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CSC323-A

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**ARP**

1. The 48-bit Ethernet address of my computer is 44:37:e6:1e:0f:b1.
2. The 48-bit destination address of the Ethernet frame is 08:95:2a:2b:1c:6c. This is the Ethernet address of my router.
3. The hex value for my two-byte frame is 0x0800. The upper layer protocol this correspond to is IPv4.
4. In the Ethernet frame, the “G” in GET is 47 bytes.
5. The value of the Ethernet source address is 08:95:2a:1b:1c:6c. The device that has this address is my router.
6. The destination address in the Ethernet frame is 44:37:e6:1e:0f:b1. This is the Ethernet address of my computer.
7. The hexadecimal value for the two-byte Frame type field is 0x0800. The upper layer protocol this corresponds to is IPv4.
8. In the Ethernet frame, the “O” in OK is 44 bytes.
9. The contents of my computer’s ARP cache is IP, PA, and Type. IP stands for internet address, PA stands for physical address, and Type stands for protocol type.
10. In the Ethernet frame with the ARP request message, the hexadecimal value for the source address is ec:9b:f3:f9:50:0a, and the hexadecimal value for the destination address is ff:ff:ff:ff:ff:ff.
11. The hexadecimal value for the two-byte Ethernet Frame type field is 0x0806. The upper layer protocol this corresponds to is ARP.
12. From the very beginning of the Ethernet frame, the ARP opcode fields begins at 20 bytes. The value of the opcode within the ARP-payload part of the Ethernet frame is 0x0001. Yes, the ARP contain the IP address of the sender which is 192.168.0.16. In the ARP request, the “question” appears at 00:00:00:00:00:00.
13. In the ARP reply, the opcode field begins at 20 bytes. The value of the opcode field is 2. The “answer” to the earlier ARP request is 08:95:2a:1b:2c:6c.
14. In the ARP reply message, the destination address in hexadecimal value is 08:95:2a:1b:2c:6c, and the source address is the exact same value.
15. There is no reply because my machine is not the one that sent the request. Therefore, I did not receive the reply.