

Nalongsone Danddank Student ID : 14958950 StarID: jf3893pd

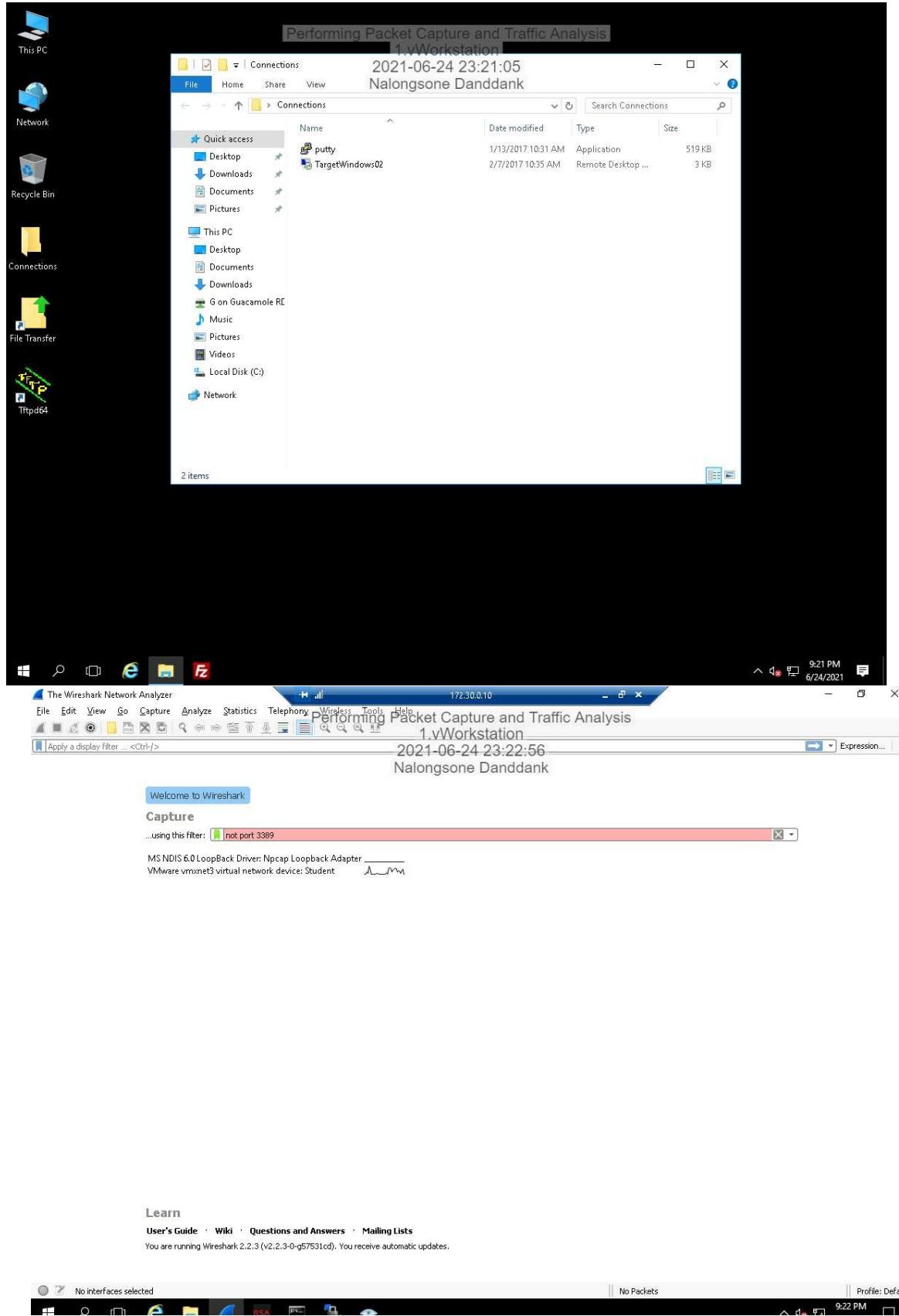
Email: nalongsone.danddank@my.metrostate.edu\

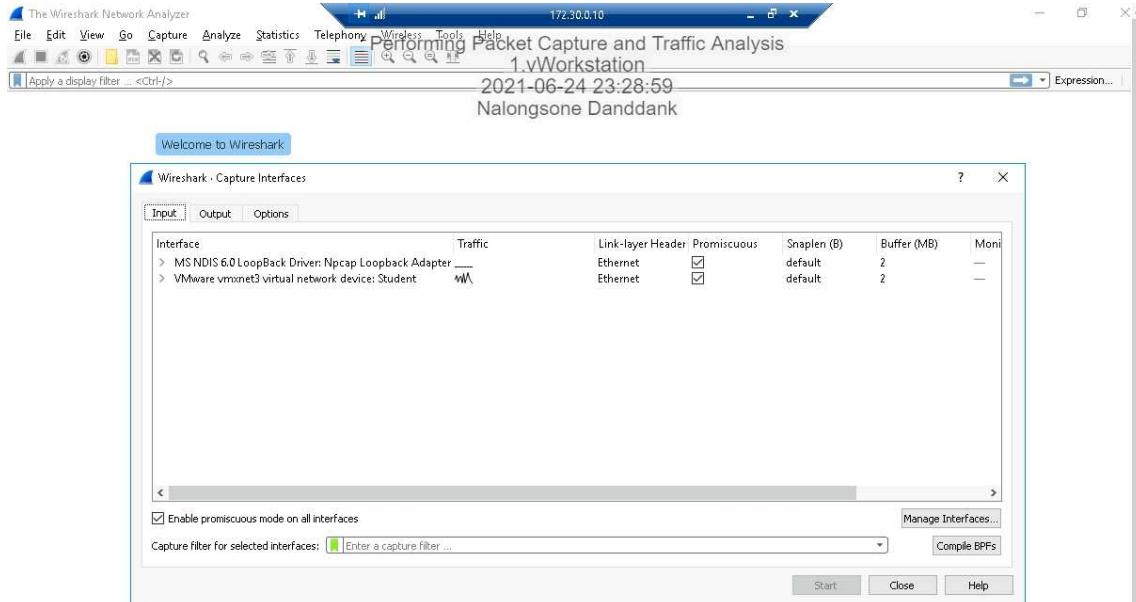
ICS382/CYBR332-51 —Computer Security

Lab #5 Report

Performing Packet Capture and Traffic Analysis

Part 1: Generate Network Traffic.

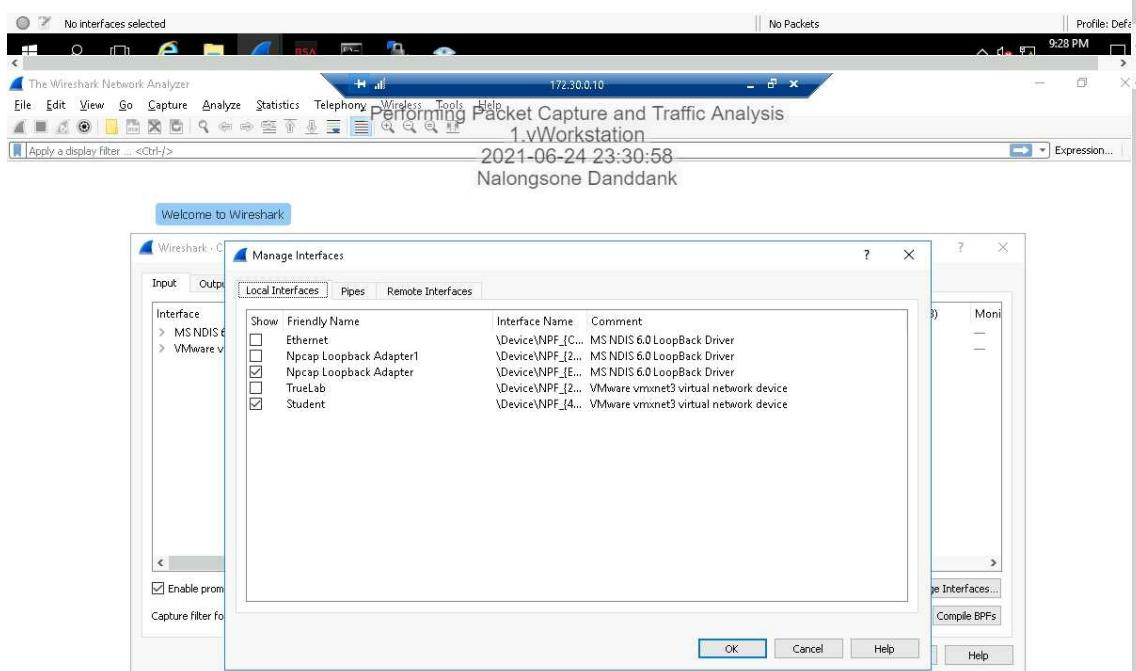




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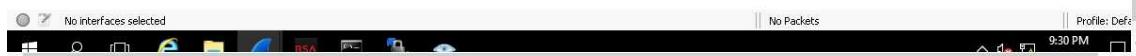
You are running Wireshark 2.2.3 (v2.2.3-0-g57531cd). You receive automatic updates.

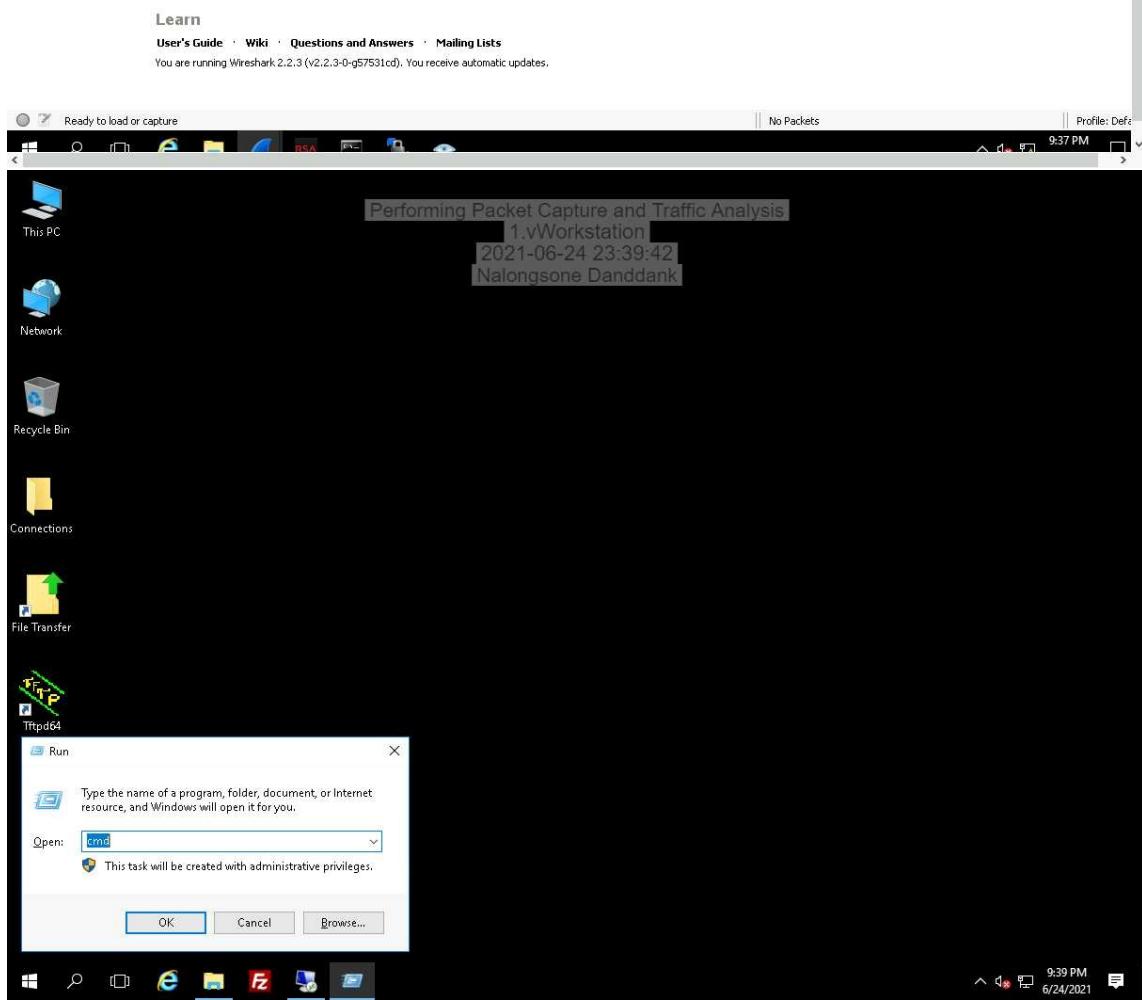
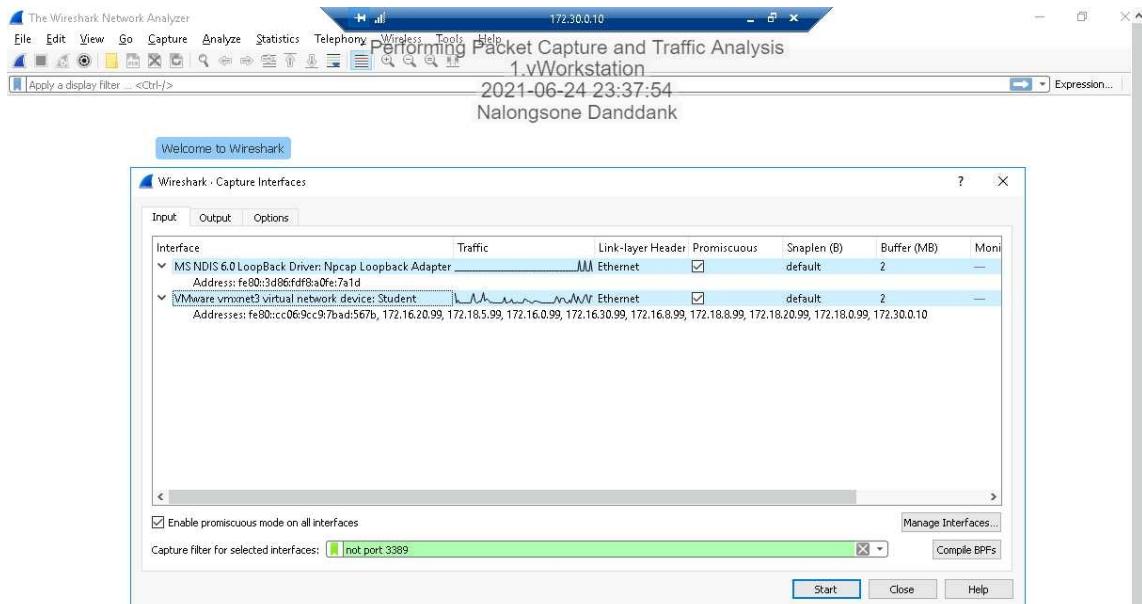


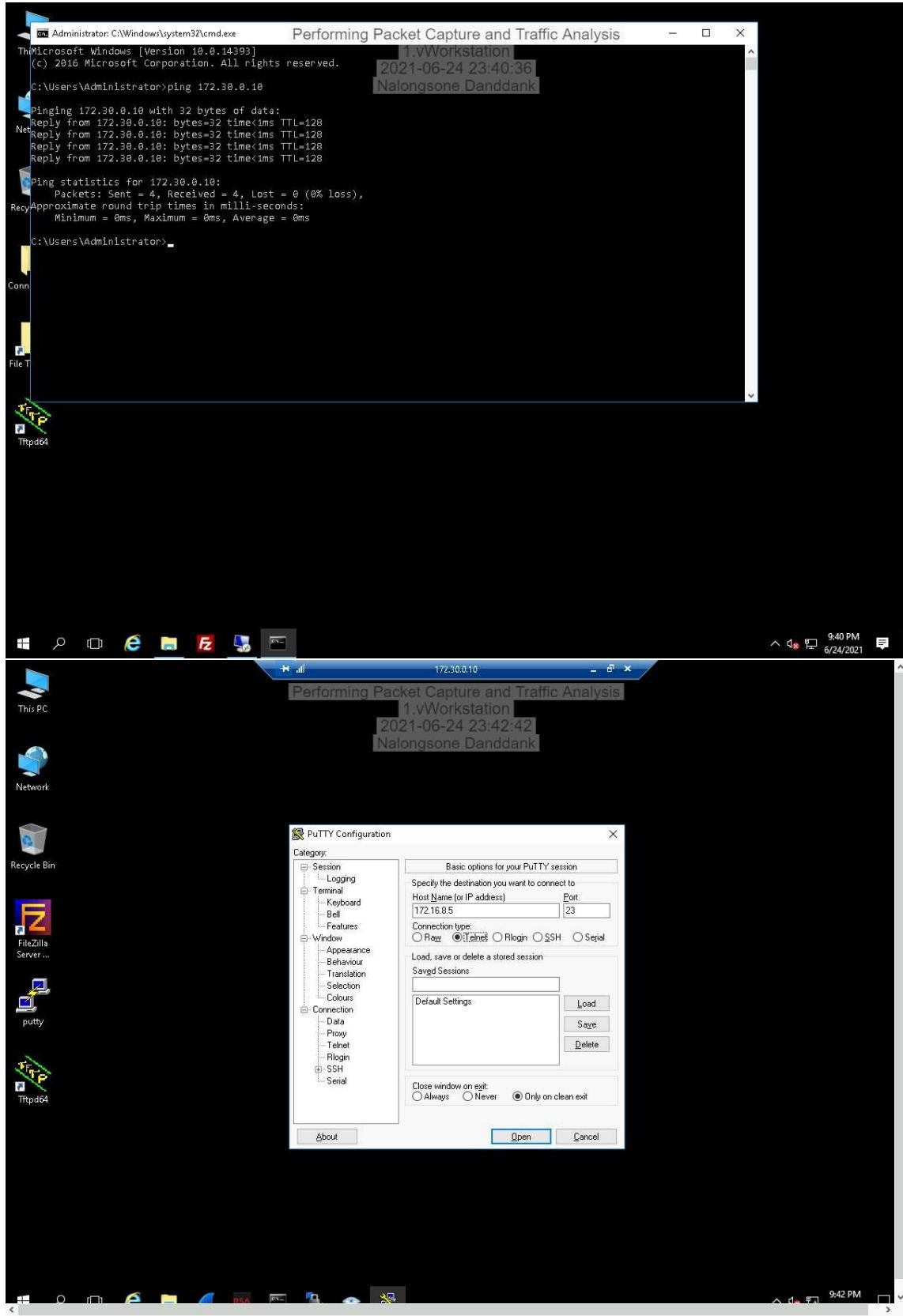
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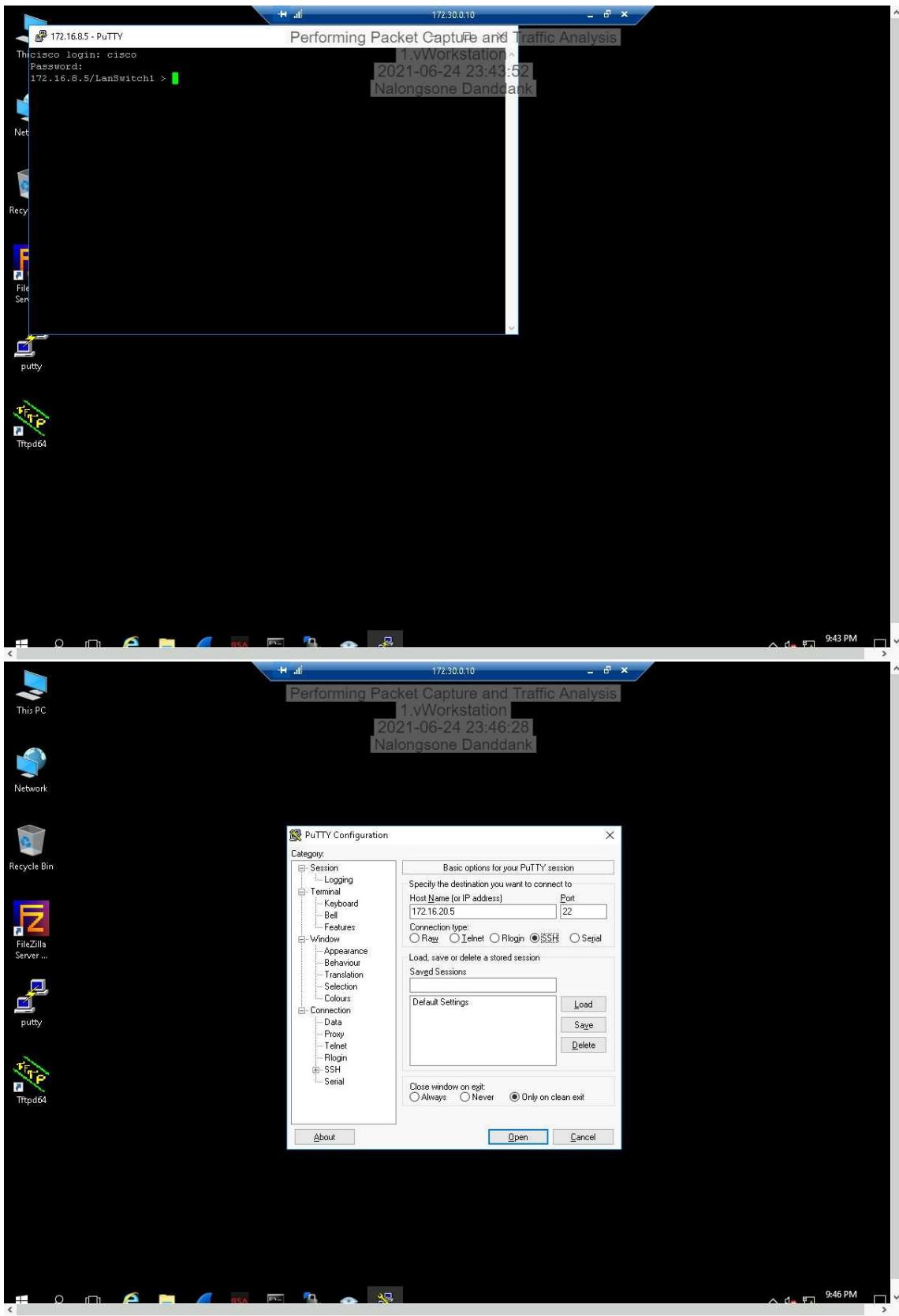
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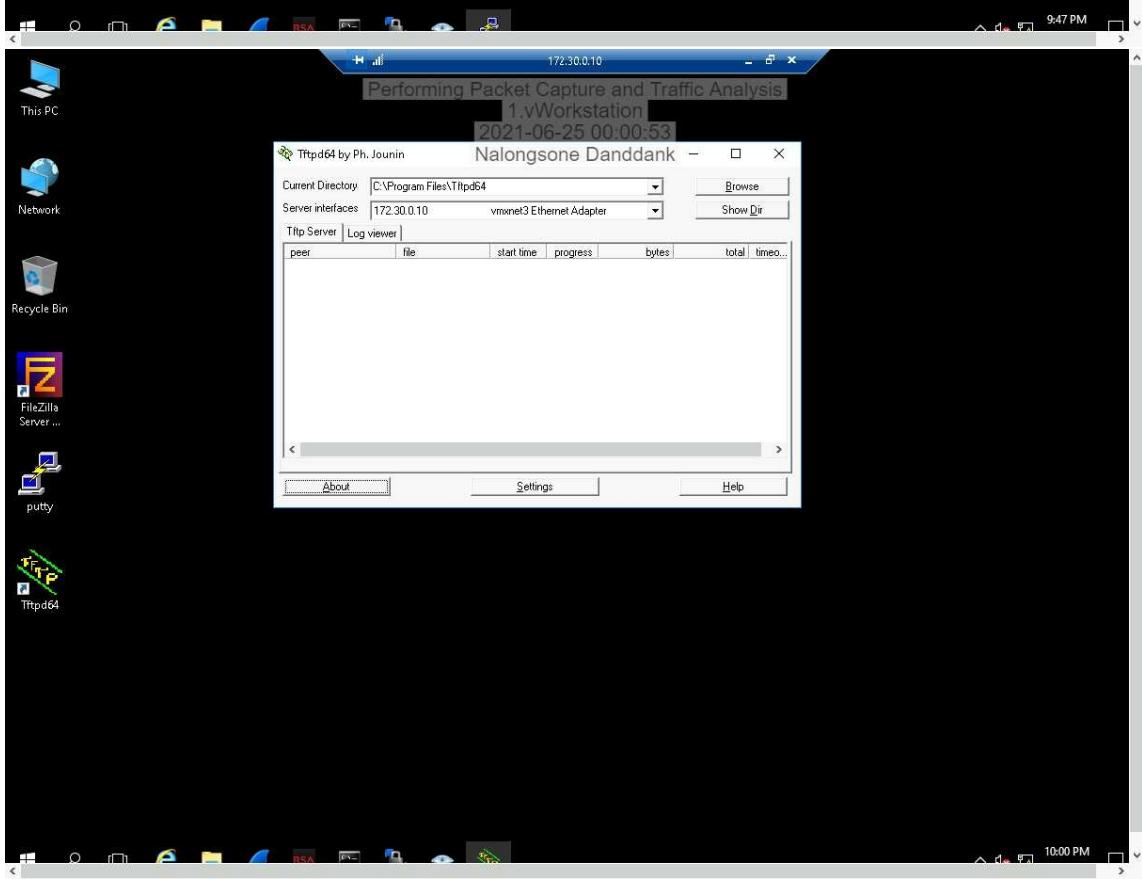
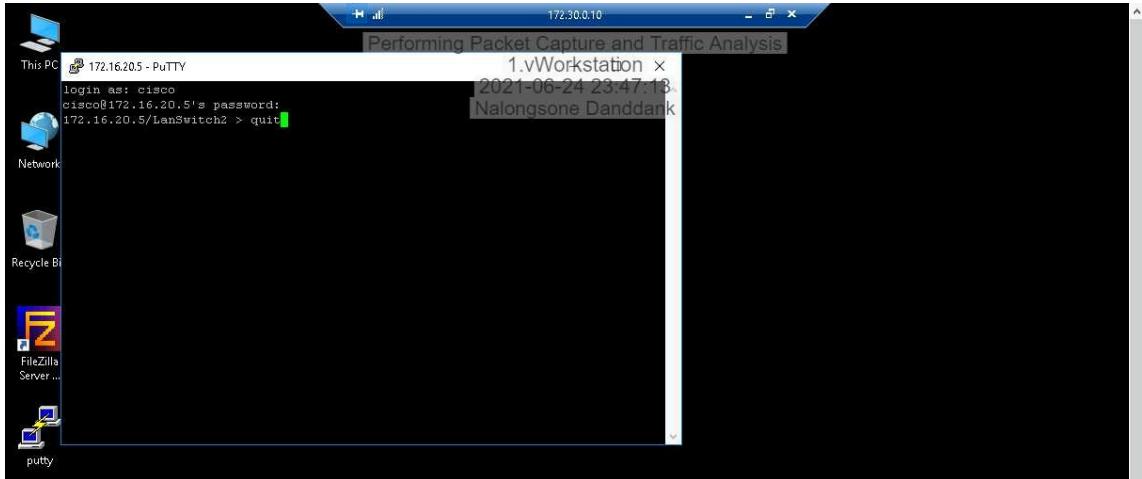
You are running Wireshark 2.2.3 (v2.2.3-0-g57531cd). You receive automatic updates.

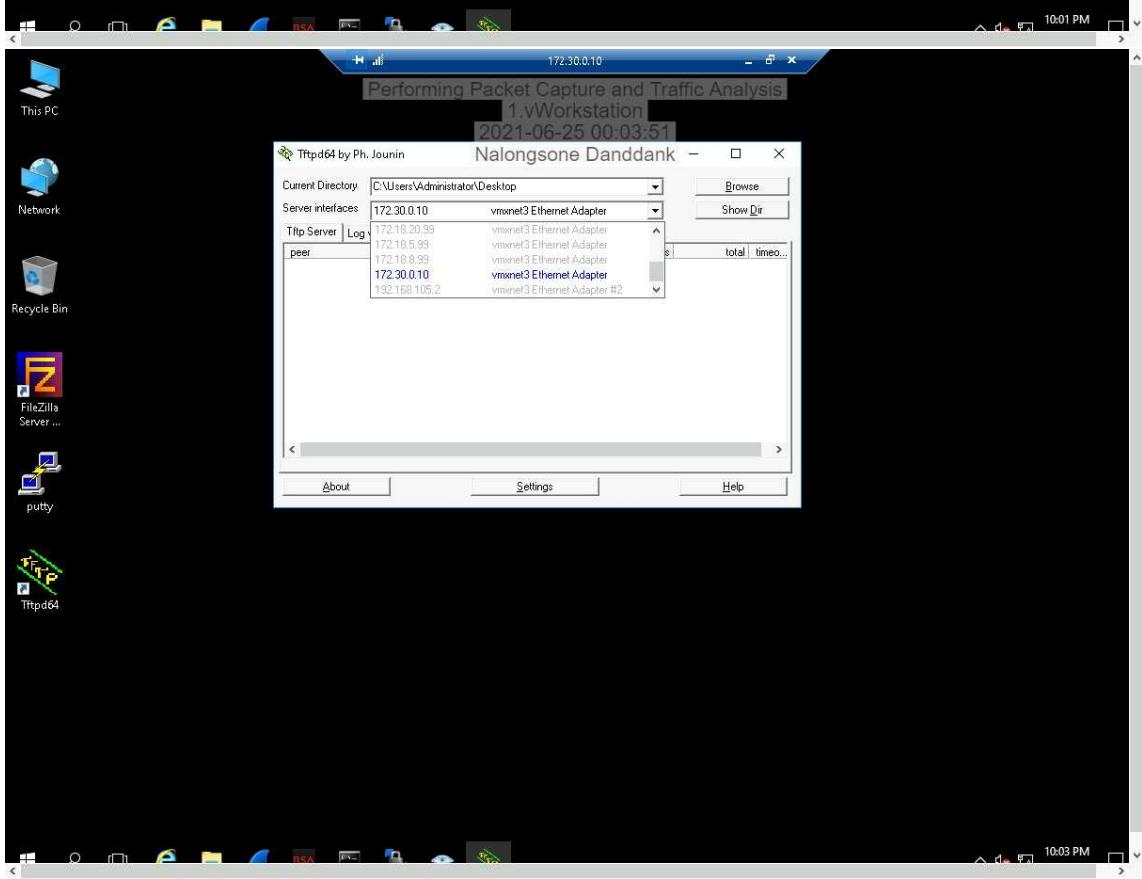
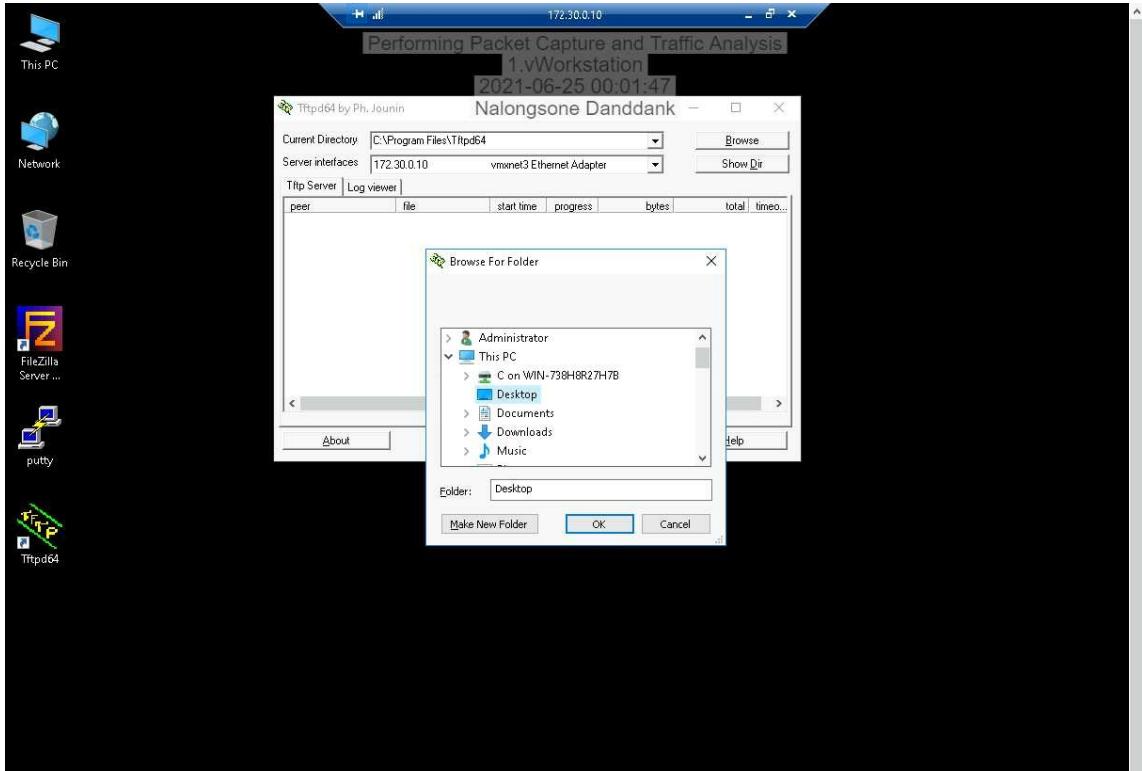


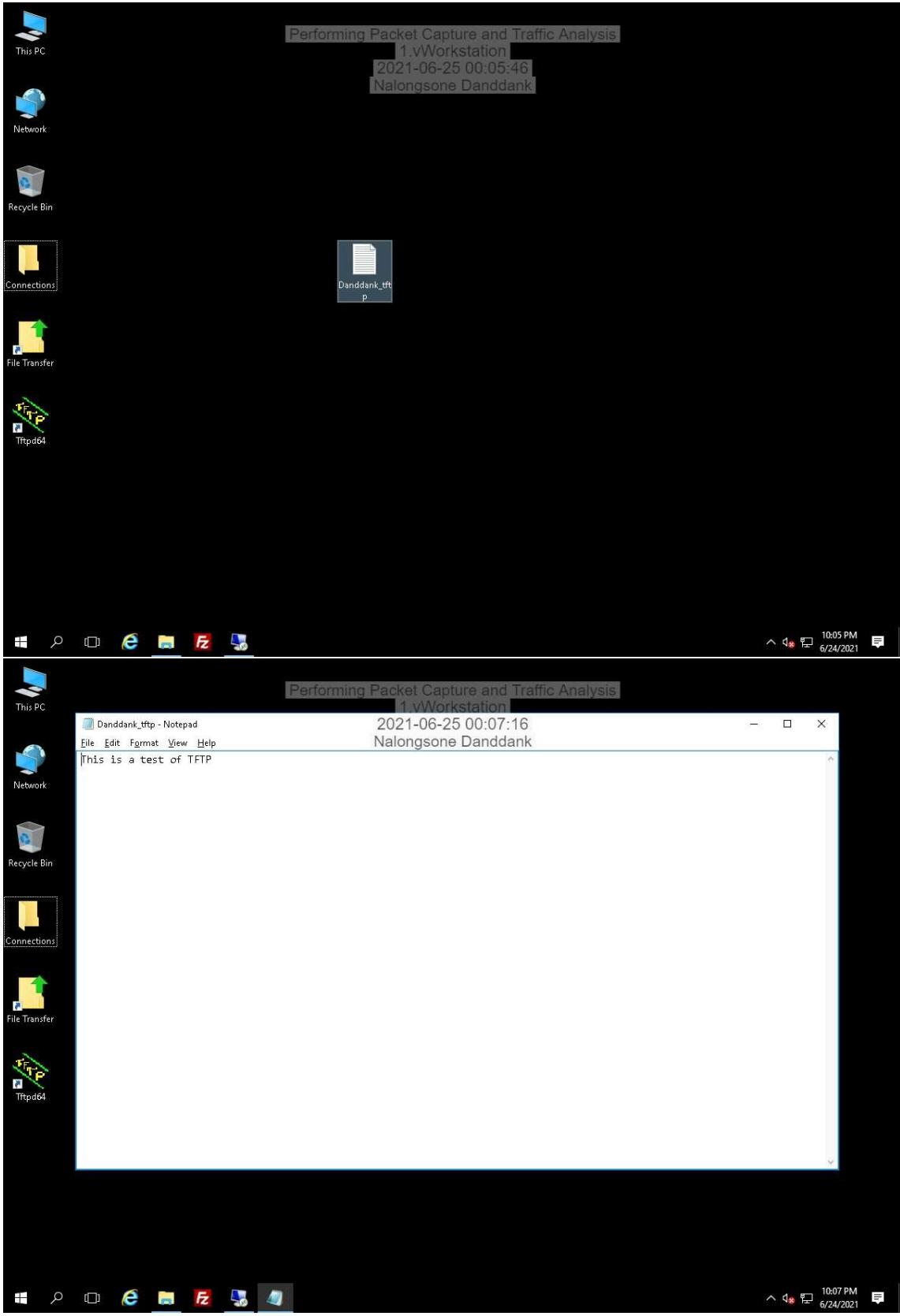


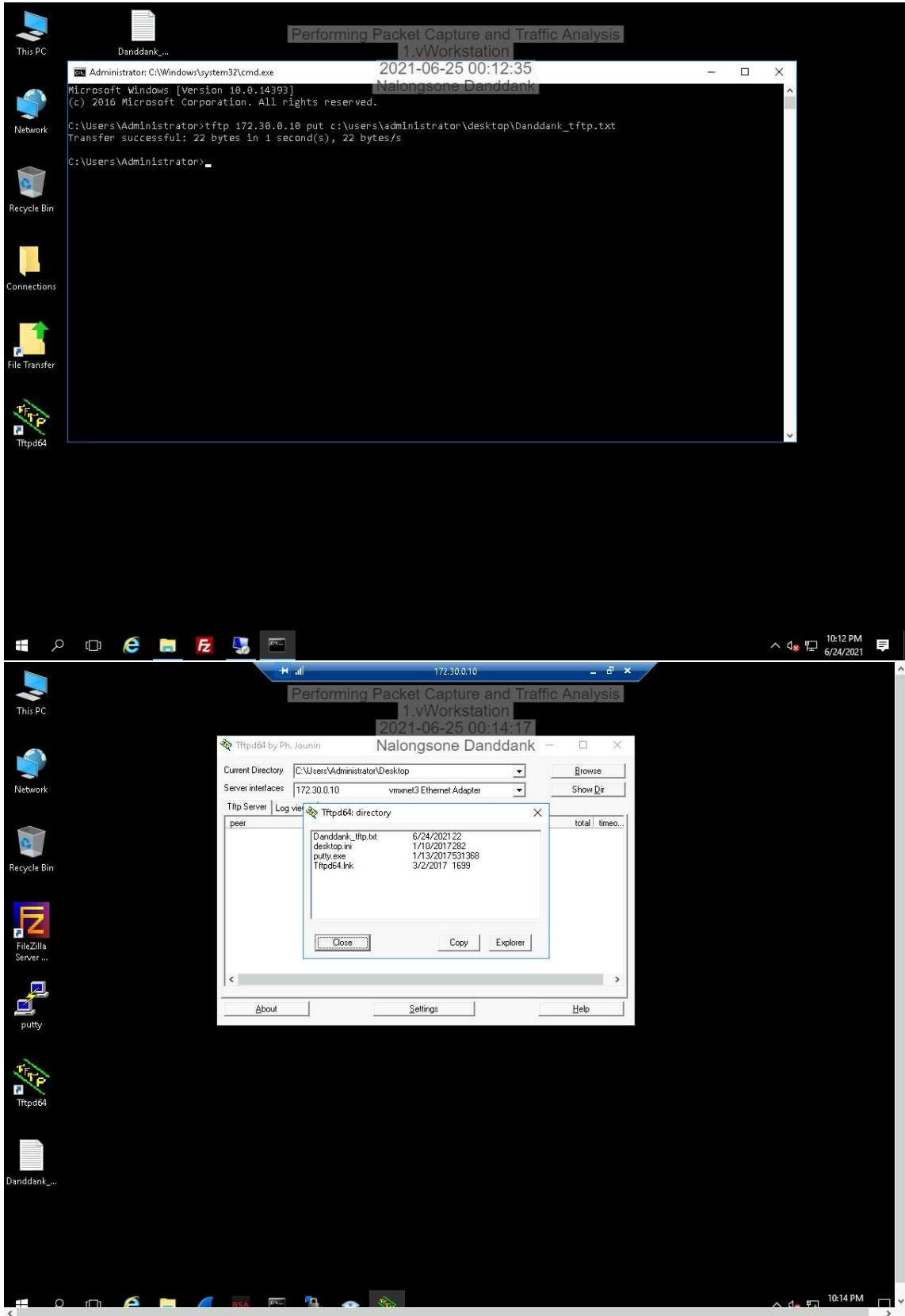


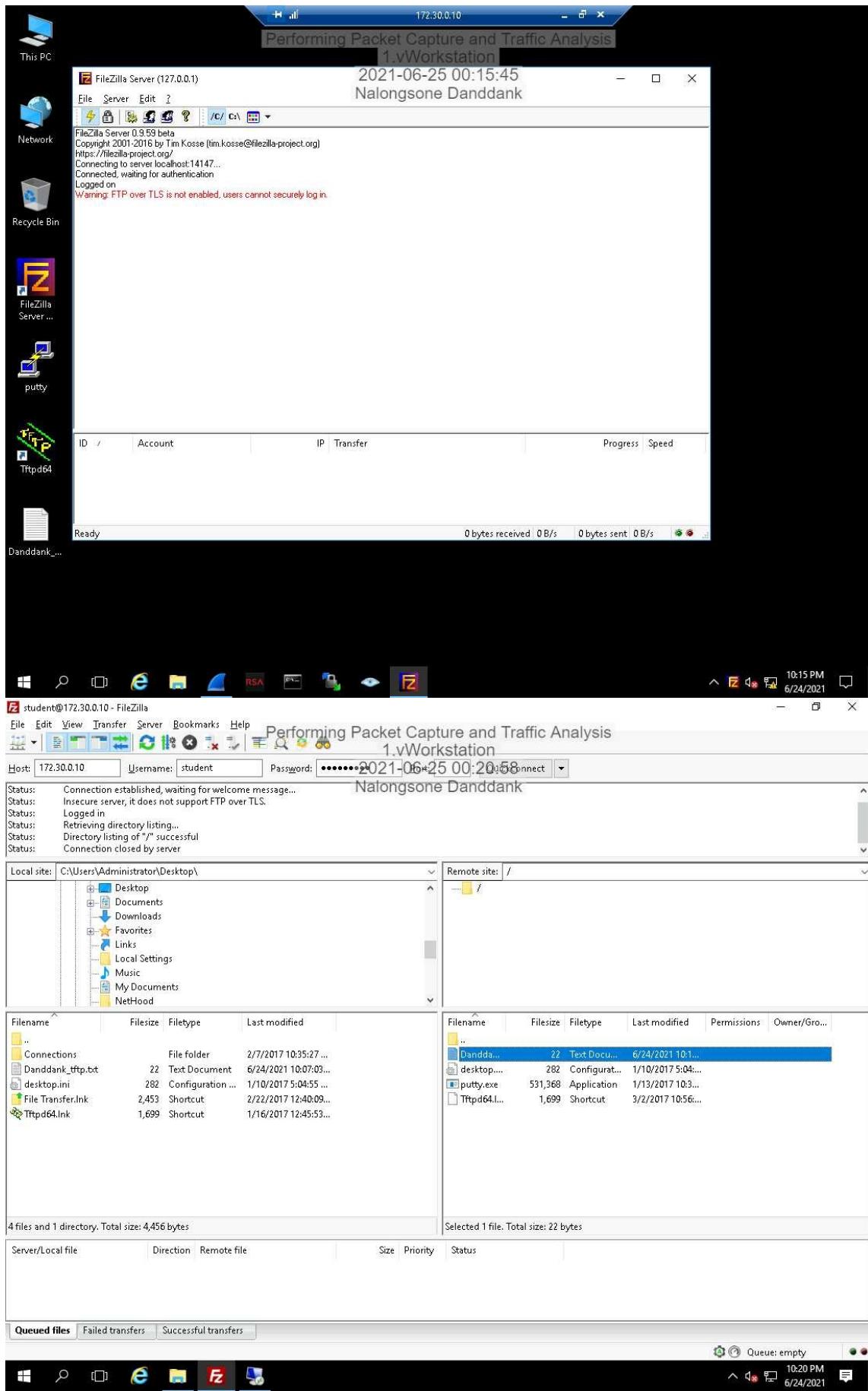












student@172.30.0.10 - FileZilla

File Edit View Transfer Server Bookmarks Help

Performing Packet Capture and Traffic Analysis
1.vWorkstation

Host: 172.30.0.10 Username: student Password: *****2021-06-25 00:20:44 connect

Status: Connection closed by server
Status: Connecting to 172.30.0.10:21...
Status: Connection established, waiting for welcome message...
Status: Insecure server, it does not support FTP over TLS.
Status: Logged in
Status: Starting download of /Danddank_tftp.txt

Local site: C:\Users\Administrator\Desktop\ Remote site: /

Target file already exists

The target file already exists.
Please choose an action.

Action:

Overwrite
 Overwrite if source newer
 Overwrite if different size
 Overwrite if different size or source newer
 Resume
 Rename
 Skip

Source file:
/Danddank_tftp.txt
22 bytes
6/24/2021 10:12:31 PM

Target file:
C:\Users\Administrator\Desktop\Danndank_tftp.txt
22 bytes
6/24/2021 10:07:03 PM

Always use this action
 Apply to current queue only
 Apply only to downloads

Modified Permissions Owner/Gro...
021 10:1... 017 5:04... 017 10:3... 17 10:56...

OK Cancel

4 files and 1 directory. Total size: 4,456 bytes Selected 1 file. Total size: 22 bytes

Server/Local file	Direction	Remote file	Size	Priority	Status
student@172.30.0.10	<<-	/Danndank_tftp.txt	22	Normal	Transferring

Queued files (1) Failed transfers Successful transfers

Queue: 22 B 10:21 PM 6/24/2021

student@172.30.0.10 - FileZilla

File Edit View Transfer Server Bookmarks Help

Performing Packet Capture and Traffic Analysis
1.vWorkstation

Host: 172.30.0.10 Username: student Password: *****2021-06-25 00:22:44 connect

Status: Connecting to 172.30.0.10:21...
Status: Connection established, waiting for welcome message...
Status: Insecure server, it does not support FTP over TLS.
Status: Logged in
Status: Starting download of /Danndank_tftp.txt
Status: File transfer successful, transferred 22 bytes in 1 second

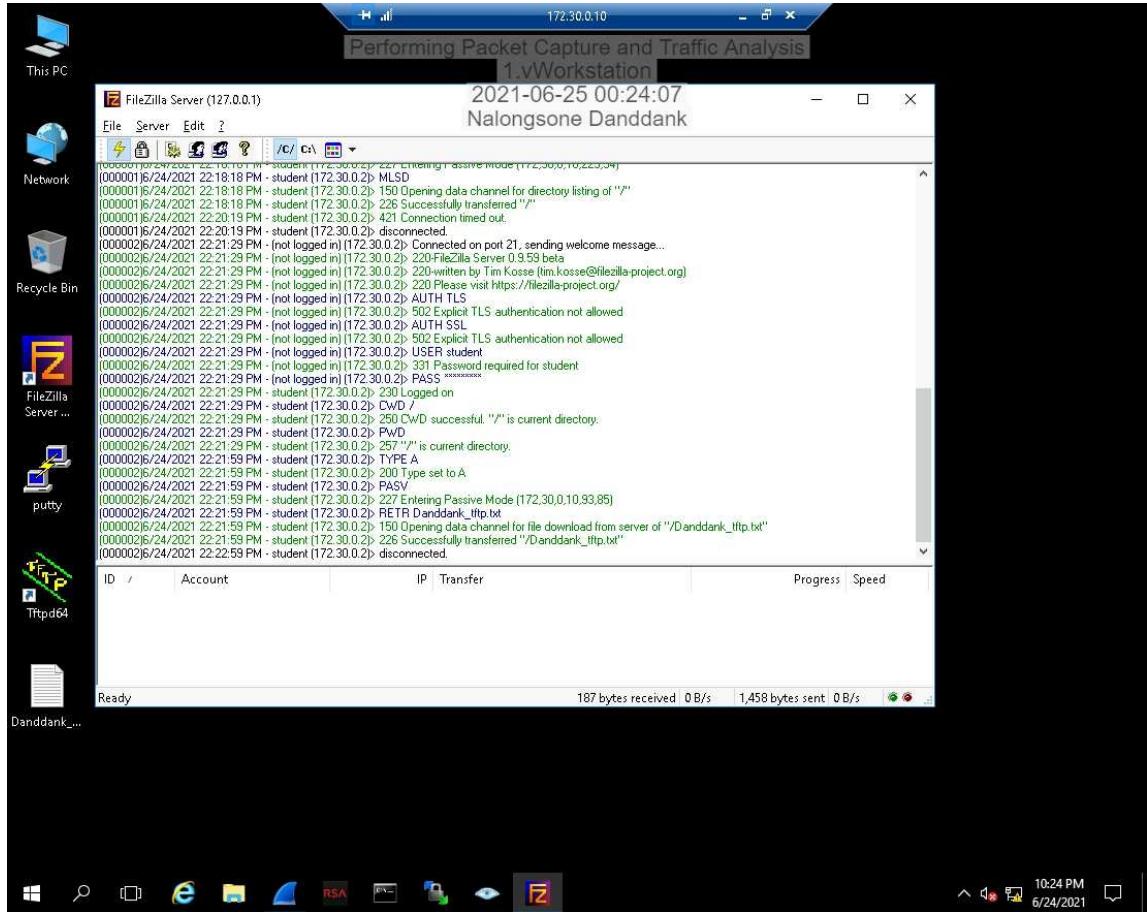
Local site: C:\Users\Administrator\Desktop\ Remote site: /

4 files and 1 directory. Total size: 4,456 bytes Selected 1 file. Total size: 22 bytes

Server/Local file	Direction	Remote file	Size	Priority	Time
student@172.30.0.10	<<-	/Danndank_tftp.txt	22	Normal	6/24/2021 10:21:59 PM

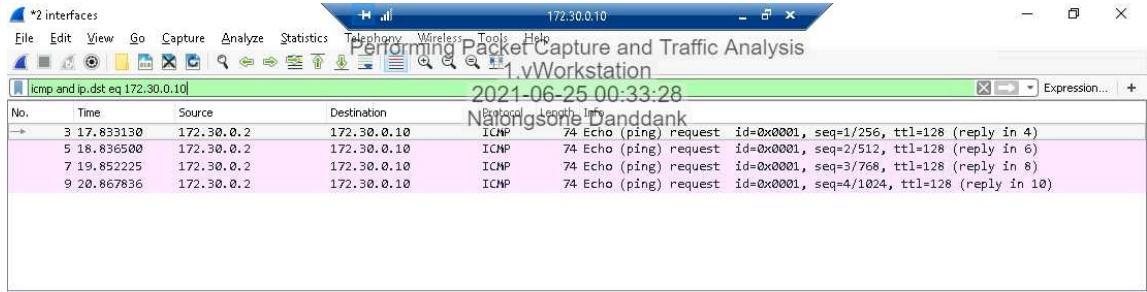
Queued files Failed transfers Successful transfers (1)

Queue: empty 10:22 PM 6/24/2021



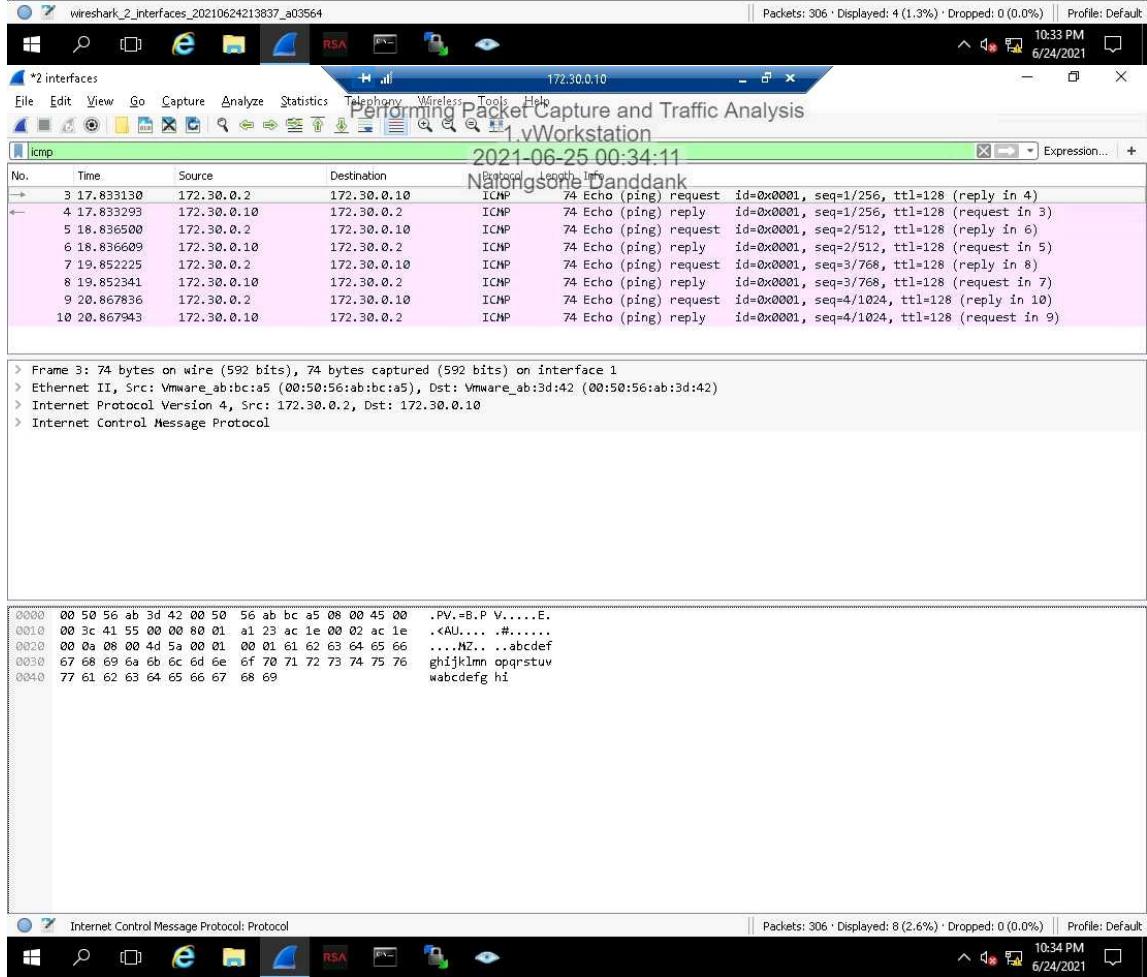
Part 2: Analyze Traffic using Wireshark.

The screenshot shows the Wireshark application window. The title bar reads 'Performing Packet Capture and Traffic Analysis' and '1.vWorkstation'. The main pane displays a list of network packets captured on interface 1. The first few packets are highlighted in pink. The details pane shows the packet structure for the first few frames, including source and destination addresses, protocols (BROWSER, ICMP), and payload. The bottom pane shows a hex dump of the captured data. The status bar at the bottom indicates 'Packets: 306 · Displayed: 306 (100.0%)' and the date/time '6/24/2021 10:25 PM'.



```
> Frame 3: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 1
> Ethernet II, Src: VMware_ab:bc:a5 (00:50:56:ab:bc:a5), Dst: VMware_ab:3d:42 (00:50:56:ab:3d:42)
> Internet Protocol Version 4, Src: 172.30.0.2, Dst: 172.30.0.10
> Internet Control Message Protocol

0000  00 50 56 ab 3d 42 00 50 56 ab bc a5 08 00 45 00 .PV.=B.P V.....E.
0010  00 3c 41 55 00 00 80 01 a1 23 ac 1e 00 02 ac 1e .<AU.... #. ....
0020  00 0a 08 00 4d 5a 00 01 00 01 61 62 63 64 65 66 ....Mz... .abcdef
0030  67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76 ghijklmn opqrstuv
0040  77 61 62 63 64 65 66 67 68 69 wabcdefg hi
```



Internet Control Message Protocol: Protocol

Packets: 306 · Displayed: 8 (2.6%) · Dropped: 0 (0.0%) · Profile: Default

10:34 PM 6/24/2021

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

telnet

2021-06-25 00:34:59

Nanorlgsone Danddank

No.	Time	Source	Destination	Protocol	Length	Info
16	192.420465	172.16.8.99	172.16.8.5	TELNET	75	Telnet Data ...
18	192.429087	172.16.8.5	172.16.8.99	TELNET	66	Telnet Data ...
19	192.429227	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
20	192.429312	172.16.8.5	172.16.8.99	TELNET	66	Telnet Data ...
21	192.429369	172.16.8.99	172.16.8.5	TELNET	63	Telnet Data ...
22	192.429413	172.16.8.5	172.16.8.99	TELNET	72	Telnet Data ...
23	192.429451	172.16.8.99	172.16.8.5	TELNET	71	Telnet Data ...
24	192.429467	172.16.8.99	172.16.8.5	TELNET	68	Telnet Data ...
25	192.429479	172.16.8.99	172.16.8.5	TELNET	65	Telnet Data ...
27	192.429213	172.16.8.5	172.16.8.99	TELNET	63	Telnet Data ...

> Frame 16: 75 bytes on wire (600 bits), 75 bytes captured (600 bytes) on interface 1

> Ethernet II, Src: VMware_ab:3d:42 (00:50:56:ab:3d:42), Dst: VMware_ab:ae:77 (00:50:56:ab:ae:77)

> Internet Protocol Version 4, Src: 172.16.8.99, Dst: 172.16.8.5

> Transmission Control Protocol, Src Port: 1558, Dst Port: 23, Seq: 1, Ack: 1, Len: 21

> Telnet

0000 00 50 56 ab ae 77 00 50 56 ab 3d 42 08 00 45 00 .PV.=B.P V.=B..E.

0010 00 3d 6d 13 40 00 80 06 25 1f ac 10 08 63 ac 10 .=m.@...%....c..

0020 08 05 06 16 00 17 e9 f2 c9 6a dd 9c ed 98 50 18j....P.

0030 04 02 8f 2e 00 00 ff fb 1f ff fb 20 ff fb 18 ff

0040 fb 27 ff fd 01 ff fb 03 ff fd 03

Telnet: Protocol

Packets: 306 · Displayed: 49 (16.0%) · Dropped: 0 (0.0%) · Profile: Default

10:34 PM 6/24/2021

*2 interfaces

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Performing Packet Capture and Traffic Analysis

1.vWorkstation

telnet

2021-06-25 00:46:21

Nanorlgsone Danddank

No.	Time	Source	Destination	Protocol	Length	Info
25	192.429479	172.16.8.99	172.16.8.5	TELNET	65	Telnet Data ...
27	192.429713	172.16.8.5	172.16.8.99	TELNET	63	Telnet Data ...
28	192.429770	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
29	192.429786	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
30	192.429796	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
32	192.440087	172.16.8.5	172.16.8.99	TELNET	67	Telnet Data ...
34	208.573482	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
35	208.573921	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...
37	208.711106	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
38	208.711407	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...

Frame Number: 32

Frame Length: 67 bytes (536 bits)

Capture Length: 67 bytes (536 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:ip:tcp:telnet]

[Coloring Rule Name: TCP]

[Coloring Rule String: tcp]

> Ethernet II, Src: VMware_ab:ae:77 (00:50:56:ab:ae:77), Dst: VMware_ab:3d:42 (00:50:56:ab:3d:42)

> Internet Protocol Version 4, Src: 172.16.8.5, Dst: 172.16.8.99

> Transmission Control Protocol, Src Port: 23, Dst Port: 1558, Seq: 52, Ack: 77, Len: 13

> Telnet

Data: cisco login:

0000 00 50 56 ab 3d 42 00 50 56 ab ae 77 08 00 45 10 .PV.=B.P V.=w..E.

0010 00 35 c7 fe 40 00 40 06 0a 2c ac 10 08 05 ac 10 .5..@.

0020 08 63 00 17 06 16 dd 9c ed cb e9 f2 c9 be 50 18 .c.....P.

0030 07 21 12 d6 00 00 63 69 73 63 6f 20 6c 6f 67 69 !....ci sco logi

0040 6e 3a 20 n:

wireshark_2_interfaces_20210624213837_a03564

Packets: 306 · Displayed: 49 (16.0%) · Dropped: 0 (0.0%) · Profile: Default

10:46 PM 6/24/2021

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

telnet

2021-06-25 00:46:46

Narongsonne_Danddank

No.	Time	Source	Destination	Protocol	Length	Info
25	192.429479	172.16.8.99	172.16.8.5	TELNET	65	Telnet Data ...
27	192.429713	172.16.8.5	172.16.8.99	TELNET	63	Telnet Data ...
28	192.429770	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
29	192.429786	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
30	192.429796	172.16.8.99	172.16.8.5	TELNET	57	Telnet Data ...
32	192.440087	172.16.8.5	172.16.8.99	TELNET	67	Telnet Data ...
34	208.573482	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
35	208.573921	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...
37	208.711106	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
38	208.711107	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...

Frame Number: 34

Frame Length: 55 bytes (440 bits)

Capture Length: 55 bytes (440 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:etherType:ip:tcp:telnet]

[Coloring Rule Name: TCP]

[Coloring Rule String: tcp]

> Ethernet II, Src: VMware_ab:3d:42 (00:50:56:ab:3d:42), Dst: VMware_ab:ae:77 (00:50:56:ab:ae:77)

> Internet Protocol Version 4, Src: 172.16.8.99, Dst: 172.16.8.5

> Transmission Control Protocol, Src Port: 1558, Dst Port: 23, Seq: 77, Ack: 65, Len: 1

▼ Telnet

Data: c

```
0000 00 50 56 ab ae 77 00 50 56 ab 3d 42 08 00 45 00 .PV..w.P V.=B..E.
0010 00 29 6d 1d 40 00 80 06 25 29 ac 10 08 63 ac 10 .)m.@.%.%)...c..
0020 08 05 06 16 00 17 e9 f2 c9 b6 dd 9c ed d8 50 18 ..... ....P.
0030 04 02 5a f4 00 00 63 .....Z...c
```

wireshark_2_interfaces_20210624213837_a03564

Packets: 306 · Displayed: 49 (16.0%) · Dropped: 0 (0.0%) · Profile: Default

10:46 PM 6/24/2021

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

telnet

2021-06-25 00:47:30

Narongsonne_Danddank

No.	Time	Source	Destination	Protocol	Length	Info
40	208.894971	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
41	208.895342	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...
43	209.196460	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
44	209.196820	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...
46	209.324906	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...
47	209.325293	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...
49	212.883411	172.16.8.99	172.16.8.5	TELNET	56	Telnet Data ...
50	212.883893	172.16.8.5	172.16.8.99	TELNET	60	Telnet Data ...
52	212.934200	172.16.8.5	172.16.8.99	TELNET	64	Telnet Data ...
54	212.934771	172.16.8.99	172.16.8.5	TELNET	55	Telnet Data ...

Frame Number: 52

Frame Length: 64 bytes (512 bits)

Capture Length: 64 bytes (512 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:etherType:ip:tcp:telnet]

[Coloring Rule Name: TCP]

[Coloring Rule String: tcp]

> Ethernet II, Src: VMware_ab:ae:77 (00:50:56:ab:ae:77), Dst: VMware_ab:3d:42 (00:50:56:ab:3d:42)

> Internet Protocol Version 4, Src: 172.16.8.5, Dst: 172.16.8.99

> Transmission Control Protocol, Src Port: 23, Dst Port: 1558, Seq: 72, Ack: 84, Len: 10

▼ Telnet

Data: Password:

```
0000 00 50 56 ab 3d 42 00 50 56 ab ae 77 08 00 45 10 .PV.=B.P V.=w.E.
0010 00 32 c8 05 40 00 40 06 0a 28 ac 10 08 05 ac 10 .2.@@.%.%)...P.
0020 08 63 00 17 06 16 dd 9c ed df e9 f2 c9 bd 50 18 ..c..... ....P.
0030 07 21 d2 f5 00 00 50 61 73 73 77 6f 72 64 3a 20 .!....Pa ssword:
```

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

ssh

2021-06-25 00:50:56

Natongsone Dandank

No.	Time	Source	Destination	Protocol	Length	Info
105	402.430508	172.16.20.99	172.16.20.5	SSHv2	82	Client: Protocol (SSH-2.0-PUTTY_Release_0.67)
107	402.434923	172.16.20.5	172.16.20.99	SSHv2	93	Server: Protocol (SSH-2.0-OpenSSH_6.0p1 Debian-4+deb7u6)
108	402.473481	172.16.20.99	172.16.20.5	SSHv2	726	Client: Key Exchange Init
109	402.473717	172.16.20.5	172.16.20.99	SSHv2	1038	Server: Key Exchange Init
110	402.473818	172.16.20.99	172.16.20.5	SSHv2	78	Client: Diffie-Hellman Group Exchange Request
111	402.478301	172.16.20.5	172.16.20.99	SSHv2	593	Server: Diffie-Hellman Group Exchange Group
113	402.554099	172.16.20.99	172.16.20.5	SSHv2	582	Client: Diffie-Hellman Group Exchange Init
114	402.564603	172.16.20.5	172.16.20.99	SSHv2	1158	Server: Diffie-Hellman Group Exchange Reply, New Keys
116	402.642633	172.16.20.99	172.16.20.5	SSHv2	70	Client: New Keys
117	402.643787	172.16.20.99	172.16.20.5	SSHv2	118	Client: Encrypted packet (len=64)

Frame 105: 82 bytes on wire (656 bits), 82 bytes captured (656 bits) on interface 1
 Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})
 Encapsulation type: Ethernet (1)
 Arrival Time: Jun 24, 2021 21:46:53.751388000 Pacific Daylight Time
 [Time shift for this packet: 0.000000000 seconds]
 Epoch Time: 1624596413.751388000 seconds
 [Time delta from previous captured frame: 0.005118000 seconds]
 [Time delta from previous displayed frame: 0.000000000 seconds]
 [Time since reference or first frame: 402.430508000 seconds]
 Frame Number: 105
 Frame Length: 82 bytes (656 bits)
 Capture Length: 82 bytes (656 bits)
 [Frame is marked: False]
 [Frame is ignored: False]

```

0000  00 50 56 ab ae 77 00 50 56 ab 3d 42 08 00 45 00 .PV..w.P V..B..E.
0010  00 44 72 47 40 00 80 06 07 e4 ac 10 14 63 ac 10 .Drg@... ....c..
0020  14 05 06 17 00 16 b4 c5 b3 92 02 f9 b0 f4 50 18 ..... ....P.
0030  04 02 13 a1 00 00 53 53 48 2d 32 2e 30 2d 50 75 .....SS H-2.0-Pu
0040  54 54 59 5f 52 65 6c 65 61 73 65 5f 30 2e 36 37 TTY_Rele ase_0.67
0050  0d 0a  .. .

```

*2 interfaces

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Performing Packet Capture and Traffic Analysis

1.vWorkstation

ssh

2021-06-25 00:51:52

Natongsone Dandank

No.	Time	Source	Destination	Protocol	Length	Info
105	402.430508	172.16.20.99	172.16.20.5	SSHv2	82	Client: Protocol (SSH-2.0-PUTTY_Release_0.67)
107	402.434923	172.16.20.5	172.16.20.99	SSHv2	93	Server: Protocol (SSH-2.0-OpenSSH_6.0p1 Debian-4+deb7u6)
108	402.473481	172.16.20.99	172.16.20.5	SSHv2	726	Client: Key Exchange Init
109	402.473717	172.16.20.5	172.16.20.99	SSHv2	1038	Server: Key Exchange Init
110	402.473818	172.16.20.99	172.16.20.5	SSHv2	78	Client: Diffie-Hellman Group Exchange Request
111	402.478301	172.16.20.5	172.16.20.99	SSHv2	593	Server: Diffie-Hellman Group Exchange Group
113	402.554099	172.16.20.99	172.16.20.5	SSHv2	582	Client: Diffie-Hellman Group Exchange Init
114	402.564603	172.16.20.5	172.16.20.99	SSHv2	1158	Server: Diffie-Hellman Group Exchange Reply, New Keys
116	402.642633	172.16.20.99	172.16.20.5	SSHv2	70	Client: New Keys
117	402.643787	172.16.20.99	172.16.20.5	SSHv2	118	Client: Encrypted packet (len=64)

Frame 107: 93 bytes on wire (744 bits), 93 bytes captured (744 bits) on interface 1
 Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})
 Encapsulation type: Ethernet (1)
 Arrival Time: Jun 24, 2021 21:46:53.755803000 Pacific Daylight Time
 [Time shift for this packet: 0.000000000 seconds]
 Epoch Time: 1624596413.755803000 seconds
 [Time delta from previous captured frame: 0.004338000 seconds]
 [Time delta from previous displayed frame: 0.004415000 seconds]
 [Time since reference or first frame: 402.434923000 seconds]
 Frame Number: 107
 Frame Length: 93 bytes (744 bits)
 Capture Length: 93 bytes (744 bits)
 [Frame is marked: False]
 [Frame is ignored: False]

```

0000  00 50 56 ab 3d 42 00 50 56 ab ae 77 08 00 45 00 .PV.=B.P V..w..E.
0010  00 4f 47 72 40 00 40 06 7a ae ac 10 14 05 ac 10 .OGr@.r. ....
0020  14 63 00 16 06 17 02 f9 bf 4b c5 b3 ae 50 18 .c..... ....P.
0030  07 21 01 66 00 00 53 53 48 2d 32 2e 30 2d 4f 78 .l....SS H-2.0-Op
0040  65 6e 53 53 48 5f 36 2e 30 70 31 20 44 65 62 69 enSSH 6.0p1 Debi
0050  61 6e 2d 34 2b 64 65 62 37 75 36 0d 0a an-4+deb 7u6..

```

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

tftp

2021-06-25 00:53:45

Nanorgsone Danddank

No.	Time	Source	Destination	Protocol	Length	Info
224	1940.646192	172.30.0.2	172.30.0.10	TFTP	71	Write Request, File: Danddank_tftp.txt, Transfer type: netascii
225	1940.660734	172.30.0.10	172.30.0.2	TFTP	46	Acknowledgement, Block: 0
226	1940.661372	172.30.0.2	172.30.0.10	TFTP	68	Data Packet, Block: 1 (last)
227	1940.661822	172.30.0.10	172.30.0.2	TFTP	46	Acknowledgement, Block: 1

Frame 224: 71 bytes on wire (568 bits), 71 bytes captured (568 bits) on interface 1

Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})

Encapsulation type: Ethernet (1)

Arrival Time: Jun 24, 2021 22:12:31.967072000 Pacific Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1624597951.967072000 seconds

[Time delta from previous captured frame: 485.796628000 seconds]

[Time delta from previous displayed frame: 0.000000000 seconds]

[Time since reference or first frame: 1940.646192000 seconds]

Frame Number: 224

Frame Length: 71 bytes (568 bits)

Capture Length: 71 bytes (568 bits)

[Frame is marked: False]

[Frame is ignored: False]

```
0000  00 50 56 ab 3d 42 00 50 56 ab bc a5 08 00 45 00 .PV.=B.P V.....E.
0010  00 39 57 60 00 00 80 11 8b 0b ac 1e 00 02 ac 1e ..W..... .....
0020  00 0a c5 ca 00 45 00 25 7d 93 00 02 44 61 6e 64 .....E.% }...Dand
0030  64 61 6e 6b 5f 74 66 74 70 2e 74 78 74 00 6e 65 dank_tft p.txt.ne
0040  74 61 73 63 69 69 00 tascii.
```

wireshark_2_interfaces_20210624213837_a03564

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

tftp

2021-06-25 00:54:13

Nanorgsone Danddank

No.	Time	Source	Destination	Protocol	Length	Info
224	1940.646192	172.30.0.2	172.30.0.10	TFTP	71	Write Request, File: Danddank_tftp.txt, Transfer type: netascii
225	1940.660734	172.30.0.10	172.30.0.2	TFTP	46	Acknowledgement, Block: 0
226	1940.661372	172.30.0.2	172.30.0.10	TFTP	68	Data Packet, Block: 1 (last)
227	1940.661822	172.30.0.10	172.30.0.2	TFTP	46	Acknowledgement, Block: 1

Frame 226: 68 bytes on wire (544 bits), 68 bytes captured (544 bits) on interface 1

Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})

Encapsulation type: Ethernet (1)

Arrival Time: Jun 24, 2021 22:12:31.982252000 Pacific Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1624597951.982252000 seconds

[Time delta from previous captured frame: 0.000638000 seconds]

[Time delta from previous displayed frame: 0.000638000 seconds]

[Time since reference or first frame: 1940.661372000 seconds]

Frame Number: 226

Frame Length: 68 bytes (544 bits)

Capture Length: 68 bytes (544 bits)

[Frame is marked: False]

[Frame is ignored: False]

```
0000  00 50 56 ab 3d 42 00 50 56 ab bc a5 08 00 45 00 .PV.=B.P V.....E.
0010  00 36 57 61 00 00 80 11 8b 0d ac 1e 00 02 ac 1e ..Wa..... .....
0020  00 0a c5 ca c0 8e 00 22 57 7e 00 03 00 01 54 68 ....." W.....Th
0030  69 73 20 69 73 20 61 20 74 65 73 74 20 6f 66 20 is is a test of
0040  54 46 54 50 TFTP
```

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

ftp

2021-06-25 00:55:16

Norrlingsone Danndank

No.	Time	Source	Destination	Protocol	Length	Info
233	2287.446002	172.30.0.10	172.30.0.2	FTP	197	Response: 220 FileZilla Server 0.9.59 beta
234	2287.449414	172.30.0.2	172.30.0.10	FTP	64	Request: AUTH TLS
236	2287.455529	172.30.0.10	172.30.0.2	FTP	99	Response: 502 Explicit TLS authentication not allowed
237	2287.455785	172.30.0.2	172.30.0.10	FTP	64	Request: AUTH SSL
238	2287.455890	172.30.0.10	172.30.0.2	FTP	99	Response: 502 Explicit TLS authentication not allowed
239	2287.456618	172.30.0.2	172.30.0.10	FTP	68	Request: USER student
240	2287.456920	172.30.0.10	172.30.0.2	FTP	89	Response: 331 Password required for student
241	2287.457051	172.30.0.2	172.30.0.10	FTP	70	Request: PASS P@ssw0rd!
242	2287.462187	172.30.0.10	172.30.0.2	FTP	69	Response: 230 Logged on
243	2287.463024	172.30.0.2	172.30.0.10	FTP	60	Request: SVST

Frame 239: 68 bytes on wire (544 bits), 68 bytes captured (544 bits) on interface 1

Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})

Encapsulation type: Ethernet (1)

Arrival Time: Jun 24, 2021 22:18:18.777498000 Pacific Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1624598298.777498000 seconds

[Time delta from previous frame: 0.000728000 seconds]

[Time delta from previous displayed frame: 0.000728000 seconds]

[Time since reference or first frame: 2287.456618000 seconds]

Frame Number: 239

Frame Length: 68 bytes (544 bits)

Capture Length: 68 bytes (544 bits)

[Frame is marked: False]

[Frame is ignored: False]

```
0000 00 50 56 ab 3d 42 00 50 56 ab bc a5 08 00 45 02 .PV.=B.P V.....E.
0010 00 36 5d c6 40 00 80 06 44 b1 ac 1e 00 02 ac 1e .6].@... D.....
0020 00 0a c2 2d 00 15 59 51 c4 72 ca 24 0c 67 50 18 ...-.YQ r.$gp.
0030 04 01 8d 70 00 00 55 53 45 52 20 73 74 75 64 65 ...p.US ER stude
0040 6e 74 0d 0a nt..
```

File Transfer Protocol (FTP): Protocol

Packets: 306 · Displayed: 43 (14.1%) · Dropped: 0 (0.0%) · Profile: Default

10:55 PM 6/24/2021

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

ftp

2021-06-25 00:55:46

Norrlingsone Danndank

No.	Time	Source	Destination	Protocol	Length	Info
233	2287.446002	172.30.0.10	172.30.0.2	FTP	197	Response: 220 FileZilla Server 0.9.59 beta
234	2287.449414	172.30.0.2	172.30.0.10	FTP	64	Request: AUTH TLS
236	2287.455529	172.30.0.10	172.30.0.2	FTP	99	Response: 502 Explicit TLS authentication not allowed
237	2287.455785	172.30.0.2	172.30.0.10	FTP	64	Request: AUTH SSL
238	2287.455890	172.30.0.10	172.30.0.2	FTP	99	Response: 502 Explicit TLS authentication not allowed
239	2287.456618	172.30.0.2	172.30.0.10	FTP	68	Request: USER student
240	2287.456920	172.30.0.10	172.30.0.2	FTP	89	Response: 331 Password required for student
241	2287.457051	172.30.0.2	172.30.0.10	FTP	70	Request: PASS P@ssw0rd!
242	2287.462187	172.30.0.10	172.30.0.2	FTP	69	Response: 230 Logged on
243	2287.463024	172.30.0.2	172.30.0.10	FTP	60	Request: SVST

Frame 241: 70 bytes on wire (560 bits), 70 bytes captured (560 bits) on interface 1

Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})

Encapsulation type: Ethernet (1)

Arrival Time: Jun 24, 2021 22:18:18.777931000 Pacific Daylight Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1624598298.777931000 seconds

[Time delta from previous captured frame: 0.000131000 seconds]

[Time delta from previous displayed frame: 0.000131000 seconds]

[Time since reference or first frame: 2287.457051000 seconds]

Frame Number: 241

Frame Length: 70 bytes (560 bits)

Capture Length: 70 bytes (560 bits)

[Frame is marked: False]

[Frame is ignored: False]

```
0000 00 50 56 ab 3d 42 00 50 56 ab bc a5 08 00 45 02 .PV.=B.P V.....E.
0010 00 38 5d c7 40 00 80 06 44 ae ac 1e 00 02 ac 1e .8].@... D.....
0020 00 0a c2 2d 00 15 59 51 c4 80 ca 24 0c 8a 50 18 ...-.YQ ...$..P.
0030 04 01 83 42 00 00 50 41 53 53 20 50 40 73 73 77 ...B.PA SS P@ssw
0040 30 72 64 21 0d 0a ordl..
```

File Transfer Protocol (FTP): Protocol

Packets: 306 · Displayed: 43 (14.1%) · Dropped: 0 (0.0%) · Profile: Default

10:55 PM 6/24/2021

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

ftp

2021-06-25 00:56:38

Norrljungsne Danddank

No.	Time	Source	Destination	Protocol	Length	Info
243	2287.462424	172.30.0.2	172.30.0.10	FTP	60	Request: SYST
244	2287.463054	172.30.0.10	172.30.0.2	FTP	86	Response: 215 UNIX emulated by FileZilla
245	2287.463222	172.30.0.2	172.30.0.10	FTP	60	Request: FEAT
246	2287.463604	172.30.0.10	172.30.0.2	FTP	176	Response: 211-Features:
247	2287.466403	172.30.0.2	172.30.0.10	FTP	60	Request: PWD
248	2287.466717	172.30.0.10	172.30.0.2	FTP	85	Response: 257 "/" is current directory.
249	2287.470677	172.30.0.2	172.30.0.10	FTP	62	Request: TYPE I
250	2287.472393	172.30.0.10	172.30.0.2	FTP	73	Response: 200 Type set to I
251	2287.472637	172.30.0.2	172.30.0.10	FTP	60	Request: PASV
252	2287.473082	172.30.0.10	172.30.0.2	FTP	102	Response: 227 Entering Passive Mode (172,30,0,10,225,34)

Frame 248: 85 bytes on wire (680 bits), 85 bytes captured (680 bits) on interface 1
 Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})
 Encapsulation type: Ethernet (1)
 Arrival Time: Jun 24, 2021 22:18:18.787597000 Pacific Daylight Time
 [Time shift for this packet: 0.000000000 seconds]
 Epoch Time: 1624598298.787597000 seconds
 [Time delta from previous captured frame: 0.000314000 seconds]
 [Time delta from previous displayed frame: 0.000314000 seconds]
 [Time since reference or first frame: 2287.466717000 seconds]
 Frame Number: 248
 Frame Length: 85 bytes (680 bits)
 Capture Length: 85 bytes (680 bits)
 [Frame is marked: False]
 [Frame is ignored: False]

```
0000 00 50 56 ab bc a5 00 50 56 ab 3d 42 08 00 45 02 .PV....P V.=B..E.
0010 00 47 24 2a 40 00 80 06 7e 3c ac 1e 00 0a ac 1e .G*@... ~<.....
0020 00 02 00 15 c2 d2 ca 24 0d 33 59 51 c4 a1 50 18 .....-$ .3YQ..P.
0030 04 02 ff dd 00 00 32 35 37 20 22 2f 22 20 69 73 .....25 7 "/" is
0040 20 63 75 72 72 65 6e 74 20 64 69 72 65 63 74 6f current directo
0050 72 79 2e 0d 0a ry...
```

File Transfer Protocol (FTP): Protocol

Packets: 306 · Displayed: 43 (14.1%) · Dropped: 0 (0.0%) · Profile: Default

10:56 PM 6/24/2021

*2 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Performing Packet Capture and Traffic Analysis

1.vWorkstation

ftp

2021-06-25 00:58:50

Norrljungsne Danddank

No.	Time	Source	Destination	Protocol	Length	Info
282	2478.408749	172.30.0.2	172.30.0.10	FTP	61	Request: CWD /
283	2478.409171	172.30.0.10	172.30.0.2	FTP	101	Response: 250 CWD successful. "/" is current directory.
284	2478.409326	172.30.0.2	172.30.0.10	FTP	60	Request: PWD
285	2478.409477	172.30.0.10	172.30.0.2	FTP	85	Response: 257 "/" is current directory.
287	2508.622872	172.30.0.2	172.30.0.10	FTP	62	Request: TYPE A
288	2508.623410	172.30.0.10	172.30.0.2	FTP	73	Response: 200 Type set to A
289	2508.623930	172.30.0.2	172.30.0.10	FTP	60	Request: PASV
290	2508.627762	172.30.0.10	172.30.0.2	FTP	101	Response: 227 Entering Passive Mode (172,30,0,10,93,85)
291	2508.628326	172.30.0.2	172.30.0.10	FTP	78	Request: RETR Danddank_ftpp.txt
292	2508.628330	172.30.0.10	172.30.0.2	FTP	134	Response: 150 Opening data channel for file download from carmen.of "

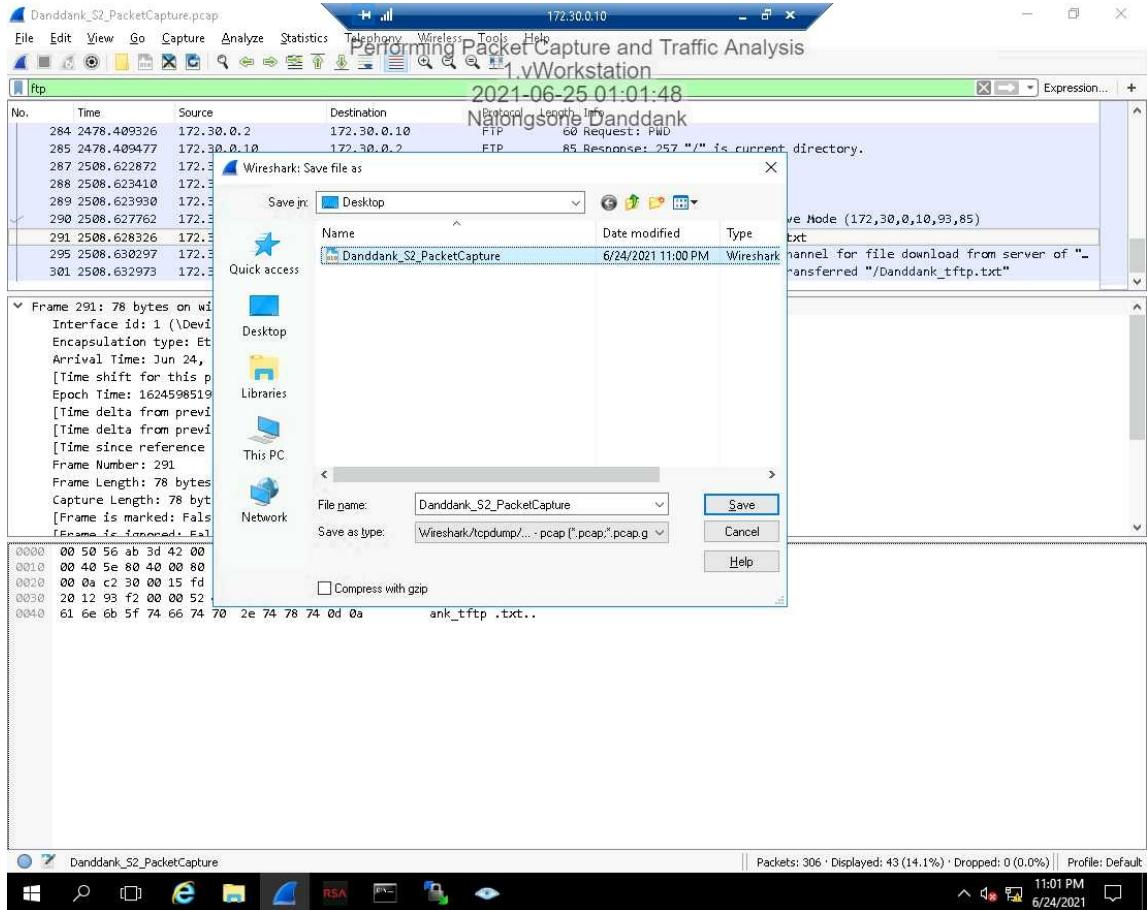
Frame 291: 78 bytes on wire (624 bits), 78 bytes captured (624 bits) on interface 1
 Interface id: 1 (\Device\NPF_{414269F4-8DF0-4852-8F56-384E405060F3})
 Encapsulation type: Ethernet (1)
 Arrival Time: Jun 24, 2021 22:15:59.949206000 Pacific Daylight Time
 [Time shift for this packet: 0.000000000 seconds]
 Epoch Time: 1624598519.949206000 seconds
 [Time delta from previous captured frame: 0.000564000 seconds]
 [Time delta from previous displayed frame: 0.000564000 seconds]
 [Time since reference or first frame: 2508.628326000 seconds]
 Frame Number: 291
 Frame Length: 78 bytes (624 bits)
 Capture Length: 78 bytes (624 bits)
 [Frame is marked: False]
 [Frame is ignored: False]

```
0000 00 50 56 ab 3d 42 00 50 56 ab bc a5 08 00 45 02 .PV.=B.P V.....E.
0010 00 40 5e 80 40 00 80 06 43 ed ac 1e 00 02 ac 1e .@^@... C.....
0020 00 0a c2 30 00 5d f7 27 dd d8 d9 ec 9c 50 18 ...0... ....P.
0030 20 12 93 f2 00 00 52 45 54 52 20 44 61 6e 64 64 .....RE TR Dandd
0040 61 6e 6b 5f 74 66 74 70 2e 74 78 74 0d 0a ank_ftpp .txt..
```

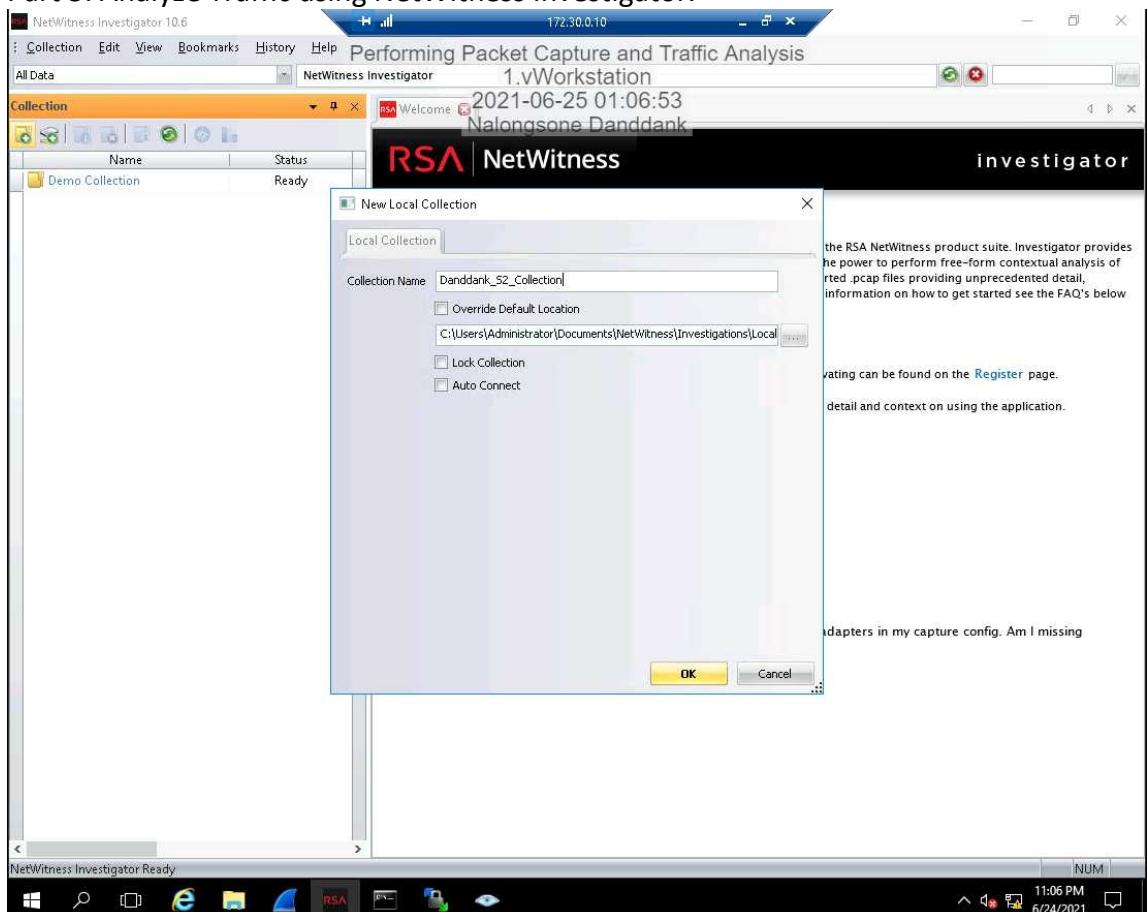
File Transfer Protocol (FTP): Protocol

Packets: 306 · Displayed: 43 (14.1%) · Dropped: 0 (0.0%) · Profile: Default

10:58 PM 6/24/2021



Part 3: Analyze Traffic using NetWitness Investigator.



NetWitness Investigator 10.6

Collection Edit View Bookmarks History Help

172.30.0.10

Performing Packet Capture and Traffic Analysis

All Data NetWitness Investigator 1.vWorkstation 2021-06-25 01:10:53 Nalongsone Danndank

Collection

Name Status

- Demo Collection Ready
- Danndank_S2_Collection Ready

RSA | NetWitness investigator

Open

Look in: Desktop

Administrator This PC

Libraries Network

Danndank_S2_PacketCapture Wireshark capture file 32.4 KB

File name: Danndank_S2_PacketCapture Open Cancel

Files of type: Pcap Files (*.pcap; *.tcp; *.pcap.gz; *.tcp.gz; *.pc)

Track Filename

NetWitness product suite. Investigator provides free-form contextual analysis of cap files providing unprecedented detail, see the FAQ's below.

an be found on the Register page.

and context on using the application.

in my capture config. Am I missing

NetWitness Investigator Ready

11:10 PM 6/24/2021

NetWitness Investigator 10.6

Collection Edit View Bookmarks History Help

172.30.0.10

Performing Packet Capture and Traffic Analysis

All Data Danddank_S2_Collection 1.vWorkstation 2021-06-25 01:11:49 Nalongsone Danndank

< 2021-06-24 21:40 2021-06-24 22:21 >

Collection

Service Type (5 items)
OTHER (27) - NETBIOS (2) - FTP (2) - TFTP (1) - SSH (1)

Source IP Address (5 items)
172.30.0.2 (8) - 172.30.0.10 (6) - 172.16.8.99 (3) - 172.16.0.99 (2) - 172.16.20.99 (1)

Destination IP address (7 items)
224.0.0.252 (7) - 172.30.0.10 (6) - 172.16.8.255 (2) - 172.16.0.255 (2) - 172.30.0.2 (1) - 172.16.20.5 (1) - 172.16.8.5 (1)

Source IPv6 Address (3 items)
FE80::CC06:9CC9:7BAD:567B (5) - FE80::3D86:FDFA:A0FE:7A1D (5) - FE80::51D0:932A:728C:C758 (2)

Destination IPv6 address (1 item)
FF02::1:3 (12)

Action Event (3 items)
login (2) - put (1) - get (1)

User Account (1 item)
student (2)

Extension (2 items)
txt (1) - <none> (1)

Filename [open]

TCP Destination Port (5 items)
21 (ftp) (2) - 57634 (1) - 23893 (1) - 23 (telnet) (1) - 22 (ssh) (1)

UDP Target Port (5 items)
5355 (1) - 138 (netbios-dnm) (2) - 137 (netbios-ns) (2) - 50634 (1) - 69 (rftn) (1)

11:11 PM 6/24/2021

NetWitness Investigator 10.6

Collection Edit View Bookmarks History Help

Performing Packet Capture and Traffic Analysis

All Data Danddank_S2_Collection 1.vWorkstation 2021-06-25 01:13:28 Nalongsone Danddank

< 2021-06-24 21:40 >

21 (11p) - 5355 (1) - 57 (554) (1) - 25 (595) (1) - 25 (1000) (1) - 22 (550) (1)

UDP Target Port (5 items)
5355 (19) - 138 (netbios-dgm) (2) - 137 (netbios-ns) (2) - 50634 (1) - 69 (tftp) (1)

Ethernet Protocol (3 items)
IP (20) - IPv6 (12) - ARP (1)

IP Protocol (3 items)
UDP (13) - TCP (6) - ICMP (1)

IP V6 Protocol (1 item)
UDP (12)

Password (1 item)
p@sswOrld (2)

Crypto (1 item)
aes256-ctr (1)

Ethernet Source (3 items)
00:50:56:AB:3D:42 (16) - 00:50:56:AB:BC:A5 (12) - 02:00:4C:4F:4F:50 (5)

Ethernet Destination (6 items)
33:33:00:01:00:03 (12) - 01:00:5E:00:00:FC (7) - 00:50:56:AB:3D:42 (6) - FF:FF:FF:FF:FF:FF (5) - 00:50:56:AB:AE:77 (2) - 00:50:56:AB:BC:A5 (1)

Link to Data [open]

The following report(s) contain 0 results for the active query:

Decoder Source, Alerts, Risk: Informational, Risk: Suspicious, Risk: Warning, Top Level Domains, Hostname Aliases, E-mail Address, Content Type, Errors, Forensic Fingerprint, Attachment, Client Application, Source Application, Operating System, Versions, Processes, Languages, Sound Search, Active Directory, Unknown Source, Active Directory, Unknown Destination, Active Directory, Unknown

NUM

11:13 PM 6/24/2021

NetWitness Investigator 10.6

Collection Edit View Bookmarks History Help

Performing Packet Capture and Traffic Analysis

All Data Danddank_S2_Collection > Sessions to 1.vWorkstation 2021-06-25 01:14:17 Nalongsone Danddank

Page 1 of 1

Time	Service	Size	Events
2021-Jun-24 22:18:18	IP / TCP / FTP	2.45 KB	<ul style="list-style-type: none"> 00:50:56:AB:BC:A5 -> 00:50:56:AB:3D:42 172.30.0.2 -> 172.30.0.10 49709 -> 21 (ftp) payload: 738 medium: Ethernet tcp.flags: 219 streams: 2 packets: 32 lifetime: 121 action: login username: student password: P@sswOrld! 1 linked session
2021-Jun-24 22:21:29	IP / TCP / FTP	2.22 KB	<ul style="list-style-type: none"> 00:50:56:AB:BC:A5 -> 00:50:56:AB:3D:42 172.30.0.2 -> 172.30.0.10 49712 -> 21 (ftp) payload: 658 medium: Ethernet tcp.flags: 219 streams: 2 packets: 29 lifetime: 90 action: login username: student password: P@sswOrld! action: get filename: Danddank_tftp.txt extension: txt 1 linked session

Displaying 1 - 2 of 2

NUM

11:14 PM 6/24/2021

NetWitness Investigator 10.6 172.30.0.10

Collection Edit View Bookmarks History Help Performing Packet Capture and Traffic Analysis

All Data Danddank_S2_Collection > Sessions to Workstation

2021-06-25 01:15:22 Nalongsone Danddank

Page 1 of 1

Time	Service	Size	Events
2021-Jun-24 22:18:18	IP / TCP / FTP	2.45 KB	<ul style="list-style-type: none"> 00:50:56:AB:BC:A5 -> 00:50:56:AB:3D:42 172.30.0.2 -> 172.30.0.10 49709 -> 21 (ftp) payload: 738 medium: Ethernet tcp.flags: 219 streams: 2 packets: 32 lifetime: 121 action: login username: student password: P@ssw0rd!

Danddank_S2_Collection Content - Session 3

RSA Security Analytics Reconstruction for session ID: 3 (Source 172.30.0.2 : 49709, Target 172.30.0.10 : 21)

Time 6/24/2021 22:18:18 to 6/24/2021 22:20:19 Packet Size 2,515 bytes Payload Size 738 bytes

Protocol 2048/6/21 Flags Keep Assembled AppMeta NetworkMeta Packet Count 32

REQUEST RESPONSE

```

211-Features:
MDTM
REST STREAM
SIZE
MLST type*;size*;modify*;
MLSD
UTF8
CLNT
MFMT
EPSV
EPRT
211 End

```

NetWitness Investigator 10.6 172.30.0.10

Collection Edit View Bookmarks History Help Performing Packet Capture and Traffic Analysis

All Data Danddank_S2_Collection > Sessions to Workstation

2021-06-25 01:16:36 Nalongsone Danddank

Page 1 of 1

Time	Service	Size	Events
2021-Jun-24 22:21:29	IP / TCP / FTP	2.22 KB	<ul style="list-style-type: none"> 00:50:56:AB:BC:A5 -> 00:50:56:AB:3D:42 172.30.0.2 -> 172.30.0.10 49712 -> 21 (ftp) payload: 658 medium: Ethernet tcp.flags: 219 streams: 2 packets: 29 lifetime: 90 action: login username: student password: P@ssw0rd! action: net

Danddank_S2_Collection Content - Session 5

RSA Security Analytics Reconstruction for session ID: 5 (Source 172.30.0.2 : 49712, Target 172.30.0.10 : 21)

Time 6/24/2021 22:21:29 to 6/24/2021 22:22:59 Packet Size 2,279 bytes Payload Size 658 bytes

Protocol 2048/6/21 Flags Keep Assembled AppMeta NetworkMeta Packet Count 29

E SPONSE

```

220-written by Tim Kosse (tim.kosse@filezilla-project.org)
220 Please visit https://filezilla-project.org/

```

REQUEST AUTH TLS

RESPONSE

```

502 Explicit TLS authentication not allowed

```

NetWitness Investigator 10.6 172.30.0.10

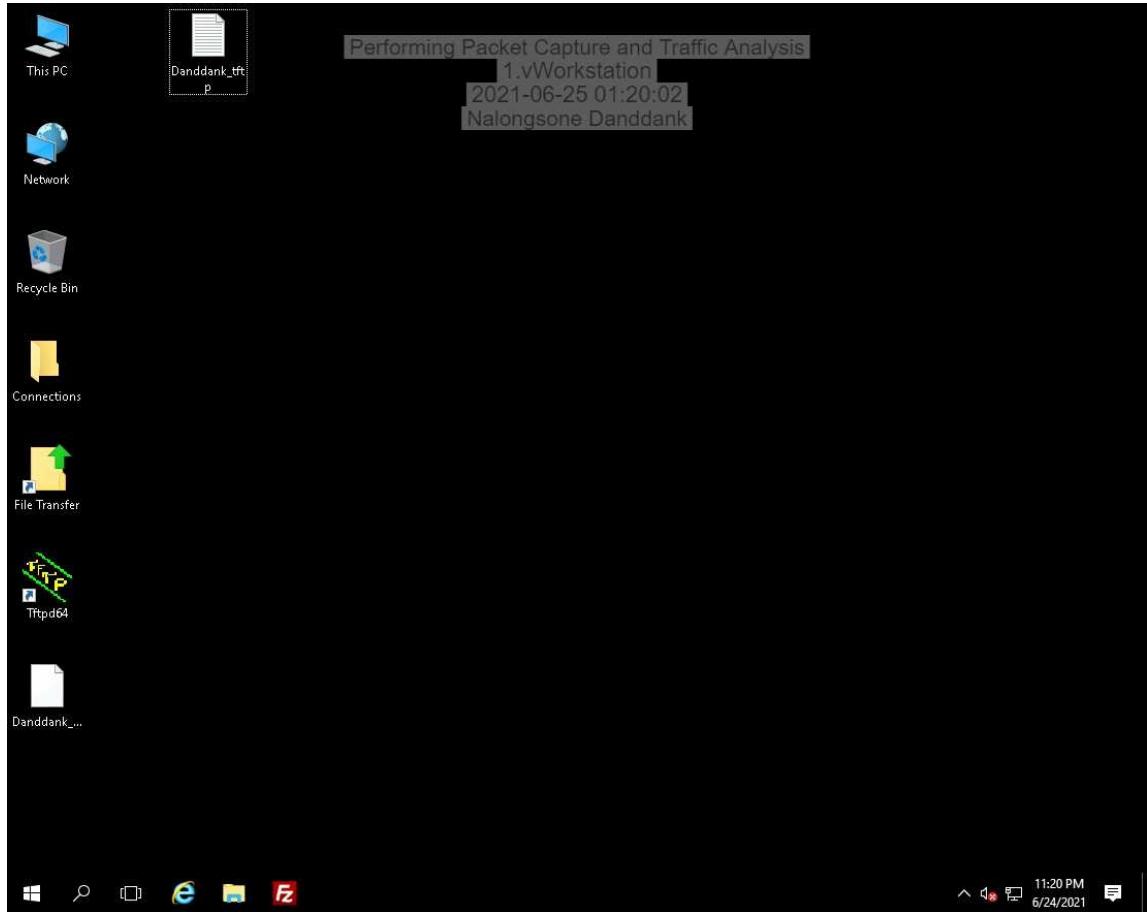
Collection Edit View Bookmarks History Help Performing Packet Capture and Traffic Analysis

All Data Danddank_S2_Collection > Sessions to Workstation

2021-06-25 01:16:36 Nalongsone Danddank

Page 1 of 1

Time	Service	Size	Events
2021-Jun-24 22:21:29	IP / TCP / FTP	2.22 KB	<ul style="list-style-type: none"> 00:50:56:AB:BC:A5 -> 00:50:56:AB:3D:42 172.30.0.2 -> 172.30.0.10 49712 -> 21 (ftp) payload: 658 medium: Ethernet tcp.flags: 219 streams: 2 packets: 29 lifetime: 90 action: login username: student password: P@ssw0rd! action: net



End.