NSCAP Homework 1 Report

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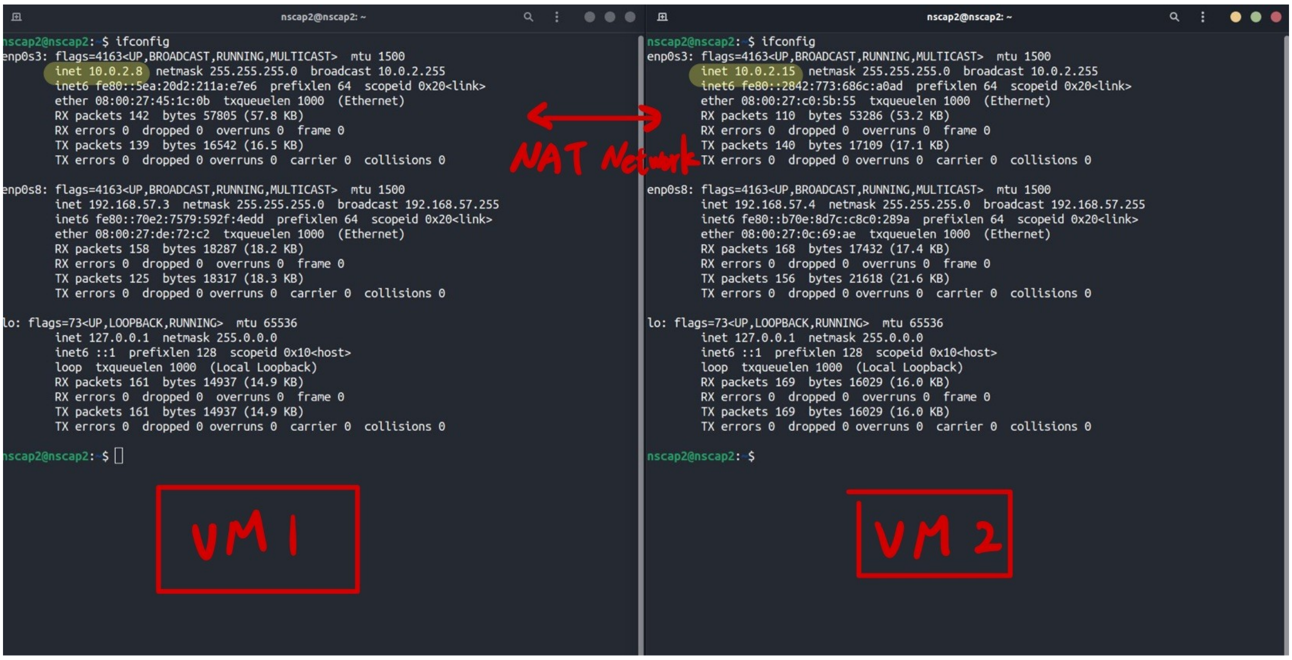
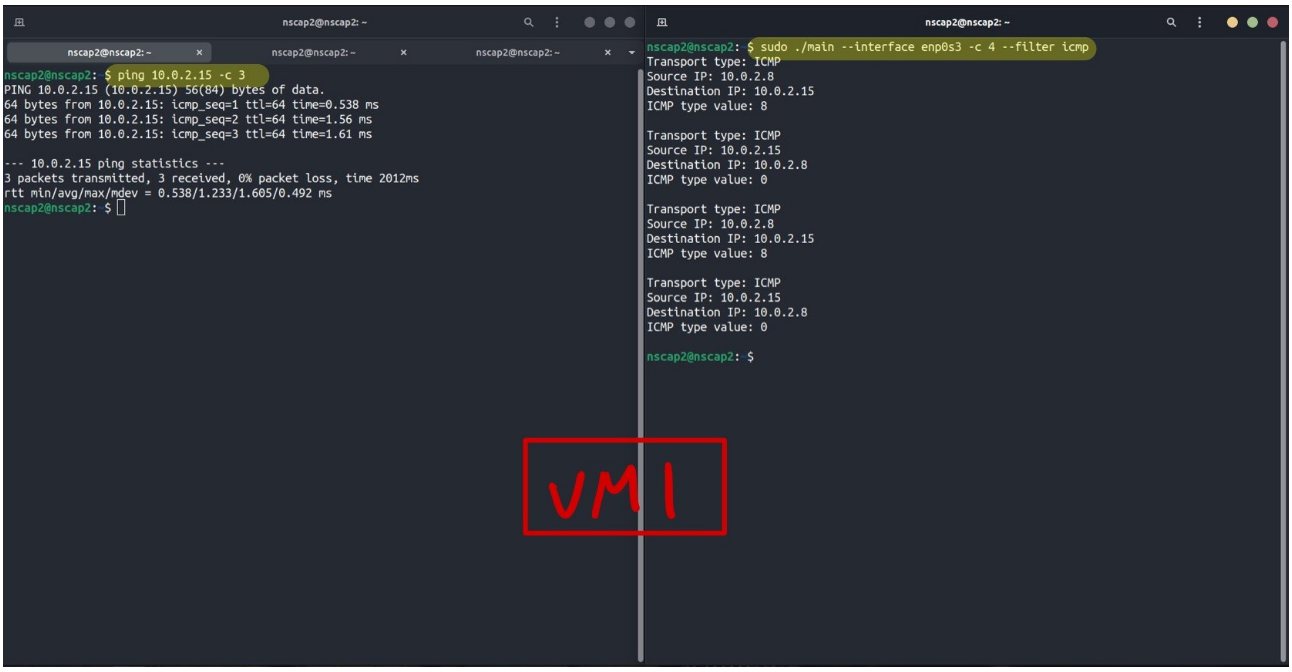
1. Two virtual machine on the same VLAN:



```
nscap2@nscap2:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.8  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::5ea:20d2:211a:e7e6  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:45:1c:0b  txqueuelen 1000  (Ethernet)
        RX packets 142  bytes 57805 (57.8 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 139  bytes 16542 (16.5 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.57.3  netmask 255.255.255.0  broadcast 192.168.57.255
        inet6 fe80::70e2:7579:592f:4edd  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:de:72:c2  txqueuelen 1000  (Ethernet)
        RX packets 158  bytes 18287 (18.2 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 125  bytes 18317 (18.3 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 161  bytes 14937 (14.9 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 161  bytes 14937 (14.9 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

nscap2@nscap2:~$ 
```

```
nscap2@nscap2:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::2842:773:686c:a0ad  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:c0:5b:55  txqueuelen 1000  (Ethernet)
        RX packets 110  bytes 53286 (53.2 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 140  bytes 17109 (17.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.57.4  netmask 255.255.255.0  broadcast 192.168.57.255
        inet6 fe80::b70e:8d7c:c8c0:289a  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:0c:69:ae  txqueuelen 1000  (Ethernet)
        RX packets 168  bytes 17432 (17.4 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 156  bytes 21618 (21.6 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 169  bytes 16029 (16.0 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 169  bytes 16029 (16.0 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

nscap2@nscap2:~$
```

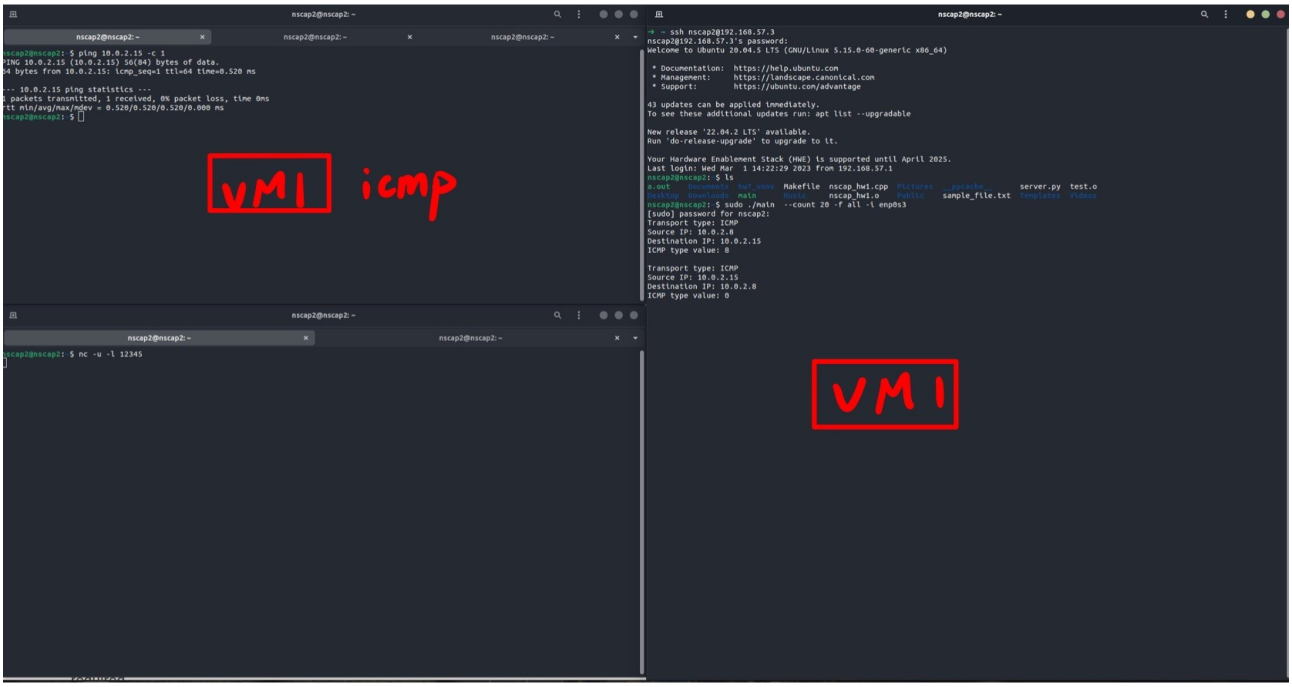
2. Experiments
    - Experiment 1: ICMP only



```
nscap2@nscap2:~$ ping 10.0.2.15 -c 3
PING 10.0.2.15 (10.0.2.15) 56(84) bytes of data.
64 bytes from 10.0.2.15: icmp_seq=1 ttl=64 time=0.538 ms
64 bytes from 10.0.2.15: icmp_seq=2 ttl=64 time=1.56 ms
64 bytes from 10.0.2.15: icmp_seq=3 ttl=64 time=1.61 ms

--- 10.0.2.15 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2012ms
rtt min/avg/max/mdev = 0.538/1.233/1.605/0.492 ms
nscap2@nscap2:~$ 
```

```
nscap2@nscap2:~$ sudo ./main --interface enp0s3 -c 4 --filter icmp
Transport type: ICMP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
ICMP type value: 8

Transport type: ICMP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
ICMP type value: 0

Transport type: ICMP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
ICMP type value: 8

Transport type: ICMP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
ICMP type value: 0

nscap2@nscap2:~$
```

- Experiment 2: All packets
    - ICMP

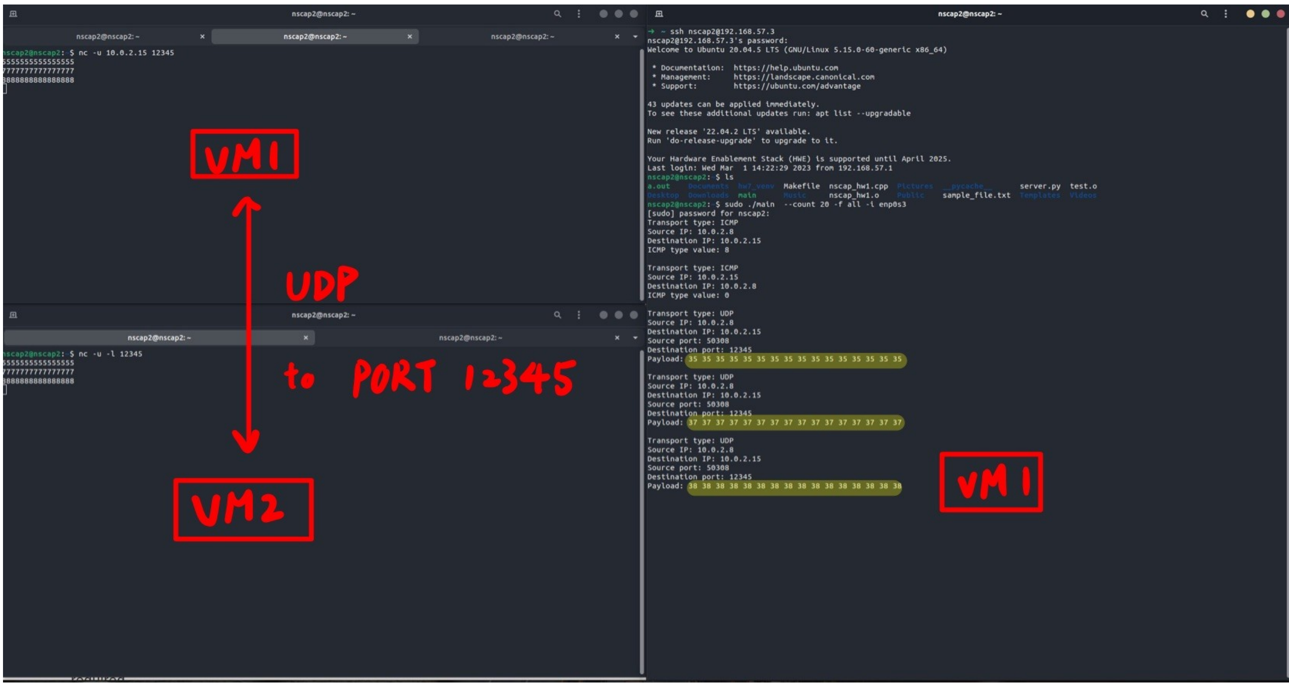


```
nscap2@nscap2:~$ ping 10.0.2.15 -c 1
PING 10.0.2.15 (10.0.2.15) 56(84) bytes of data.
64 bytes from 10.0.2.15: icmp_seq=1 ttl=64 time=0.520 ms

--- 10.0.2.15 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.520/0.520/0.520/0.000 ms
nscap2@nscap2:~$ 
```

```
nscap2@nscap2:~$ nc -u -l 12345
```

```
→ ~ ssh nscap2@192.168.57.3
nscap2@192.168.57.3's password:
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.15.0-60-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

43 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

New release '22.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Wed Mar  1 14:22:29 2023 from 192.168.57.1
nscap2@nscap2:~$ ls
a.out    Documents  hw7_venv  Makefile  nscap_hw1.cpp  Pictures  __pycache__      server.py  test.o
Desktop  Downloads  main      Music     nscap_hw1.o    Public    sample_file.txt  Templates  Videos
nscap2@nscap2:~$ sudo ./main  --count 20 -f all -i enp0s3
[sudo] password for nscap2:
Transport type: ICMP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
ICMP type value: 8

Transport type: ICMP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
ICMP type value: 0
```

    - UDP

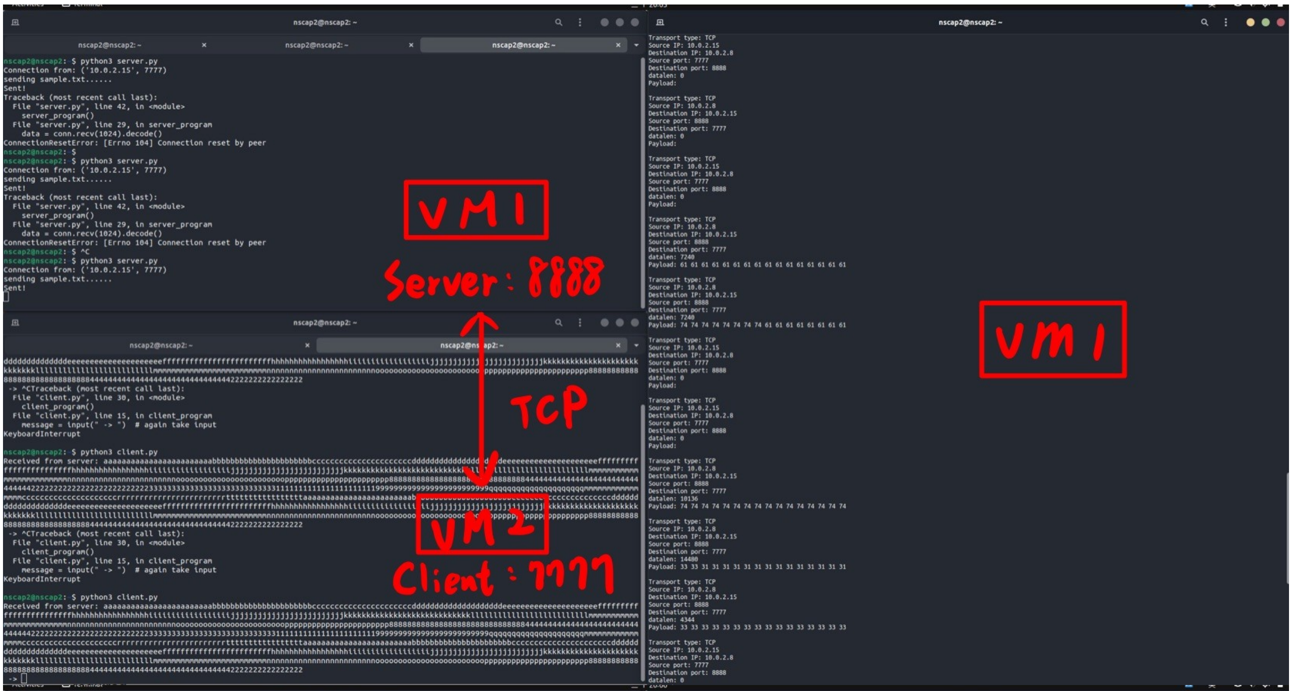


```
nscap2@nscap2:~$ nc -u 10.0.2.15 12345
5555555555555555
7777777777777777
8888888888888888
```

```
nscap2@nscap2:~$ nc -u -l 12345
5555555555555555
7777777777777777
8888888888888888
```

```
→ ~ ssh nscap2@192.168.57.3
nscap2@192.168.57.3's password:
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.15.0-60-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

43 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

New release '22.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Wed Mar  1 14:22:29 2023 from 192.168.57.1
nscap2@nscap2:~$ ls
a.out    Documents  hw7_venv  Makefile  nscap_hw1.cpp  Pictures  __pycache__      server.py  test.o
Desktop  Downloads  main      Music     nscap_hw1.o    Public    sample_file.txt  Templates  Videos
nscap2@nscap2:~$ sudo ./main  --count 20 -f all -i enp0s3
[sudo] password for nscap2:
Transport type: ICMP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
ICMP type value: 8

Transport type: ICMP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
ICMP type value: 0

Transport type: UDP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 50308
Destination port: 12345
Payload: 35 35 35 35 35 35 35 35 35 35 35 35 35 35 35 35

Transport type: UDP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 50308
Destination port: 12345
Payload: 37 37 37 37 37 37 37 37 37 37 37 37 37 37 37 37

Transport type: UDP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 50308
Destination port: 12345
Payload: 38 38 38 38 38 38 38 38 38 38 38 38 38 38 38 38
```

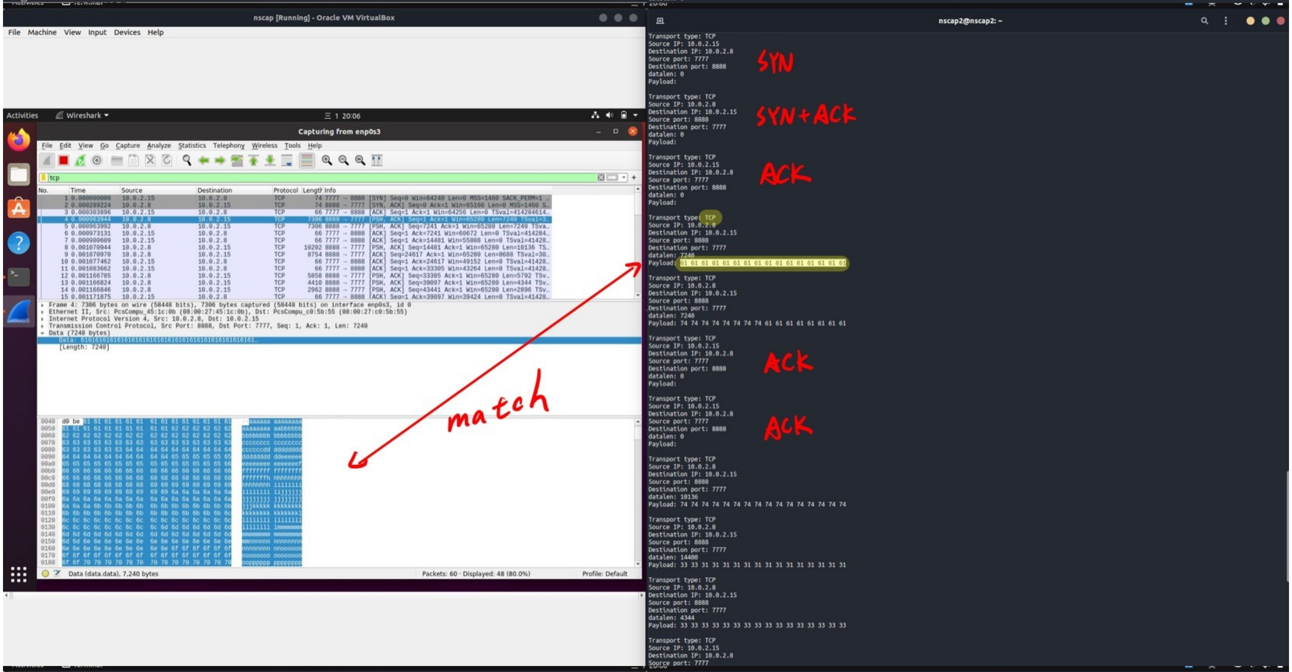
- TCP



```
nscap2@nscap2:~$ python3 server.py
Connection from: ('10.0.2.15', 7777)
sending sample.txt......
Sent!
Traceback (most recent call last):
  File "server.py", line 42, in <module>
    server_program()
  File "server.py", line 29, in server_program
    data = conn.recv(1024).decode()
ConnectionResetError: [Errno 104] Connection reset by peer
nscap2@nscap2:~$
nscap2@nscap2:~$ python3 server.py
Connection from: ('10.0.2.15', 7777)
sending sample.txt......
Sent!
Traceback (most recent call last):
  File "server.py", line 42, in <module>
    server_program()
  File "server.py", line 29, in server_program
    data = conn.recv(1024).decode()
ConnectionResetError: [Errno 104] Connection reset by peer
nscap2@nscap2:~$ ^C
nscap2@nscap2:~$ python3 server.py
Connection from: ('10.0.2.15', 7777)
sending sample.txt......
Sent!
```

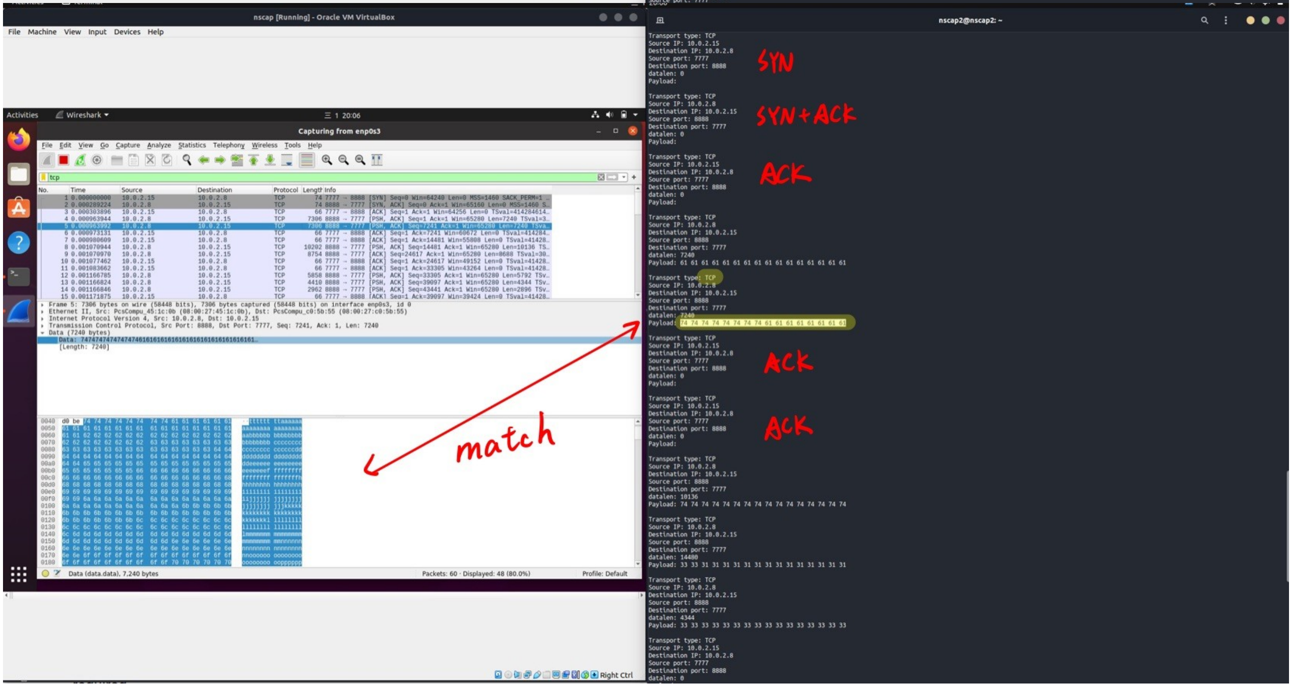
```
ddddddddddddddeeeeeeeeeeeeeeeeeeeeeeffffffffffffffffffffffhhhhhhhhhhhhhhhhhhiiiiiiiiiiiiiiiiijjjjjjjjjjjjjjjjjjjjjjjjjjkkkkkkkkkkkkkkkkkkkkk
kkkkkkkllllllllllllllllllllllllmmmmmmmmmmmmmmmmmmmmmmmmnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnooooooooooooooooooooooooppppppppppppppppppppppp8888888888
8888888888888888888844444444444444444444444444444442222222222222222
 -> ^CTraceback (most recent call last):
  File "client.py", line 30, in <module>
    client_program()
  File "client.py", line 15, in client_program
    message = input(" -> ")  # again take input
KeyboardInterrupt

nscap2@nscap2:~$ python3 client.py
Received from server: aaaaaaaaaaaaaaaaaaaaaaaaabbbbbbbbbbbbbbbbbbbbbbcccccccccccccccccccccccccccdddddddddddddddddddddeeeeeeeeeeeeeeeeeeeeeeffffffff
fffffffffffffhhhhhhhhhhhhhhhhhiiiiiiiiiiiiiiiiijjjjjjjjjjjjjjjjjjjjjjjjjjkkkkkkkkkkkkkkkkkkkkkkkkkkkkllllllllllllllllllllllllmmmmmmmmmmm
mmmmmmmmmmmmmmnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnooooooooooooooooooooooooppppppppppppppppppppppp888888888888888888888888888844444444444444444444444444
4444442222222222222222222222222222222333333333333333333333333333333311111111111111111111199999999999999999999999999qqqqqqqqqqqqqqqqqqqqqqmmmmmmmmmmm
mmmmcccccccccccccccccccccccrrrrrrrrrrrrrrrrrrrrrrrrttttttttttttttttttaaaaaaaaaaaaaaaaaaaaaaaaaabbbbbbbbbbbbbbbbbbbbbbbcccccccccccccccccccccccdddddd
ddddddddddddddeeeeeeeeeeeeeeeeeeeeeeffffffffffffffffffffffhhhhhhhhhhhhhhhhhhiiiiiiiiiiiiiiiiijjjjjjjjjjjjjjjjjjjjjjjjjjkkkkkkkkkkkkkkkkkkkkk
kkkkkkkllllllllllllllllllllllllmmmmmmmmmmmmmmmmmmmmmmmmnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnooooooooooooooooooooooooppppppppppppppppppppppp8888888888
8888888888888888888844444444444444444444444444444442222222222222222
 -> ^CTraceback (most recent call last):
  File "client.py", line 30, in <module>
    client_program()
  File "client.py", line 15, in client_program
    message = input(" -> ")  # again take input
KeyboardInterrupt

nscap2@nscap2:~$ python3 client.py
Received from server: aaaaaaaaaaaaaaaaaaaaaaaaabbbbbbbbbbbbbbbbbbbbbbcccccccccccccccccccccccccccdddddddddddddddddddddeeeeeeeeeeeeeeeeeeeeeeffffffff
fffffffffffffhhhhhhhhhhhhhhhhhiiiiiiiiiiiiiiiiijjjjjjjjjjjjjjjjjjjjjjjjjjkkkkkkkkkkkkkkkkkkkkkkkkkkkkllllllllllllllllllllllllmmmmmmmmmmm
mmmmmmmmmmmmmmnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnooooooooooooooooooooooooppppppppppppppppppppppp888888888888888888888888888844444444444444444444444444
4444442222222222222222222222222222222333333333333333333333333333333311111111111111111111199999999999999999999999999qqqqqqqqqqqqqqqqqqqqqqmmmmmmmmmmm
mmmmcccccccccccccccccccccccrrrrrrrrrrrrrrrrrrrrrrrrttttttttttttttttttaaaaaaaaaaaaaaaaaaaaaaaaaabbbbbbbbbbbbbbbbbbbbbbbcccccccccccccccccccccccdddddd
ddddddddddddddeeeeeeeeeeeeeeeeeeeeeeffffffffffffffffffffffhhhhhhhhhhhhhhhhhhiiiiiiiiiiiiiiiiijjjjjjjjjjjjjjjjjjjjjjjjjjkkkkkkkkkkkkkkkkkkkkk
kkkkkkkllllllllllllllllllllllllmmmmmmmmmmmmmmmmmmmmmmmmnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnooooooooooooooooooooooooppppppppppppppppppppppp8888888888
8888888888888888888844444444444444444444444444444442222222222222222
 ->
```

```
Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 7240
Payload: 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 7240
Payload: 74 74 74 74 74 74 74 74 61 61 61 61 61 61 61 61

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 10136
Payload: 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 14480
Payload: 33 33 31 31 31 31 31 31 31 31 31 31 31 31 31 31

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 4344
Payload: 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
```



```
No.  Time         Source      Destination  Protocol Length Info
   1 0.000000000  10.0.2.15   10.0.2.8     TCP        74 7777 → 8888 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM=1 …
   2 0.000289224  10.0.2.8    10.0.2.15    TCP        74 8888 → 7777 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 S…
   3 0.000303896  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=414284614…
   4 0.000963944  10.0.2.8    10.0.2.15    TCP      7306 8888 → 7777 [PSH, ACK] Seq=1 Ack=1 Win=65280 Len=7240 TSval=3…
   5 0.000963992  10.0.2.8    10.0.2.15    TCP      7306 8888 → 7777 [PSH, ACK] Seq=7241 Ack=1 Win=65280 Len=7240 TSva…
   6 0.000973131  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=7241 Win=60672 Len=0 TSval=414284…
   7 0.000980609  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=14481 Win=55808 Len=0 TSval=41428…
   8 0.001070944  10.0.2.8    10.0.2.15    TCP     10202 8888 → 7777 [PSH, ACK] Seq=14481 Ack=1 Win=65280 Len=10136 TS…
   9 0.001070970  10.0.2.8    10.0.2.15    TCP      8754 8888 → 7777 [ACK] Seq=24617 Ack=1 Win=65280 Len=8688 TSval=30…
  10 0.001077462  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=24617 Win=49152 Len=0 TSval=41428…
  11 0.001083662  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=33305 Win=43264 Len=0 TSval=41428…
  12 0.001166785  10.0.2.8    10.0.2.15    TCP      5858 8888 → 7777 [PSH, ACK] Seq=33305 Ack=1 Win=65280 Len=5792 TSv…
  13 0.001166824  10.0.2.8    10.0.2.15    TCP      4410 8888 → 7777 [PSH, ACK] Seq=39097 Ack=1 Win=65280 Len=4344 TSv…
  14 0.001166846  10.0.2.8    10.0.2.15    TCP      2962 8888 → 7777 [PSH, ACK] Seq=43441 Ack=1 Win=65280 Len=2896 TSv…
  15 0.001171875  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=39097 Win=39424 Len=0 TSval=41428…

▸ Frame 4: 7306 bytes on wire (58448 bits), 7306 bytes captured (58448 bits) on interface enp0s3, id 0
▸ Ethernet II, Src: PcsCompu_45:1c:0b (08:00:27:45:1c:0b), Dst: PcsCompu_c0:5b:55 (08:00:27:c0:5b:55)
▸ Internet Protocol Version 4, Src: 10.0.2.8, Dst: 10.0.2.15
▸ Transmission Control Protocol, Src Port: 8888, Dst Port: 7777, Seq: 1, Ack: 1, Len: 7240
▾ Data (7240 bytes)
    Data: 616161616161616161616161616161616161616161616161…
    [Length: 7240]

0040  d0 be 61 61 61 61 61 61  61 61 61 61 61 61 61 61   ··aaaaaa aaaaaaaa
0050  61 61 61 61 61 61 61 61  61 61 62 62 62 62 62 62   aaaaaaaa aabbbbbb
0060  62 62 62 62 62 62 62 62  62 62 62 62 62 62 62 62   bbbbbbbb bbbbbbbb
0070  63 63 63 63 63 63 63 63  63 63 63 63 63 63 63 63   cccccccc cccccccc
0080  63 63 63 63 63 63 64 64  64 64 64 64 64 64 64 64   ccccccdd dddddddd
0090  64 64 64 64 64 64 64 64  64 64 65 65 65 65 65 65   dddddddd ddeeeeee
00a0  65 65 65 65 65 65 65 65  65 65 65 65 65 65 65 66   eeeeeeee eeeeeeef
00b0  66 66 66 66 66 66 66 66  66 66 66 66 66 66 66 66   ffffffff ffffffff
00c0  66 66 66 66 66 66 66 68  68 68 68 68 68 68 68 68   fffffffh hhhhhhhh
00d0  68 68 68 68 68 68 68 68  69 69 69 69 69 69 69 69   hhhhhhhh iiiiiiii
00e0  69 69 69 69 69 69 69 69  69 69 6a 6a 6a 6a 6a 6a   iiiiiiii iijjjjjj
00f0  6a 6a 6a 6a 6a 6a 6a 6a  6a 6a 6a 6a 6a 6a 6a 6a   jjjjjjjj jjjjjjjj
0100  6a 6a 6a 6b 6b 6b 6b 6b  6b 6b 6b 6b 6b 6b 6b 6b   jjjkkkkk kkkkkkkk
0110  6b 6b 6b 6b 6b 6b 6b 6b  6b 6b 6b 6b 6b 6b 6b 6c   kkkkkkkk kkkkkkkl
0120  6c 6c 6c 6c 6c 6c 6c 6c  6c 6c 6c 6c 6c 6c 6c 6c   llllllll llllllll
0130  6c 6c 6c 6c 6c 6c 6c 6c  6c 6d 6d 6d 6d 6d 6d 6d   llllllll lmmmmmmm
0140  6d 6d 6d 6d 6d 6d 6d 6d  6d 6d 6d 6d 6d 6d 6d 6d   mmmmmmmm mmmmmmmm
0150  6d 6d 6e 6e 6e 6e 6e 6e  6e 6e 6e 6e 6e 6e 6e 6e   mmnnnnnn nnnnnnnn
0160  6e 6e 6e 6e 6e 6e 6e 6e  6e 6e 6f 6f 6f 6f 6f 6f   nnnnnnnn nnoooooo
0170  6f 6f 6f 6f 6f 6f 6f 6f  6f 6f 6f 6f 6f 6f 6f 6f   oooooooo oooooooo
0180  6f 6f 70 70 70 70 70 70  70 70 70 70 70 70 70 70   oopppppp pppppppp

Data (data.data), 7,240 bytes          Packets: 60 · Displayed: 48 (80.0%)          Profile: Default
```

```
Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 7240
Payload: 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 7240
Payload: 74 74 74 74 74 74 74 74 61 61 61 61 61 61 61 61

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 10136
Payload: 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 14480
Payload: 33 33 31 31 31 31 31 31 31 31 31 31 31 31 31 31

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 4344
Payload: 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
```



```
No.  Time         Source      Destination  Protocol Length Info
   1 0.000000000  10.0.2.15   10.0.2.8     TCP        74 7777 → 8888 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM=1 …
   2 0.000289224  10.0.2.8    10.0.2.15    TCP        74 8888 → 7777 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 S…
   3 0.000303896  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=414284614…
   4 0.000963944  10.0.2.8    10.0.2.15    TCP      7306 8888 → 7777 [PSH, ACK] Seq=1 Ack=1 Win=65280 Len=7240 TSval=3…
   5 0.000963992  10.0.2.8    10.0.2.15    TCP      7306 8888 → 7777 [PSH, ACK] Seq=7241 Ack=1 Win=65280 Len=7240 TSva…
   6 0.000973131  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=7241 Win=60672 Len=0 TSval=414284…
   7 0.000980609  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=14481 Win=55808 Len=0 TSval=41428…
   8 0.001070944  10.0.2.8    10.0.2.15    TCP     10202 8888 → 7777 [PSH, ACK] Seq=14481 Ack=1 Win=65280 Len=10136 TS…
   9 0.001070970  10.0.2.8    10.0.2.15    TCP      8754 8888 → 7777 [ACK] Seq=24617 Ack=1 Win=65280 Len=8688 TSval=30…
  10 0.001077462  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=24617 Win=49152 Len=0 TSval=41428…
  11 0.001083662  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=33305 Win=43264 Len=0 TSval=41428…
  12 0.001166785  10.0.2.8    10.0.2.15    TCP      5858 8888 → 7777 [PSH, ACK] Seq=33305 Ack=1 Win=65280 Len=5792 TSv…
  13 0.001166824  10.0.2.8    10.0.2.15    TCP      4410 8888 → 7777 [PSH, ACK] Seq=39097 Ack=1 Win=65280 Len=4344 TSv…
  14 0.001166846  10.0.2.8    10.0.2.15    TCP      2962 8888 → 7777 [PSH, ACK] Seq=43441 Ack=1 Win=65280 Len=2896 TSv…
  15 0.001171875  10.0.2.15   10.0.2.8     TCP        66 7777 → 8888 [ACK] Seq=1 Ack=39097 Win=39424 Len=0 TSval=41428…

▸ Frame 5: 7306 bytes on wire (58448 bits), 7306 bytes captured (58448 bits) on interface enp0s3, id 0
▸ Ethernet II, Src: PcsCompu_45:1c:0b (08:00:27:45:1c:0b), Dst: PcsCompu_c0:5b:55 (08:00:27:c0:5b:55)
▸ Internet Protocol Version 4, Src: 10.0.2.8, Dst: 10.0.2.15
▸ Transmission Control Protocol, Src Port: 8888, Dst Port: 7777, Seq: 7241, Ack: 1, Len: 7240
▾ Data (7240 bytes)
    Data: 747474747474747461616161616161616161616161616161…
    [Length: 7240]

0040  d0 be 74 74 74 74 74 74  74 74 61 61 61 61 61 61   ··tttttt ttaaaaaa
0050  61 61 61 61 61 61 61 61  61 61 61 61 61 61 61 61   aaaaaaaa aaaaaaaa
0060  61 61 62 62 62 62 62 62  62 62 62 62 62 62 62 62   aabbbbbb bbbbbbbb
0070  62 62 62 62 62 62 62 62  63 63 63 63 63 63 63 63   bbbbbbbb cccccccc
0080  63 63 63 63 63 63 63 63  63 63 63 63 63 63 64 64   cccccccc ccccccdd
0090  64 64 64 64 64 64 64 64  64 64 64 64 64 64 64 64   dddddddd dddddddd
00a0  64 64 65 65 65 65 65 65  65 65 65 65 65 65 65 65   ddeeeeee eeeeeeee
00b0  65 65 65 65 65 65 65 66  66 66 66 66 66 66 66 66   eeeeeeef ffffffff
00c0  66 66 66 66 66 66 66 66  66 66 66 66 66 66 66 68   ffffffff fffffffh
00d0  68 68 68 68 68 68 68 68  68 68 68 68 68 68 68 68   hhhhhhhh hhhhhhhh
00e0  69 69 69 69 69 69 69 69  69 69 69 69 69 69 69 69   iiiiiiii iiiiiiii
00f0  69 69 6a 6a 6a 6a 6a 6a  6a 6a 6a 6a 6a 6a 6a 6a   iijjjjjj jjjjjjjj
0100  6a 6a 6a 6a 6a 6a 6a 6a  6a 6a 6a 6b 6b 6b 6b 6b   jjjjjjjj jjjkkkkk
0110  6b 6b 6b 6b 6b 6b 6b 6b  6b 6b 6b 6b 6b 6b 6b 6b   kkkkkkkk kkkkkkkk
0120  6b 6b 6b 6b 6b 6b 6b 6c  6c 6c 6c 6c 6c 6c 6c 6c   kkkkkkkl llllllll
0130  6c 6c 6c 6c 6c 6c 6c 6c  6c 6c 6c 6c 6c 6c 6c 6c   llllllll llllllll
0140  6c 6d 6d 6d 6d 6d 6d 6d  6d 6d 6d 6d 6d 6d 6d 6d   lmmmmmmm mmmmmmmm
0150  6d 6d 6d 6d 6d 6d 6d 6d  6d 6d 6e 6e 6e 6e 6e 6e   mmmmmmmm mmnnnnnn
0160  6e 6e 6e 6e 6e 6e 6e 6e  6e 6e 6e 6e 6e 6e 6e 6e   nnnnnnnn nnnnnnnn
0170  6e 6e 6f 6f 6f 6f 6f 6f  6f 6f 6f 6f 6f 6f 6f 6f   nnoooooo oooooooo
0180  6f 6f 6f 6f 6f 6f 6f 6f  6f 6f 70 70 70 70 70 70   oooooooo oopppppp

Data (data.data), 7,240 bytes          Packets: 60 · Displayed: 48 (80.0%)          Profile: Default
```

```
Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 7240
Payload: 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 7240
Payload: 74 74 74 74 74 74 74 74 61 61 61 61 61 61 61 61

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
Payload:

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 10136
Payload: 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 14480
Payload: 33 33 31 31 31 31 31 31 31 31 31 31 31 31 31 31

Transport type: TCP
Source IP: 10.0.2.8
Destination IP: 10.0.2.15
Source port: 8888
Destination port: 7777
datalen: 4344
Payload: 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33

Transport type: TCP
Source IP: 10.0.2.15
Destination IP: 10.0.2.8
Source port: 7777
Destination port: 8888
datalen: 0
```