

Wireshark

: 90 1st exer

Info	Length	Protocol	Destination	Source	Time
52 Len=4 [PSH, ACK] 50056 → 50000 48	48	TCP	127.0.0.1	127.0.0.1	0.000520 4
2161152 Len=0 [ACK] 50000 → 50056 44	44	TCP	127.0.0.1	127.0.0.1	0.000551 5
52 Len=6 [PSH, ACK] 50000 → 50056 50	50	TCP	127.0.0.1	127.0.0.1	2.615382 6
2161152 Len=0 [ACK] 50056 → 50000 44	44	TCP	127.0.0.1	127.0.0.1	2.615403 7

Frame 6: 50 bytes on wire (400 bits) 50 bytes captured (400 bits) on interface \Device\NPF_Loophack_i

```
00 00 2e 0f fb 40 00 80 06 00 00  ....E... .@....  
00 00 01 c3 88 c3 50 61 b3 49 0b  .....P...I.  
18 20 fa 4a a8 00 00 68 6f 64 61  ....P... J...hoda  
ya
```

: 91 2nd exer

Info	Length	Protocol	Destination	Source	Time
Win=2161152 Len=23 [PSH, ACK] 50056 → 50000 67	67	TCP	127.0.0.1	127.0.0.1	2.615672 10
Win=2161152 Len=0 [ACK] 50000 → 50056 44	44	TCP	127.0.0.1	127.0.0.1	2.615681 11
MSS=65495 WS=256 SA [SYN] 50000 → 50057 56	56	TCP	127.0.0.1	127.0.0.1	4.026977 12
Len=0 MSS=65495 FS [SYN, ACK] 50057 → 50000 56	56	TCP	127.0.0.1	127.0.0.1	4.027075 13

Frame 10: 67 bytes on wire (536 bits) 67 bytes captured (536 bits) on interface \Device\NPF_Loophack_i

```
00 00 45 00 00 3f 0f ff 40 00 80 06 00 00  ....E..? ..@....  
00 01 7f 00 00 01 c3 50 c3 88 f5 ae d8 c9  .....P.....  
9 11 50 18 20 fa 35 47 00 00 43 6f 6e 6e a.I.P. . 5G-Conn  
+ 65 64 20 74 6f 20 74 68 65 20 73 65 72 ected to the ser  
ver
```

: 92 3rd exer

Info	Length	Protocol	Destination	Source	Time
Win=2161152 Len=4 [PSH, ACK] 50057 → 50000 48	48	TCP	127.0.0.1	127.0.0.1	4.027383 15
Ack=5 Win=2161152 Len=0 [ACK] 50000 → 50057 44	44	TCP	127.0.0.1	127.0.0.1	4.027420 16
Win=2161152 Len=4 [PSH, ACK] 50000 → 50057 48	48	TCP	127.0.0.1	127.0.0.1	14.429541 17
Ack=5 Win=2161152 Len=0 [ACK] 50057 → 50000 44	44	TCP	127.0.0.1	127.0.0.1	14.429571 18

Frame 17: 48 bytes on wire (384 bits) 48 bytes captured (384 bits) on interface \Device\NPF_Loophack_i

```
00 00 45 00 00 2c 10 06 40 00 80 06 00 00  ....E.., ..@....  
00 01 7f 00 00 01 c3 89 c3 50 c8 f6 b5 ec  .....P....  
ef 45 50 18 20 fa 0f d1 00 00 65 72 61 6e ...EP. ....eran
```

: 93 2nd exer . 94 1st exer

Info	Length	Protocol	Destination	Source	Time
Ack=5 Win=2161152 Len=4 [PSH, ACK] 50000 → 50057 48	48	TCP	127.0.0.1	127.0.0.1	14.429541 17
Ack=5 Win=2161152 Len=0 [ACK] 50057 → 50000 44	44	TCP	127.0.0.1	127.0.0.1	14.429571 18
Ack=7 Win=2161152 Len=31 [PSH, ACK] 50056 → 50000 75	75	TCP	127.0.0.1	127.0.0.1	14.429706 19
Ack=7 Win=2161152 Len=0 [ACK] 50000 → 50056 44	44	TCP	127.0.0.1	127.0.0.1	14.429723 20

Frame 19: 75 bytes on wire (600 bits) 75 bytes captured (600 bits) on interface \Device\NPF_Loophack_i

```
02 00 00 00 45 00 00 47 10 08 40 00 80 06 00 00  ....E..G ..@....  
7f 00 00 01 7f 00 00 01 c3 50 c3 88 f5 ae d8 e0  .....P.....  
61 b3 49 11 50 18 20 fa 2c 65 00 00 62 27 65 72 a.I.P. . ,e..b'er  
61 6e 27 20 63 6f 6e 6e 65 63 74 65 64 20 74 6f an' conn ected to  
20 74 68 65 20 63 68 61 74 21 0a the chat!.
```

: (Broadcast)

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(2 earlier) 17

	Info	Length	Protocol	Destination	Source	Time
k=5 Win=2161152 Len=23	[PSH, ACK]	50057	→ 50000 67	TCP	127.0.0.1	127.0.0.1 14.429760 23
-5 Ack=59 Win=2161152 Len=0	[ACK]	50000	→ 50057 44	TCP	127.0.0.1	127.0.0.1 14.429770 24
-59 Win=2161152 Len=22	[PSH, ACK]	50000	→ 50057 66	TCP	127.0.0.1	127.0.0.1 28.553159 25
9 Ack=27 Win=2161152 Len=0	[ACK]	50057	→ 50000 44	TCP	127.0.0.1	127.0.0.1 28.553135 26

Frame 25: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface `Adsl1` [ethernet-raw]

```
12 00 00 00 45 00 00 3e 10 00 40 00 80 06 00 00 ...-E-> @@.  
f 00 00 01 7f 00 00 01 c3 89 c3 50 8c f6 b5 f0 ..{P.....P.  
5 16 ef 7b 50 18 20 fa bd aa 00 00 65 72 61 6e ..{P.....eran  
a 20 68 65 6c 6c 6f 20 65 76 65 72 79 6f 6e 65 : hello everyone  
1 00
```

• സ്കീറ്റ് വീംഗ് ഫോറ്മേഷൻ (1 ഏക്കർ) നടപ്പ്

k=59 Win=2161152 Len=22 [PSH, ACK] 50000 → 50057 66	TCP	127.0.0.1	127.0.0.1	28.553159	25
=59 Ack=27 Win=2161152 Len=0 [ACK] 50057 → 50000 44	TCP	127.0.0.1	127.0.0.1	28.553185	26
ck=7 Win=2161152 Len=22 [PSH, ACK] 50056 → 50000 66	TCP	127.0.0.1	127.0.0.1	28.553247	27
=7 Ack=114 Win=2161152 Len=0 [ACK] 50000 → 50056 44	TCP	127.0.0.1	127.0.0.1	28.553264	28

Name: 37; 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 0

20% "participants" and 70% under participants of 30%

Epile

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جعفر

	Info	Length	Protocol	Destination	Source	Time
k=27 Win=2161152 Len=22 [PSH, ACK] 50057 → 50000 66			TCP	127.0.0.1	127.0.0.1	28.553278 29
=27 Ack=81 Win=2161152 Len=0 [ACK] 50000 → 50057 44			TCP	127.0.0.1	127.0.0.1	28.553292 30
=81 Win=2161152 Len=12 [PSH, ACK] 50000 → 50057 56			TCP	127.0.0.1	127.0.0.1	30.889075 31
81 Ack=39 Win=2161152 Len=0 [ACK] 50057 → 50000 44			TCP	127.0.0.1	127.0.0.1	30.889103 32

1. (112.1.1.1) -> [loopback] (Device) NFE_Loopback

...P...
TCTRANTS

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a display filter ... <Ctrl-/>						
	Info	Length	Protocol	Destination	Source	Time
2161152	Len=14 [PSH, ACK]	50057 → 50000 58	TCP	127.0.0.1	127.0.0.1	30.889157 33
5	Win=2161152	Len=0 [ACK]	50000 → 50057 44	TCP	127.0.0.1	30.889173 34
2161152	Len=6 [PSH, ACK]	50057 → 50000 50	TCP	127.0.0.1	127.0.0.1	30.889188 35
Win=2161152	Len=0 [ACK]	50000 → 50057 44	TCP	127.0.0.1	127.0.0.1	30.889198 36

22. 52 bytes on wire (416 bits) - 52 bytes captured (416 bits) on interface \Device\NPF_Loopback id 9

Frame 33 - 58 bytes on wire (464 bits) 58 bytes captured											
00	45	00	00	36	10	16	40	00	80	00	00
01	7f	00	01	c3	50	c3	89	c5	16	e9	91
12	50	18	20	fa	d1	4a	00	00	50	41	52
50	41	4e	54	53	3a	20					

...P. . .J.

	Info	Length	Protocol	Destination	Source	Time
c=39 Win=2161152 Len=14 [PSH, ACK]	50057 ->	50000	58	TCP	127.0.0.1	127.0.0.1 30.889157 33
=39 Ack=95 Win=2161152 Len=0 [ACK]	50000 ->	50057	44	TCP	127.0.0.1	127.0.0.1 30.889173 34
c=39 Win=2161152 Len=6 [PSH, ACK]	50057 ->	50000	50	TCP	127.0.0.1	127.0.0.1 30.889188 35
39 Ack=101 Win=-2161152 Len=0 [ACK]	50000 ->	50057	44	TCP	127.0.0.1	127.0.0.1 30.889198 36

Digitized by srujanika@gmail.com

```

Frame 35: 50 bytes on wire (400 bits), 50 bytes captured
00 02 00 00 00 45 00 00 00 2e 10 18 40 00 80 06 00 00 .E...@...
01 07 f0 00 00 01 7f 00 00 01 c3 50 c3 89 5c 16 ef 9f ..P.....
02 c8 f6 b6 12 50 18 20 fa 8f fd 00 00 68 6f 64 61 ..P.....hoda
03 79 61                                         ya

```

• •

	Info	Length	Protocol	Destination	Source	Time
ck=39 Win=2161152 Len=6 [PSH, ACK] 50057 → 50000 50		TCP	127.0.0.1	127.0.0.1	30.889188	35
39 Ack=101 Win=2161152 Len=0 [ACK] 50000 → 50057 44		TCP	127.0.0.1	127.0.0.1	30.889198	36
ck=39 Win=2161152 Len=1 [PSH, ACK] 50057 → 50000 45		TCP	127.0.0.1	127.0.0.1	30.889210	37
39 Ack=102 Win=2161152 Len=0 [ACK] 50000 → 50057 44		TCP	127.0.0.1	127.0.0.1	30.889218	38

Frame 37: 45 bytes on wire (360 bits) | 45 bytes captured (360 bits) on interface \Device\NPF_{loopback} id 0

02 00 00 00 45 00 00 29	10 1a 40 00 80 06 00 00E..) ..@.....
7f 00 00 01 7f 00 00 01	c3 50 c3 89 c5 16 ef a5P.....
c8 f6 b6 12 50 18 20 fa	aa 2e 00 00 2cP.,

	Info	Length	Protocol	Destination	Source	Time
ck=39 Win=2161152 Len=1 [PSH, ACK] 50057 → 50000 45			TCP	127.0.0.1	127.0.0.1	30.889210 37
39 Ack=102 Win=2161152 Len=0 [ACK] 50000 → 50057 44			TCP	127.0.0.1	127.0.0.1	30.889218 38
ck=39 Win=2161152 Len=4 [PSH, ACK] 50057 → 50000 48			TCP	127.0.0.1	127.0.0.1	30.889229 39
39 Ack=106 Win=2161152 Len=0 [ACK] 50000 → 50057 44			TCP	127.0.0.1	127.0.0.1	30.889246 40

Frame 39: 48 bytes on wire (384 bits), 48 bytes captured (384 bits) on interface \Device\NPF_{loopback} id 0

02 00 00 00 45 00 00 2c	10 1c 40 00 80 06 00 00E.., .@....
7f 00 00 01 7f 00 00 01	c3 50 c3 89 c5 16 ef a6P.....
c8 f6 b6 12 50 18 20 fa	0f 4a 00 00 65 72 61 6e	...P. .J. eran

∴ $\overrightarrow{PQ} = \overrightarrow{AB}$, $\overrightarrow{PR} = \overrightarrow{AC}$

	Info	Length	Protocol	Destination	Source	Time
39	Ack=108 Win=2161152 Len=0 [ACK]	50000 → 50057 44	TCP	127.0.0.1	127.0.0.1	30.889289 44
=108	Win=2161152 Len=10 [PSH, ACK]	50000 → 50057 54	TCP	127.0.0.1	127.0.0.1	31.622405 45
108	Ack=49 Win=2161152 Len=0 [ACK]	50057 → 50000 44	TCP	127.0.0.1	127.0.0.1	31.622429 46
=49	Win=2161152 Len=7 [PSH, ACK]	50057 → 50000 51	TCP	127.0.0.1	127.0.0.1	31.622523 47

Frame 45: 54 bytes on wire (432 bits) 54 bytes captured (432 bits) on interface \Device\NPF_Loopback_id_0
02 00 00 00 45 00 00 32 10 22 40 00 80 06 00 00 . . . E . 2 . "@
7f 00 00 01 7f 00 00 01 c3 89 c3 50 c8 f6 d6 12 P
c5 16 ef ac 50 18 20 fa c4 f8 00 00 73 68 6f 77 . . . P show
5f 66 69 6c 65 73 . . . files

	Info	Length	Protocol	Destination	Source	Time	No
152	Len=10 [PSH, ACK] 50000 → 50057 54		TCP	127.0.0.1	127.0.0.1	31.622405	45
n=2161152	Len=0 [ACK] 50057 → 50000 44		TCP	127.0.0.1	127.0.0.1	31.622429	46
1152	Len=7 [PSH, ACK] 50057 → 50000 51		TCP	127.0.0.1	127.0.0.1	31.622523	47
n=2161152	Len=0 [ACK] 50000 → 50057 44		TCP	127.0.0.1	127.0.0.1	31.622543	48

Frame 47: 51 bytes on wire (408 bits) | 51 bytes captured (408 bits) on interface \Device\NPF_Loopback id a

45 00 00 2f 10 24 40 00 80 06 00 00E.. / ..\$@.....
7f 00 00 01 c3 50 c3 89 c5 16 ef acP.....
50 18 20 fa d0 4e 00 00 46 49 4c 45	...P... N..FILE

S:

	Info	Length	Protocol	Destination	Source	Time	...
ck=49 Win=2161152 Len=7 [PSH, ACK]	50057 → 50000	51	TCP	127.0.0.1	127.0.0.1	31.622523	47
49 Ack=115 Win=2161152 Len=0 [ACK]	50000 → 50057	44	TCP	127.0.0.1	127.0.0.1	31.622543	48
ck=49 Win=2161152 Len=9 [PSH, ACK]	50057 → 50000	53	TCP	127.0.0.1	127.0.0.1	31.622557	49
49 Ack=124 Win=2161152 Len=0 [ACK]	50000 → 50057	44	TCP	127.0.0.1	127.0.0.1	31.622565	50

Frame 49: 53 bytes on wire (424 bits), 53 bytes captured (424 bits) on interface \Device\NPF_Loophack_ifA

00	02 00 00 00 45 00 00 31	10 26 40 00 80 06 00 00E..-1 .&@....
10	7F 00 00 01 7f 00 00 01	c3 50 c3 89 c5 16 ef b3P.....
20	c8 f6 b6 1c 50 18 20 fa	e9 98 00 00 66 69 6c 65P.file
30	31 2e 74 78 74		1.txt