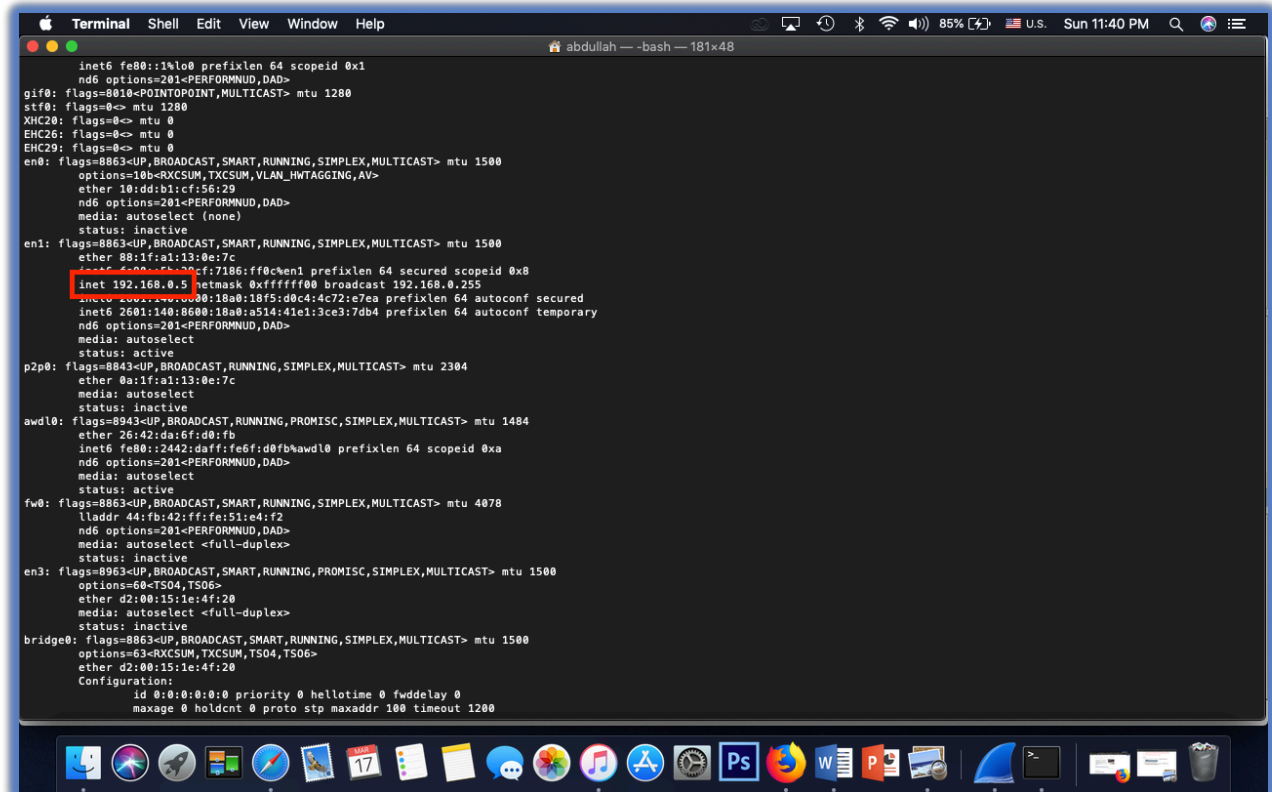


Abdullah Alrfeedi
IT-520
Lab #4

Terminal IP address.

The IP address on terminal is 192.168.0.5

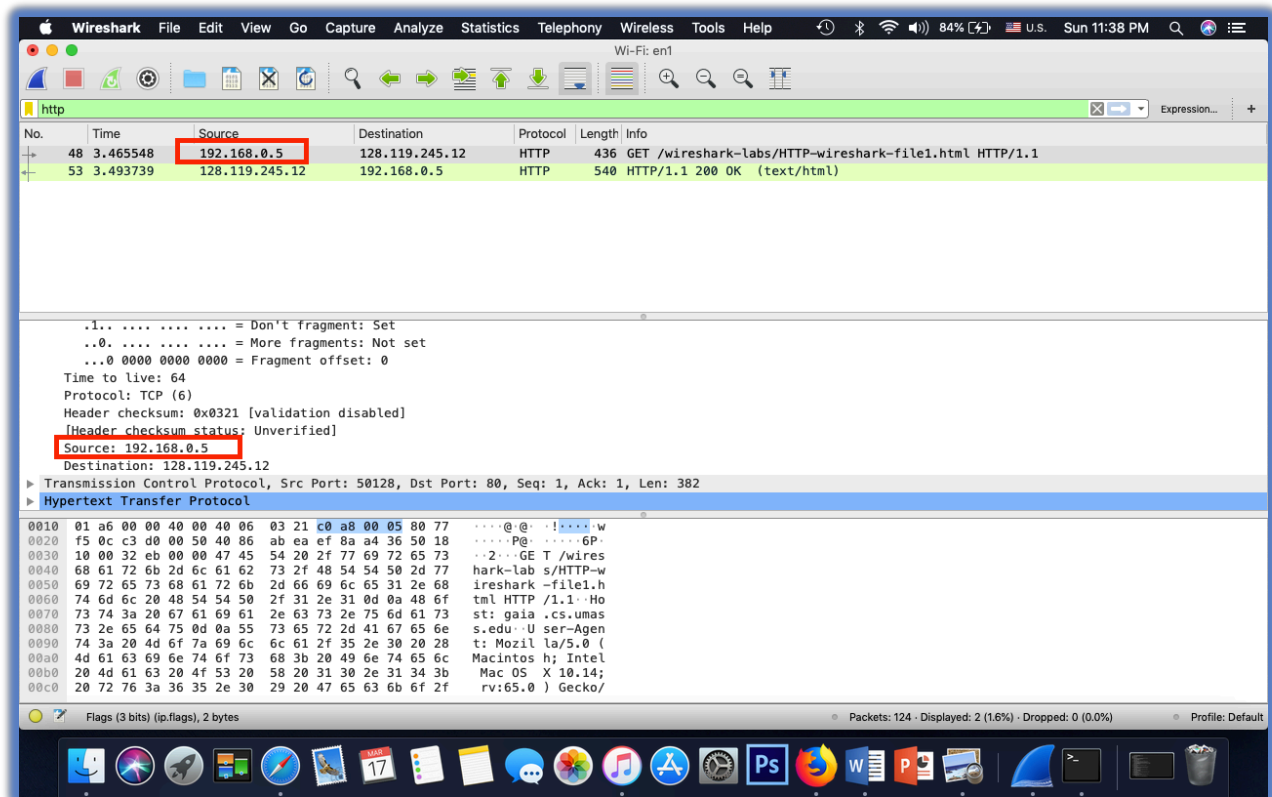


```
Terminal Shell Edit View Window Help
abdullah ~ -bash - 181x48

inet6 fe80::1::1::1 prefixlen 64 scopeid 0x1
nd6 options=201-PERFORMNUD,DAD>
gif0: flags=8010<POINTOPOINT,MULTICAST> mtu 1280
stf0: flags=0<> mtu 1280
XHC20: flags=0<> mtu 0
EHC26: flags=0<> mtu 0
EHC29: flags=0<> mtu 0
en0: flags=8063<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
options=10<RXCSUM,TXCSUM,VLAN_HWTAGGING,AV>
ether 10:dd:b1:cf:56:29
nd6 options=201-PERFORMNUD,DAD>
media: autoselect (none)
status: inactive
en1: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
ether 08:1f:a1:13:0e:7c
inet 192.168.0.5 netmask 0xffffff00 broadcast 192.168.0.255
inet6 2001::1::1::1 prefixlen 64 secured scopeid 0x0
inet6 2601:140:8600:18a0:a514:41e1:3ce3:7db4 prefixlen 64 autoconf secured
nd6 options=201-PERFORMNUD,DAD>
media: autoselect
status: active
p2p0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 2304
ether 0a:1f:a1:13:0e:7c
media: autoselect
status: inactive
awdl0: flags=8943<UP,BROADCAST,RUNNING,PROMISC,SIMPLEX,MULTICAST> mtu 1484
ether 26:42:da:6f:d0:fb
inet6 fe80::2442:daff:fe6f:d0fbawdl0 prefixlen 64 scopeid 0xa
nd6 options=201-PERFORMNUD,DAD>
media: autoselect
status: active
fw0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 4078
lladdr 44:fb:42:ff:fe:51:e4:f2
nd6 options=201-PERFORMNUD,DAD>
media: autoselect <full-duplex>
status: inactive
en3: flags=8963<UP,BROADCAST,SMART,RUNNING,PROMISC,SIMPLEX,MULTICAST> mtu 1500
options=60<TS04,TS06>
ether d2:00:15:1e:4f:20
media: autoselect <full-duplex>
status: inactive
bridge0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
options=63<RXCSUM,TXCSUM,TS04,TS06>
ether d2:00:15:1e:4f:20
Configuration:
id 0:0:0:0:0:0 priority 0 hellotime 0 fiddelay 0
maxage 0 holdcnt 0 proto stp maxaddr 100 timeout 1200
```

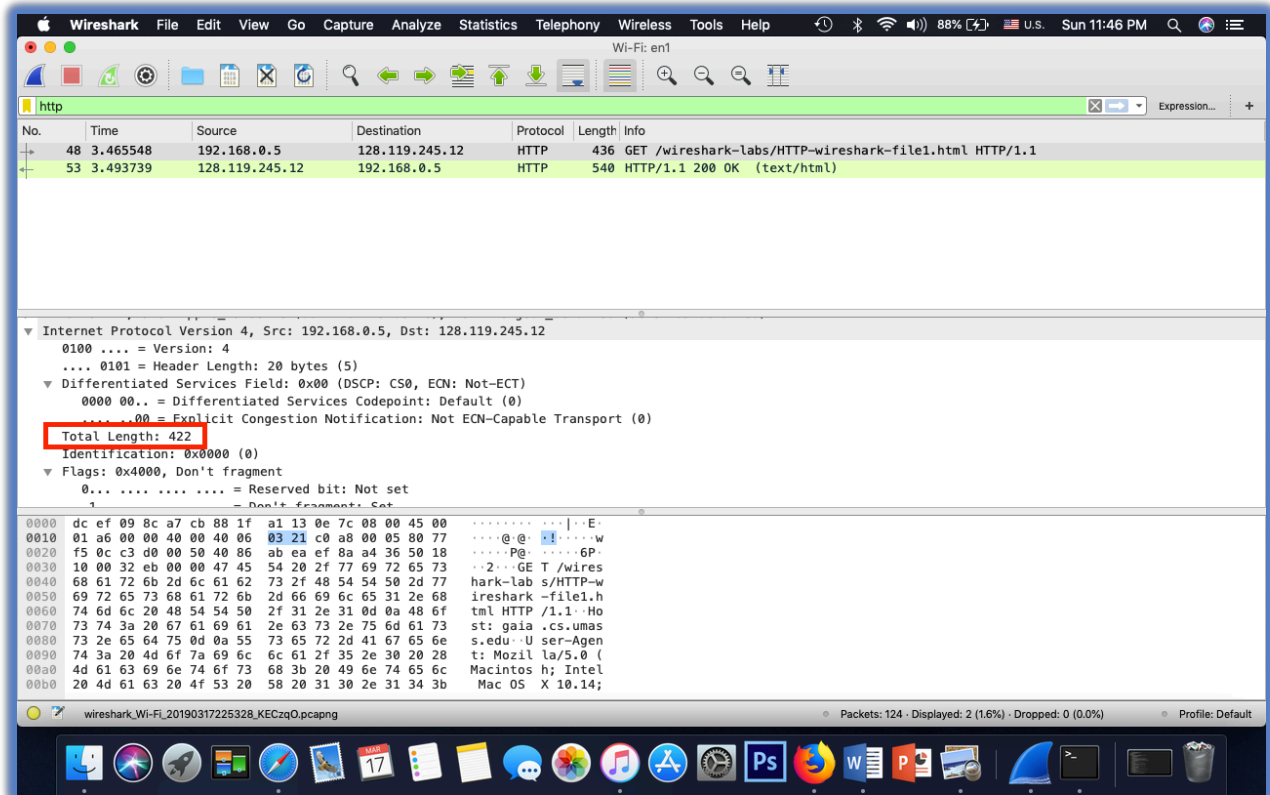
1) What is the IP address of your computer?

The IP address is 192.168.0.5



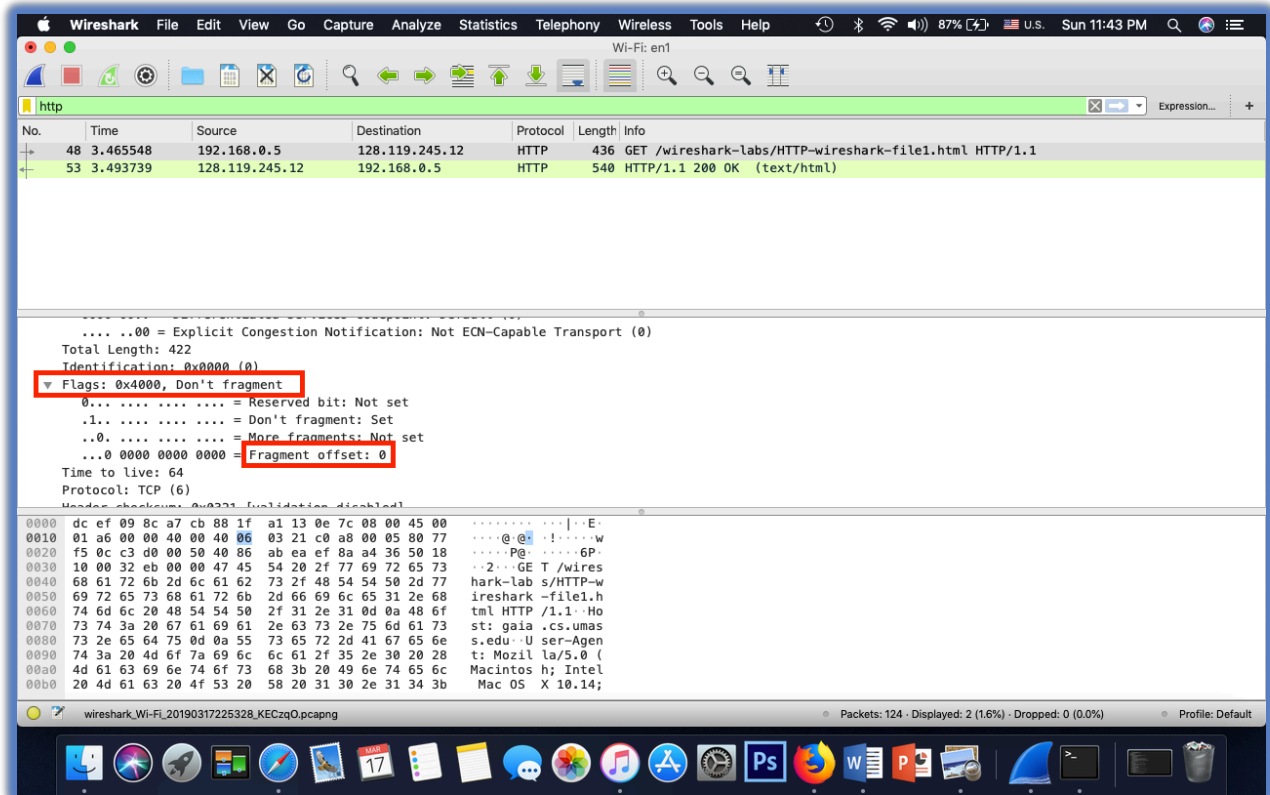
2) What is the total length of the datagram?

The total length is 422.



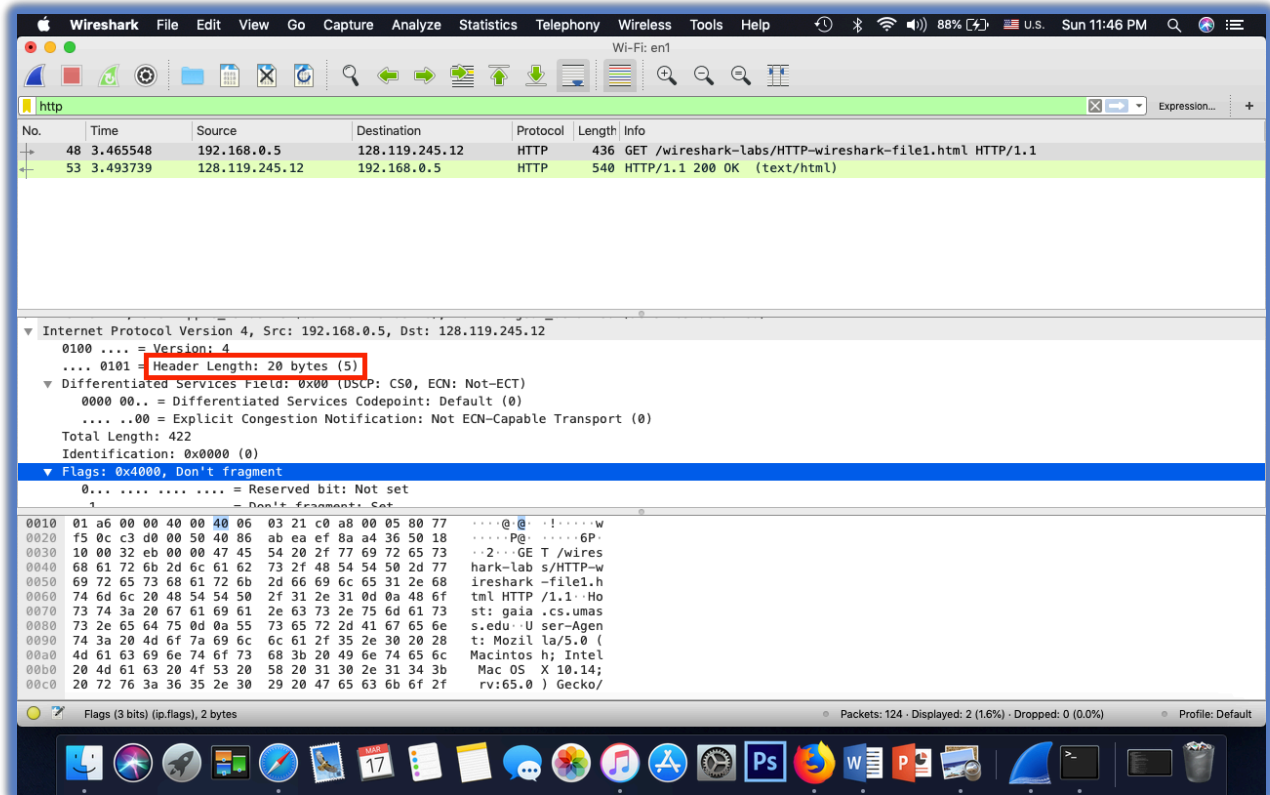
3) Has this IP datagram been fragmented?

No, it hasn't. The fragment offset is 0 as it is showing in the screenshot.



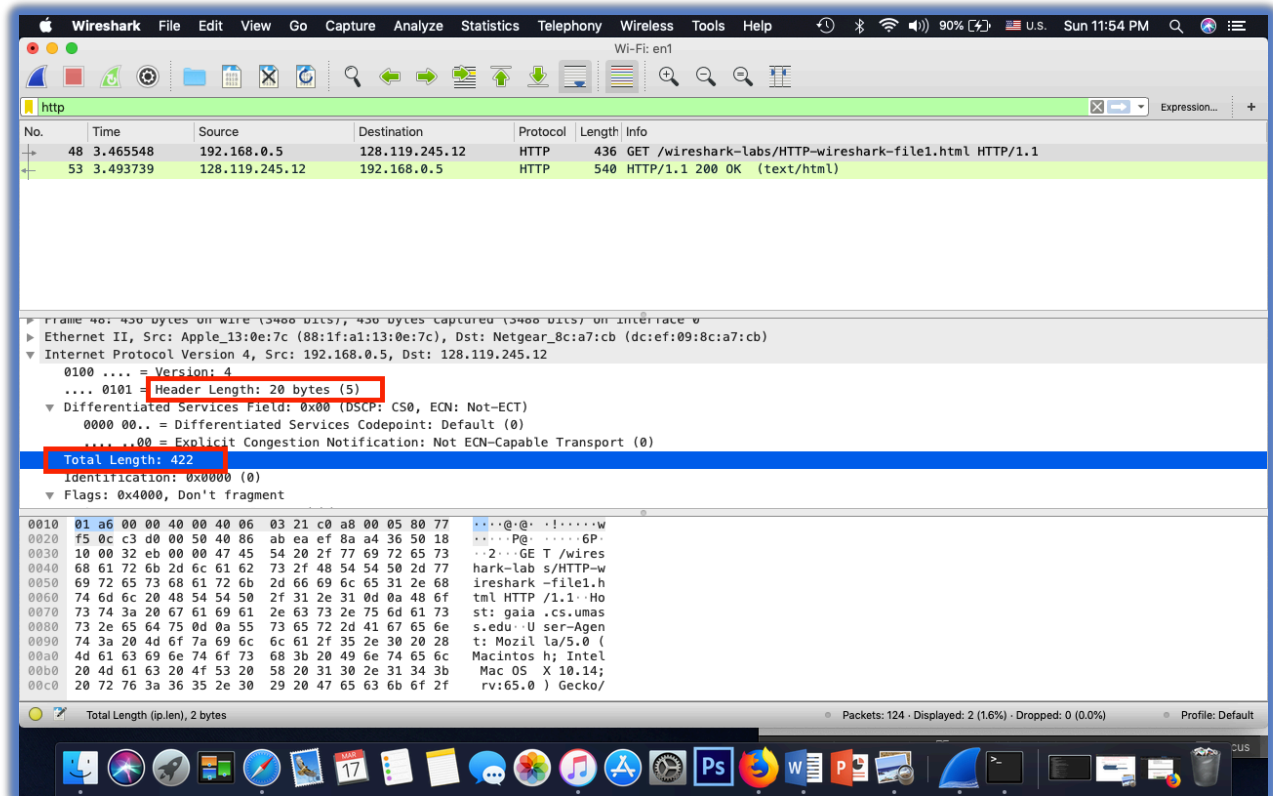
4) How many bytes are in the IP header?

There are 20 bytes in the IP header.



5) How many bytes are in the payload of the IP datagram? Explain how you determined the number of payload bytes.

The packet that was sending has a total length of 422. So, $(422 - 20)$ is the result for the payload of the IP datagram, which is (402)



A full PRINT of the HTTP OK message

| No. | Time | Source | Destination |
|--|----------|-------------|----------------|
| 436 | 3.465548 | 192.168.0.5 | 128.119.245.12 |
| GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1 | | | |

Frame 48: 436 bytes on wire (3488 bits), 436 bytes captured (3488 bits) on interface 0

Ethernet II, Src: Apple_13:0e:7c (88:1f:a1:13:0e:7c), Dst:

Netgear_8c:a7:cb (dc:ef:09:8c:a7:cb)

Internet Protocol Version 4, Src: 192.168.0.5, Dst: 128.119.245.12

0100 = Version: 4

.... 0101 = Header Length: 20 bytes (5)

Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

0000 00.. = Differentiated Services Codepoint: Default (0)

.... ..00 = Explicit Congestion Notification: Not ECN-Capable

Transport (0)

Total Length: 422

Identification: 0x0000 (0)

Flags: 0x4000, Don't fragment

0... = Reserved bit: Not set

.1.. = Don't fragment: Set

..0. = More fragments: Not set

...0 0000 0000 0000 = Fragment offset: 0

Time to live: 64

Protocol: TCP (6)

Header checksum: 0x0321 [validation disabled]

[Header checksum status: Unverified]

Source: 192.168.0.5

Destination: 128.119.245.12

Transmission Control Protocol, Src Port: 50128, Dst Port: 80, Seq: 1, Ack: 1, Len: 382

Hypertext Transfer Protocol

| No. | Time | Source | Destination |
|-----------------------------|----------|----------------|-------------|
| 540 | 3.493739 | 128.119.245.12 | 192.168.0.5 |
| HTTP/1.1 200 OK (text/html) | | | |

Frame 53: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface 0

Ethernet II, Src: Netgear_8c:a7:cb (dc:ef:09:8c:a7:cb), Dst:

Apple_13:0e:7c (88:1f:a1:13:0e:7c)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.5

0100 = Version: 4

.... 0101 = Header Length: 20 bytes (5)

Differentiated Services Field: 0x20 (DSCP: CS1, ECN: Not-ECT)

0010 00.. = Differentiated Services Codepoint: Class Selector 1

(8)

.... ..00 = Explicit Congestion Notification: Not ECN-Capable

Transport (0)

Total Length: 526

Identification: 0x481e (18462)

Flags: 0x4000, Don't fragment
 0... .. = Reserved bit: Not set
 .1.. .. = Don't fragment: Set
 ..0. .. = More fragments: Not set
 ...0 0000 0000 0000 = Fragment offset: 0
Time to live: 47
Protocol: TCP (6)
Header checksum: 0xcb7a [validation disabled]
[Header checksum status: Unverified]
Source: 128.119.245.12
Destination: 192.168.0.5
Transmission Control Protocol, Src Port: 80, Dst Port: 50128, Seq: 1, Ack:
384, Len: 486
Hypertext Transfer Protocol
Line-based text data: text/html (4 lines)