

Network Programming

Lab 1

Solutions

Initial Capture

- 6 different protocols are visible with the “udp” filter
- Sent 3 packets



```
sganguly@DESKTOP-VQASVHR: /mnt/c/Users/Saptarshi/Dropbox/2020-2021/NetProg/unpv13e/udpcliserv
sganguly@DESKTOP-VQASVHR:/mnt/c/Users/Saptarshi/Dropbox/2020-2021/NetProg/unpv13e$ cd udpcliserv/
sganguly@DESKTOP-VQASVHR:/mnt/c/Users/Saptarshi/Dropbox/2020-2021/NetProg/unpv13e/udpcliserv$ ./udpserv01 &
[1] 104
sganguly@DESKTOP-VQASVHR:/mnt/c/Users/Saptarshi/Dropbox/2020-2021/NetProg/unpv13e/udpcliserv$ ./udpcli01 127.0.0.1
I
I
am
am
Sappy
Sappy
^C
sganguly@DESKTOP-VQASVHR:/mnt/c/Users/Saptarshi/Dropbox/2020-2021/NetProg/unpv13e/udpcliserv$ fg
./udpserv01
^C
sganguly@DESKTOP-VQASVHR:/mnt/c/Users/Saptarshi/Dropbox/2020-2021/NetProg/unpv13e/udpcliserv$
```

- 0 packets that I sent showed up in the capture

Switching to Loopback

- All 3 packets came through in the loopback

Examining Packet Contents

1. Client-Side port-number: 55706
2. Server Side: 9877
3. Header Size: 8 bytes
4. Application data (for I): 2 bytes
5. One packet: 10 bytes

Internet Checksums

Source IP: 7F 00 00 01

Destination IP: 7F 00 00 01

Protocol: 00 11

Source Port: CB 5E

Destination Port: 26 95

UDP Length: 00 0A (This value is added twice)

Actual Data: 49 0A

Adding all these values up and handling the overflow gives us 3926 in hex
The complement of this is C6D9 which matches the value in Wireshark