

Δίκτυα Υπολογιστών II

Στεφανίδης Ιωάννης

AEM: 9587

Wireshark

1 Echo

The image displays two screenshots of the Wireshark network protocol analyzer. The top screenshot shows packet 4095, an Echo request (UDP) from 155.207.18.208 to 155.207.207.25. The bottom screenshot shows packet 4174, the corresponding Echo response (UDP) from 155.207.207.25 back to 155.207.18.208. Both packets are filtered by the expression '(ip.src == 155.207.18.208 or ip.dst == 155.207.18.208) and udp'.

Packet 4095: Echo request

No.	Time	Source	Destination	Protocol	Length	Info
4095	61.608376458	155.207.207.25	155.207.18.208	UDP	47	60257 → 38002 Len=5

Frame 4095: 47 bytes on wire (376 bits), 47 bytes captured (376 bits) on interface tap0, id 0
 Ethernet II, Src: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b), Dst: Cisco_#f:fc:04 (00:08:e3:f:fc:04)
 Internet Protocol Version 4, Src: 155.207.207.25, Dst: 155.207.18.208
 User Datagram Protocol, Src Port: 60257, Dst Port: 38002
 Data (5 bytes)
 Data: 4534383331 (Length: 5)

```

0000 00 08 e3 ff fc 04 f6 de e4 a9 2f 0b 08 00 45 00  ....E-
0010 00 21 f9 5f 40 00 40 11 27 e4 9b cf cf 19 9b cf  -!_@-@-
0020 12 d0 eb 61 94 72 00 0d b8 0f 45 34 38 33 31    ...a.r...E4831
  
```

Packet 4174: Echo response

No.	Time	Source	Destination	Protocol	Length	Info
4174	63.060690326	155.207.207.25	155.207.18.208	UDP	74	58002 → 48002 Len=32

Frame 4174: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface tap0, id 0
 Ethernet II, Src: Cisco_#f:fc:04 (00:08:e3:f:fc:04), Dst: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b)
 Internet Protocol Version 4, Src: 155.207.18.208, Dst: 155.207.207.25
 User Datagram Protocol, Src Port: 58002, Dst Port: 48002
 Data (32 bytes)
 Data: 503542030332d31322d323032302030393a30323a3037205053544f50 (Length: 32)

```

0000 f6 de e4 a9 2f 0b 00 08 e3 ff fc 04 08 00 45 00  ....E-
0010 00 3e b8 98 00 00 7f 11 69 90 9b cf 12 d0 9b cf  -<.....i.....
0020 cf 19 e2 92 bb 82 00 28 af 33 50 53 54 41 52 54  -.....(-3E8TART
0030 20 30 33 2d 31 32 2d 32 30 32 30 20 30 39 3a 30  03-12-2 020.09:0
0040 32 3a 30 37 20 50 53 54 4f 50                    2:07 PST OF
  
```

2 Image

The image displays two screenshots of the Wireshark network traffic analysis tool. Both screenshots show a packet capture with a filter applied: `(ip.src == 155.207.18.208 or ip.dst == 155.207.18.208) and udp`.

Top Screenshot:

- Packet List:** Shows a list of captured packets. The selected packet is Frame 27340, which is a UDP packet from 155.207.207.25 to 155.207.18.208, port 38002, with a length of 56 bytes.
- Packet Details:** Shows the structure of the selected packet:
 - Frame 27340: 56 bytes on wire (448 bits), 56 bytes captured (448 bits) on interface tap0, id 0
 - Ethernet II, Src: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b), Dst: Cisco_#f:fc:04 (00:08:e3:f:fc:04)
 - Internet Protocol Version 4, Src: 155.207.207.25, Dst: 155.207.18.208
 - User Datagram Protocol, Src Port: 60257, Dst Port: 38002
 - Data (14 bytes): 4d36373934205544503d31303234
- Packet Bytes:** Shows the raw data of the selected packet in hexadecimal and ASCII format.

Bottom Screenshot:

- Packet List:** Shows a list of captured packets. The selected packet is Frame 27343, which is a UDP packet from 155.207.207.25 to 155.207.18.208, port 48002, with a length of 1066 bytes.
- Packet Details:** Shows the structure of the selected packet:
 - Frame 27343: 1066 bytes on wire (8528 bits), 1066 bytes captured (8528 bits) on interface tap0, id 0
 - Ethernet II, Src: Cisco_#f:fc:04 (00:08:e3:f:fc:04), Dst: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b)
 - Internet Protocol Version 4, Src: 155.207.18.208, Dst: 155.207.207.25
 - User Datagram Protocol, Src Port: 58002, Dst Port: 48002
 - Data (1024 bytes): ff8ffe000104a46494600010200000100010000ffab0043000806060706050807070709...
- Packet Bytes:** Shows the raw data of the selected packet in hexadecimal and ASCII format.

The image displays two screenshots of the Wireshark network traffic analysis tool. The top screenshot shows a capture of an ADwin configuration protocol packet (Frame 27492) with a length of 64 bytes. The packet details pane shows the Ethernet II, Internet Protocol Version 4, User Datagram Protocol, and ADwin configuration protocol layers. The packet bytes pane shows the raw data in hexadecimal and ASCII. The bottom screenshot shows a capture of a User Datagram Protocol (UDP) packet (Frame 27494) with a length of 1024 bytes. The packet details pane shows the Ethernet II, Internet Protocol Version 4, and User Datagram Protocol layers. The packet bytes pane shows the raw data in hexadecimal and ASCII.

Top Screenshot: ADwin configuration protocol (adwin_config), 22 bytes

No.	Time	Source	Destination	Protocol	Length	Info
5.207.207.25	0.000000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.001000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.002000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.003000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.004000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.005000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.006000	5.207.207.25	5.207.207.25	UDP	781	58002 → 48002 Len=739
5.207.18.208	0.007000	5.207.18.208	5.207.18.208	ADwin Con...	64	
5.207.207.25	0.008000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.009000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.010000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.011000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024

Bottom Screenshot: Destination Address: IPv4 address

No.	Time	Source	Destination	Protocol	Length	Info
5.207.207.25	0.000000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.001000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.002000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.003000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.004000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.005000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.006000	5.207.207.25	5.207.207.25	UDP	781	58002 → 48002 Len=739
5.207.18.208	0.007000	5.207.18.208	5.207.18.208	ADwin Con...	64	
5.207.207.25	0.008000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.009000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.010000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024
5.207.207.25	0.011000	5.207.207.25	5.207.207.25	UDP	1066	58002 → 48002 Len=1024

3 Temperatures

The top screenshot shows a Wireshark capture of network traffic. The packet list table is as follows:

No.	Time	Source	Destination	Protocol	Length	Info
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	760	58002 → 48002 Len=718
5.207.207.25				UDP	50	58002 → 38002 Len=1
5.207.207.25				UDP	96	58002 → 48002 Len=54
5.207.18.208				UDP	56	60257 → 38002 Len=14
5.207.207.25				UDP	174	58002 → 48002 Len=132

The selected packet (No. 27594) details are:

- Frame 27594: 50 bytes on wire (400 bits), 50 bytes captured (400 bits) on interface tap0, id 0
- Ethernet II, Src: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b), Dst: Cisco_H:f6:04 (00:08:e3:f6:04)
- Internet Protocol Version 4, Src: 155.207.207.25, Dst: 155.207.18.208
- User Datagram Protocol, Src Port: 60257, Dst Port: 38002
- Data (8 bytes)
- Data: 4534383331543030
- [Length: 8]

The bottom screenshot shows a similar capture. The packet list table is:

No.	Time	Source	Destination	Protocol	Length	Info
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	1066	58002 → 48002 Len=1024
5.207.207.25				UDP	760	58002 → 48002 Len=718
5.207.18.208				UDP	50	60257 → 38002 Len=8
5.207.207.25				UDP	96	58002 → 48002 Len=54
5.207.18.208				UDP	56	60257 → 38002 Len=14
5.207.207.25				UDP	174	58002 → 48002 Len=132

The selected packet (No. 27595) details are:

- Frame 27595: 96 bytes on wire (768 bits), 96 bytes captured (768 bits) on interface tap0, id 0
- Ethernet II, Src: Cisco_H:f6:04 (00:08:e3:f6:04), Dst: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b)
- Internet Protocol Version 4, Src: 155.207.18.208, Dst: 155.207.207.25
- User Datagram Protocol, Src Port: 58002, Dst Port: 48002
- Data (54 bytes)
- Data: 5053544152542030332d31322d323032302030393a31303a3134205430302030332d3132...
- [Length: 54]

4 Sound

Κατά την εκτέλεση της εφαρμογής μου κατέβασα 2 φορές το τραγούδι 01 και μετά έτρεξα ξεχωριστά το πρόγραμμα μόνο για το τραγούδι 02 το οποίο ξέχασα να καταγράψω.

The top screenshot shows a Wireshark capture of network traffic. The filter is set to '(ip.src == 155.207.18.208 or ip.dst == 155.207.18.208) and udp'. The packet list shows several UDP packets. Packet 5 is selected, showing details for Ethernet II, Internet Protocol Version 4, and User Datagram Protocol. The data field shows a 14-byte payload: 41313837364c3031415146333030.

The bottom screenshot shows the same capture with packet 28010 selected. The details pane shows the same structure, but the data field shows a 14-byte payload: 41313837364c3031415146333030.

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

(ip.src == 155.207.18.208 or ip.dst == 155.207.18.208) and udp

stination	Protocol	Length	Info
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.18.208	UDP	54	60257 → 38002 Len=12
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128

Frame 28497: 54 bytes on wire (432 bits), 54 bytes captured (432 bits) on interface tap0, id 0

Ethernet II, Src: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b), Dst: Cisco_Hf:fc:04 (00:08:e3:ff:fc:04)

Internet Protocol Version 4, Src: 155.207.207.25, Dst: 155.207.18.208

User Datagram Protocol, Src Port: 60257, Dst Port: 38002

Data (12 bytes)

Data: 41313837364c303146333030

[Length: 12]

```

0000  00 08 e3 ff fc 04 f6 de e4 a9 2f 0b 08 00 45 00  ....E-
0010  00 28 29 ec 40 00 40 11 f7 50 9b cf cf 19 9b cf  ()@.@.P.....
0020  12 d0 eb 61 94 72 00 14 10 20 41 31 38 37 36 4c  ..a.r...A1876L
0030  30 31 46 33 30 30                                01F300

```

Destination Address: IPv4 address
Packets: 66125 · Displayed: 8000 (12.1%)
Profile: Default

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

(ip.src == 155.207.18.208 or ip.dst == 155.207.18.208) and udp

stination	Protocol	Length	Info
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.207.25	UDP	174	58002 → 48002 Len=132
5.207.18.208	UDP	54	60257 → 38002 Len=12
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128

Frame 28507: 170 bytes on wire (1360 bits), 170 bytes captured (1360 bits) on interface tap0, id 0

Ethernet II, Src: Cisco_Hf:fc:04 (00:08:e3:ff:fc:04), Dst: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b)

Internet Protocol Version 4, Src: 155.207.18.208, Dst: 155.207.207.25

User Datagram Protocol, Src Port: 58002, Dst Port: 48002

Data (128 bytes)

Data: d0f7886b49b0aa960f82fb92f8697b6a6cb3a7b62986694c82c767bc926d7697b57f61ae...

[Length: 128]

```

0000  f6 de e4 a9 2f 0b 08 00 e3 ff fc 04 08 00 45 00  ....E-
0010  00 9c bf d1 00 00 7f 11 61 f7 9b cf 12 d0 9b cf  ....a.....
0020  cf 19 e2 92 bb 82 00 88 55 b6 d0 f7 88 6b 49 b0  ....U....kI-
0030  aa 96 0f 82 fb 92 f8 69 7b 6a 6c b3 a7 b6 29 86  ....i (j1...)-
0040  69 4c 82 c7 67 bc 92 6d 76 97 b5 7f 61 ae 53 bc  ..l..g..m v...a8-
0050  39 a0 bf 62 ef 85 9d 70 fc 17 7d 44 e3 a5 49 69  9..b...p...JD..i
0060  27 c7 69 96 6a e7 4a f9 65 a9 5f 48 d1 e9 75 6b  'i.j.J..e_H..uk
0070  74 4f 97 4b 8a a5 e3 48 6b 66 88 d9 4f f5 63 eb  tOK...H kF..O.c-

```

Destination Address: IPv4 address
Packets: 66125 · Displayed: 8000 (12.1%)
Profile: Default

5 Ithaki Copter

Wireshark packet capture showing a UDP packet from 155.207.18.208 to 155.207.18.208. The packet contains a custom protocol with a header and a body containing the text "ITHAKI COPTER 0 3-12-2020 09:11: 26 LMOTO R=000 RM OTOR=000 ALTITUD E=074 TE MPERATUR E=+21.79".

Destination	Protocol	Length	Info
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	170	58002 → 48002 Len=128
5.207.207.25	UDP	155	56113 → 48078 Len=113
5.207.207.25	UDP	155	56113 → 48078 Len=113
5.207.207.25	UDP	155	56113 → 48078 Len=113
5.207.207.25	UDP	155	56113 → 48078 Len=113
5.207.207.25	UDP	155	56113 → 48078 Len=113
5.207.207.25	UDP	155	56113 → 48078 Len=113

Frame 30699: 155 bytes on wire (1240 bits), 155 bytes captured (1240 bits) on interface tap0, id 0

Ethernet II, Src: Cisco_H:fc:04 (00:08:e3:fc:04), Dst: f6:de:e4:a9:2f:0b (f6:de:e4:a9:2f:0b)

Internet Protocol Version 4, Src: 155.207.18.208, Dst: 155.207.207.25

User Datagram Protocol, Src Port: 56113, Dst Port: 48078

Data (113 bytes)

Data: 495448414b49434f505445522030332d31322d323032302030393a31313a3236204c4d4f...

[Length: 113]

```

0000 f6 de e4 a9 2f 0b 00 08 e3 ff fc 04 08 00 45 00  ....-....E-
0010 00 8d c2 2a 00 00 7f 11 5f ad 9b cf 12 d0 9b cf  ...*..._.....
0020 cf 19 db 31 bb ce 00 79 18 69 49 54 48 41 4b 49  ...1...y -IITHAKI
0030 43 4f 50 54 45 52 20 30 33 2d 31 32 2d 32 30 32  COPTER 0 3-12-202
0040 30 20 30 39 3a 31 31 3a 32 36 20 4c 4d 4f 54 4f  0 09:11: 26 LMOTO
0050 52 3d 30 30 30 20 52 4d 4f 54 4f 52 3d 30 30 30  R=000 RM OTOR=000
0060 20 41 4c 54 49 54 55 44 45 3d 30 37 34 20 54 45  ALTITUD E=074 TE
0070 4d 50 45 52 41 54 55 52 45 3d 2b 32 31 2e 37 39  MPERATUR E=+21.79
  
```

Destination Address: IPv4 address Packets: 66125 · Displayed: 8000 (12.1%) Profile: Default

6 Vehicle

