

## Lab 6 – MAC/ARP

```
Command Prompt
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 12:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

Ethernet adapter Ethernet 2:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
IPv6 Address. . . . . : 2600:8806:6202:1d00:b91c:fc89:27b8:2bb
Temporary IPv6 Address. . . . : 2600:8806:6202:1d00:a4d9:41ff:3ebe:1c38
Link-local IPv6 Address . . . : fe80::b91c:fc89:27b8:2bb%6
IPv4 Address. . . . . : 192.168.0.15
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : fe80::3e37:86ff:fe08:bada%6
                          192.168.0.1

Ethernet adapter Bluetooth Network Connection:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

C:\Users\yddi>
```

## Questions:

1. What is the MAC address from your computer?

f8-34-41-ac-dc-da

Wireshark Lab 6\_Yakubu Iddirisu.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
145	12:55:09.017432	192.168.0.15	128.119.245.12	HTTP	466	GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1
153	12:55:09.046662	128.119.245.12	192.168.0.15	HTTP	535	HTTP/1.1 200 OK (text/html)

> Frame 145: 466 bytes on wire (3728 bits), 466 bytes captured (3728 bits) on interface 0

▼ Ethernet II, Src: IntelCor\_ac:dc:da (f8:34:41:ac:dc:da), Dst: Netgear\_08:ba:da (3c:37:86:08:ba:da)

- > Destination: Netgear\_08:ba:da (3c:37:86:08:ba:da)
- > Source: IntelCor\_ac:dc:da (f8:34:41:ac:dc:da)
- Type: IPv4 (0x0800)

> Internet Protocol Version 4, Src: 192.168.0.15, Dst: 128.119.245.12

> Transmission Control Protocol, Src Port: 55418, Dst Port: 80, Seq: 1, Ack: 1, Len: 412

> Hypertext Transfer Protocol

0000 3c 37 86 08 ba da f8 34 41 ac dc da 08 00 45 00 <7.....4 A.....E>

Frame (frame), 466 bytes

Packets: 404 · Displayed: 2 (0.5%) · Dropped: 0 (0.0%) Profile: Default

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2. What is the destination MAC address?

3c-37-86-08-ba-da

Wireshark Lab 6\_Yakubu Iddirisu.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
145	12:55:09.017432	192.168.0.15	128.119.245.12	HTTP	466	GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1
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- Type: IPv4 (0x0800)

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0000 3c 37 86 08 ba da f8 34 41 ac dc da 08 00 45 00 <7.....4 A.....E>

Frame (frame), 466 bytes

Packets: 404 · Displayed: 2 (0.5%) · Dropped: 0 (0.0%) Profile: Default

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3. What device has the MAC address shown in the destination?

The Netgear home router connected to my laptop.

Wireshark Lab 6\_Yakubu Iddirisu.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
145	12:55:09.017432	192.168.0.15	128.119.245.12	HTTP	466	GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1
153	12:55:09.046662	128.119.245.12	192.168.0.15	HTTP	535	HTTP/1.1 200 OK (text/html)

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▼ Ethernet II, Src: IntelCor\_ac:dc:da (f8:34:41:ac:dc:da), Dst: Netgear\_08:ba:da (3c:37:86:08:ba:da)

> Destination: Netgear\_08:ba:da (3c:37:86:08:ba:da)

> Source: IntelCor\_ac:dc:da (f8:34:41:ac:dc:da)

Type: IPv4 (0x0800)

> Internet Protocol Version 4, Src: 192.168.0.15, Dst: 128.119.245.12

> Transmission Control Protocol, Src Port: 55418, Dst Port: 80, Seq: 1, Ack: 1, Len: 412

> Hypertext Transfer Protocol

0000 3c 37 86 08 ba da f8 34 41 ac dc da 08 00 45 00 <7>...4 A...E

Frame (frame), 466 bytes

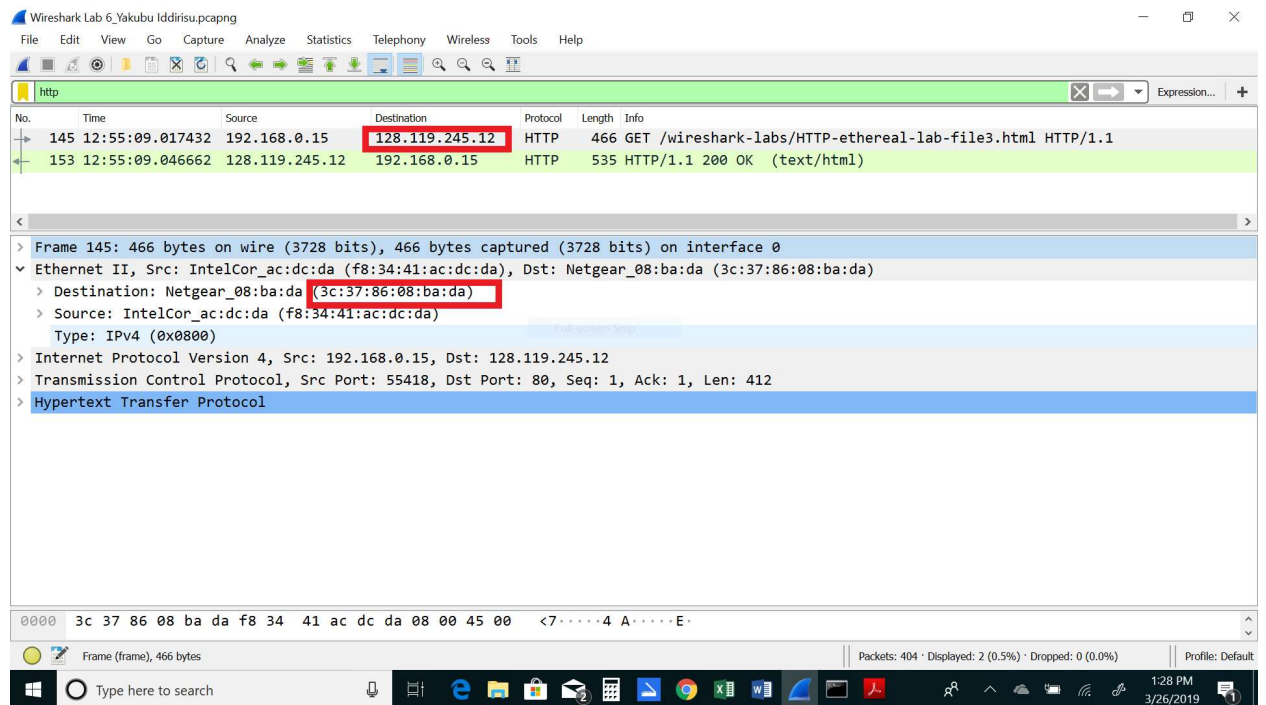
Packets: 404 · Displayed: 2 (0.5%) · Dropped: 0 (0.0%) Profile: Default

Type here to search

1:28 PM 3/26/2019

4. Explain the relationship between the destination MAC address and the destination IP address?

The destination MAC address is actually the MAC address of the home router connected to my laptop 3c-37-86-08-ba-da. And the destination IP address is the IP address of the destination server 128.119.245.12. Both the destination MAC address and the destination IP address do not belong to the same device.



5. Using the terminal (cmd in Windows, Terminal in mac) run a command to display your full ARP list table. (Find out what the command is, and print a full screen shot of your result.)

ARP -a

```
Command Prompt
Microsoft Windows [Version 10.0.17134.648]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\yiddi>ARP -a

Interface: 192.168.0.15 --- 0x6
Internet Address      Physical Address      Type
192.168.0.1           3c-37-86-08-ba-da    dynamic
192.168.0.11          34-41-5d-b0-5a-63    dynamic
192.168.0.255         ff-ff-ff-ff-ff-ff    static
224.0.0.2             01-00-5e-00-00-02    static
224.0.0.22            01-00-5e-00-00-16    static
224.0.0.251           01-00-5e-00-00-fb    static
224.0.0.252           01-00-5e-00-00-fc    static
239.255.255.250       01-00-5e-7f-ff-fa    static
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 169.254.94.242 --- 0x33
Internet Address      Physical Address      Type
169.254.255.255       ff-ff-ff-ff-ff-ff    static
224.0.0.2             01-00-5e-00-00-02    static
224.0.0.22            01-00-5e-00-00-16    static
224.0.0.251           01-00-5e-00-00-fb    static
224.0.0.252           01-00-5e-00-00-fc    static
239.255.255.250       01-00-5e-7f-ff-fa    static
255.255.255.255       ff-ff-ff-ff-ff-ff    static

C:\Users\yiddi>
```

