

Lab 7: UDP

1. The Ethernet header is 14 bytes, the IP header is 20 bytes, circle the first byte of the UDP header.

The first byte in the UDP header is 22, located at 0x0022

2. Identify each field of the UDP header with a different highlight color matching both the packet details and the packet bytes.
3. Draw a square around the protocol number in the IP header for UDP. What is the decimal value?

The decimal value is 17 for 11, located in the 0x0017th place.

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No.      Leftover Capture Data Time      Source      Destination      Info
Protocol Length Data      Data
1591     1078 ✓          30.724004      198.251.150.226  192.168.1.80     8801 → 61089 Len=1036
UDP      1078 ✓          050097007686900015010000000000000033010d84009383...
Frame 1591: 1078 bytes on wire (8624 bits), 1078 bytes captured (8624 bits) on interface en0, id 0
Ethernet II, Src: 5a:5b:3b:20:40:6c (5a:5b:3b:20:40:6c), Dst: Apple_31:3c:75 (8c:85:90:31:3c:75)
Internet Protocol Version 4, Src: 198.251.150.226, Dst: 192.168.1.80
User Datagram Protocol, Src Port: 8801, Dst Port: 61089
Source Port: 8801
Destination Port: 61089
Length: 1044
Checksum: 0x3b77 [unverified]
[Checksum Status: Unverified]
[Stream index: 43]
[Timestamps]
Data (1036 bytes)
Data: 050097007686900015010000000000000033010d84009383...
[Length: 1036]
0000  8c 85 90 31 3c 75 5a 5b 3b 20 40 6c 08 00 45 00  ...1<uZ[; @l..E.
0010  04 28 57 01 40 00 27 11 78 6d c6 fb 96 e2 c0 a8  (...@.'..xm.....
0020  01 50 22 01 0e a1 04 14 3b 77 05 00 97 00 76 86  .P"a...;w...v.
0030  90 00 15 01 00 00 00 00 00 00 00 33 01 0d 84 00  .....3....
0040  93 83 f3 49 ce 00 00 00 03 e8 00 00 00 01 01 01  ...I.....
0050  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0060  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0070  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0080  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0090  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
00a0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
00b0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
00c0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
00d0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
00e0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
00f0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0100  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0110  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0120  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0130  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0140  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0150  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0160  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0170  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0180  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
0190  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
01a0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
01b0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
01c0  01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01  .....
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eth

IP

1) 22 61, src port

2)

3) Protocol #: 11

decimal: 17

Qanda

1. At time $t=0$, what is the sender state?

At time $t=0$, the sender state is Wait for ACK 0.

2. At time $t=0$, what is the receiver state?

At time $t=0$, the receiver state is Wait for 0 from below.

3. At time $t=0$, what is the sequence/ack # of the packet?

At time $t=0$, the sequence/ack # of the packet is 0.

4. At time $t=1$, what is the sender state?

At time $t=1$, the sender state is Wait for ACK 0.

5. At time $t=1$, what is the receiver state?

At time $t=1$, the receiver state is Wait for 1 from below.

6. At time $t=1$, what is the sequence/ack # of the packet?

At time $t=1$, the sequence/ack # of the packet is 0.

7. At time $t=2$, what is the sender state?

At time $t=2$, the sender state is Wait for ACK 0.

8. At time $t=2$, what is the receiver state?

At time $t=2$, the receiver state is Wait for 1 from below.

9. At time $t=2$, what is the sequence/ack # of the packet?

At time $t=2$, the sequence/ack # of the packet is 0.

10. At time $t=3$, what is the sender state?

At time $t=3$, the sender state is Wait for ACK 0.

11. At time $t=3$, what is the receiver state?

At time $t=3$, the receiver state is Wait for 1 from below.

12. At time $t=3$, what is the sequence/ack # of the packet?

At time $t=3$, the sequence/ack # of the packet is 0.

13. How many times is the payload of the received packet passed up to the higher layer?

The times the payload of the received packet is passed up to the higher layer is one.