

1. MDNS, DHCPv6, ARP, SSDP, TLSv1.2, TCP, UDP, NBNS, DNS
2. 0.044907 seconds. Used the default time display setting and marked the GET message as the reference.

(ip.src == 192.168.0.148    ip.dst == 192.168.0.148) && http						
No.	Time	Source	Destination	Protocol	Length	Info
→ 1437	*REF*	192.168.0.148	104.80.34.253	HTTP	267	GET /en-US/livet
← 1442	0.044907	104.80.34.253	192.168.0.148	HTTP/XML	306	HTTP/1.1 200 OK

3. Their IP address is 104.80.34.253. My computer's IP address is 192.168.0.148.

Source	Destination
192.168.0.148	104.80.34.253
104.80.34.253	192.168.0.148

4. Restarted WS, 133 total packets, all of them include my IP. *ip.addr==192.168.0.148*. Reversing the filter (*ip.addr!=192.168.0.148*) still results in 133 packets, but WS warns that != may have unexpected results. The proper filter should be something like *not ip.addr==192.168.0.148*. 131 packets do not contain my IP.
5. There were 4 DNS packets initially, TCP, but no HTTP requests. Looks like around 10600 packets in total.

\*Ethernet 4

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ip.addr==192.168.0.148

No.	Time	Source	Destination	Protocol	Length	Info
6	0.425651	192.168.0.148	173.222.228.86	TCP	55	51274 → 443 [ACK] Seq=1 Ack=1 Win=1024 Len=1 [TCP segment of data stream 0]
7	0.425654	192.168.0.148	173.222.228.86	TCP	55	51273 → 443 [ACK] Seq=1 Ack=1 Win=1024 Len=1 [TCP segment of data stream 0]
9	0.443139	173.222.228.86	192.168.0.148	TCP	66	443 → 51273 [ACK] Seq=1 Ack=2 Win=254 Len=0 SLE=1 SRE=2
10	0.443381	173.222.228.86	192.168.0.148	TCP	66	443 → 51274 [ACK] Seq=1 Ack=2 Win=254 Len=0 SLE=1 SRE=2
12	*REF*	192.168.0.148	192.168.0.1	DNS	71	Standard query 0x0835 A www.cmu.edu
13	0.030979	192.168.0.148	192.168.0.1	DNS	71	Standard query 0x0835 A www.cmu.edu
14	0.286614	192.168.0.1	192.168.0.148	DNS	109	Standard query response 0x0835 A www.cmu.edu CNAME WWW.R53.
15	0.286789	192.168.0.1	192.168.0.148	DNS	109	Standard query response 0x0835 A www.cmu.edu CNAME WWW.R53.
16	0.287012	192.168.0.148	128.2.42.52	TCP	66	51323 → 443 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK
17	0.387513	128.2.42.52	192.168.0.148	TCP	62	443 → 51323 [SYN, ACK] Seq=0 Ack=1 Win=4380 Len=0 MSS=1460
18	0.387574	192.168.0.148	128.2.42.52	TCP	54	51323 → 443 [ACK] Seq=1 Ack=1 Win=64240 Len=0
19	0.387744	192.168.0.148	128.2.42.52	TLSv1.2	571	Client Hello
20	0.483571	128.2.42.52	192.168.0.148	TCP	60	443 → 51323 [ACK] Seq=1 Ack=518 Win=4897 Len=0
21	0.484346	128.2.42.52	192.168.0.148	TLSv1.2	146	Server Hello, Change Cipher Spec
22	0.484516	128.2.42.52	192.168.0.148	TLSv1.2	99	Encrypted Handshake Message
23	0.484529	192.168.0.148	128.2.42.52	TCP	54	51323 → 443 [ACK] Seq=518 Ack=138 Win=64103 Len=0
24	0.485128	192.168.0.148	128.2.42.52	TLSv1.2	105	Change Cipher Spec, Encrypted Handshake Message
25	0.485267	192.168.0.148	128.2.42.52	TLSv1.2	621	Application Data
26	0.580440	128.2.42.52	192.168.0.148	TCP	60	443 → 51323 [ACK] Seq=138 Ack=569 Win=4948 Len=0
27	0.580505	128.2.42.52	192.168.0.148	TCP	60	443 → 51323 [ACK] Seq=138 Ack=1136 Win=5515 Len=0
28	0.580505	128.2.42.52	192.168.0.148	TCP	60	[TCP Dup ACK 27#1] 443 → 51323 [ACK] Seq=138 Ack=1136 Win=5
29	0.585727	128.2.42.52	192.168.0.148	TCP	1514	443 → 51323 [ACK] Seq=138 Ack=1136 Win=5515 Len=1460 [TCP segment of data stream 0]
30	0.585900	128.2.42.52	192.168.0.148	TCP	1514	443 → 51323 [ACK] Seq=138 Ack=1136 Win=5515 Len=1460 [TCP segment of data stream 0]

> Frame 12: 71 bytes on wire (568 bits), 71 bytes captured (568 bits) on interface 0

> Ethernet II, Src: AsustekC\_4c:c0:ca (04:d4:c4:c0:ca), Dst: Tp-LinkT\_e2:e4:7d (ac:84:c6:e2:e4:7d)

> Internet Protocol Version 4, Src: 192.168.0.148, Dst: 192.168.0.1

> User Datagram Protocol, Src Port: 53398, Dst Port: 53

Domain Name System (query)

Transaction ID: 0x0835

Flags: 0x0100 Standard query

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 0

Queries

> www.cmu.edu: type A, class IN

[Response In: 14]

```

0000  ac 84 c6 e2 e4 7d 04 d4  c4 4c c0 ca 08 00 45 00  .....}...L....E..
0010  00 39 d9 10 00 00 80 11  00 00 c0 a8 00 94 c0 a8  ..9.....
0020  00 01 d0 96 00 35 00 25  82 1c 08 35 01 00 00 01  ...5%...5....
0030  00 00 00 00 00 00 03 77  77 77 03 6d 75 03 65  ....w ww.cmu.e
0040  64 75 00 00 01 00 01  .....du.....

```

Text item (text), 17 bytes

Packets: 10601 · Displayed: 10589 (99.9%) · Dropped: 0 (0.0%) | Profile: Default

Towards the end of the capture, there are several FIN, ACK packets signaling the site finishing up

loading?

Wireshark interface showing a packet capture on Ethernet 4. The filter is set to `ip.addr==192.168.0.148`. The packet list shows a series of TCP connections and keep-alive messages between 192.168.0.148 and 128.2.42.52, as well as connections to 173.222.228.86. The packet details pane shows the structure of frame 18, which is an Ethernet II frame containing an Internet Protocol Version 4 packet and a Transmission Control Protocol packet.

No.	Time	Source	Destination	Protocol	Length	Info
10578	5.455145	128.2.42.52	192.168.0.148	TCP	1514	443 → 51324 [ACK] Seq=2519185 Ack=1604 Win=5983 Len=1460 [T...
10579	5.455152	192.168.0.148	128.2.42.52	TCP	54	51324 → 443 [ACK] Seq=1604 Ack=2520645 Win=64240 Len=0
10580	5.455270	128.2.42.52	192.168.0.148	TCP	1514	443 → 51324 [ACK] Seq=2520645 Ack=1604 Win=5983 Len=1460 [T...
10581	5.455271	128.2.42.52	192.168.0.148	TCP	1514	443 → 51324 [ACK] Seq=2522105 Ack=1604 Win=5983 Len=1460 [T...
10582	5.455271	128.2.42.52	192.168.0.148	TLSv1.2	1172	Application Data
10583	5.455279	192.168.0.148	128.2.42.52	TCP	54	51324 → 443 [ACK] Seq=1604 Ack=2524683 Win=64240 Len=0
10584	7.775841	128.2.42.52	192.168.0.148	TCP	60	443 → 51331 [FIN, ACK] Seq=871985 Ack=2095 Win=6474 Len=0
10585	7.775868	192.168.0.148	128.2.42.52	TCP	54	51331 → 443 [ACK] Seq=2095 Ack=871986 Win=64240 Len=0
10586	7.962929	128.2.42.52	192.168.0.148	TCP	60	443 → 51330 [FIN, ACK] Seq=1012042 Ack=3181 Win=7560 Len=0
10587	7.962957	192.168.0.148	128.2.42.52	TCP	54	51330 → 443 [ACK] Seq=3181 Ack=1012043 Win=64240 Len=0
10588	8.240958	128.2.42.52	192.168.0.148	TCP	60	443 → 51328 [FIN, ACK] Seq=1352521 Ack=2058 Win=6437 Len=0
10589	8.240984	192.168.0.148	128.2.42.52	TCP	54	51328 → 443 [ACK] Seq=2058 Ack=1352522 Win=64240 Len=0
10590	8.452930	128.2.42.52	192.168.0.148	TCP	60	443 → 51325 [FIN, ACK] Seq=943200 Ack=4204 Win=8583 Len=0
10591	8.452957	192.168.0.148	128.2.42.52	TCP	54	51325 → 443 [ACK] Seq=4204 Ack=943201 Win=64240 Len=0
10592	8.636787	192.168.0.148	173.222.228.86	TCP	55	[TCP Keep-Alive] 51273 → 443 [ACK] Seq=1 Ack=1 Win=1024 Len=0
10593	8.636789	192.168.0.148	173.222.228.86	TCP	55	[TCP Keep-Alive] 51274 → 443 [ACK] Seq=1 Ack=1 Win=1024 Len=0
10596	8.658108	173.222.228.86	192.168.0.148	TCP	66	[TCP Keep-Alive ACK] 443 → 51273 [ACK] Seq=1 Ack=2 Win=254
10597	8.658347	173.222.228.86	192.168.0.148	TCP	66	[TCP Keep-Alive ACK] 443 → 51274 [ACK] Seq=1 Ack=2 Win=254
10598	8.822041	128.2.42.52	192.168.0.148	TCP	60	443 → 51323 [FIN, ACK] Seq=2239011 Ack=3632 Win=8011 Len=0
10599	8.822059	192.168.0.148	128.2.42.52	TCP	54	51323 → 443 [ACK] Seq=3632 Ack=2239012 Win=64240 Len=0
10600	9.513177	128.2.42.52	192.168.0.148	TCP	60	443 → 51324 [FIN, ACK] Seq=2524683 Ack=1604 Win=5983 Len=0
10601	9.513204	192.168.0.148	128.2.42.52	TCP	54	51324 → 443 [ACK] Seq=1604 Ack=2524684 Win=64240 Len=0

Frame 18: 54 bytes on wire (432 bits), 54 bytes captured (432 bits) on interface 0  
> Ethernet II, Src: AsustekC\_4c:c0:ca (04:d4:c4:c0:ca), Dst: Tp-LinkT\_e2:e4:7d (ac:84:c6:e2:e4:7d)  
> Internet Protocol Version 4, Src: 192.168.0.148, Dst: 128.2.42.52  
> Transmission Control Protocol, Src Port: 51323, Dst Port: 443, Seq: 1, Ack: 1, Len: 0

```
0000  ac 84 c6 e2 e4 7d 04 d4  c4 4c c0 ca 08 00 45 00  .....}...L....E.
0010  00 28 b3 da 40 00 80 06  00 00 c0 a8 00 94 80 02  .(..@.....
0020  2a 34 c8 7b 01 bb d9 8a  c7 bd 69 fd fc 12 50 10  *4.{...i...P.
0030  fa f0 6b 8d 00 00                                ...k...
```

wireshark\_Ethernet 4\_20200409132450\_a07248.pcapng | Packets: 10601 · Displayed: 10589 (99.9%) · Dropped: 0 (0.0%) | Profile: Default