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Assignment 4

CSCE 416

\*\* Used Traces Provided due to errors running on Windows 11 (Emailed about it) \*\*

**Part 1**

No. Time Source Destination Protocol Length Info

1036 1.507967 IntelCor\_07:8a:d7 Tp-LinkT\_80:5f:36 0x0800 579 IPv4

Frame 1036: 579 bytes on wire (4632 bits), 579 bytes captured (4632 bits) on interface \Device\NPF\_{9055B7F9-CAC0-430D-88B0-90333F70D926}, id 0

Ethernet II, Src: IntelCor\_07:8a:d7 (28:7f:cf:07:8a:d71), Dst: Tp-LinkT\_80:5f:36 (84:d8:1b:80:5f:362)

Destination: Tp-LinkT\_80:5f:36 (84:d8:1b:80:5f:36)

Source: IntelCor\_07:8a:d7 (28:7f:cf:07:8a:d7)

Type: IPv4 (0x0800)

Data (565 bytes)

0000 45 00 02 35 b1 85 40 00 80 06 00 00 0a 05 01 e0 E..5..@.........

0010 80 77 f5 0c f9 f1 00 50 6c 42 da 38 71 33 f2 10 .w.....PlB.8q3..

0020 50 18 02 01 83 90 00 004 47 45 54 20 2f 77 69 72 P.......GET /wir

0030 65 73 68 61 72 6b 2d 6c 61 62 73 2f 48 54 54 50 eshark-labs/HTTP

0040 2d 65 74 68 65 72 65 61 6c 2d 6c 61 62 2d 66 69 -ethereal-lab-fi

0050 6c 65 33 2e 68 74 6d 6c 20 48 54 54 50 2f 31 2e le3.html HTTP/1.

0060 31 0d 0a 48 6f 73 74 3a 20 67 61 69 61 2e 63 73 1..Host: gaia.cs

0070 2e 75 6d 61 73 73 2e 65 64 75 0d 0a 43 6f 6e 6e .umass.edu..Conn

0080 65 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 ection: keep-ali

0090 76 65 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 ve..Upgrade-Inse

00a0 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure-Requests: 1

00b0 0d 0a 55 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f ..User-Agent: Mo

00c0 7a 69 6c 6c 61 2f 35 2e 30 20 28 57 69 6e 64 6f zilla/5.0 (Windo

00d0 77 73 20 4e 54 20 31 30 2e 30 3b 20 57 69 6e 36 ws NT 10.0; Win6

00e0 34 3b 20 78 36 34 29 20 41 70 70 6c 65 57 65 62 4; x64) AppleWeb

00f0 4b 69 74 2f 35 33 37 2e 33 36 20 28 4b 48 54 4d Kit/537.36 (KHTM

0100 4c 2c 20 6c 69 6b 65 20 47 65 63 6b 6f 29 20 43 L, like Gecko) C

0110 68 72 6f 6d 65 2f 39 35 2e 30 2e 34 36 33 38 2e hrome/95.0.4638.

0120 36 39 20 53 61 66 61 72 69 2f 35 33 37 2e 33 36 69 Safari/537.36

0130 20 45 64 67 2f 39 35 2e 30 2e 31 30 32 30 2e 35 Edg/95.0.1020.5

0140 33 0d 0a 41 63 63 65 70 74 3a 20 74 65 78 74 2f 3..Accept: text/

0150 68 74 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f 6e html,application

0160 2f 78 68 74 6d 6c 2b 78 6d 6c 2c 61 70 70 6c 69 /xhtml+xml,appli

0170 63 61 74 69 6f 6e 2f 78 6d 6c 3b 71 3d 30 2e 39 cation/xml;q=0.9

0180 2c 69 6d 61 67 65 2f 77 65 62 70 2c 69 6d 61 67 ,image/webp,imag

0190 65 2f 61 70 6e 67 2c 2a 2f 2a 3b 71 3d 30 2e 38 e/apng,\*/\*;q=0.8

01a0 2c 61 70 70 6c 69 63 61 74 69 6f 6e 2f 73 69 67 ,application/sig

01b0 6e 65 64 2d 65 78 63 68 61 6e 67 65 3b 76 3d 62 ned-exchange;v=b

01c0 33 3b 71 3d 30 2e 39 0d 0a 41 63 63 65 70 74 2d 3;q=0.9..Accept-

01d0 45 6e 63 6f 64 69 6e 67 3a 20 67 7a 69 70 2c 20 Encoding: gzip,

01e0 64 65 66 6c 61 74 65 0d 0a 41 63 63 65 70 74 2d deflate..Accept-

01f0 4c 61 6e 67 75 61 67 65 3a 20 65 6e 2d 55 53 2c Language: en-US,

0200 65 6e 3b 71 3d 30 2e 39 0d 0a 43 6f 6f 6b 69 65 en;q=0.9..Cookie

0210 3a 20 5f 67 61 3d 47 41 31 2e 32 2e 32 30 34 39 : \_ga=GA1.2.2049

0220 30 31 35 36 38 37 2e 31 35 37 37 39 39 38 32 39 015687.157799829

0230 36 0d 0a 0d 0a 6....

Data: 45000235b1854000800600000a0501e08077f50cf9f100506c42da387133f21050180201…

[Length: 565]

1. **28:7f:cf:07:8a:d7**
2. **84:d8:1b:80:5f:36No it is not the ethernet address of umass. It is the IP address of the Tp-Link router, which is the link to my subnet**
3. **0x0800, this corresponds to the IP Protocol**
4. **40 bytes**

Ok Response

No. Time Source Destination Protocol Length Info

109 1.820078 Tp-LinkT\_80:5f:36 IntelCor\_07:8a:d7 0x08007 1514 IPv4

Frame 109: 1514 bytes on wire (12112 bits), 1514 bytes captured (12112 bits) on interface \Device\NPF\_{9055B7F9-CAC0-430D-88B0-90333F70D926}, id 0

Ethernet II, Src: Tp-LinkT\_80:5f:36 (84:d8:1b:80:5f:365), Dst: IntelCor\_07:8a:d7 (28:7f:cf:07:8a:d76)

Data (1500 bytes)

0000 45 00 05 dc 45 6c 40 00 2b 06 83 3b 80 77 f5 0c E...El@.+..;.w..

0010 0a 05 01 ec 00 50 cc 11 1c c6 16 40 8c df 92 e4 .....P.....@....

0020 50 10 00 ed c5 ec 00 00 48 54 54 50 2f 31 2e 31 P.......HTTP/1.1

0030 20 32 30 30 208 4f 4b 0d 0a 44 61 74 65 3a 20 4d 200 OK..Date: M

0040 6f 6e 2c 20 32 32 20 4e 6f 76 20 32 30 32 31 20 on, 22 Nov 2021

0050 30 30 3a 33 30 3a 32 39 20 47 4d 54 0d 0a 53 65 00:30:29 GMT..Se

0060 72 76 65 72 3a 20 41 70 61 63 68 65 2f 32 2e 34 rver: Apache/2.4

0070 2e 36 20 28 43 65 6e 74 4f 53 29 20 4f 70 65 6e .6 (CentOS) Open

0080 53 53 4c 2f 31 2e 30 2e 32 6b 2d 66 69 70 73 20 SSL/1.0.2k-fips

0090 50 48 50 2f 37 2e 34 2e 32 35 20 6d 6f 64 5f 70 PHP/7.4.25 mod\_p

00a0 65 72 6c 2f 32 2e 30 2e 31 31 20 50 65 72 6c 2f erl/2.0.11 Perl/

00b0 76 35 2e 31 36 2e 33 0d 0a 4c 61 73 74 2d 4d 6f v5.16.3..Last-Mo

00c0 64 69 66 69 65 64 3a 20 53 75 6e 2c 20 32 31 20 dified: Sun, 21

00d0 4e 6f 76 20 32 30 32 31 20 30 36 3a 35 39 3a 30 Nov 2021 06:59:0

00e0 32 20 47 4d 54 0d 0a 45 54 61 67 3a 20 22 31 31 2 GMT..ETag: "11

00f0 39 34 2d 35 64 31 34 37 30 62 31 36 37 30 37 66 94-5d1470b16707f

0100 22 0d 0a 41 63 63 65 70 74 2d 52 61 6e 67 65 73 "..Accept-Ranges

0110 3a 20 62 79 74 65 73 0d 0a 43 6f 6e 74 65 6e 74 : bytes..Content

0120 2d 4c 65 6e 67 74 68 3a 20 34 35 30 30 0d 0a 4b -Length: 4500..K

0130 65 65 70 2d 41 6c 69 76 65 3a 20 74 69 6d 65 6f eep-Alive: timeo

0140 75 74 3d 35 2c 20 6d 61 78 3d 31 30 30 0d 0a 43 ut=5, max=100..C

0150 6f 6e 6e 65 63 74 69 6f 6e 3a 20 4b 65 65 70 2d onnection: Keep-

0160 41 6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 54 Alive..Content-T

0170 79 70 65 3a 20 74 65 78 74 2f 68 74 6d 6c 3b 20 ype: text/html;

0180 63 68 61 72 73 65 74 3d 55 54 46 2d 38 0d 0a 0d charset=UTF-8...

0190 0a 3c 68 74 6d 6c 3e 3c 68 65 61 64 3e 20 0a 3c .<html><head> .<

01a0 74 69 74 6c 65 3e 48 69 73 74 6f 72 69 63 61 6c title>Historical

01b0 20 44 6f 63 75 6d 65 6e 74 73 3a 54 48 45 20 42 Documents:THE B

01c0 49 4c 4c 20 4f 46 20 52 49 47 48 54 53 3c 2f 74 ILL OF RIGHTS</t

01d0 69 74 6c 65 3e 3c 2f 68 65 61 64 3e 0a 0a 0a 3c itle></head>...<

01e0 62 6f 64 79 20 62 67 63 6f 6c 6f 72 3d 22 23 66 body bgcolor="#f

01f0 66 66 66 66 66 22 20 6c 69 6e 6b 3d 22 23 33 33 fffff" link="#33

0200 30 30 30 30 22 20 76 6c 69 6e 6b 3d 22 23 36 36 0000" vlink="#66

0210 36 36 33 33 22 3e 0a 3c 70 3e 3c 62 72 3e 0a 3c 6633">.<p><br>.<

0220 2f 70 3e 0a 3c 70 3e 3c 2f 70 3e 3c 63 65 6e 74 /p>.<p></p><cent

0230 65 72 3e 3c 62 3e 54 48 45 20 42 49 4c 4c 20 4f er><b>THE BILL O

0240 46 20 52 49 47 48 54 53 3c 2f 62 3e 3c 62 72 3e F RIGHTS</b><br>

0250 0a 20 20 3c 65 6d 3e 41 6d 65 6e 64 6d 65 6e 74 . <em>Amendment

0260 73 20 31 2d 31 30 20 6f 66 20 74 68 65 20 43 6f s 1-10 of the Co

0270 6e 73 74 69 74 75 74 69 6f 6e 3c 2f 65 6d 3e 0a nstitution</em>.

0280 3c 2f 63 65 6e 74 65 72 3e 0a 0a 3c 70 3e 54 68 </center>..<p>Th

0290 65 20 43 6f 6e 76 65 6e 74 69 6f 6e 73 20 6f 66 e Conventions of

02a0 20 61 20 6e 75 6d 62 65 72 20 6f 66 20 74 68 65 a number of the

02b0 20 53 74 61 74 65 73 20 68 61 76 69 6e 67 2c 20 States having,

02c0 61 74 20 74 68 65 20 74 69 6d 65 20 6f 66 20 61 at the time of a

02d0 64 6f 70 74 69 6e 67 0a 74 68 65 20 43 6f 6e 73 dopting.the Cons

02e0 74 69 74 75 74 69 6f 6e 2c 20 65 78 70 72 65 73 titution, expres

02f0 73 65 64 20 61 20 64 65 73 69 72 65 2c 20 69 6e sed a desire, in

0300 20 6f 72 64 65 72 20 74 6f 20 70 72 65 76 65 6e order to preven

0310 74 20 6d 69 73 63 6f 6e 73 74 72 75 63 74 69 6f t misconstructio

0320 6e 0a 6f 72 20 61 62 75 73 65 20 6f 66 20 69 74 n.or abuse of it

0330 73 20 70 6f 77 65 72 73 2c 20 74 68 61 74 20 66 s powers, that f

0340 75 72 74 68 65 72 20 64 65 63 6c 61 72 61 74 6f urther declarato

0350 72 79 20 61 6e 64 20 72 65 73 74 72 69 63 74 69 ry and restricti

0360 76 65 20 63 6c 61 75 73 65 73 0a 73 68 6f 75 6c ve clauses.shoul

0370 64 20 62 65 20 61 64 64 65 64 2c 20 61 6e 64 20 d be added, and

0380 61 73 20 65 78 74 65 6e 64 69 6e 67 20 74 68 65 as extending the

0390 20 67 72 6f 75 6e 64 20 6f 66 20 70 75 62 6c 69 ground of publi

03a0 63 20 63 6f 6e 66 69 64 65 6e 63 65 20 69 6e 20 c confidence in

03b0 74 68 65 0a 47 6f 76 65 72 6e 6d 65 6e 74 20 77 the.Government w

03c0 69 6c 6c 20 62 65 73 74 20 69 6e 73 75 72 65 20 ill best insure

03d0 74 68 65 20 62 65 6e 65 66 69 63 65 6e 74 20 65 the beneficent e

03e0 6e 64 73 20 6f 66 20 69 74 73 20 69 6e 73 74 69 nds of its insti

03f0 74 75 74 69 6f 6e 3b 20 3c 2f 70 3e 3c 70 3e 20 tution; </p><p>

0400 20 52 65 73 6f 6c 76 65 64 2c 20 62 79 20 74 68 Resolved, by th

0410 65 20 53 65 6e 61 74 65 20 61 6e 64 20 48 6f 75 e Senate and Hou

0420 73 65 20 6f 66 20 52 65 70 72 65 73 65 6e 74 61 se of Representa

0430 74 69 76 65 73 20 6f 66 20 74 68 65 20 55 6e 69 tives of the Uni

0440 74 65 64 0a 53 74 61 74 65 73 20 6f 66 20 41 6d ted.States of Am

0450 65 72 69 63 61 2c 20 69 6e 20 43 6f 6e 67 72 65 erica, in Congre

0460 73 73 20 61 73 73 65 6d 62 6c 65 64 2c 20 74 77 ss assembled, tw

0470 6f 2d 74 68 69 72 64 73 20 6f 66 20 62 6f 74 68 o-thirds of both

0480 20 48 6f 75 73 65 73 20 63 6f 6e 63 75 72 72 69 Houses concurri

0490 6e 67 2c 0a 74 68 61 74 20 74 68 65 20 66 6f 6c ng,.that the fol

04a0 6c 6f 77 69 6e 67 20 61 72 74 69 63 6c 65 73 20 lowing articles

04b0 62 65 20 70 72 6f 70 6f 73 65 64 20 74 6f 20 74 be proposed to t

04c0 68 65 20 4c 65 67 69 73 6c 61 74 75 72 65 73 20 he Legislatures

04d0 6f 66 20 74 68 65 20 73 65 76 65 72 61 6c 0a 53 of the several.S

04e0 74 61 74 65 73 2c 20 61 73 20 61 6d 65 6e 64 6d tates, as amendm

04f0 65 6e 74 73 20 74 6f 20 74 68 65 20 43 6f 6e 73 ents to the Cons

0500 74 69 74 75 74 69 6f 6e 20 6f 66 20 74 68 65 20 titution of the

0510 55 6e 69 74 65 64 20 53 74 61 74 65 73 3b 20 61 United States; a

0520 6c 6c 20 6f 72 20 61 6e 79 0a 6f 66 20 77 68 69 ll or any.of whi

0530 63 68 20 61 72 74 69 63 6c 65 73 2c 20 77 68 65 ch articles, whe

0540 6e 20 72 61 74 69 66 69 65 64 20 62 79 20 74 68 n ratified by th

0550 72 65 65 2d 66 6f 75 72 74 68 73 20 6f 66 20 74 ree-fourths of t

0560 68 65 20 73 61 69 64 20 4c 65 67 69 73 6c 61 74 he said Legislat

0570 75 72 65 73 2c 0a 74 6f 20 62 65 20 76 61 6c 69 ures,.to be vali

0580 64 20 74 6f 20 61 6c 6c 20 69 6e 74 65 6e 74 73 d to all intents

0590 20 61 6e 64 20 70 75 72 70 6f 73 65 73 20 61 73 and purposes as

05a0 20 70 61 72 74 20 6f 66 20 74 68 65 20 73 61 69 part of the sai

05b0 64 20 43 6f 6e 73 74 69 74 75 74 69 6f 6e 2c 0a d Constitution,.

05c0 6e 61 6d 65 6c 79 3a 20 20 20 20 3c 2f 70 3e 3c namely: </p><

05d0 70 3e 3c 61 20 6e 61 6d 65 3d 22 31 p><a name="1

Data: 450005dc456c40002b06833b8077f50c0a0501ec0050cc111cc616408cdf92e4501000ed…

[Length: 1500]

1. **84:d8:1b:80:5f:36No it is not the ethernet address of umass. It is the IP address of the Tp-Link router, which is the link to my subnet**
2. **28:7f:cf:07:8a:d7 Yes this is address to my computer**
3. **0x0800, This is the IP Protocol**
4. **53 bytes**

Part 2

No. Time Source Destination Protocol Length Info

1 0.000000 AmbitMic\_a9:3d:68 Broadcast ARP 42 Who has 192.168.1.1? Tell 192.168.1.105

Frame 1: 42 bytes on wire (336 bits), 42 bytes captured (336 bits)

Ethernet II, Src: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:689), Dst: Broadcast (ff:ff:ff:ff:ff:ff9)

Destination: Broadcast (ff:ff:ff:ff:ff:ff)

Address: Broadcast (ff:ff:ff:ff:ff:ff)

.... ..1. .... .... .... .... = LG bit: Locally administered address (this is NOT the factory default)

.... ...1 .... .... .... .... = IG bit: Group address (multicast/broadcast)

Source: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:68)

Address: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:68)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Type: ARP (0x0806)10

Address Resolution Protocol (request)

Hardware type: Ethernet (1)

Protocol type: IPv4 (0x0800)

Hardware size: 6

Protocol size: 4

Opcode: request (1)

Sender MAC address: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:68)

Sender IP address: 192.168.1.105

Target MAC address: 00:00:00\_00:00:00 (00:00:00:00:00:0011)

Target IP address: 192.168.1.111

**9) The hex for the source is 00:d0:59:a9:3d:68 and the hex for the destination is ff:ff:ff:ff:ff:ff**

**10) The hex value is 0x0806 and that corresponds to ARP**

**11) The target MAC is 00:00:00:00:00:00 to query 192.168.1.1**

ARP Reply:

No. Time Source Destination Protocol Length Info

2 0.001018 LinksysG\_da:af:73 AmbitMic\_a9:3d:68 ARP 60 192.168.1.1 is at 00:06:25:da:af:73

No. Time Source Destination Protocol Length Info

2 0.001018 LinksysG\_da:af:73 AmbitMic\_a9:3d:68 ARP 60 192.168.1.1 is at 00:06:25:da:af:73

Frame 2: 60 bytes on wire (480 bits), 60 bytes captured (480 bits)

Ethernet II, Src: LinksysG\_da:af:73 (00:06:25:da:af:7312), Dst: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:68)

Destination: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:68)

Address: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:68)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Source: LinksysG\_da:af:73 (00:06:25:da:af:73)

Address: LinksysG\_da:af:73 (00:06:25:da:af:73)

.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)

.... ...0 .... .... .... .... = IG bit: Individual address (unicast)

Type: ARP (0x0806)

Padding: 000000000000000000000000000000000000

Address Resolution Protocol (reply)

Hardware type: Ethernet (1)

Protocol type: IPv4 (0x0800)

Hardware size: 6

Protocol size: 4

Opcode: reply (2)

Sender MAC address: LinksysG\_da:af:73 (00:06:25:da:af:7312/13)

Sender IP address: 192.168.1.1

Target MAC address: AmbitMic\_a9:3d:68 (00:d0:59:a9:3d:6813)

Target IP address: 192.168.1.105

0000 00 d0 59 a9 3d 68 00 06 25 da af 73 08 06 00 01 ..Y.=h..%..s....

0010 08 00 06 04 00 02 00 06 25 da af 73 c0 a8 01 01 ........%..s....

0020 00 d0 59 a9 3d 68 c0 a8 01 69 00 00 00 00 00 00 ..Y.=h...i......

0030 00 00 00 00 00 00 00 00 00 00 00 00 ............

**12) The answer for the request appears in the sender mac address from 192.168.1.1 of 00:06:25:da:af:73**

**13) The hex value of the source address is 00:06:25:da:af:73 while the destination is 00:d0:59:a9:3d:68**