



Faculty of Engineering and Technology

Electrical and Computer Engineering

Department ENCS4130 // Computer Networks

Laboratory

TODO 6

EXP. No. 10

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Section: 2

Part one

Capturing from Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.1.111	34.202.42.180	TLsv1.2	226	Application Data
2	0.012266	192.168.1.111	104.18.32.115	TLsv1.2	121	Application Data
3	0.017662	104.18.32.115	192.168.1.111	TCP	54	443 → 53941 [ACK] Seq=1 Ack=68 Win=8 Len=0
4	0.082195	fe80::1	fe80::b425:a3e4:406::1	ICMPv6	86	Neighbor Solicitation for fe80::b425:a3e4:406::123 from 58:13:d3:b2:ba:16
5	0.082259	fe80::b425:a3e4:406::1	fe80::1	ICMPv6	86	Neighbor Advertisement fe80::b425:a3e4:406::123 (sol, ovr) is at b4:d5:bd:9c:ff:68
6	0.143973	34.202.42.180	192.168.1.111	TLsv1.2	113	Application Data
7	0.184807	192.168.1.111	34.202.42.180	TCP	54	54074 → 443 [ACK] Seq=173 Ack=60 Win=258 Len=0
8	0.631208	192.168.1.111	52.20.22.182	TLsv1.2	364	Application Data
9	0.811710	52.20.22.182	192.168.1.111	TLsv1.2	108	Application Data
10	0.812036	192.168.1.111	52.20.22.182	TLsv1.2	1054	Application Data
11	1.014813	52.20.22.182	192.168.1.111	TCP	54	443 → 54075 [ACK] Seq=55 Ack=1311 Win=425 Len=0
12	1.014813	52.20.22.182	192.168.1.111	TLsv1.2	512	Application Data
13	1.056492	192.168.1.111	52.20.22.182	TCP	54	54075 → 443 [ACK] Seq=1311 Ack=513 Win=256 Len=0
14	1.322051	142.251.37.227	192.168.1.111	TLsv1.2	127	Application Data
15	1.323807	192.168.1.111	142.251.37.227	TCP	54	53951 → 443 [FIN, ACK] Seq=1 Ack=74 Win=259 Len=0
16	1.369304	142.251.37.227	192.168.1.111	TCP	54	443 → 53951 [FIN, ACK] Seq=74 Ack=2 Win=261 Len=0

> Frame 1: 226 bytes on wire (1808 bits), 226 bytes captured (1808 bits) on interface \Device\NPF...
> Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GentekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Internet Protocol Version 4, Src: 192.168.1.111, Dst: 34.202.42.180
> Transmission Control Protocol, Src Port: 54074, Dst Port: 443, Seq: 1, Ack: 1, Len: 172
> Transport Layer Security

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 08 00 45 00 X.....h..E..
0010 00 d4 cc 11 40 00 80 06 1e 7d c0 a8 01 6f 22 c6@...}..cP..
0020 2a b4 d3 3a 01 bb c2 a8 ca 6c 00 fb 00 86 50 18 [a].....1....P..
0030 01 02 28 ec 00 00 17 03 03 00 a7 00 00 00 00 00{.....doP...mC..
0040 00 00 09 97 ce d6 9d e2 69 6f 72 44 95 be 6d 43{.....doP...mC..
0050 3d 7f 9e fd 5b b9 90 ee 31 3a 97 57 6f 56 1f 11{.....1:MoV..
0060 aa 21 a2 0c 58 e6 05 6d e9 ac 91 dd 29 76 71 38 [X].....M)vg8..
0070 e0 86 5c fa eb 86 d7 c7 d2 40 66 ff c0 a1 3e 2c@f...>..
0080 cc e3 ce bd b3 16 43 a6 af f6 11 d3 33 00 27 c5C.....3'..
0090 11 fb 65 3c 05 58 d2 68 9b 41 3c 07 b1 95 0e a1eC X'h AC.....
00a0 8e dd f0 6e 90 3e 58 00 cc 6b af 22 ce d1 bf 05n>X..k".....
00b0 3a e1 94 65 67 a1 d3 e2 54 dd 52 97 4d ad 31 c0 [reg]...T.R.M.1..
00c0 e8 cf cb a7 eb 5f 64 54 66 1a 8b fa 7d 93 76 22dT f...}v..
00d0 e1 da 23 93 f1 58 fd eb 08 36 c5 d8 d8 80 7d e9 [X]...6.....}
00e0 23 b8#..

user info

testphp.vulnweb.com/userinfo.php

acunetix acuart

TEST and Demonstration site for Acunetix Web Vulnerability Scanner

home | categories | artists | disclaimer | your cart | guestbook | AJAX Demo | Logout test

search art go

Browse categories
Browse artists
Your cart
Signup
Your profile
Our guestbook
AJAX Demo

Links
Security art
PHP scanner
PHP vuln help
Fractal Explorer

John Smith (test)

On this page you can visualize or edit your user information.

Name:

Credit card number:

E-Mail:

Phone number:

Address:

update

You have 1 items in your cart. You visualize your cart here.

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Warning: This is not a real shop. This is an example PHP application, which is intentionally vulnerable to web attacks. It is intended to help you test Acunetix. It also helps you understand how developer errors and bad configuration may let someone break into your website. You can use it to test other tools and your manual hacking skills as well. Tip:

Wi-Fi

screenrec

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http.request.method=="POST"

No.	Time	Source	Destination	Protocol	Length	Info
2627	79.615948	192.168.1.111	44.228.249.3	HTTP	711	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)
2886	118.239796	192.168.1.111	44.228.249.3	HTTP	699	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

> Frame 2627: 711 bytes on wire (5688 bits), 711 bytes captured (5688 bits) on interface \Device\NPF{...}

> Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GentekTechno_b2:ba:16 (58:13:d3:b2:ba:16)

> Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3

> Transmission Control Protocol, Src Port: 54113, Dst Port: 80, Seq: 1178, Ack: 9605, Len: 657

> Hypertext Transfer Protocol

> HTML Form URL Encoded: application/x-www-form-urlencoded

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00 X.....-h..E
0010 02 b9 04 8b 40 00 80 06 0b b5 c0 a8 01 6f 2c e4@...o,-
0020 f9 03 d3 61 00 50 42 3f 9c c8 b3 ca bd ed 50 18 ...aPB?.....P
0030 00 ff 36 99 00 00 50 4f 53 54 20 2f 75 73 65 72 ...6...POST/user
0040 69 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e info.php HTTP/1.
0050 31 0d 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70 1~Host: testphp
0060 2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0a 43 6f .vulnweb.com~Co
0070 6e 6e 65 63 74 69 6f 6e 3a 20 0b 05 05 70 2d 61 nnection: keep-a
0080 6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65 live~Content-Le
0090 6e 67 74 68 3a 20 33 32 0d 0a 43 61 63 68 65 2d ngth: 32 ~Cache-
00a0 43 6f 6e 74 72 6f 6c 3a 20 6d 61 78 2d 61 67 65 Control: max-age
00b0 3d 30 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 =0~Upgrade~Inse
00c0 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure~Reques: 1
00d0 0d 0a 4f 72 69 67 69 6e 3a 20 68 74 74 70 3a 2f ~Origin: http://
00e0 2f 74 65 73 74 70 68 70 2e 76 75 6c 6e 77 65 62 /testphp.vulnweb
00f0 2e 63 6f 6d 0a 43 6f 6e 74 65 6e 74 2d 54 79 .com~Content-Ty
0100 70 65 3a 20 61 70 70 6c 69 63 61 74 69 6f 6e 2f pe: appl ication/
0110 78 2d 77 77 7d 66 6f 72 6d 2d 75 72 6c 65 6e x-www-fo rm~urlen
0120 63 6f 64 65 64 0d 0a 55 73 65 72 2d 41 67 65 6e coded ~Content~gm
0130 74 3a 20 4d 6f 7a 69 6c 6c 61 2f 35 2e 39 20 20 ti: Mozilla/5.0 (

wireshark_Wi-FiCTDPN2.pcapng

Packets: 3962 - Displayed: 2 (0.1%) - Dropped: 0 (0.0%)

Profile: Default

Wireshark - Packet 2627 - Wi-Fi

Frame 2627: 711 bytes on wire (5688 bits), 711 bytes captured (5688 bits) on interface \Device\NPF_{793E52BC-A9ED-42B5-83AB-28C6AA0983D6}, id 0

Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)

Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3

Transmission Control Protocol, Src Port: 54113, Dst Port: 80, Seq: 1178, Ack: 9605, Len: 657

Hypertext Transfer Protocol

HTML Form URL Encoded: application/x-www-form-urlencoded

No. 2627, Time: 79.615948, Source: 192.168.1.111, Destination: 44.228.249.3, Protocol: HTTP, Length: 711, Info: POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

Show packet bytes

Close Help

Wireshark - Packet 2627 - Wi-Fi

Frame 2627: 711 bytes on wire (5688 bits), 711 bytes captured (5688 bits) on interface \Device\NPF_{793E52BC-A9ED-42B5-83AB-28C6AA0983D6}, id 0

Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)

Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3

Transmission Control Protocol, Src Port: 54113, Dst Port: 80, Seq: 1178, Ack: 9605, Len: 657

Hypertext Transfer Protocol

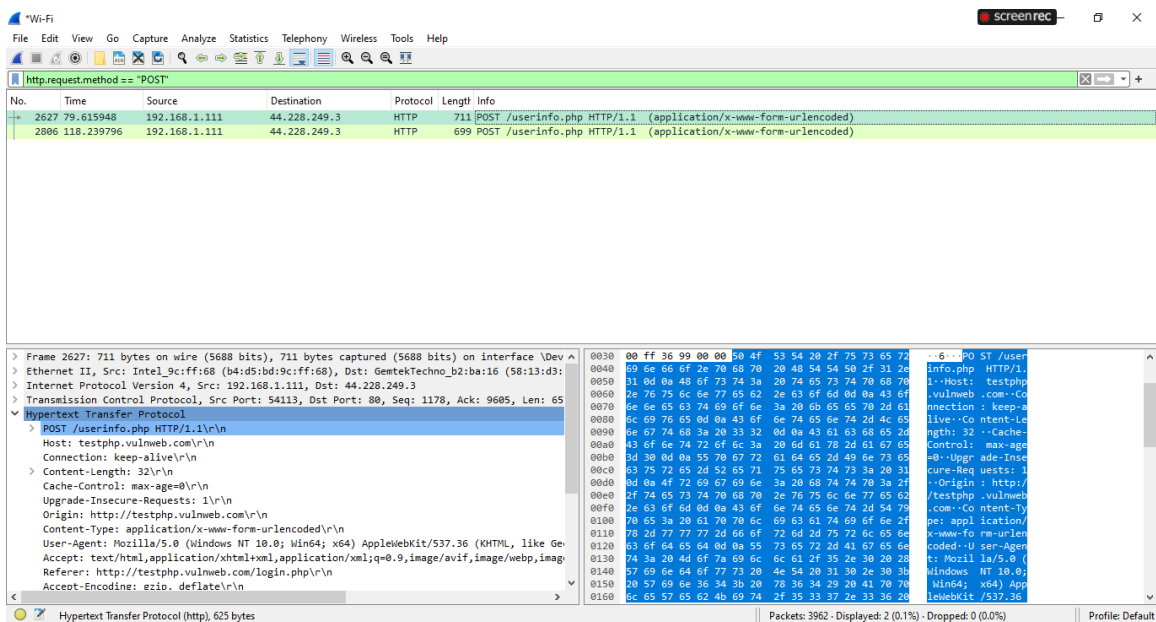
POST /userinfo.php HTTP/1.1\r\nHost: testphp.vulnweb.com\r\nConnection: keep-alive\r\nContent-Length: 32\r\nCache-Control: max-age=0\r\nUpgrade-Insecure-Requests: 1\r\nOrigin: http://testphp.vulnweb.com\r\nContent-Type: application/x-www-form-urlencoded\r\nUser-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.0.0 Safari/537.36\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7\r\nReferer: http://testphp.vulnweb.com/login.php\r\nAccept-Encoding: gzip, deflate\r\nAccept-Language: en-US,en;q=0.9\r\n\r\n[Full request URI: http://testphp.vulnweb.com/userinfo.php]\n[HTTP request 4/6]\n[Prev request in frame: 246]\n[Response in frame: 2645]\n[Next request in frame: 2648]\nFile Data: 32 bytes

HTML Form URL Encoded: application/x-www-form-urlencoded

No. 2627, Time: 79.615948, Source: 192.168.1.111, Destination: 44.228.249.3, Protocol: HTTP, Length: 711, Info: POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

Show packet bytes

Close Help



Wireshark - Packet 2349 - Wi-Fi

Frame 2349: 727 bytes on wire (5816 bits), 727 bytes captured (5816 bits) on interface \Device\NPF... id 0

Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GentekTechno_b2:ba:16 (58:13:d3:b2:ba:16)

Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3

Transmission Control Protocol, Src Port: 54288, Dst Port: 80, Seq: 1, Ack: 1, Len: 673

Hypertext Transfer Protocol

POST /userinfo.php HTTP/1.1

Host: testphp.vulnweb.com

Connection: keep-alive

Content-Length: 21

Cache-Control: max-age=0

Upgrade-Insecure-Requests: 1

Origin: http://testphp.vulnweb.com

Content-Type: application/x-www-form-urlencoded

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.0.0 Safari/537.36

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7

Referer: http://testphp.vulnweb.com/login.php

Accept-Encoding: gzip, deflate

Accept-Language: en-US,en;q=0.9

Cookie: login=test%2ftest

[Full request URI: http://testphp.vulnweb.com/userinfo.php]

[HTTP request 1/1]

[Response in frame: 2355]

File Data: 21 bytes

HTML Form URL Encoded: application/x-www-form-urlencoded

Form item: "uname" = "test"

Form item: "pass" = "test"

0030 01 04 12 c4 00 00 50 4f 53 54 20 2f 75 73 65 72POST /user
0040 69 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e info.php HTTP/1.
0050 31 0d 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70 1..Host: testphp
0060 2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0d 0a 43 6f .vulnweb .com..Co

No: 2349 - Time: 22.217776 - Source: 192.168.1.111 - Destination: 44.228.249.3 - Protocol: HTTP - Length: 727 - Info: POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

Show packet bytes

Close Help

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http.request.method == "POST"

No.	Time	Source	Destination	Protocol	Length	Info
2349	22.217776	192.168.1.111	44.228.249.3	HTTP	727	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

Frame 2349: 727 bytes on wire (5816 bits), 727 bytes captured (5816 bits) on interface \Device\NPF... id 0

Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GentekTechno_b2:ba:16 (58:13:d3:b2:ba:16)

Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3

Transmission Control Protocol, Src Port: 54288, Dst Port: 80, Seq: 1, Ack: 1, Len: 673

Hypertext Transfer Protocol

HTML Form URL Encoded: application/x-www-form-urlencoded

Form item: "uname" = "test"

Form item: "pass" = "test"

01a0 33 36 0d 0a 41 63 63 65 70 74 3a 20 74 65 78 74 36 .Acce pt: text
01b0 2f 68 74 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f /html,ap plicatio
01c0 6e 2f 78 68 74 6d 6c 2b 78 6d 6c 2c 61 70 70 6c n/xhtml+ xml,appl
01d0 69 63 61 74 69 6f 6e 2f 78 6d 6c 3b 71 3d 30 2e ication/ xml;q=0.
01e0 39 2c 69 6d 61 67 65 2f 61 76 69 66 2c 69 6d 61 9,image/ avif,ima
01f0 67 65 2f 77 65 62 70 2c 69 6d 61 67 65 2f 61 70 ge/webp, image/ap
0200 6e 67 2c 2a 2f 2a 3b 71 3d 30 2e 38 2c 61 70 70 ng,*/*;q =0.8,app
0210 6c 69 63 61 74 69 6f 6e 2f 73 69 67 6e 65 64 2d lication /signed-
0220 65 78 63 68 61 6e 67 65 3b 76 3d 62 33 3b 71 3d exchange ;v=b3;q=
0230 30 2e 37 0d 0a 52 65 66 65 72 65 72 3a 20 68 74 0.7 .Ref erer: ht
0240 74 70 3a 2f 2f 74 65 73 74 70 68 70 2a 76 75 6c tps://tes tphp.vul
0250 6e 77 65 62 2e 63 6f 6d 2f 6c 6f 67 69 6e 2e 70 nweb.com /login.p
0260 68 70 0d 0a 41 63 63 65 70 74 2d 45 6e 63 6f 64 hp .Acce pt-Encod
0270 69 6e 67 3a 20 67 7a 69 70 2c 20 64 65 66 6c 61 ing: gzi p, defla
0280 74 65 0d 0a 41 63 63 65 70 74 2d 4c 61 6e 67 75 te .Acce pt-Langu
0290 61 67 65 3a 20 65 6e 2d 55 53 2c 65 6e 3b 71 3d age: en- US,en;q
02a0 30 2e 39 0d 0a 43 6f 6f 6b 69 65 3a 20 6c 6f 67 0.9 .Coo kie: log
02b0 69 6e 3d 74 65 73 74 25 32 46 74 65 73 74 0d 0a in=test% 2ftest..
02c0 0d 0a 75 6e 61 6d 65 3d 74 65 73 74 2b 26 70 61 .-uname= test+&pa
02d0 73 73 3d 74 65 73 74 2b 26 70 61 ss=&cs

HTML Form URL Encoded (urlencoded-form), 21 bytes

Packets: 2614 - Displayed: 1 (0.0%) - Dropped: 0 (0.0%)

Profile: Default

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http.request.method == "POST"

No.	Time	Source	Destination	Protocol	Length	Info
2349	22.217776	192.168.1.111	44.228.249.3	HTTP	727	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

> Destination: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
> Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3
Transmission Control Protocol, Src Port: 54288, Dst Port: 80, Seq: 1, Ack: 1, Len: 673
Source Port: 54288
Destination Port: 80
[Stream index: 56]
> [Conversation completeness: Incomplete (12)]
> [TCP Segment Len: 673]
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 3212019319
[Next Sequence Number: 674 (relative sequence number)]
Acknowledgment Number: 1 (relative ack number)
Acknowledgment number (raw): 1222614548
0101 = Header Length: 20 bytes (5)
> Flags: 0x018 (PSH, ACK)
Window: 260
[Calculated window size: 260]
[Window size scaling factor: -1 (unknown)]
Checksum: 0x12c4 [unverified]
[Checksum Status: Unverified]
Urgent Pointer: 0
> [Timestamps]
> [SEQ/ACK analysis]
TCP payload (673 bytes)
Hypertext Transfer Protocol
> HTML Form URL Encoded: application/x-www-form-urlencoded
> Form item: "uname" = "test"
> Form item: "pass" = "test"

Internet Protocol Version 4 (ip), 20 bytes

Packets: 2614 - Displayed: 1 (0.0%) - Dropped: 0 (0.0%) Profile: Default

Wireshark - Packet 2349 - Wi-Fi

Frame 2349: 727 bytes on wire (5816 bits), 727 bytes captured (5816 bits) on interface \Device\NPF_{793E52BC-A9ED-42B5-83AB-28C6AA09B3D6}, id 0

Section number: 1
> Interface id: 0 (\Device\NPF_{793E52BC-A9ED-42B5-83AB-28C6AA09B3D6})
Encapsulation type: Ethernet (1)
Arrival Time: May 23, 2024 22:07:27.531646000 Jerusalem Daylight Time
UTC Arrival Time: May 23, 2024 19:07:27.531646000 UTC
Epoch Arrival Time: 1716491247.531646000
[Time shift for this packet: 0.000000000 seconds]
[Time delta from previous captured frame: 0.085298000 seconds]
[Time delta from previous displayed frame: 0.000000000 seconds]
[Time since reference or first frame: 22.217776000 seconds]
Frame Number: 2349
Frame Length: 727 bytes (5816 bits)
Capture Length: 727 bytes (5816 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: ethertype:ip:tcp:http:urlencoded-form]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
> Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Destination: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
> Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3
0100 = Version: 4
.... 0101 = Header Length: 20 bytes (5)
> Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
Total Length: 713
Identification: 0x04ee (1262)
> 010. = Flags: 0x2, Don't fragment
...0.0000.0000.0000 = Fragment Offset: 0
0000 01 04 12 c4 00 00 50 4f 53 54 20 2f 75 73 65 72 PO ST /user
0040 69 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e info.php HTTP/1.
0080 31 0d 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70 1-Host: testphp
00c0 2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0d 0a 43 6f .vulnweb .com- Co
0100 6e 6e 65 63 74 69 6f 6e 3a 20 0b 05 05 70 2d 61 nnection : keep-a
0140 6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65 live-Content-Le
0180 6e 67 74 68 3a 20 32 31 0d 0a 43 61 63 68 65 2d ngth: 21 - Cache-
01c0 43 6f 6e 74 72 6f 6c 3a 20 6d 61 78 2d 61 67 65 Control: max-age
0200 3d 30 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 =0-Upgrade-Inse
0240 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure-Requests: 1
0280 0d 0a 4f 72 69 67 69 6e 3a 20 68 74 74 70 3a 2f -Origin : http/
0300 2f 74 65 73 74 70 68 70 2e 76 75 6c 6e 77 65 62 /testphp.vulnweb
0340 2e 63 6f 6d 0d 0a 43 6f 6e 74 65 6e 74 2d 54 79 .com-Content-Ty
0380 70 65 3a 20 61 70 70 6c 69 63 61 74 69 6f 6e 2f pe: application/
0400 78 2d 77 77 77 2d 66 6f 72 6d 2d 75 72 6e 65 6e x-www-form-urle
0440 63 6f 64 65 64 0d 0a 55 73 65 72 2d 41 67 65 6e coded -User-Agen
0480 74 3a 20 4d 6f 7a 69 6c 6c 61 2f 35 2e 30 20 28 t: Mozilla/5.0 (
0500 57 69 6e 64 6f 77 73 20 4e 54 20 31 30 2e 30 3b Windows NT 10.0;
0540 20 57 69 6e 36 34 3b 20 78 36 34 29 20 41 70 70 Win64; x64) App
0580 6c 65 57 65 62 4b 69 74 2f 35 33 37 2e 33 36 20 leWebKit/537.36
0600 28 4b 48 54 4d 4c 2c 20 6c 69 6b 65 20 47 65 63 (KHTML, like Gec
0640 6b 6f 29 20 43 68 72 6f 6d 65 2f 31 32 34 2e 30 ko) Chrome/124.0
0680 2e 30 2e 30 20 53 61 66 61 72 69 2f 35 33 37 2e .0.0 Safari/537.
0700 33 36 0d 0a 41 63 63 65 70 74 3a 20 74 65 78 74 36 -Accept: text
0740 2f 68 74 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f /html,application
0780 6e 2f 78 68 74 6d 6c 2b 78 6d 6c 2c 61 70 70 6c n/xhtml+xml,appl
0800 69 63 61 74 69 6f 6e 2f 78 6d 6c 3b 71 3d 30 2e ication/xml;q=0.
0840 39 2c 69 6d 61 67 65 2f 61 76 69 66 2c 69 6d 61 9,image/avif,ima
0880 67 65 2f 77 65 62 70 2c 69 6d 61 67 65 2f 61 70 ge/webp,image/ap
0900 6e 67 2c 2a 2f 2a 3b 71 3d 30 2e 38 2c 61 70 70 ng,*/*;q=0.8,app
0940 69 63 61 74 69 6f 6e 2f 73 69 67 6e 65 64 2d lication/signed-
0980 65 78 63 68 61 6e 67 65 3b 76 3d 62 33 3b 71 3d exchange;v=b3;q=
0a00

No: 2349 - Time: 22.217776 - Source: 192.168.1.111 - Destination: 44.228.249.3 - Protocol: HTTP - Length: 727 - Info: POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

Show packet bytes

Close Help

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http.request.method=="GET"

No.	Time	Source	Destination	Protocol	Length	Info
187	14.460325	192.168.1.111	44.228.249.3	HTTP	497	GET /login.php HTTP/1.1
215	15.107361	192.168.1.111	44.228.249.3	HTTP	397	GET /style.css HTTP/1.1
216	15.109086	192.168.1.111	44.228.249.3	HTTP	449	GET /images/logo.gif HTTP/1.1
246	15.888931	192.168.1.111	44.228.249.3	HTTP	445	GET /favicon.ico HTTP/1.1
2648	79.882313	192.168.1.111	44.228.249.3	HTTP	570	GET /login.php HTTP/1.1

> Frame 246: 445 bytes on wire (3560 bits), 445 bytes captured (3560 bits) on interface \Device\NPF{...}

> Ethernet II, Src: Intel_9c:ff:60 (b4:d5:bd:9c:ff:60), Dst: GentekTechno_b2:ba:16 (58:13:d3:b2:ba:16)

> Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3

> Transmission Control Protocol, Src Port: 54113, Dst Port: 80, Seq: 787, Ack: 8470, Len: 391

> Hypertext Transfer Protocol

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 60 00 00 45 00 X.....-h...E-
0010 01 af 04 82 40 00 80 06 0c c8 c0 a8 01 6f 2c e4@.....o,-
0020 f9 03 d3 61 00 50 42 3f 9b 41 b3 ca b9 7e 50 18aPB? A....P-
0030 01 04 f2 9b 00 00 47 45 54 20 2f 66 61 76 69 63-GE T /favic
0040 6f 6e 2e 69 63 6f 20 48 54 50 2f 31 2e 31 0d on.ico H TTP/1.1
0050 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70 2e 76 -Host: testphp.v
0060 75 6c 6e 77 65 62 2e 63 6f 6d 0d 0a 43 6f 6e 6e ulweb.c om-Conn
0070 65 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 ection: keep-all
0080 76 65 0d 0a 55 73 65 72 2d 41 67 65 6e 74 3a 20 ve-User-Agent:
0090 4d 6f 7a 69 6c 6c 61 2f 35 2e 30 20 28 57 69 6e Mozilla/ 5.0 (Win
00a0 64 6f 77 73 20 4e 54 20 31 30 2e 30 3b 20 57 69 dows NT 10.0; Wi
00b0 6e 36 34 3b 20 78 36 34 29 20 41 70 70 6c 65 57 n64; x64) AppleW
00c0 65 62 4b 69 74 2f 35 33 37 2e 33 36 20 28 4b 48 ebkit/53 7.36 (KH
00d0 54 4d 4c 2c 20 6c 69 6b 65 20 47 65 63 6b 6f 29 TML, like Gecko)
00e0 20 43 68 72 6f 6d 65 2f 31 32 34 2e 30 2e 30 2e Chrome/ 124.0.0.
00f0 30 20 53 61 66 61 72 69 2f 35 33 37 2e 33 36 0d 0 Safari/ 537.36
0100 0a 41 63 63 65 70 74 3a 20 69 6d 61 67 65 2f 61 Accept: image/a
0110 75 69 6e 2c 69 6d 61 67 65 2f 77 65 62 70 2c 69 vif,imag e/webp,i
0120 6d 61 67 65 2f 63 70 6e 67 2c 69 6d 61 67 65 2f image/apn g,image/
0130 73 76 67 2b 70 6d 6c 2c 69 6d 61 67 65 2f 2a 2c vpxonly, image/*

wireshark_Wi-FiCTDPN2.pcapng

Packets: 3962 - Displayed: 5 (0.1%) - Dropped: 0 (0.0%)

Profile: Default

C:\WINDOWS\system32\cmd.exe

Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 11:

Media State : Media disconnected

Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 12:

Media State : Media disconnected

Connection-specific DNS Suffix . :

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
Link-local IPv6 Address : fe80::b425:a3e4:406:f123%9
IPv4 Address. : 192.168.1.111
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.254

Ethernet adapter Bluetooth Network Connection:

Media State : Media disconnected

Connection-specific DNS Suffix . :

C:\Users\LENOVO>

Wi-Fi screenrec

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ip.src==192.168.1.111

No.	Time	Source	Destination	Protocol	Length	Info
2348	22.132478	192.168.1.111	169.150.215.48	TCP	55	[TCP Keep-Alive] 53545 → 443 [ACK] Seq=1 Ack=1 Win=258 Len=1
2349	22.217776	192.168.1.111	44.228.249.3	HTTP	727	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)
2356	22.489814	192.168.1.111	44.228.249.3	TCP	54	54288 → 80 [ACK] Seq=674 Ack=2928 Win=260 Len=0
2361	22.997677	192.168.1.111	172.217.19.138	TLSv1.2	122	Application Data
2362	23.003981	192.168.1.111	172.217.19.138	TLSv1.2	169	Application Data, Application Data
2367	23.072784	192.168.1.111	172.217.19.138	TCP	54	54294 → 443 [ACK] Seq=184 Ack=114 Win=255 Len=0
2370	23.073474	192.168.1.111	172.217.19.138	TCP	54	54294 → 443 [ACK] Seq=184 Ack=2469 Win=260 Len=0
2373	23.073662	192.168.1.111	172.217.19.138	TCP	54	54294 → 443 [ACK] Seq=184 Ack=2697 Win=259 Len=0
2374	23.096436	192.168.1.111	172.217.19.138	TLSv1.2	89	Application Data
2375	23.096679	192.168.1.111	172.217.19.138	TLSv1.2	93	Application Data
2382	24.128674	192.168.1.111	18.153.4.44	TCP	54	54322 → 443 [FIN, ACK] Seq=1294 Ack=6174 Win=65792 Len=0
2385	24.196501	192.168.1.111	18.153.4.44	TCP	54	54322 → 443 [ACK] Seq=1295 Ack=6199 Win=65792 Len=0
2387	24.355442	192.168.1.111	172.217.18.46	TLSv1.2	175	Application Data
2388	24.368376	192.168.1.111	172.217.18.46	TLSv1.2	1414	Application Data
2389	24.368376	192.168.1.111	172.217.18.46	TLSv1.2	209	Application Data
2394	24.457333	192.168.1.111	172.217.18.46	TCP	54	54295 → 443 [ACK] Seq=1637 Ack=40 Win=258 Len=0
2397	24.462627	192.168.1.111	172.217.18.46	TCP	54	54295 → 443 [ACK] Seq=1637 Ack=605 Win=255 Len=0
2401	24.463225	192.168.1.111	172.217.18.46	TCP	54	54295 → 443 [ACK] Seq=1637 Ack=957 Win=260 Len=0
2402	24.475371	192.168.1.111	172.217.18.46	TLSv1.2	89	Application Data
2403	24.475462	192.168.1.111	172.217.18.46	TLSv1.2	93	Application Data
2407	24.762159	192.168.1.111	142.250.203.227	TLSv1.3	279	Application Data
2408	24.779341	192.168.1.111	142.250.203.227	TCP	1414	54335 → 443 [ACK] Seq=1356 Ack=5566 Win=65536 Len=1360 [TCP segment of a reassembled PDU]
2409	24.779341	192.168.1.111	142.250.203.227	TCP	1414	54335 → 443 [ACK] Seq=2716 Ack=5566 Win=65536 Len=1360 [TCP segment of a reassembled PDU]
2410	24.779341	192.168.1.111	142.250.203.227	TCP	1414	54335 → 443 [ACK] Seq=4076 Ack=5566 Win=65536 Len=1360 [TCP segment of a reassembled PDU]

> Frame 2349: 727 bytes on wire (5816 bits), 727 bytes captured (5816 bits) on interface \Dev N
Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GentekTechno_b2:ba:16 (58:13:d3:16:58:13:d3:16)
> Destination: GentekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3
..... = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00 X.....-h-E
0010 02 c9 04 ee 40 00 80 06 0b 42 c8 a8 01 6f 2c e4@...B...o.
0020 f9 03 d4 10 00 50 bf 73 86 77 48 df 9e 14 50 18P s WH...P
0030 01 04 12 c4 00 00 50 4f 53 54 20 2f 75 73 65 72PO ST /user
0040 09 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e info.php HTTP/1.
0050 31 0d 0a 00 0f 73 74 3a 20 74 c5 73 74 70 63 00 1 Post: testip
0060 2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0d 0a 43 6f vulnweb .com.<C
0070 6e 6e 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 nnection : keep-a
0080 6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65 live:Co ntent-Le
0090 6e 67 74 68 3a 20 32 31 0d 0a 43 61 63 68 65 2d ngth: 21 ..Cache-

Internet Protocol Version 4 (ip), 20 bytes Packets: 2614 - Displayed: 1056 (40.4%) - Dropped: 0 (0.0%) Profile: Default

Type here to search 10:17 PM 5/23/2024

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.4412]
(c) Microsoft Corporation. All rights reserved.

C:\Users\LENOVO>nslookup
Default Server: mada-alarab.ps
Address: 192.168.1.254

>
> exit

C:\Users\LENOVO>nslookup http://testphp.vulnweb.com/login.php
Server: mada-alarab.ps
Address: 192.168.1.254

*** mada-alarab.ps can't find http://testphp.vulnweb.com/login.php: Non-existent domain

C:\Users\LENOVO>nslookup testphp.vulnweb.com
Server: mada-alarab.ps
Address: 192.168.1.254

Non-authoritative answer:
Name: testphp.vulnweb.com
Address: 44.228.249.3

C:\Users\LENOVO>
```

*Wi-Fi

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ip.dst=44.228.249.3

No.	Time	Source	Destination	Protocol	Length	Info
2349	22.217776	192.168.1.111	44.228.249.3	HTTP	727	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)
2356	22.489814	192.168.1.111	44.228.249.3	TCP	54	54288 → 80 [ACK] Seq=674 Ack=2928 Win=260 Len=0
2579	29.991480	192.168.1.111	44.228.249.3	TCP	55	54289 → 80 [ACK] Seq=1 Ack=1 Win=260 Len=1

▼ Frame 2349: 727 bytes on wire (5816 bits), 727 bytes captured (5816 bits) on interface \Dev...
Section number: 1
Interface id: 0 (\Device\NPF_{793E52BC-A9ED-4285-83AB-28C6AA09B306})
Encapsulation type: Ethernet (1)
Arrival Time: May 23, 2024 22:07:27.531646000 Jerusalem Daylight Time
UTC Arrival Time: May 23, 2024 19:07:27.531646000 UTC
Epoch Arrival Time: 1716491247.531646000
[Time shift for this packet: 0.000000000 seconds]
[Time delta from previous captured frame: 0.005290800 seconds]
[Time delta from previous displayed frame: 0.000000000 seconds]
[Time since reference or first frame: 22.217776000 seconds]
Frame Number: 2349
Frame Length: 727 bytes (5816 bits)
Capture Length: 727 bytes (5816 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http:application/x-www-form-urlencoded]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
Destination: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.111, Dst: 44.228.249.3
Transmission Control Protocol, Src Port: 54288, Dst Port: 80, Seq: 1, Ack: 1, Len: 673
Hypertext Transfer Protocol
HTML Form URL Encoded: application/x-www-form-urlencoded
Form item: "uname" = "test"

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00 X.....h:E
0010 02 c9 04 ee 40 00 80 06 0b 42 c0 a8 01 6f 2c e4@...B...
0020 f9 03 d4 10 00 50 bf 73 86 77 48 df 9e 14 50 18P...s...w...P
0030 01 04 12 c4 00 00 50 4f 53 54 20 2f 75 73 65 72P...O...T /user
0040 69 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e info.php HTTP/1.
0050 31 0d 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70 1: Host: testphp
0060 2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0a 43 6f .vulnweb.com: Co
0070 6e 6e 65 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 nnection: keep-a
0080 6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65 live-Content-Le
0090 6e 67 74 68 3a 20 32 31 0d 0a 43 61 63 68 65 2d ngth: 21 -Cache-
00a0 43 6f 6e 74 72 6f 6c 3a 20 6d 61 78 2d 61 67 65 Control: max-age
00b0 3d 30 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 =0-Upgrade-Inse
00c0 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure-Requests: 1
00d0 0d 0a 4f 72 69 67 69 6e 3a 20 68 74 74 70 3a 2f .Origin: http:/
00e0 2f 74 65 73 74 70 68 70 2e 76 75 6c 6e 77 65 62 /testphp.vulnweb
00f0 2e 63 6f 6d 0a 43 6f 6e 74 65 6e 74 2d 54 79 .com-Content-Ty
0100 70 65 3a 20 61 70 70 6c 69 63 61 74 69 6f 6e 2f pe: application/
0110 78 2d 77 77 77 2d 66 6f 72 6d 2d 75 72 6c 65 6e x-www-form-urle
0120 63 6f 64 65 64 0d 0a 55 73 65 72 2d 41 67 65 6e coded-User-Agen
0130 74 3a 20 4d 6f 7a 69 6c 6c 61 2f 35 2e 30 20 28 t: Mozilla/5.0 (
0140 57 69 6e 64 6f 77 73 20 4e 54 20 31 30 2e 30 3b Windows NT 10.0;
0150 20 57 69 6e 36 34 3b 20 78 36 34 29 20 41 70 70 Win64; x64) App
0160 6c 65 57 65 62 4b 69 74 2f 35 33 37 2e 33 36 20 leleebKit /537.36
0170 28 4b 48 54 4d 4c 2c 20 6c 69 6b 65 20 47 65 63 (KHTML, like Gec
0180 6b 6f 29 20 43 68 72 6f 6d 65 2f 31 32 34 2e 30 ko) Chrome/124.0
0190 2e 30 2e 30 20 53 61 66 61 72 69 2f 35 33 37 2e .0.0 Safari/537.
01a0 33 36 0d 0a 41 63 63 65 70 74 3a 20 74 65 70 74 36-Accept: text
01b0 2f 68 74 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f /html,applicatio
01c0 6e 2f 70 68 74 6d 6c 2b 70 6d 6c 2c 61 70 70 6c p/xhtml+xml,appl
01d0 69 63 61 74 69 6f 6e 2f 78 6d 6c 3b 71 3d 30 2a ction/xml;q=0
01e0 39 2c 69 6d 61 67 65 2f 61 76 69 66 2c 69 6d 61 9,image/avif,ima
01f0 67 65 2f 77 65 62 70 2c 69 6d 61 67 65 2f 61 70 ge/webp, image/ap

Internet Protocol Version 4 (ip), 20 bytes Packets: 2614 - Displayed: 3 (0.1%) - Dropped: 0 (0.0%) Profile: Default 10:24 PM

The image displays a Wireshark packet capture analysis of an HTTP POST request. The top pane shows the packet list with packet 2349 selected. The middle pane shows the packet details for the selected packet, including Ethernet II, Internet Protocol Version 4, Transmission Control Protocol, and Hypertext Transfer Protocol. The bottom pane shows the raw packet bytes in hexadecimal and ASCII.

Packet List:

No.	Time	Source	Destination	Protocol	Length	Info
2349	22.217776	192.168.1.111	44.228.249.3	HTTP	727	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)

Packet Details:

- Ethernet II:** Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
- Internet Protocol Version 4:** Src: 192.168.1.111, Dst: 44.228.249.3
- Transmission Control Protocol:** Src Port: 54288, Dst Port: 80, Seq: 1, Ack: 1, Len: 673
- Hypertext Transfer Protocol:**
 - Form item: "uname" = "test"
 - Form item: "pass" = "test"

Raw Packet Bytes:

```

0000  58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00  X.....h..E
0010  02 c9 04 ee 40 00 80 06 0b 42 c0 a8 01 6f 2c e4  ....@...B...
0020  f9 03 d4 10 00 50 bf 73 86 77 48 df 9e 14 50 18  ....P.s..W...P
0030  01 04 12 c4 00 00 50 4f 53 54 20 2f 75 73 65 72  ....PO ST /user
0040  69 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e  info.php HTTP/1.
0050  31 0d 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70  1..Host: testph
0060  2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0d 0a 43 6f  .vulnweb.com:Co
0070  6e 6e 65 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61  nnection: keep-a
0080  6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65  live:Content-Le
0090  6e 67 74 68 3a 20 32 31 0d 0a 43 61 63 68 65 2d  nght: 21 -Cache-
00a0  43 6f 6e 74 72 6f 6c 3a 20 6d 61 78 2d 61 67 65  Control: max-age
00b0  3d 30 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65  =0-Upgrade-Inse
00c0  63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31  cure-Requests: 1
00d0  0d 0a 4f 72 69 67 69 6e 3a 20 68 74 74 70 3a 2f  .Origin: http:/
00e0  2f 74 65 73 74 70 68 70 2e 76 75 6c 6e 77 65 62  /testphp.vulnweb
00f0  2e 63 6f 6d 0d 0a 43 6f 6e 74 65 6e 74 2d 54 79  .com:Content-Ty
0100  70 65 3a 20 61 70 70 6c 69 63 61 74 69 6f 6e 2f  pe: application/
0110  78 2d 77 77 72 6d 66 6f 72 6d 2d 75 72 6c 65 6e  x-www-form-urle
0120  63 6f 64 65 64 0d 0a 55 73 65 72 2d 41 67 65 6e  coded-U ser-Agen
0130  74 3a 20 4d 6f 7a 69 6c 6c 61 2f 35 2e 30 20 28  t: Mozilla/5.0 (
0140  57 69 6e 64 6f 77 73 20 4e 54 20 31 30 2e 30 3b  windows NT 10.0;
0150  20 57 69 6e 36 34 3b 20 78 36 34 29 20 41 70 70  Win64; x64) App
0160  6c 65 57 65 62 4b 69 74 2f 35 33 37 2e 33 36 20  leWebKit/537.36
0170  28 4b 48 54 4d 4c 2c 20 6c 69 60 65 20 47 65 63  (KHTML, like Gec
0180  69 6f 29 20 43 68 72 6f 6d 65 2f 31 33 34 2e 30  ko) Chrome/124.0
0190  2e 30 2e 30 53 61 66 61 72 69 2f 35 33 37 2e  .0.0 Safari/537.
01a0  33 36 0d 0a 41 63 63 65 70 74 3a 20 74 65 76 74  36-Accept: text
01b0  2f 68 74 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f  /html,applicatio
01c0  6e 2f 70 69 74 6d 6c 2b 70 6d 6c 2c 61 70 70 6c  x/html+xml,appl
01d0  69 63 61 74 69 6f 6e 2f 78 6d 6c 3b 71 3d 30 2e  ication/xml;par
01e0  39 2c 69 6d 61 67 65 2f 61 76 69 66 2c 69 6d 61  ,image/avif,ima
01f0  67 65 2f 77 65 62 70 2c 69 6d 61 67 65 2f 61 70  ge/webp,image/ap
  
```

Part two:

1. What is DNS?

DNS (Domain Name System) is like the Internet's phonebook. It translates human-friendly domain names (like `www.google.com`) into numerical IP addresses (like `172.217.5.110`), which computers use to communicate with each other. For example, when you type "`www.google.com`" into your web browser, DNS finds the corresponding IP address and directs your request to the right server, so you can see Google's homepage.

This process happens quickly and behind the scenes, making it easy for users to browse the web without needing to remember IP addresses.

2. Does DNS work on UDP or TCP or both? Explain

DNS primarily uses the User Datagram Protocol (UDP) on port 53 for most queries due to its speed and efficiency. However, it can also use the Transmission Control Protocol (TCP) in specific situations:

1. When the response size exceeds 512 bytes, requiring a more reliable connection.
 2. For zone transfers between DNS servers, which involve larger data amounts.
 3. When a query response is truncated over UDP, prompting a retry using TCP.
-
1. In these cases, TCP ensures reliable data transfer, making it suitable for handling larger or more complex DNS tasks. DNS Protocols: Uses both UDP (primarily) and TCP (in specific cases) on port 53.

3. What is the domain name of the following IP address: 8.8.8.8?

One of Google's publicly accessible DNS server addresses is 8.8.8.8. It is known as "Google Public DNS," but unlike other websites, it does not have a single domain name connected with it. Domain Name for 8.8.8.8: Commonly referred to as "Google Public DNS"

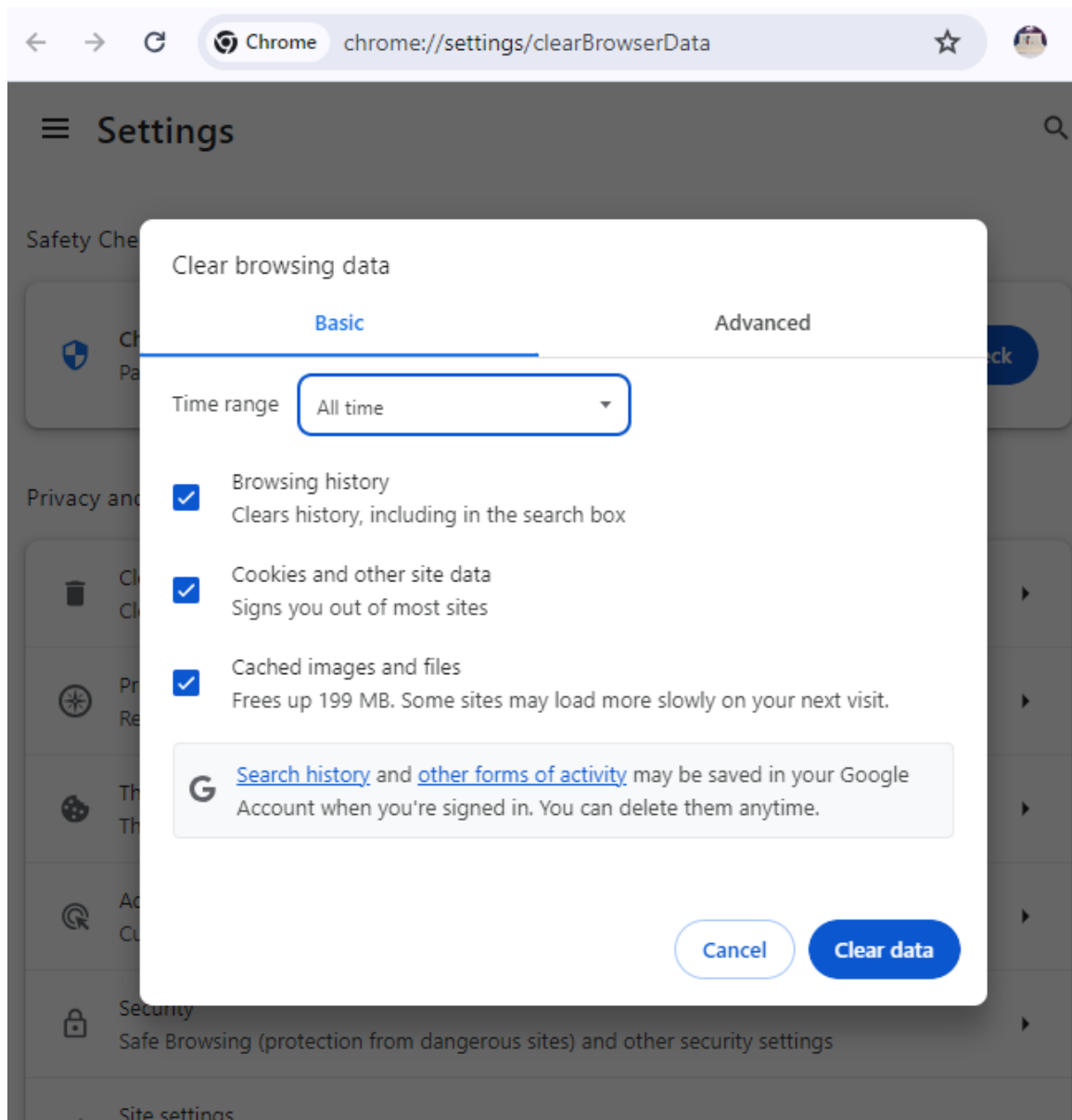
4. What is the IP address for the Google website?

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.4412]
(c) Microsoft Corporation. All rights reserved.

:\Users\LENOVO>nslookup www.google.com
Server: mada-alarab.ps
Address: 192.168.1.254

Non-authoritative answer:
Name: www.google.com
Addresses: 2a00:1450:4006:80f::2004
          142.250.201.36

:\Users\LENOVO>
```



Clear browsing data

Basic

Advanced

Time range

All time



Browsing history

Clears history, including in the search box



Cookies and other site data

Signs you out of most sites



Cached images and files

Frees up 199 MB. Some sites may load more slowly on your next visit.



Cancel

Clear data

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.1.111	34.239.51.74	TLSv1.2	227	Application Data
2	0.003804	34.199.114.46	192.168.1.111	TCP	54	443 → 55138 [ACK] Seq=1 Ack=1 Win=130 Len=0
3	0.029608	fe80::1	fe80::b425:a3e4:406:f123	ICMPv6	86	Neighbor Solicitation for fe80::b425:a3e4:406:f123 from 58:13:d3:b2:ba:16
4	0.029676	fe80::b425:a3e4:406:f123	fe80::1	ICMPv6	86	Neighbor Advertisement fe80::b425:a3e4:406:f123 (sol, ovr) is at b4:d5:bd:9c:ff:68
5	0.130804	192.168.1.115	224.0.0.251	MDNS	136	Standard query 0x0000 ANY 17:b5:69:b2:4e:f0@EShare-2741._raop._tcp.local, "QU" question SRV 0 0 51040 loca...
6	0.147637	192.168.1.111	104.17.3.184	TCP	55	55129 → 443 [ACK] Seq=1 Ack=1 Win=260 Len=1 [TCP segment of a reassembled PDU]
7	0.169178	104.17.3.184	192.168.1.111	TCP	66	443 → 55129 [ACK] Seq=1 Ack=2 Win=10 Len=0 SLE=1 SRE=2
8	0.169693	34.199.114.46	192.168.1.111	TLSv1.2	512	Application Data
9	0.169827	34.239.51.74	192.168.1.111	TLSv1.2	113	Application Data
10	0.219528	192.168.1.111	34.199.114.46	TCP	54	55138 → 443 [ACK] Seq=1 Ack=459 Win=255 Len=0
11	0.210664	192.168.1.111	34.239.51.74	TCP	54	55137 → 443 [ACK] Seq=174 Ack=60 Win=259 Len=0
12	0.817701	192.168.1.111	169.150.215.48	TCP	55	53545 → 443 [ACK] Seq=1 Ack=1 Win=258 Len=1 [TCP segment of a reassembled PDU]
13	0.842807	192.168.1.115	224.0.0.251	MDNS	444	Standard query response 0x0000 TXT, cache flush PTR 17:b5:69:b2:4e:f0@EShare-2741._raop._tcp.local SRV, ca...
14	0.843775	169.150.215.48	192.168.1.111	TCP	54	443 → 53545 [ACK] Seq=0 Ack=2 Win=501 Len=0
15	0.843881	192.168.1.111	169.150.215.48	TCP	54	[TCP Dup ACK 1241] [TCP ACKed unseen segment] 53545 → 443 [ACK] Seq=2 Ack=1 Win=258 Len=0
16	0.925568	169.150.215.48	192.168.1.111	TCP	66	[TCP Previous segment not captured] 443 → 53545 [ACK] Seq=1 Ack=2 Win=501 Len=0 SLE=1 SRE=2
17	1.456751	GenteTechno_b2:ba:16	Intel_9c:ff:68	ARP	60	Who has 192.168.1.111? Tell 192.168.1.254
18	1.456779	Intel_9c:ff:68	GenteTechno_b2:ba:16	ARP	42	192.168.1.111 is at b4:d5:bd:9c:ff:68
19	1.477870	192.168.1.111	34.199.114.46	TLSv1.2	364	Application Data
20	1.774573	192.168.1.115	255.255.255.255	UDP	93	48689 → 48689 Len=51
21	1.777103	34.199.114.46	192.168.1.111	TCP	54	443 → 55138 [ACK] Seq=459 Ack=311 Win=135 Len=0
22	1.777103	34.199.114.46	192.168.1.111	TLSv1.2	108	Application Data
23	1.778478	192.168.1.111	34.199.114.46	TLSv1.2	1055	Application Data
24	1.866474	192.168.1.115	224.0.0.251	MDNS	184	Standard query response 0x0000 SRV, cache flush 0 0 51040 localhost.local A, cache flush 192.168.1.115 NSE...
25	2.071092	34.199.114.46	192.168.1.111	TCP	54	443 → 55138 [ACK] Seq=513 Ack=1312 Win=205 Len=0
26	2.071655	34.199.114.46	192.168.1.111	TLSv1.2	512	Application Data

Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
Address: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
.....0..... = LG bit: Globally unique address (factory default)
.....0..... = IG bit: Individual address (unicast)
Type: IPv4 (0x0000)
Internet Protocol Version 4, Src: 192.168.1.111, Dst: 192.168.1.254
User Datagram Protocol, Src Port: 58601, Dst Port: 53

Internet Protocol Version 4 (IP), 20 bytes

Packets: 6154 - Displayed: 6154 (100.0%) - Dropped: 0 (0.0%)

Profile: Default

Jim Kurose Homepage

gaia.cs.umass.edu/kurose_ross/index.php

Computer Networking: A Top-Down Approach

8th edition

Jim Kurose, Keith Ross

Authors' website

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Comments welcome and appreciated: kurose@cs.umass.edu

Wi-Fi

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dns

No.	Time	Source	Destination	Protocol	Length	Info
29	2.812244	192.168.1.111	192.168.1.254	DNS	75	Standard query 0x73f8 A ssl.gstatic.com
32	2.826026	192.168.1.254	192.168.1.111	DNS	186	Standard query response 0x73f8 A ssl.gstatic.com A 142.250.201.35 NS ns4.google.com NS ns3.google.com NS n...
89	9.759182	192.168.1.111	192.168.1.254	DNS	77	Standard query 0xc404 A gaia.cs.umass.edu
92	9.792119	192.168.1.111	192.168.1.254	DNS	77	Standard query 0xc404 A gaia.cs.umass.edu
99	10.160957	192.168.1.254	192.168.1.111	DNS	147	Standard query response 0xc404 A gaia.cs.umass.edu A 128.119.245.12 NS ns1.umass.edu NS ns3.umass.edu NS n...
100	10.160957	192.168.1.254	192.168.1.111	DNS	147	Standard query response 0xc404 A gaia.cs.umass.edu A 128.119.245.12 NS ns2.umass.edu NS ns1.umass.edu NS n...
109	10.406741	192.168.1.111	192.168.1.254	DNS	91	Standard query 0x2900 AAAA dc1-file.ksn.kaspersky-labs.com
110	10.407295	192.168.1.111	192.168.1.254	DNS	91	Standard query 0x2900 A dc1-file.ksn.kaspersky-labs.com
111	10.495556	192.168.1.254	192.168.1.111	DNS	207	Standard query response 0x2348 AAAA dc1-file.ksn.kaspersky-labs.com CNAME ksn-dc1-file.geoksn.kaspersky.co...
112	10.495556	192.168.1.254	192.168.1.111	DNS	379	Standard query response 0x2900 A dc1-file.ksn.kaspersky-labs.com CNAME ksn-dc1-file.geoksn.kaspersky.co...
170	15.560323	192.168.1.111	192.168.1.254	DNS	80	Standard query 0xd915 A beacons.gcp.gvt2.com
172	15.573132	192.168.1.254	192.168.1.111	DNS	249	Standard query response 0xd915 A beacons.gcp.gvt2.com CNAME beacons-handoff.gcp.gvt2.com A 142.251.37.227 ...
188	15.811503	192.168.1.111	192.168.1.254	DNS	76	Standard query 0xb78f A www.acunetix.com
189	15.846064	192.168.1.111	192.168.1.254	DNS	76	Standard query 0xb78f A www.acunetix.com
190	15.864722	192.168.1.254	192.168.1.111	DNS	162	Standard query response 0xb78f A www.acunetix.com A 104.18.16.171 A 104.18.17.171 NS seamus.ns.cloudflare...
191	15.864914	192.168.1.254	192.168.1.111	DNS	162	Standard query response 0xb78f A www.acunetix.com A 104.18.16.171 A 104.18.17.171 NS dara.ns.cloudflare.co...
220	16.835145	192.168.1.111	192.168.1.254	DNS	77	Standard query 0xebb9 A beacons4.gvt2.com
229	16.841166	192.168.1.254	192.168.1.111	DNS	216	Standard query response 0xebb9 A beacons4.gvt2.com A 216.239.32.116 NS ns3.google.com NS ns1.google.com NS...
272	18.190121	192.168.1.111	192.168.1.254	DNS	77	Standard query 0xd4e A gaia.cs.umass.edu
273	18.190978	192.168.1.111	192.168.1.254	DNS	77	Standard query 0x49a8 HTTPS gaia.cs.umass.edu
275	18.197456	192.168.1.254	192.168.1.111	DNS	147	Standard query response 0xd4e A gaia.cs.umass.edu A 128.119.245.12 NS ns1.umass.edu NS ns2.umass.edu NS n...
283	18.679868	192.168.1.111	192.168.1.254	DNS	77	Standard query 0x45d9 A gaia.cs.umass.edu
284	18.685602	192.168.1.254	192.168.1.111	DNS	147	Standard query response 0x45d9 A gaia.cs.umass.edu A 128.119.245.12 NS ns3.umass.edu NS ns2.umass.edu NS n...
285	18.903959	192.168.1.111	192.168.1.254	DNS	77	Standard query 0x0e71 A business.bing.com
286	18.904435	192.168.1.111	192.168.1.254	DNS	77	Standard query 0x2280 HTTPS business.bing.com
287	18.910613	192.168.1.254	192.168.1.111	DNS	199	Standard query response 0x2280 HTTPS business.bing.com CNAME business-bing-com.b-0005.b-msedge.net CNAME b...
288	18.910613	192.168.1.254	192.168.1.111	DNS	194	Standard query response 0x0e71 A business.bing.com CNAME business-bing-com.b-0005.b-msedge.net CNAME b-000...

> Frame 29: 75 bytes on wire (600 bits), 75 bytes captured (600 bits) on interface \Device\NPF...
> Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Destination: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
> Source: Intel_9c:ff:68 (b4:d5:bd9c:ff:68)
> Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 192.168.1.111, Dst: 192.168.1.254

Domain Name System: Protocol

Packets: 6154 - Displayed: 218 (3.5%) - Dropped: 0 (0.0%)

Profile: Default

Wireshark - Packet 92 - Wi-Fi

Length: 43
Checksum: 0x681b [unverified]
[Checksum Status: Unverified]
[Stream index: 3]
[Timestamps]
UDP payload (35 bytes)
Domain Name System (query)
Transaction ID: 0xc404
Flags: 0x0100 Standard query
Questions: 1
Answer RRs: 0
Authority RRs: 0
Additional RRs: 0
Queries
[Retransmitted request, Original request in: 89]
[Retransmission: True]

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00 X:.....h:E
0010 00 3f 51 d6 00 00 11 64 1a c0 a8 01 6f c0 00 :Q:....d...o
0020 01 fe d3 19 00 35 00 2b 68 1b c4 04 01 00 00 01 :...5+ h.....
0030 00 00 00 00 00 04 67 61 69 61 02 63 73 05 75 :.....g aia-cs-
0040 6d 61 73 73 03 65 64 75 00 00 01 00 01 :...mass.edu...

No: 92 - Time: 9.792119 - Source: 192.168.1.111 - Destination: 192.168.1.254 - Protocol: DNS - Length: 77 - Info: Standard query 0xc404 A gaia.cs.umass.edu

☒ Show packet bytes

Close Help

Wi-Fi screenrec

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dns

No.	Time	Source	Destination	Protocol	Length	Info
29	2.812244	192.168.1.111	192.168.1.254	DNS	75	Standard query 0x73f8 A ssl.gstatic.com
32	2.826026	192.168.1.254	192.168.1.111	DNS	186	Standard query response 0x73f8 A ssl.gstatic.com A 142.250.201.35 NS ns4.google.com NS ns3.google.com NS n...
89	9.759102	192.168.1.111	192.168.1.254	DNS	77	Standard query 0xc404 A gaia.cs.umass.edu
92	9.792119	192.168.1.111	192.168.1.254	DNS	77	Standard query 0xc404 A gaia.cs.umass.edu
99	10.160957	192.168.1.254	192.168.1.111	DNS	147	Standard query response 0xc404 A gaia.cs.umass.edu A 128.119.245.12 NS ns1.umass.edu NS ns3.umass.edu NS n...
100	10.160957	192.168.1.254	192.168.1.111	DNS	147	Standard query response 0xc404 A gaia.cs.umass.edu A 128.119.245.12 NS ns2.umass.edu NS ns1.umass.edu NS n...
109	10.486741	192.168.1.111	192.168.1.254	DNS	91	Standard query 0x2348 AAAA dcl-file.kaspersky-labs.com
118	10.487295	192.168.1.111	192.168.1.254	DNS	91	Standard query 0x2900 A dcl-file.kaspersky-labs.com

Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
Address: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
... .. = LG bit: Globally unique address (factory default)
... .. = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.111, Dst: 192.168.1.254
User Datagram Protocol, Src Port: 54041, Dst Port: 53
Source Port: 54041
Destination Port: 53
Length: 43
Checksum: 0x681b [unverified]
[Checksum Status: Unverified]
[Stream index: 3]
[Timestamps]
UDP payload (35 bytes)
Domain Name System (query)
Transaction ID: 0xc404
Flags: 0x0100 Standard query
Questions: 1
Answer RRs: 0
Authority RRs: 0
Additional RRs: 0
Queries
[Retransmitted request. Original request in: 89]
[Retransmission: True]

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00 X.....h-E-
0010 00 3f 51 d6 00 00 00 11 64 1a c0 a8 01 6f c0 a8 -?Q....d...o-
0020 01 fe d3 19 00 35 00 2b 68 1b c4 04 01 00 00 015+h.....
0030 00 00 00 00 00 00 04 67 61 69 61 02 63 73 05 75g aia+cs+u
0040 6d 61 73 73 03 65 64 75 00 00 01 00 01mass+edu.....

Wi-Fi screenrec

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dns

[Coloring Rule Name: UDP]
[Coloring Rule String: udp]

Ethernet II, Src: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68), Dst: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
Destination: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
Address: GemtekTechno_b2:ba:16 (58:13:d3:b2:ba:16)
... .. = LG bit: Globally unique address (factory default)
... .. = IG bit: Individual address (unicast)
Source: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
Address: Intel_9c:ff:68 (b4:d5:bd:9c:ff:68)
... .. = LG bit: Globally unique address (factory default)
... .. = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.111, Dst: 192.168.1.254
User Datagram Protocol, Src Port: 54041, Dst Port: 53
Source Port: 54041
Destination Port: 53
Length: 43
Checksum: 0x681b [unverified]
[Checksum Status: Unverified]
[Stream index: 3]
[Timestamps]
UDP payload (35 bytes)
Domain Name System (query)
Transaction ID: 0xc404
[Expert Info (Warning/Protocol): DNS query retransmission. Original request in frame ...]
Flags: 0x0100 Standard query
Questions: 1
Answer RRs: 0
Authority RRs: 0
Additional RRs: 0
Queries
gaia.cs.umass.edu: type A, class IN
[Retransmitted request. Original request in: 89]

0000 58 13 d3 b2 ba 16 b4 d5 bd 9c ff 68 00 00 45 00 X.....h-E-
0010 00 3f 51 d6 00 00 00 11 64 1a c0 a8 01 6f c0 a8 -?Q....d...o-
0020 01 fe d3 19 00 35 00 2b 68 1b c4 04 01 00 00 015+h.....
0030 00 00 00 00 00 00 04 67 61 69 61 02 63 73 05 75g aia+cs+u
0040 6d 61 73 73 03 65 64 75 00 00 01 00 01mass+edu.....

Internet Protocol Version 4 (ip), 20 bytes

Packets: 6154 - Displayed: 218 (3.5%) - Dropped: 0 (0.0%)

Profile: Default