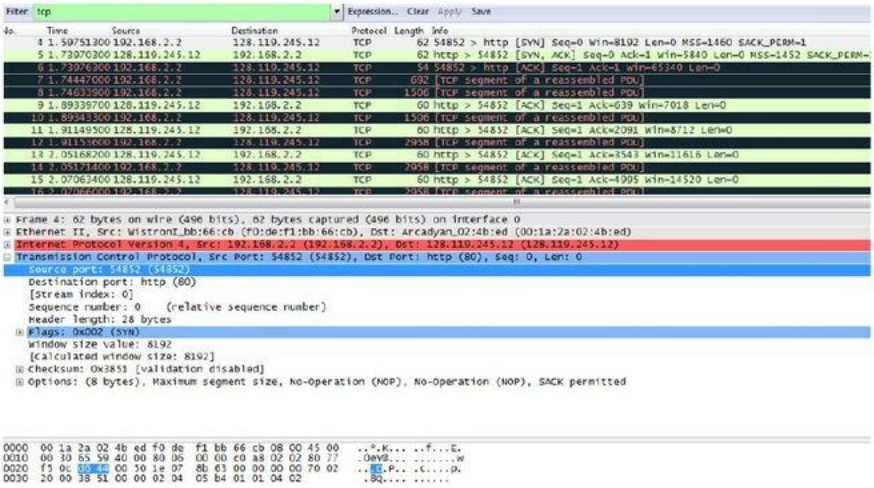
BİLGİSAYAR AĞLARI LABORATUVARI – 3 TCP

1)

- IP adresim : 192.168.2.2
- TCP port numarası : 54582

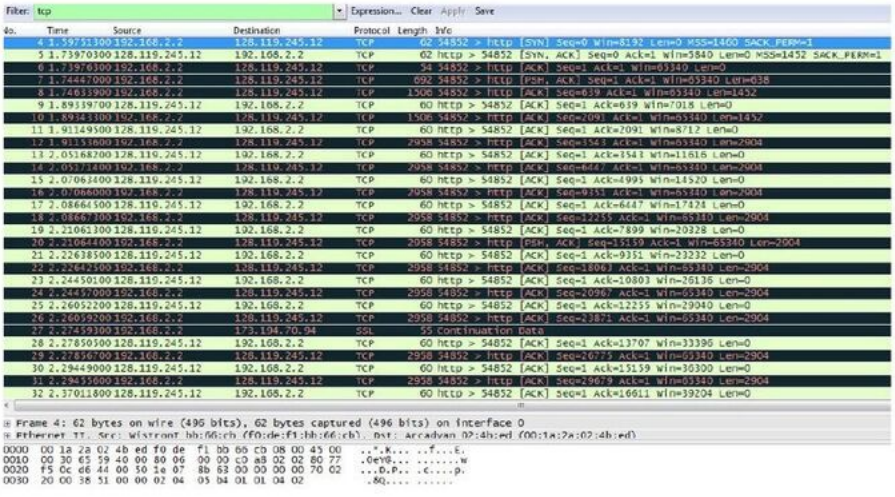


2)

- Destination IP Adres : 128.119.254.12
- TCP port numarası : 80

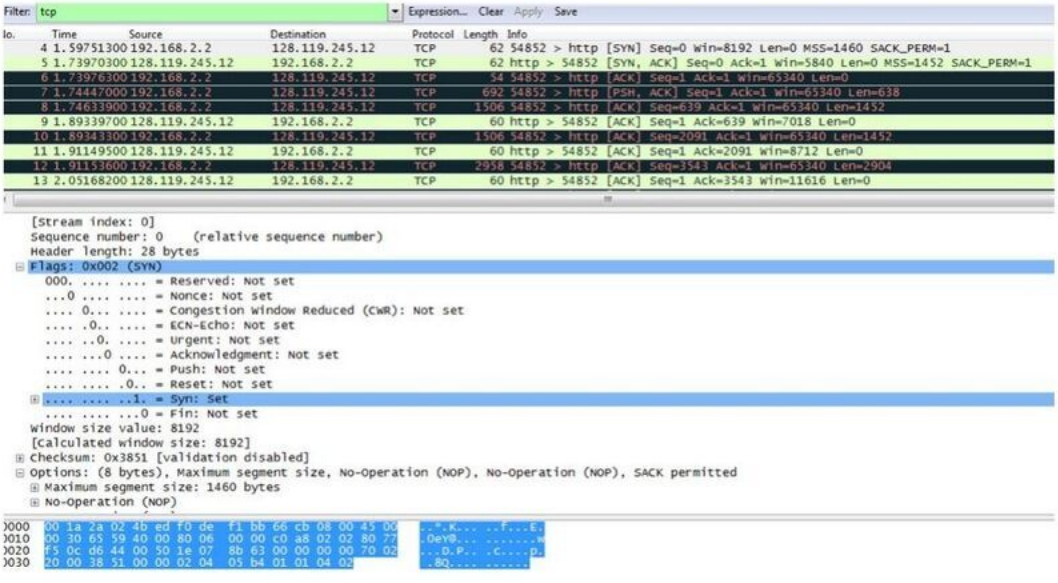
3)

HTTP seçimi kaldırıldığımız zaman TCP bağlantılarını görürüz.



4)

TCP SYN segmenti 0'dır.



5)

- Sorunun ekran görüntüsü 6. Sorunun altıdaki görüntüdür.
- SYN ACK 'nın sequence numarası 0'dır.
- SYN ACK 1 değerini gösterdiğinde acknowledge da 1 değerini gösterir.

6)

SYN, ACK ve PUSH "set" olmuş durumdadır:

```
Filter: tcp                                                    Expression... Clear Apply Save
No.  Time        Source          Destination     Protocol Length Info
  4 1.59751300 192.168.2.2     128.119.245.12  TCP      62 54852 > http [SYN] Seq=0 Win=8192 Len=0 MSS=1460 SACK_PERM=1
  5 1.73970300 128.119.245.12  192.168.2.2     TCP      62 http > 54852 [SYN, ACK] Seq=0 Ack=1 Win=5840 Len=0 MSS=1452 SACK_PERM=1
  6 1.73976300 192.168.2.2     128.119.245.12  TCP      54 54852 > http [ACK] Seq=1 Ack=1 Win=65340 Len=0
  7 1.74447000 192.168.2.2     128.119.245.12  TCP     692 54852 > http [PSH, ACK] Seq=1 Ack=1 Win=65340 Len=638
  8 1.74633900 192.168.2.2     128.119.245.12  TCP    1506 54852 > http [ACK] Seq=639 Ack=1 Win=65340 Len=1452
  9 1.89339700 128.119.245.12  192.168.2.2     TCP      60 http > 54852 [ACK] Seq=1 Ack=639 Win=7018 Len=0

⊞ Frame 7: 692 bytes on wire (5536 bits), 692 bytes captured (5536 bits) on interface 0
⊞ Ethernet II, Src: WistronI_bb:66:cb (f0:de:f1:bb:66:cb), Dst: Arcadyan_02:4b:ed (00:1a:2a:02:4b:ed)
⊞ Internet Protocol Version 4, Src: 192.168.2.2 (192.168.2.2), Dst: 128.119.245.12 (128.119.245.12)
⊟ Transmission Control Protocol, Src Port: 54852 (54852), Dst Port: http (80), Seq: 1, Ack: 1, Len: 638
    Source port: 54852 (54852)
    Destination port: http (80)
    [Stream index: 0]
    Sequence number: 1    (relative sequence number)
    [Next sequence number: 639    (relative sequence number)]
    Acknowledgment number: 1    (relative ack number)
    Header length: 20 bytes
  ⊟ Flags: 0x018 (PSH, ACK)
      000. .... .... = Reserved: Not set
      ...0 .... .... = Nonce: Not set
      .... 0... .... = Congestion Window Reduced (CWR): Not set
      .... .0.. .... = ECN-Echo: Not set
      .... ..0. .... = Urgent: Not set
      .... ...1 .... = Acknowledgment: Set
      .... .... 1... = Push: Set
      .... .... .0.. = Reset: Not set
      .... .... ..0. = Syn: Not set
      .... .... ...0 = Fin: Not set
    Window size value: 65340
    [Calculated window size: 65340]

0000  00 1a 2a 02 4b ed f0 de  f1 bb 66 cb 08 00 45 00   ..*.K... ..f...E.
0010  02 a6 65 5b 40 00 80 06  00 00 c0 a8 02 02 80 77   ..e[@... .......w
0020  f5 0c d6 44 00 50 1e 07  8b 64 56 df a8 6b 50 18   ...D.P.. .dV..kP.
0030  ff 3c 3a c7 00 00 50 4f  53 54 20 2f 77 69 72 65   .<:...PO ST /wire
0040  73 68 61 72 6b 2d 6c 61  62 73 2f 6c 61 62 33 2d   shark-la bs/lab3-
```

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9)

Win = 64621 alabileceği en yüksek değerdir.

```
150 2.82240000 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=140031 Win=63888 Len=0
151 2.84159400 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=141483 Win=63888 Len=0
152 2.85599000 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=142935 Win=63888 Len=0
153 2.87513500 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=144387 Win=63888 Len=0
154 2.94388800 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=147291 Win=63888 Len=0
155 2.97021200 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=150195 Win=63888 Len=0
156 3.01039600 128.119.245.12  192.168.2.2     TCP      60 http > 54974 [ACK] Seq=1 Ack=152958 Win=63888 Len=0
157 3.01152200 128.119.245.12  192.168.2.2     HTTP    773 HTTP/1.1 200 OK  (text/html)
158 3.21144000 192.168.2.2     128.119.245.12  TCP      54 54974 > http [ACK] Seq=152958 Ack=720 Win=64621 Len=0
```

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10)

Başlangıçta iletimde değildi. Ancak sonradan iletimde olduğunu gösterdi.

11)

	ACK seq. no:	ACK data:
ACK1	639	60 byte
ACK2	2091	1460 byte
ACK3	3543	1460 byte