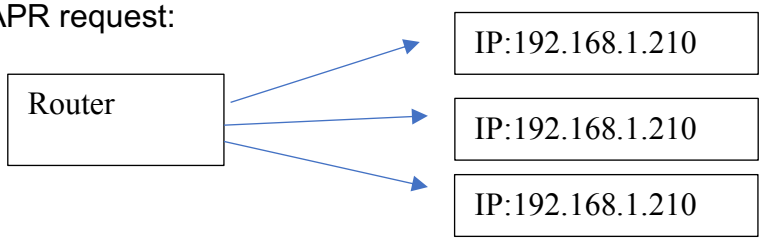
Lab Exercise – ARP Ying Di

Step 2: Inspect the Trace



Step 3: ARP request and reply
drawing of the ARP exchange:
APR request:



Source IP: 192.168.1.1
Source MAC address: 78:d2:94:6d:c6:6b
Target IP: 192.168.1.7
Target MAC address: 00:00:00:00:00:00

APR reply:

Source IP: 192.168.1.7
Source MAC address: 88:e9:fe:6f:e9:2e
Target IP: 192.168.1.1
Target MAC address: 78:d2:94:6d:c6:6b

Step 4: Details of ARP over Ethernet
Q：1. What opcode is used to indicate a request? What about a reply?

A：“1” is request; “2” is reply

Q: 2. How large is the ARP header for a request? What about for a reply?
A：A request is 42 bytes long. A reply is also 42 bytes long.

Q: 3. What value is carried on a request for the unknown target MAC address?
A: It is “Sender MAC address”

Q: 4. What Ethernet Type value which indicates that ARP is the higher layer protocol?
A: “Protocol type: IPV4(0x0800)” under “Address Resolution Protocol”, It indicates that the upper layer protocol is Internet Protocol version 4 (IPv4)

Q: 5. Is the ARP reply broadcast (like the ARP request) or not?
A: Yes