Government Engineering College, Thrissur

CS334 – Network Programming Lab

Documentation -

Exp 10 –

Wireshark to Observer UDP Packets

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Experiment 10

Using Wireshark observe data transferred in client server communication using UDP and identify the UDP datagram.

Executing program

- Code is provided in the **Server.java** and **Client.java** (Tested and verified on Ubuntu 20.04)

```
javac Server.java
java Server
```

```
javac Client.java
java Client
```

- **Client Server program is not mandatory. We can observer the UDP packets from internet to browser using wireshark. But here for the testing and for sake of simplicity we generate using the java program**
- Server.java program sends a message “ABCDE” to client every two seconds. To stop transmission use CTRL + C

PROCEDURE

- Open wireshark in super user mode using the command

```
sudo wireshark
```

- Open the Loopback mode. Since the transmission is between two processes in the same system between two ports.

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Output / Screenshots

Running server and client

Server

```
┌──hp@hp ~/Documents/S6/Network Lab/Exp10 <master*>
└─$ javac Server.java                                    130 ↵
┌──hp@hp ~/Documents/S6/Network Lab/Exp10 <master*>
└─$ java Server
Server Socket created
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
```

Client

```
┌──hp@hp ~/Documents/S6/Network Lab/Exp10 <master*>
└─$ javac Client.java
┌──hp@hp ~/Documents/S6/Network Lab/Exp10 <master*>
└─$ java Client
Client Socket created
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
```

List of UDP Packets Received

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000000	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
2	2.000936749	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
3	4.002062733	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
4	6.003024671	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
5	8.003800562	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
6	10.005362717	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
7	12.006237713	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5

Contents of Packet

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000000	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
2	2.000936749	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
3	4.002062733	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
4	6.003024671	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
5	8.003800562	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
6	10.005362717	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5
7	12.006237713	127.0.0.1	127.0.1.1	UDP	47	5000 → 6000 Len=5

```
▸ Frame 3: 47 bytes on wire (376 bits), 47 bytes captured (376 bits) on interface lo, id 0
▸ Ethernet II, Src: 00:00:00_00:00:00 (00:00:00:00:00:00), Dst: 00:00:00_00:00:00 (00:00:00:00:00:00)
▸ Internet Protocol Version 4, Src: 127.0.0.1, Dst: 127.0.1.1
▸ User Datagram Protocol, Src Port: 5000, Dst Port: 6000
▸ Data (5 bytes)
```

```
0000  00 00 00 00 00 00 00 00  00 00 00 00 08 00 45 00   ·····E·
0010  00 21 78 fe 40 00 40 11  c2 cb 7f 00 00 01 7f 00   ·!x·@·@·
0020  01 01 13 88 17 70 00 0d  ff 20 41 42 43 44 45      ·····p·· ABCDE
```