

BİLGİ SAYAR AĞLARI LABORATUVARI – 3 TCP

1)

- IP adresim : 192.168.2.2
- TCP port numarası : 54582

Filter	tcp	Expression...	Clear	Apply	Save	
No.	Time	Source	Destination	Protocol	Length	Info
4	1.59751200	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	1.73070200	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	1.73070200	192.168.2.2	128.119.245.12	TCP	54	54852 > http [ACK] Seq=1 Ack=1 Win=65140 Len=0
7	1.74447000	192.168.2.2	128.119.245.12	TCP	692	TCP segment of a reassembled PDU
8	1.74439000	192.168.2.2	128.119.245.12	TCP	1506	TCP segment of a reassembled PDU
9	1.89339700	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=639 Win=7018 Len=0
10	1.89435300	192.168.2.2	128.119.245.12	TCP	1506	TCP segment of a reassembled PDU
11	1.91149300	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=2091 Win=8712 Len=0
12	1.91149300	128.119.245.12	192.168.2.2	TCP	2904	TCP segment of a reassembled PDU
13	2.05168200	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=1541 Win=11616 Len=0
14	2.05168200	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
15	2.07061400	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=1995 Win=14520 Len=0
# Frame 4: 62 bytes on wire (496 bits), 62 bytes captured (496 bits) on interface 0						
# Ethernet II, Src: WistronTb66:cb (f0:de:f1:bb:66:cb), Dst: Arcadyan_02:4b:ed (00:1a:7a:02:4b:ed)						
# Internet Protocol Version 4, Src: 192.168.2.2, Dst: 128.119.245.12						
# Transmission Control Protocol, Src Port: 54852, Dst Port: http (80), Seq: 0, Len: 0						
# Destination port: http (80)						
# [Stream index: 0]						
# Sequence number: 0 (relative sequence number)						
# Header length: 24 bytes						
# Flags: 0x0000 (SYN)						
# Window size value: 8192						
# [calculated window size: 8192]						
# checksum: 0x2855 [validation disabled]						
# Options: (8 bytes), Maximum segment size, No-operation (NOP), No-operation (NOP), SACK permitted						
0000	00 1a 7a 02 4b ed f0 de	f1 bb 66 cb 08 00 45 00	...K... ..f...E.			
0010	00 30 65 59 40 80 00 06	00 00 c0 a8 02 02 80 77	...D... ..W			
0020	f5 0c 6e 44 00 50 1e 07	8b 61 00 00 00 00 70 02	...D.P... ..C...p.			
0030	20 00 38 51 00 00 02 04	05 b4 01 01 04 02	...80....			

2)

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

3)

HTTP seçimi kaldırıldığımız zaman TCP bağlantılarını görürüz.

Filter	tcp	Expression...	Clear	Apply	Save	
do.	Time	Source	Destination	Protocol	Length	Info
4	1.59751200	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	1.73070200	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	1.73070200	192.168.2.2	128.119.245.12	TCP	54	54852 > http [ACK] Seq=1 Ack=1 Win=65140 Len=0
7	1.74447000	192.168.2.2	128.119.245.12	TCP	692	TCP segment of a reassembled PDU
8	1.74439000	192.168.2.2	128.119.245.12	TCP	1506	TCP segment of a reassembled PDU
9	1.89339700	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=639 Win=7018 Len=0
10	1.91149300	128.119.245.12	192.168.2.2	TCP	1506	TCP segment of a reassembled PDU
11	1.91149300	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=2091 Win=8712 Len=0
12	1.91149300	128.119.245.12	192.168.2.2	TCP	2958	TCP segment of a reassembled PDU
13	2.05168200	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=1541 Win=11616 Len=0
14	2.05168200	128.119.245.12	192.168.2.2	TCP	2958	TCP segment of a reassembled PDU
15	2.07061400	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=1995 Win=14520 Len=0
16	2.07061400	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
17	2.08464500	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=6447 Win=17424 Len=0
18	2.08464500	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
19	2.21061500	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=1899 Win=20312 Len=0
20	2.21061500	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
21	2.22638500	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=9351 Win=23232 Len=0
22	2.22638500	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
23	2.24450100	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=10801 Win=26136 Len=0
24	2.24450100	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
25	2.26052200	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=12255 Win=39410 Len=0
26	2.26052200	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
27	2.27459300	192.168.2.2	173.104.70.94	SQL	55	Continuation Data
28	2.27459300	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=13707 Win=33396 Len=0
29	2.27459300	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
30	2.33449000	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=5159 Win=10300 Len=0
31	2.33449000	192.168.2.2	128.119.245.12	TCP	2958	TCP segment of a reassembled PDU
32	2.37011800	128.119.245.12	192.168.2.2	TCP	60	http > 54852 [ACK] Seq=1 Ack=16611 Win=39204 Len=0
# Frame 4: 62 bytes on wire (496 bits), 62 bytes captured (496 bits) on interface 0						
# Ethernet II, Src: WistronTb66:cb (f0:de:f1:bb:66:cb), Dst: Arcadyan_02:4b:ed (00:1a:7a:02:4b:ed)						
0000	00 1a 7a 02 4b ed f0 de	f1 bb 66 cb 08 00 45 00	...K... ..f...E.			
0010	00 30 65 59 40 80 00 06	00 00 c0 a8 02 02 80 77	...D... ..W			
0020	f5 0c 6e 44 00 50 1e 07	8b 61 00 00 00 00 70 02	...D.P... ..C...p.			
0030	20 00 38 51 00 00 02 04	05 b4 01 01 04 02	...80....			

2

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[0... ..w

0020 f5 0c 06 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-

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	2.90101000	128.119.245.12	192.168.2.2	TCP	60	http > 54974 [ACK] Seq=1 Ack=150195 Win=63888 Len=0
155	2.97021200	128.119.245.12	192.168.2.2	TCP	60	http > 54974 [ACK] Seq=1 Ack=152958 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

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