

Δίκτυα Επικοινωνιών:

1^η Εργασία:

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Tracing:

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Command Prompt
Microsoft Windows [Version 10.0.18362.900]
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C:\Users\Alexis>tracert www.acm.org

Tracing route to www.acm.org [5.79.89.114]
over a maximum of 30 hops:

  1    5 ms    5 ms    5 ms    vodafone.station [192.168.2.1]
  2   20 ms   21 ms   21 ms   loopback2004.med01.dsl.hol.gr [62.38.0.170]
  3   20 ms   19 ms   20 ms   62.38.96.150
  4   31 ms   22 ms   20 ms   ae3-100-ucr.ata.cw.net [195.89.103.69]
  5   22 ms   20 ms   21 ms   ae4-ucr1.atm.cw.net [195.2.2.70]
  6   33 ms   33 ms   33 ms   195.2.21.57
  7   42 ms   35 ms   34 ms   gtt-gw.sof.cw.net [195.2.14.166]
  8   67 ms   64 ms   64 ms   ae17.cr2-ams2.ip4.gtt.net [89.149.143.178]
  9   65 ms   64 ms   64 ms   ip4.gtt.net [46.33.78.21]
 10   66 ms   64 ms   65 ms   ae-11.cr01.ams-01.nl.leaseweb.net [81.17.34.19]
 11   64 ms   64 ms   64 ms   po-1001.ce02.ams-01.nl.leaseweb.net [81.17.33.133]
 12   65 ms   64 ms   65 ms   5.79.78.212
 13   65 ms   69 ms   74 ms   5.79.89.114

Trace complete.

C:\Users\Alexis>
```

1^η Ερώτηση:

≈ 58.3 seconds (Τελευταίο Πακέτο)

5299	58.301099	162.159.129.235	192.168.2.8	TLSv1.2	111 Application Data
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2^η Ερώτηση:

Πρωτόκολλα: ARP, DNS, ICMP, LLMNR, MDNS, NBNS, QUIC, RTCP, SSDP, TCP, TLSv1, TLSv1.2, TLSv1.3, UDP

Layer 1: N/A

Layer 2: ARP

Layer 3: ARP, ICMP, SSDP

Layer 4: QUIC, TCP, UDP

Layer 5: RTCP

Layer 6: TLSv1, TLSv1.2, TLSv1.3

Layer 7: DNS, LLMNR, MDNS, NBNS

3^η Ερώτηση:

Πρωτόκολλα επιπέδου εφαρμογής: DNS, LLMNR, MDNS, NBNS

DNS: UDP

LLMNR: UDP

MDNS: UDP

NBNS: UDP

5021 55.389412 192.168.2.8 192.168.2.255 NBNS 92 Name query NB DESKTOP-UKGCGCD<1>

> Frame 5021: 92 bytes on wire (736 bits), 92 bytes captured (736 bits) on interface \Device\NPF_{C13952AE-03D8-4E64-BB5D-E46CC24E16BF}, id 0

> Ethernet II, Src: Tp-LinkT_ce:e8:6b (50:3e:aa:ce:e8:6b), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

> Internet Protocol Version 4, Src: 192.168.2.8, Dst: 192.168.2.255

> User Datagram Protocol, Src Port: 137, Dst Port: 137

> NetBIOS Name Service

4^η Ερώτηση:

Γράφουμε “ictp” στην μπάρα φίλτρου.

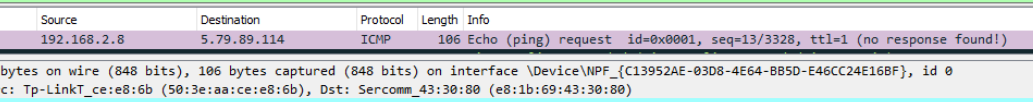
No.	Time	Source	Destination	Protocol	Length	Info
3280	35.364563	5.79.89.114	192.168.2.8	ICMP	106	Echo (ping) reply id=00001, seq=513056, ttl=51 (request in 3298)
3281	35.364616	5.79.89.114	192.168.2.8	ICMP	106	Echo (ping) request id=00001, seq=513056, ttl=13 (reply in 3290)
3280	35.289311	5.79.89.114	192.168.2.8	ICMP	106	Echo (ping) reply id=00001, seq=4612080, ttl=51 (request in 3289)
3280	35.219966	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4612080, ttl=13 (reply in 3298)
3280	35.219384	5.79.89.114	192.168.2.8	ICMP	106	Echo (ping) reply id=00001, seq=4612544, ttl=51 (request in 3279)
3279	35.154164	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4612544, ttl=13 (reply in 3281)
2758	29.513718	5.79.78.212	192.168.2.8	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
2748	29.442706	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4612288, ttl=12 (no response found)
2748	29.442719	192.168.2.8	5.79.89.114	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
2748	29.382417	5.79.89.114	192.168.2.8	ICMP	106	Echo (ping) request id=00001, seq=4712032, ttl=12 (no response found)
2748	29.381096	5.79.78.212	192.168.2.8	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
2748	29.313757	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4612176, ttl=12 (no response found)
2646	26.262186	81.37.33.133	192.168.2.8	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
2648	28.197739	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4611520, ttl=11 (no response found)
2648	28.197752	192.168.2.8	5.79.89.114	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
1633	28.133088	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4611264, ttl=11 (no response found)
2632	28.131922	81.37.33.133	192.168.2.8	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
2632	28.097261	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4611008, ttl=11 (no response found)
2550	24.616161	192.168.2.8	5.79.89.114	ICMP	20	Time-to-live exceeded (Time to live exceeded in transit)
2543	26.951377	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4610752, ttl=10 (no response found)
2543	26.951379	192.168.2.8	5.79.89.114	ICMP	20	Time-to-live exceeded (Time to live exceeded in transit)
2543	26.686553	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4610496, ttl=10 (no response found)
2533	26.605793	81.37.34.19	192.168.2.8	ICMP	78	Time-to-live exceeded (Time to live exceeded in transit)
2526	26.819055	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=00001, seq=4610240, ttl=10 (no response found)

5^η Ερώτηση:

a. Dst: 5.79.89.114

b. Time to Live: 1

c. Total Length: 92



Wireshark packet capture showing an ICMP Echo (ping) request. The packet is from 192.168.2.8 to 5.79.89.114. The packet details show the ICMP header and the Echo request data. Red arrows point to the source and destination IP addresses in the packet details pane.

Packet 719: 106 bytes on wire (848 bits), 106 bytes captured (848 bits) on interface \Device\NPF_{C13952AE-03D8-4E64-B85D-E46CC24E16BF}, id 0

Ethernet II, Src: Tp-LinkT_ce:e8:6b (50:3e:aa:ce:e8:6b), Dst: Sercomm_43:30:80 (e8:1b:69:43:30:80)

Internet Protocol Version 4, Src: 192.168.2.8, Dst: 5.79.89.114

0100 = Version: 4

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

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

Total Length: 92

Identification: 0xca16 (51734)

Flags: 0x00

Fragment Offset: 0

Time to Live: 1

Protocol: ICMP (1)

Header Checksum: 0xce19 [validation disabled]

[Header checksum status: Unverified]

Source Address: 192.168.2.8

Destination Address: 5.79.89.114

Internet Control Message Protocol

6^η Ερώτηση:

a. Src: 192.168.2.1

b. Dst: 192.168.2.8

No.	Time	Source	Destination	Protocol	Length	Info
719	7.798367	192.168.2.8	5.79.89.114	ICMP	106	Echo (ping) request id=0x0001, seq=13/3328, ttl=1 (no response found!)
720	7.803593	192.168.2.1	192.168.2.8	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)

7^η Ερώτηση:

Set of IP sources of ICMP Time Exceeded messages:

192.168.2.1

62.38.0.170

62.38.96.150

195.89.103.69

195.2.2.70

195.2.21.57

195.2.14.166

89.149.143.178

46.33.78.21

81.17.34.19

81.17.33.133

5.79.78.212

(5.79.89.114 Μόνο σε echo request/pings ως destination/source αντίστοιχα)

Υπάρχει αντιστοιχία με τα δεδομένα από την εντολή traceart στο cmd αν εξαιρέσουμε το τελευταίο IP.