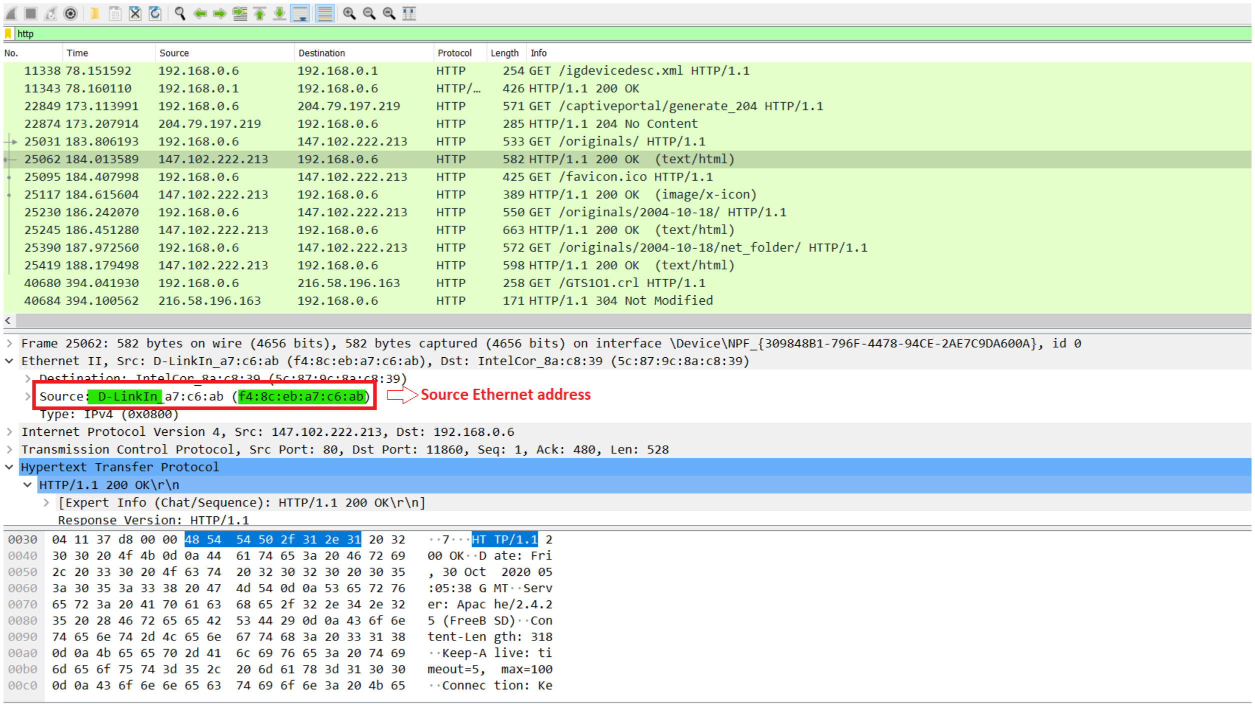
Lab-7

1. In the HTTP OK, what is the value of the ethernet source address? Which machine does this belong to?

The ethernet source address belongs to my router: **D-LinkIn**



http

```
No.   Time       Source           Destination      Protocol Length Info
11338 78.151592  192.168.0.6      192.168.0.1      HTTP      254 GET /igdevicedesc.xml HTTP/1.1
11343 78.160110  192.168.0.1      192.168.0.6      HTTP/…    426 HTTP/1.1 200 OK
22849 173.113991 192.168.0.6      204.79.197.219   HTTP      571 GET /captiveportal/generate_204 HTTP/1.1
22874 173.207914 204.79.197.219   192.168.0.6      HTTP      285 HTTP/1.1 204 No Content
25031 183.806193 192.168.0.6      147.102.222.213  HTTP      533 GET /originals/ HTTP/1.1
25062 184.013589 147.102.222.213  192.168.0.6      HTTP      582 HTTP/1.1 200 OK  (text/html)
25095 184.407998 192.168.0.6      147.102.222.213  HTTP      425 GET /favicon.ico HTTP/1.1
25117 184.615604 147.102.222.213  192.168.0.6      HTTP      389 HTTP/1.1 200 OK  (image/x-icon)
25230 186.242070 192.168.0.6      147.102.222.213  HTTP      550 GET /originals/2004-10-18/ HTTP/1.1
25245 186.451280 147.102.222.213  192.168.0.6      HTTP      663 HTTP/1.1 200 OK  (text/html)
25390 187.972560 192.168.0.6      147.102.222.213  HTTP      572 GET /originals/2004-10-18/net_folder/ HTTP/1.1
25419 188.179498 147.102.222.213  192.168.0.6      HTTP      598 HTTP/1.1 200 OK  (text/html)
40680 394.041930 192.168.0.6      216.58.196.163   HTTP      258 GET /GTS1O1.crl HTTP/1.1
40684 394.100562 216.58.196.163   192.168.0.6      HTTP      171 HTTP/1.1 304 Not Modified
```

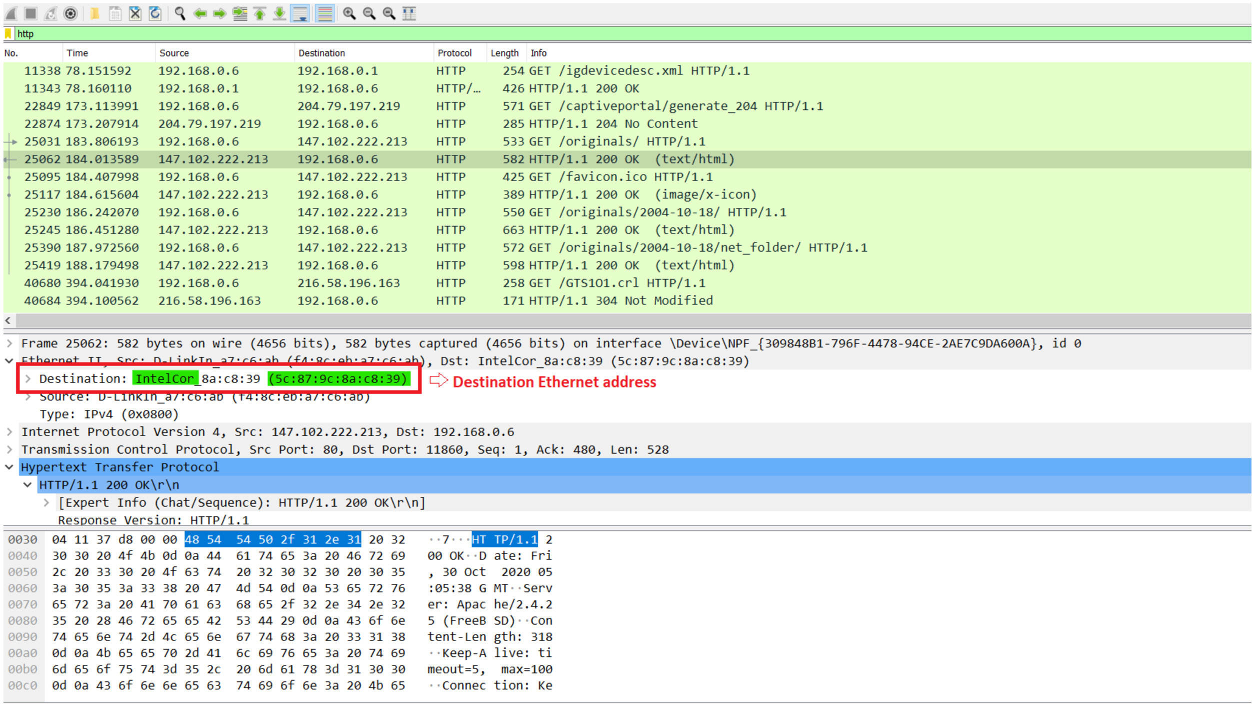
```
> Frame 25062: 582 bytes on wire (4656 bits), 582 bytes captured (4656 bits) on interface \Device\NPF_{309848B1-796F-4478-94CE-2AE7C9DA600A}, id 0
v Ethernet II, Src: D-LinkIn_a7:c6:ab (f4:8c:eb:a7:c6:ab), Dst: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39)
  > Destination: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39)
  > Source: D-LinkIn_a7:c6:ab (f4:8c:eb:a7:c6:ab)
    Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 147.102.222.213, Dst: 192.168.0.6
> Transmission Control Protocol, Src Port: 80, Dst Port: 11860, Seq: 1, Ack: 480, Len: 528
v Hypertext Transfer Protocol
  v HTTP/1.1 200 OK\r\n
    > [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Response Version: HTTP/1.1
```

Source Ethernet address

```
0030  04 11 37 d8 00 00 48 54  54 50 2f 31 2e 31 20 32   ··7···HT TP/1.1 2
0040  30 30 20 4f 4b 0d 0a 44  61 74 65 3a 20 46 72 69   00 OK··D ate: Fri
0050  2c 20 33 30 20 4f 63 74  20 32 30 32 30 20 30 35   , 30 Oct  2020 05
0060  3a 30 35 3a 33 38 20 47  4d 54 0d 0a 53 65 72 76   :05:38 G MT··Serv
0070  65 72 3a 20 41 70 61 63  68 65 2f 32 2e 34 2e 32   er: Apac he/2.4.2
0080  35 20 28 46 72 65 65 42  53 44 29 0d 0a 43 6f 6e   5 (FreeB SD)··Con
0090  74 65 6e 74 2d 4c 65 6e  67 74 68 3a 20 33 31 38   tent-Len gth: 318
00a0  0d 0a 4b 65 65 70 2d 41  6c 69 76 65 3a 20 74 69   ··Keep-A live: ti
00b0  6d 65 6f 75 74 3d 35 2c  20 6d 61 78 3d 31 30 30   meout=5,  max=100
00c0  0d 0a 43 6f 6e 6e 65 63  74 69 6f 6e 3a 20 4b 65   ··Connec tion: Ke
```

2. What is the destination address in the ethernet frame? Whose address is that?

The ethernet destination address belongs to my laptop



http

```
No.   Time         Source            Destination       Protocol  Length Info
11338 78.151592    192.168.0.6       192.168.0.1       HTTP        254 GET /igdevicedesc.xml HTTP/1.1
11343 78.160110    192.168.0.1       192.168.0.6       HTTP/…      426 HTTP/1.1 200 OK
22849 173.113991   192.168.0.6       204.79.197.219    HTTP        571 GET /captiveportal/generate_204 HTTP/1.1
22874 173.207914   204.79.197.219    192.168.0.6       HTTP        285 HTTP/1.1 204 No Content
25031 183.806193   192.168.0.6       147.102.222.213   HTTP        533 GET /originals/ HTTP/1.1
25062 184.013589   147.102.222.213   192.168.0.6       HTTP        582 HTTP/1.1 200 OK  (text/html)
25095 184.407998   192.168.0.6       147.102.222.213   HTTP        425 GET /favicon.ico HTTP/1.1
25117 184.615604   147.102.222.213   192.168.0.6       HTTP        389 HTTP/1.1 200 OK  (image/x-icon)
25230 186.242070   192.168.0.6       147.102.222.213   HTTP        550 GET /originals/2004-10-18/ HTTP/1.1
25245 186.451280   147.102.222.213   192.168.0.6       HTTP        663 HTTP/1.1 200 OK  (text/html)
25390 187.972560   192.168.0.6       147.102.222.213   HTTP        572 GET /originals/2004-10-18/net_folder/ HTTP/1.1
25419 188.179498   147.102.222.213   192.168.0.6       HTTP        598 HTTP/1.1 200 OK  (text/html)
40680 394.041930   192.168.0.6       216.58.196.163    HTTP        258 GET /GTS1O1.crl HTTP/1.1
40684 394.100562   216.58.196.163    192.168.0.6       HTTP        171 HTTP/1.1 304 Not Modified
```

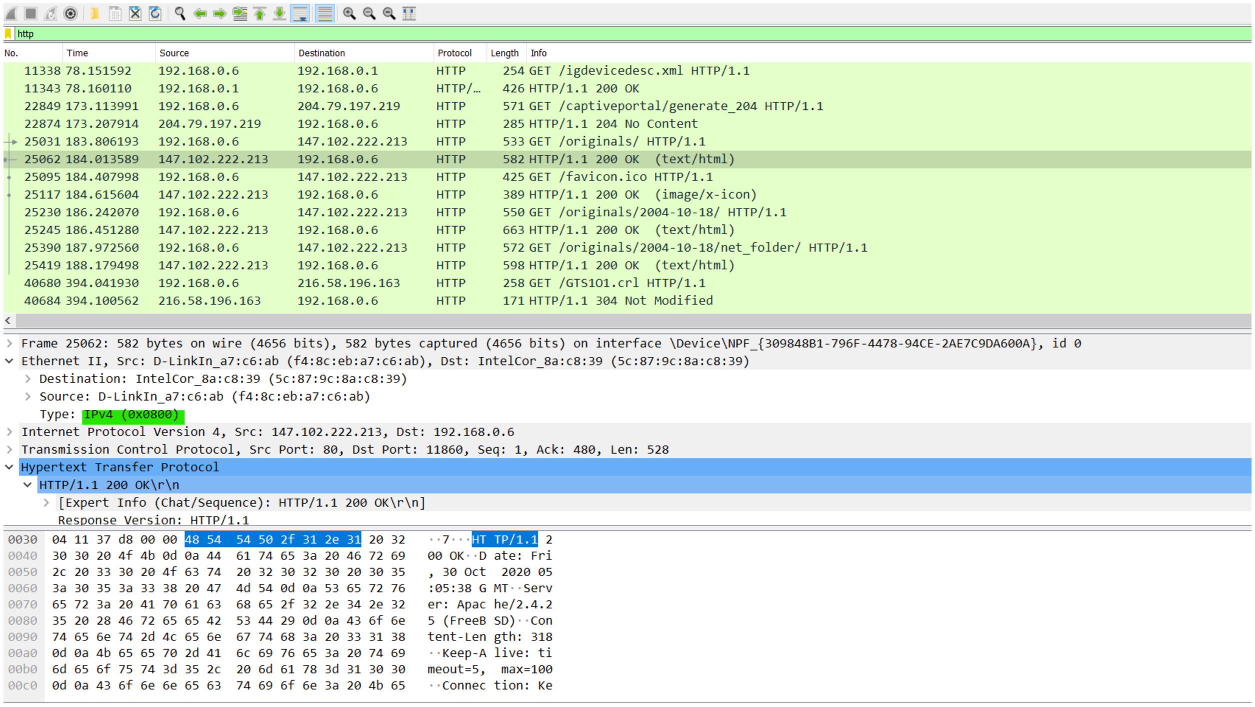
```
> Frame 25062: 582 bytes on wire (4656 bits), 582 bytes captured (4656 bits) on interface \Device\NPF_{309848B1-796F-4478-94CE-2AE7C9DA600A}, id 0
v Ethernet II, Src: D-LinkIn_a7:c6:ab (f4:8c:eb:a7:c6:ab), Dst: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39)
  > Destination: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39)
  > Source: D-LinkIn_a7:c6:ab (f4:8c:eb:a7:c6:ab)
    Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 147.102.222.213, Dst: 192.168.0.6
> Transmission Control Protocol, Src Port: 80, Dst Port: 11860, Seq: 1, Ack: 480, Len: 528
v Hypertext Transfer Protocol
  v HTTP/1.1 200 OK\r\n
    > [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Response Version: HTTP/1.1
```

Destination Ethernet address

```
0030  04 11 37 d8 00 00 48 54  54 50 2f 31 2e 31 20 32   ··7···HT TP/1.1 2
0040  30 30 20 4f 4b 0d 0a 44  61 74 65 3a 20 46 72 69   00 OK··D ate: Fri
0050  2c 20 33 30 20 4f 63 74  20 32 30 32 30 20 30 35   , 30 Oct  2020 05
0060  3a 30 35 3a 33 38 20 47  4d 54 0d 0a 53 65 72 76   :05:38 G MT··Serv
0070  65 72 3a 20 41 70 61 63  68 65 2f 32 2e 34 2e 32   er: Apac he/2.4.2
0080  35 20 28 46 72 65 65 42  53 44 29 0d 0a 43 6f 6e   5 (FreeB SD)··Con
0090  74 65 6e 74 2d 4c 65 6e  67 74 68 3a 20 33 31 38   tent-Len gth: 318
00a0  0d 0a 4b 65 65 70 2d 41  6c 69 76 65 3a 20 74 69   ··Keep-A live: ti
00b0  6d 65 6f 75 74 3d 35 2c  20 6d 61 78 3d 31 30 30   meout=5,  max=100
00c0  0d 0a 43 6f 6e 6e 65 63  74 69 6f 6e 3a 20 4b 65   ··Connec tion: Ke
```

3. What protocol does the ‘type’ correspond to?

   It corresponds to **IPv4** protocol
   Protocol number- **0x0800**



```
http
No.     Time         Source            Destination       Protocol  Length Info
  11338 78.151592    192.168.0.6       192.168.0.1       HTTP       254 GET /igdevicedesc.xml HTTP/1.1
  11343 78.160110    192.168.0.1       192.168.0.6       HTTP/…     426 HTTP/1.1 200 OK
  22849 173.113991   192.168.0.6       204.79.197.219    HTTP       571 GET /captiveportal/generate_204 HTTP/1.1
  22874 173.207914   204.79.197.219    192.168.0.6       HTTP       285 HTTP/1.1 204 No Content
  25031 183.806193   192.168.0.6       147.102.222.213   HTTP       533 GET /originals/ HTTP/1.1
  25062 184.013589   147.102.222.213   192.168.0.6       HTTP       582 HTTP/1.1 200 OK  (text/html)
  25095 184.407998   192.168.0.6       147.102.222.213   HTTP       425 GET /favicon.ico HTTP/1.1
  25117 184.615604   147.102.222.213   192.168.0.6       HTTP       389 HTTP/1.1 200 OK  (image/x-icon)
  25230 186.242070   192.168.0.6       147.102.222.213   HTTP       550 GET /originals/2004-10-18/ HTTP/1.1
  25245 186.451280   147.102.222.213   192.168.0.6       HTTP       663 HTTP/1.1 200 OK  (text/html)
  25390 187.972560   192.168.0.6       147.102.222.213   HTTP       572 GET /originals/2004-10-18/net_folder/ HTTP/1.1
  25419 188.179498   147.102.222.213   192.168.0.6       HTTP       598 HTTP/1.1 200 OK  (text/html)
  40680 394.041930   192.168.0.6       216.58.196.163    HTTP       258 GET /GTS1O1.crl HTTP/1.1
  40684 394.100562   216.58.196.163    192.168.0.6       HTTP       171 HTTP/1.1 304 Not Modified

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  > Destination: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39)
  > Source: D-LinkIn_a7:c6:ab (f4:8c:eb:a7:c6:ab)
    Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 147.102.222.213, Dst: 192.168.0.6
> Transmission Control Protocol, Src Port: 80, Dst Port: 11860, Seq: 1, Ack: 480, Len: 528
v Hypertext Transfer Protocol
  v HTTP/1.1 200 OK\r\n
    > [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Response Version: HTTP/1.1

0030  04 11 37 d8 00 00 48 54  54 50 2f 31 2e 31 20 32   ··7···HT TP/1.1 2
0040  30 30 20 4f 4b 0d 0a 44  61 74 65 3a 20 46 72 69   00 OK··D ate: Fri
0050  2c 20 33 30 20 4f 63 74  20 32 30 32 30 20 30 35   , 30 Oct  2020 05
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00b0  6d 65 6f 75 74 3d 35 2c  20 6d 61 78 3d 31 30 30   meout=5,  max=100
00c0  0d 0a 43 6f 6e 6e 65 63  74 69 6f 6e 3a 20 4b 65   ··Connec tion: Ke
```
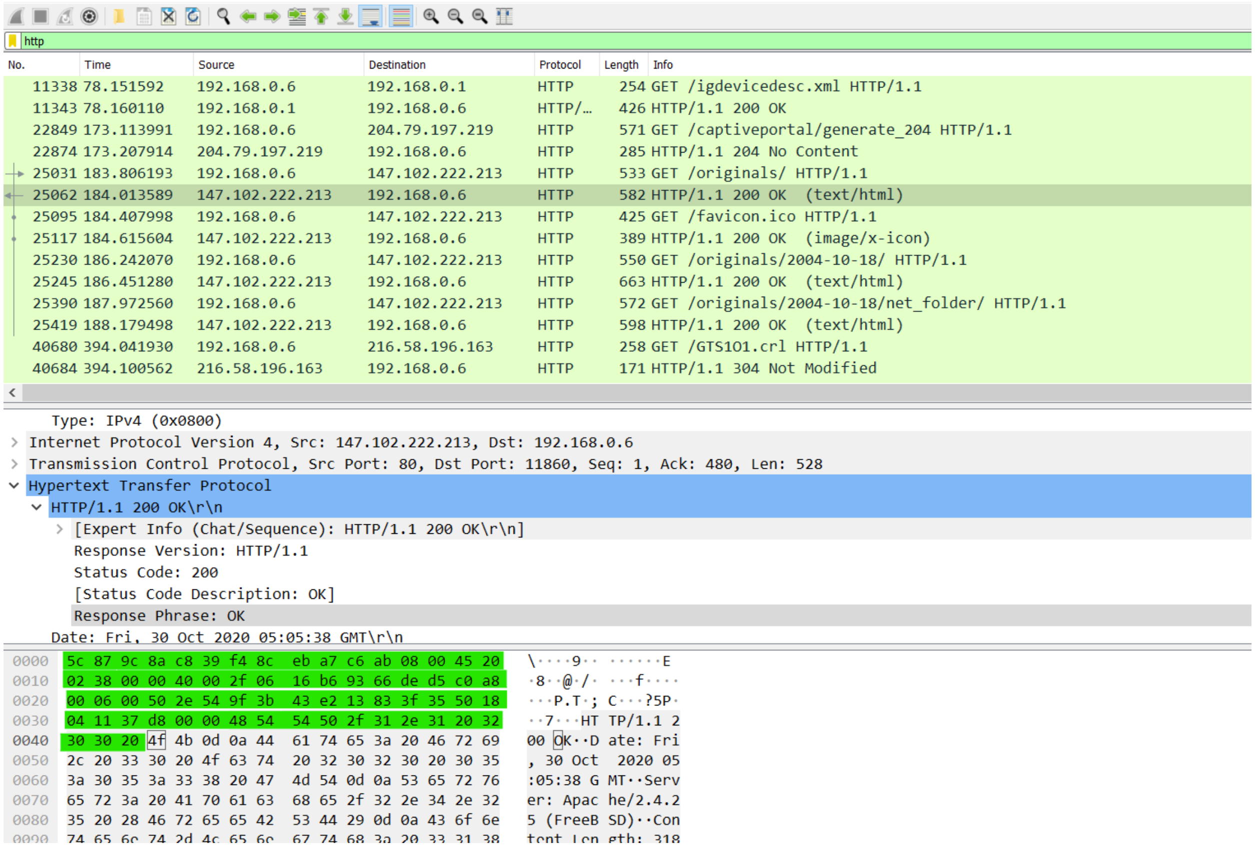

4. How many bytes from the start does the ‘O’ in the OK of response message appear?

After **67 bytes** we get ‘O’ in the Ok of response message.



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No.   Time        Source           Destination      Protocol Length Info
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25230 186.242070  192.168.0.6      147.102.222.213  HTTP     550 GET /originals/2004-10-18/ HTTP/1.1
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40680 394.041930  192.168.0.6      216.58.196.163   HTTP     258 GET /GTS1O1.crl HTTP/1.1
40684 394.100562  216.58.196.163   192.168.0.6      HTTP     171 HTTP/1.1 304 Not Modified
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> Internet Protocol Version 4, Src: 147.102.222.213, Dst: 192.168.0.6
> Transmission Control Protocol, Src Port: 80, Dst Port: 11860, Seq: 1, Ack: 480, Len: 528
v Hypertext Transfer Protocol
  v HTTP/1.1 200 OK\r\n
    > [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      Response Version: HTTP/1.1
      Status Code: 200
      [Status Code Description: OK]
      Response Phrase: OK
    Date: Fri, 30 Oct 2020 05:05:38 GMT\r\n
```

```
0000  5c 87 9c 8a c8 39 f4 8c  eb a7 c6 ab 08 00 45 20   \····9·· ······E
0010  02 38 00 00 40 00 2f 06  16 b6 93 66 de d5 c0 a8   ·8··@·/· ···f····
0020  00 06 00 50 2e 54 9f 3b  43 e2 13 83 3f 35 50 18   ···P.T·; C···?5P·
0030  04 11 37 d8 00 00 48 54  54 50 2f 31 2e 31 20 32   ··7···HT TP/1.1 2
0040  30 30 20 4f 4b 0d 0a 44  61 74 65 3a 20 46 72 69   00 OK··D ate: Fri
0050  2c 20 33 30 20 4f 63 74  20 32 30 32 30 20 30 35   , 30 Oct  2020 05
0060  3a 30 35 3a 33 38 20 47  4d 54 0d 0a 53 65 72 76   :05:38 G MT··Serv
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0080  35 20 28 46 72 65 65 42  53 44 29 0d 0a 43 6f 6e   5 (FreeB SD)··Con
0090  74 65 6c 74 2d 4c 65 6c  67 74 68 3a 20 33 31 38   tent Len gth: 318
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