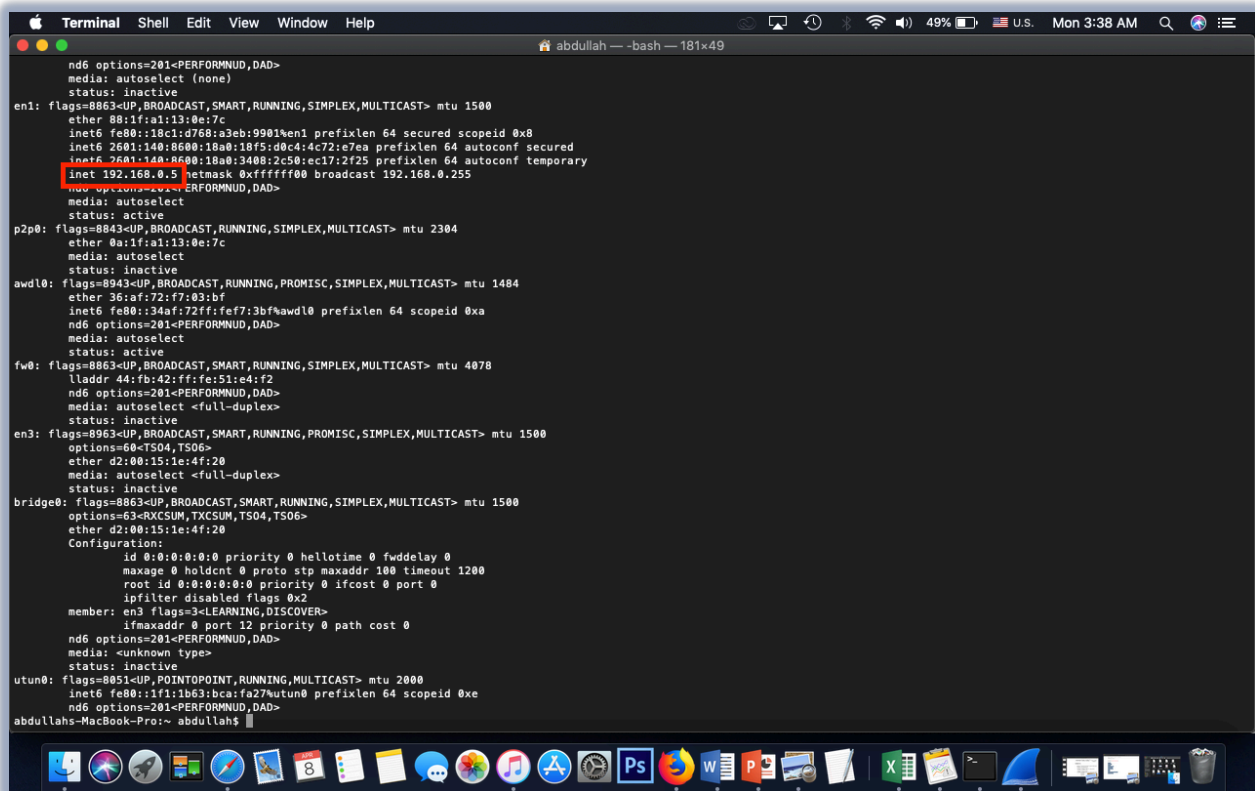


Abdullah Alrfeedi

IT-520

Lab #7

This is my IP address (192.168.0.5).

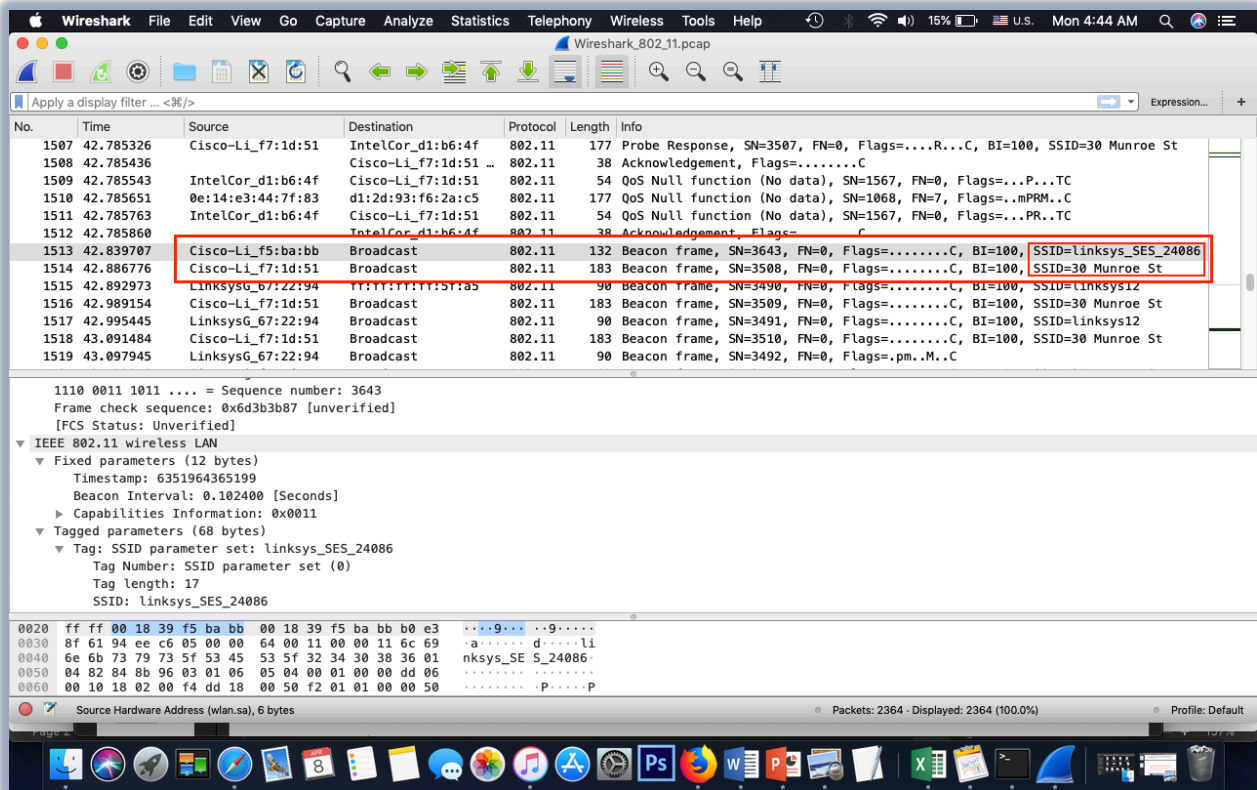


```
Terminal Shell Edit View Window Help
abdullah ~ -bash — 181x49

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
inet6 fe80::18c1:d768:a3eb:9901%en1 prefixlen 64 secured scopeid 0x0
inet6 2601:140:8600:18a0:18f5:d0c4:4c72:e7ea prefixlen 64 autoconf secured
inet6 2601:140:8600:18a0:3408:2c58:ec17:2f25 prefixlen 64 autoconf temporary
inet 192.168.0.5 netmask 0xffffff00 broadcast 192.168.0.255
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 36:af:72:f7:03:bf
inet6 fe80::34af:72ff:fe7f:3bf%awdl0 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=8863<UP,BROADCAST,SMART,RUNNING,PROMISC,SIMPLEX,MULTICAST> mtu 1500
options=60<TSO4,TSO6>
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,TSO4,TSO6>
ether d2:00:15:1e:4f:20
Configuration:
id 0:0:0:0:0:0 priority 0 hellotime 0 fwddelay 0
maxage 0 holdcnt 0 proto stp maxaddr 100 timeout 1200
root id 0:0:0:0:0:0 priority 0 ifcost 0 port 0
ipfilter disabled flags 0x2
member: en3 flags=3<LEARNING,DISCOVER>
ifmaxaddr 0 port 12 priority 0 path cost 0
nd6 options=201<PERFORMNUD,DAD>
media: <unknown type>
status: inactive
utun0: flags=8051<UP,POINTOPOINT,RUNNING,MULTICAST> mtu 2000
inet6 fe80::1f1:1b63:bca:fa27%utun0 prefixlen 64 scopeid 0xe
nd6 options=201<PERFORMNUD,DAD>
abdullahs-MacBook-Pro:~$
```

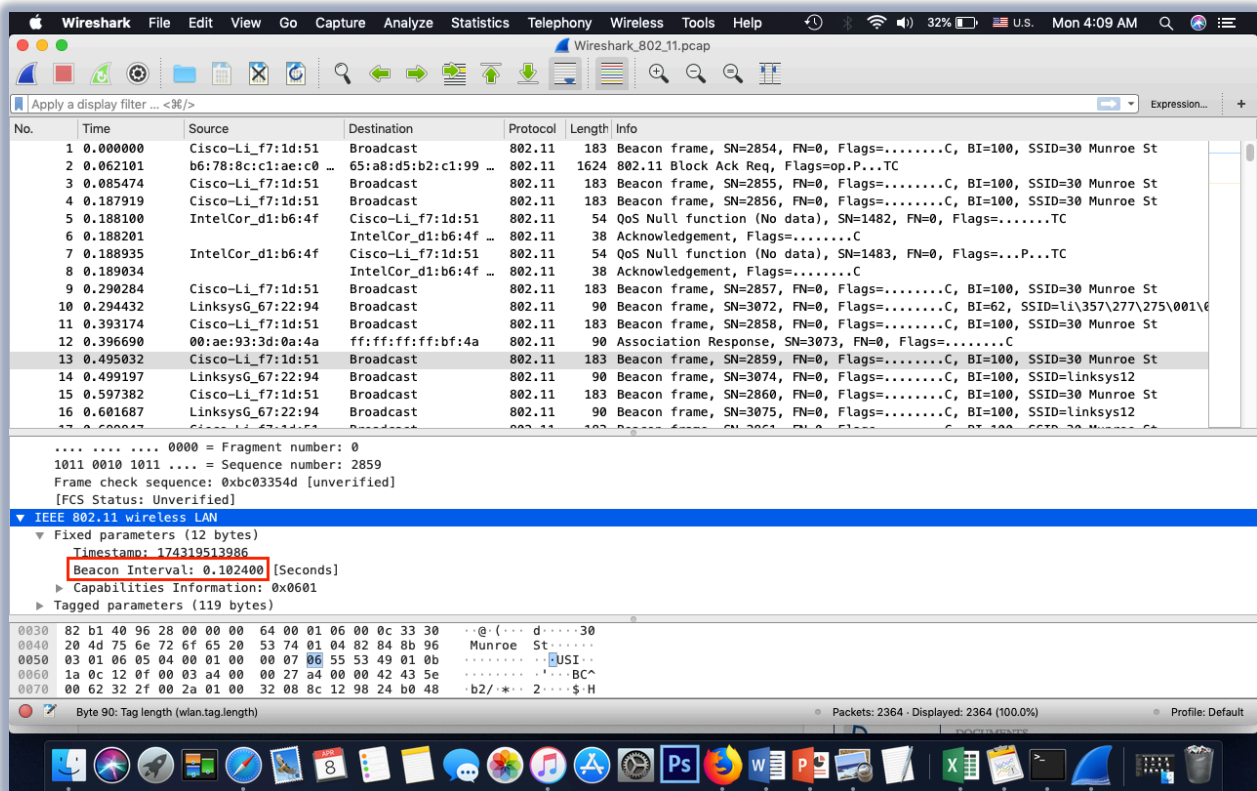
- 1) What are the SSIDs of the two access points that are issuing most of the beacon frames in this trace?

They are Linksys_SES_24086 and 30 Munroe St.



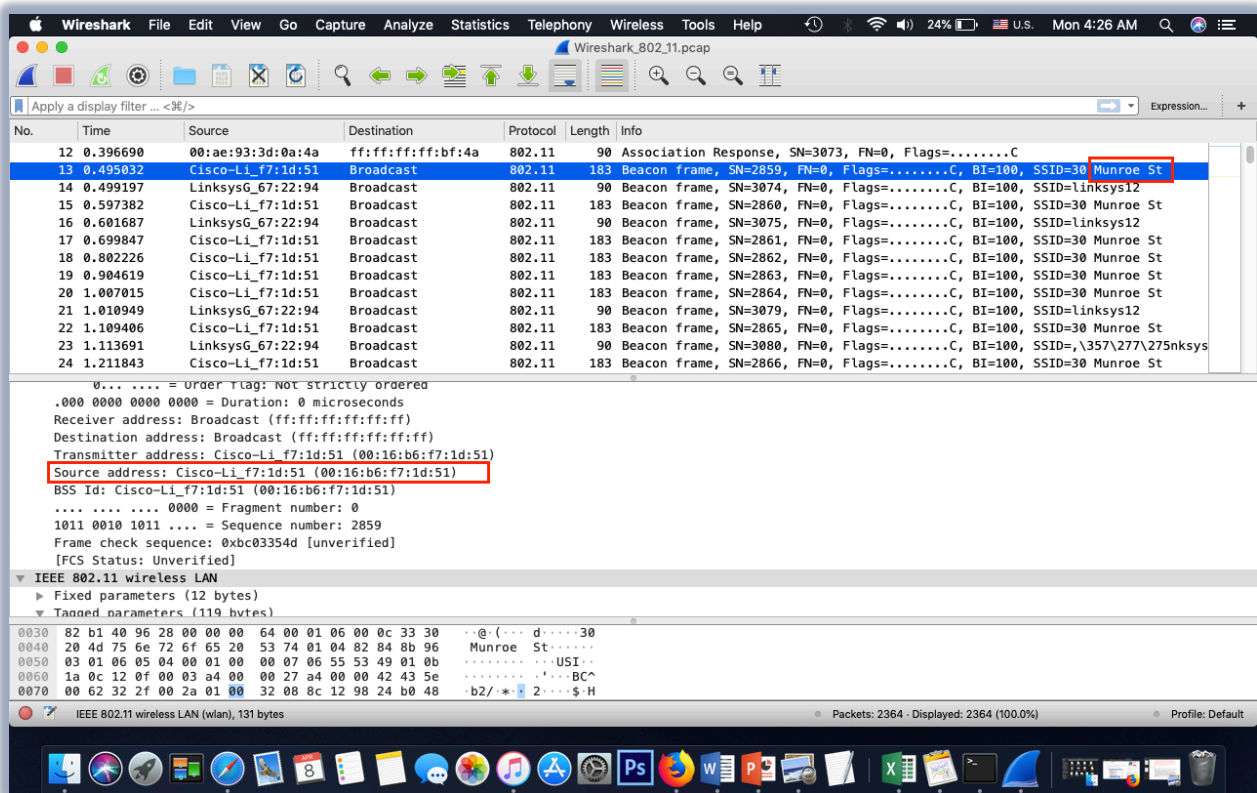
- 2) What are the intervals of time between the transmissions of the beacon frames the *linksys_ses_24086* access point? From the *30 Munroe St.* access point? (Hint: this interval of time is contained in the beacon frame itself).

They are both 0.102400 [Seconds]



- 3) What (in hexadecimal notation) is the source MAC address on the beacon frame from 30 Munroe St? Recall from Figure 7.13 in the text that the source, destination, and BSS are three addresses used in an 802.11 frame. For a detailed discussion of the 802.11 frame structure, see section 7 in the IEEE 802.11 standards document (cited above).

The source MAC address on the beacon frame from 30 Munroe St is (00:16:b6:f7:1d:51).



- 4) What (in hexadecimal notation) is the destination MAC address on the beacon frame from *30 Munroe St*?

The destination MAC address on the beacon frame from *30 Munroe St* is (ff:ff:ff:ff:ff:ff).

Wireshark capture of IEEE 802.11 wireless LAN traffic. The packet list shows a beacon frame from Cisco-Li_f7:1d:51 to Broadcast (ff:ff:ff:ff:ff:ff). The packet details show the destination address as Broadcast (ff:ff:ff:ff:ff:ff). The packet bytes show the SSID 'Munroe St'.

No.	Time	Source	Destination	Protocol	Length	Info
12	0.396690	00:ae:93:3d:0a:4a	ff:ff:ff:ff:ff:bf:4a	802.11	90	Association Response, SN=3073, FN=0, Flags=.....C
13	0.495032	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2859, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
14	0.499197	LinksysG_67:22:94	Broadcast	802.11	90	Beacon frame, SN=3074, FN=0, Flags=.....C, BI=100, SSID=Linksys12
15	0.597382	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2860, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
16	0.601687	LinksysG_67:22:94	Broadcast	802.11	90	Beacon frame, SN=3075, FN=0, Flags=.....C, BI=100, SSID=Linksys12
17	0.699847	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2861, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
18	0.802226	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2862, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
19	0.904619	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2863, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
20	1.007015	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2864, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
21	1.010949	LinksysG_67:22:94	Broadcast	802.11	90	Beacon frame, SN=3079, FN=0, Flags=.....C, BI=100, SSID=Linksys12
22	1.109406	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2865, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St
23	1.113691	LinksysG_67:22:94	Broadcast	802.11	90	Beacon frame, SN=3080, FN=0, Flags=.....C, BI=100, SSID=\357\277\275nksys
24	1.211843	Cisco-Li_f7:1d:51	Broadcast	802.11	183	Beacon frame, SN=2866, FN=0, Flags=.....C, BI=100, SSID=30 Munroe St

..... = Order tag: Not strictly ordered
..... = Duration: 0 microseconds
Receiver address: Broadcast (ff:ff:ff:ff:ff:ff)
Destination address: Broadcast (ff:ff:ff:ff:ff:ff)
Transmitter address: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
Source address: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
BSS Id: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
..... = Fragment number: 0
1011 0010 1011 = Sequence number: 2859
Frame check sequence: 0xbc03354d [unverified]
[FCS Status: Unverified]

IEEE 802.11 wireless LAN

Fixed parameters (12 bytes)

Tagged parameters (119 bytes)

0030 82 b1 40 96 28 00 00 00 64 00 01 06 00 0c 33 30 ..@.(... d....30
0040 20 4d 75 6e 72 6f 65 20 53 74 01 04 82 84 8b 96 Munroe St.....
0050 03 01 06 05 04 00 01 00 00 07 06 55 53 49 01 0bUSI..
0060 1a 0c 12 0f 00 03 a4 00 00 27 a4 00 00 42 43 5e+....BC..
0070 00 62 32 2f 00 2a 01 00 32 08 0c 12 98 24 b0 48 ..b2/. * 2\$H

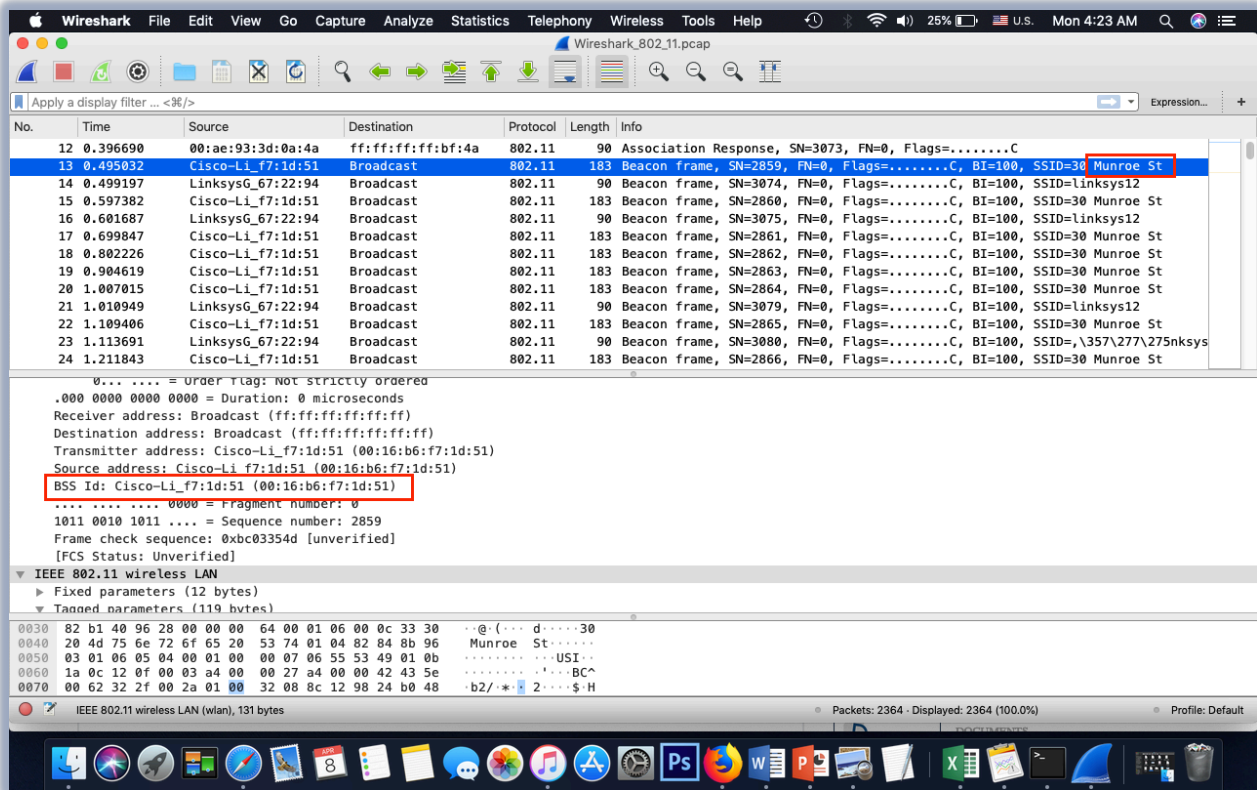
IEEE 802.11 wireless LAN (wlan), 131 bytes

Packets: 2364 - Displayed: 2364 (100.0%)

Profile: Default

5) What (in hexadecimal notation) is the MAC BSS id on the beacon frame from *30 Munroe St*?

The MAC BSS id on the beacon frame from *30 Munroe St* is (00:16:b6:f7:1d:51).



The HTTP OK message:

No.	Time	Source	Destination
868	25.126724	128.119.245.12	192.168.1.109
400	HTTP/1.1 200 OK	(text/plain)	HTTP

Frame 868: 400 bytes on wire (3200 bits), 400 bytes captured (3200 bits)
Radiotap Header v0, Length 24
802.11 radio information
IEEE 802.11 QoS Data, Flags:F.C
Logical-Link Control
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.109
Transmission Control Protocol, Src Port: 80, Dst Port: 2538, Seq: 152154,
Ack: 436, Len: 298
[111 Reassembled TCP Segments (152451 bytes): #486(313), #488(1460),
#497(1460), #501(1460), #504(1460), #507(1460), #513(1460), #516(1460),
#523(1460), #527(1460), #532(1460), #535(1460), #542(1460), #549(1460),
#553(1460), #559(1460), #56]
Hypertext Transfer Protocol
Line-based text data: text/plain (3598 lines)