
# Report for lab (5)

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# Intro about the lab:

**In this lab, we will talk about how to deal with the famous UDP protocol, through...**

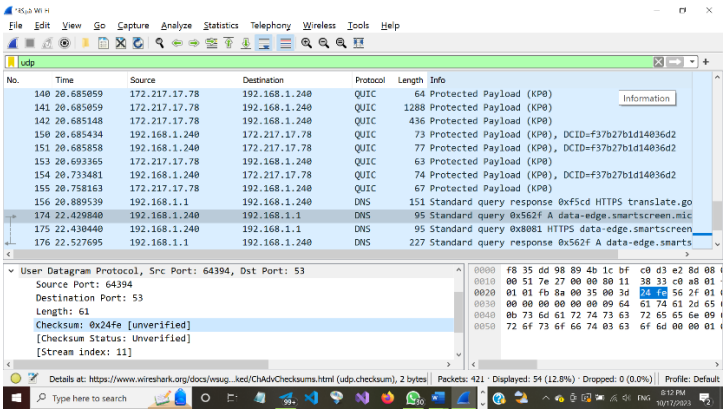
**Start capturing packets and through this we will discuss determining the IP address and UDP port number used for the server**

**We will also study the use of the UDP protocol and we will learn how to determine the Length field is the total length of the UDP segment in bytes, so let us begin.**

**1. Select one UDP packet from your trace and determine how many fields there are in the UDP header. Name these fields.**

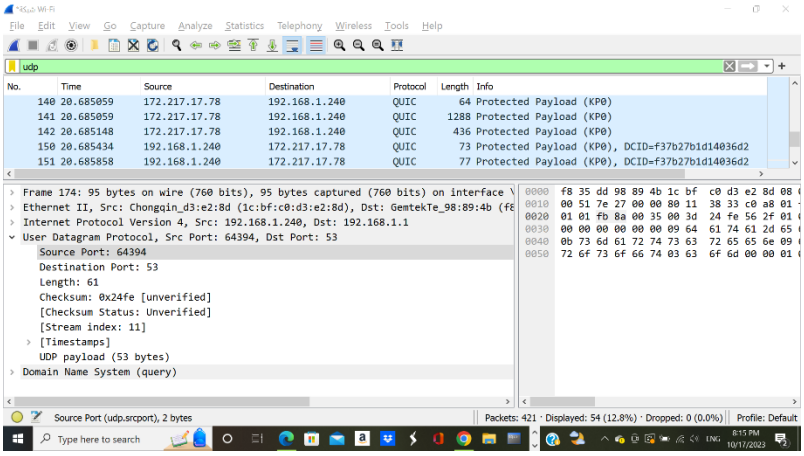
**There are 4 fields in the UDP header:**

- **Source Port : 64394**
- **Destination Port : 53**
- **Length : 61**
- **Checksum 0x24fe [unverified]**



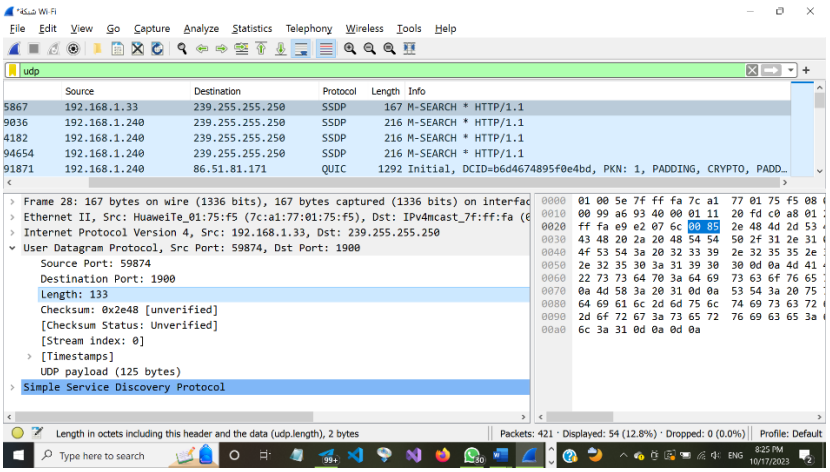
**2. Determine the length (in bytes) of each of the UDP header fields.**

**All UDP header fields are 2 bytes long.**




**3. What is the value in the Length field?**

**The value in the Length field is the total length of the UDP segment in bytes, including the header and the data payload.**



**4. What is the largest possible source port number?**

**The largest possible source port number is 65535 (2^16 - 1).**

**5. What is the IP address and UDP port number used for the server (destination)?**

**IP address is 192.168.1.1 and the destination UDP port number is 5060.**

**6. What is the IP address and UDP port number used for the client (source)?**

**The source IP address is 192.168.1.100 and the source UDP port number is 5000.**

**7. What is the protocol number for UDP? Give your answer in both hexadecimal and decimal notation.**

**The protocol number for UDP is 0x11 in hexadecimal, which is 17 in decimal.**

**UDP packet captured with Wireshark:**

```
Source: 192.168.1.100 (192.168.1.100)
Destination: 192.168.1.1 (192.168.1.1)
Protocol: UDP (17)

UDP Header
----------
Source Port: 5000 (5000)
Destination Port: 5060 (5060)
Length: 54 (54)
Checksum: 0x1234 (4660)

UDP Payload
----------
SIP/2.0 200 OK
...
```

# Conclusion:

**At the end of this lab, you have learned how to deal with the UDP protocol.**

**And like every time, we must use the Wireshark program and start capturing packets**

**After that, I learned how to determine the number of files in the header field.**

**I also learned to determine the length of the UDP header**

**I solved all the questions based on what was required**