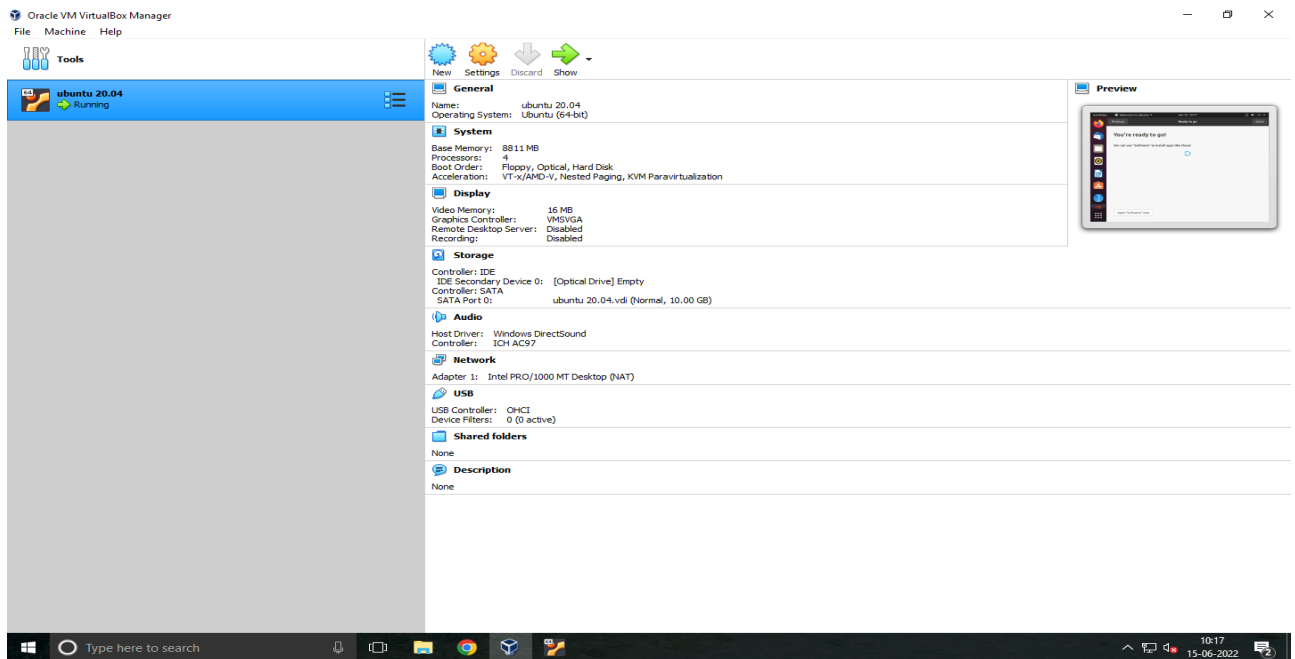


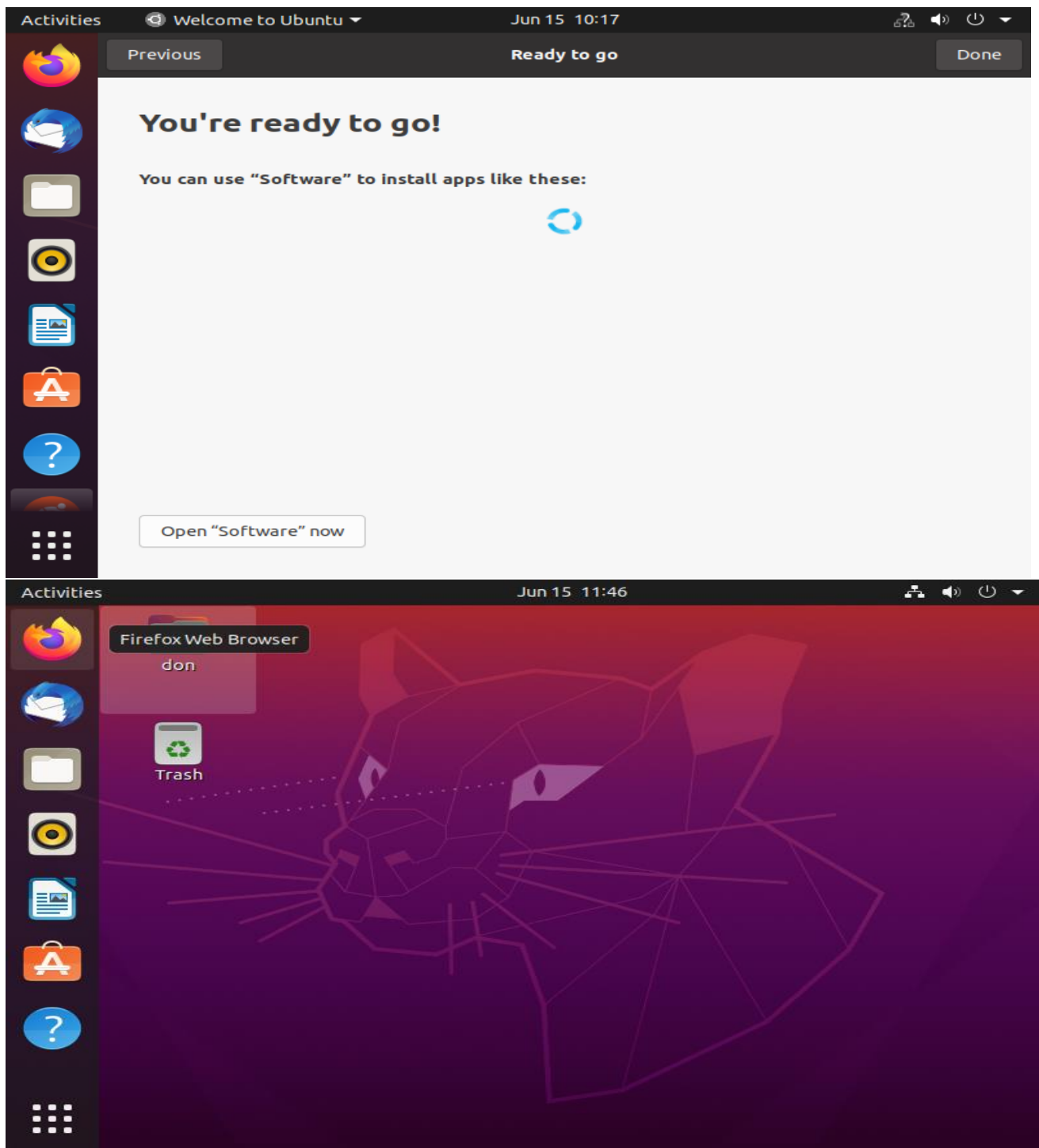
Don G Madamannil

S2 MCA

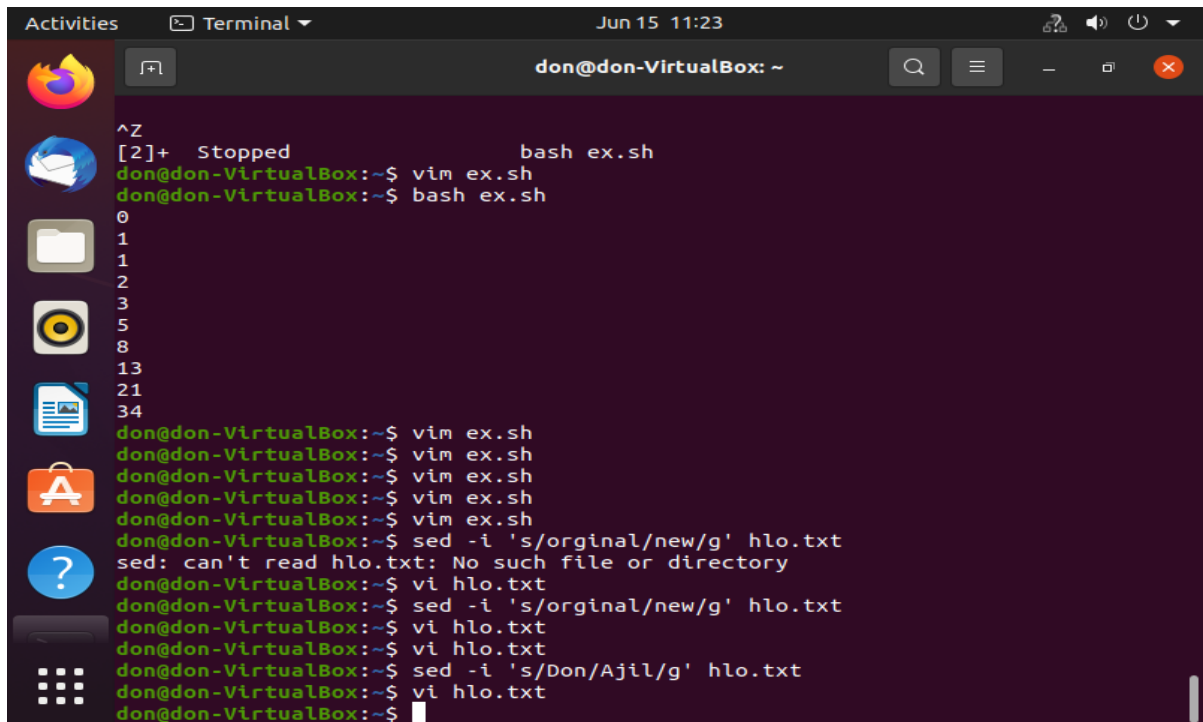
Roll_no:216

1.



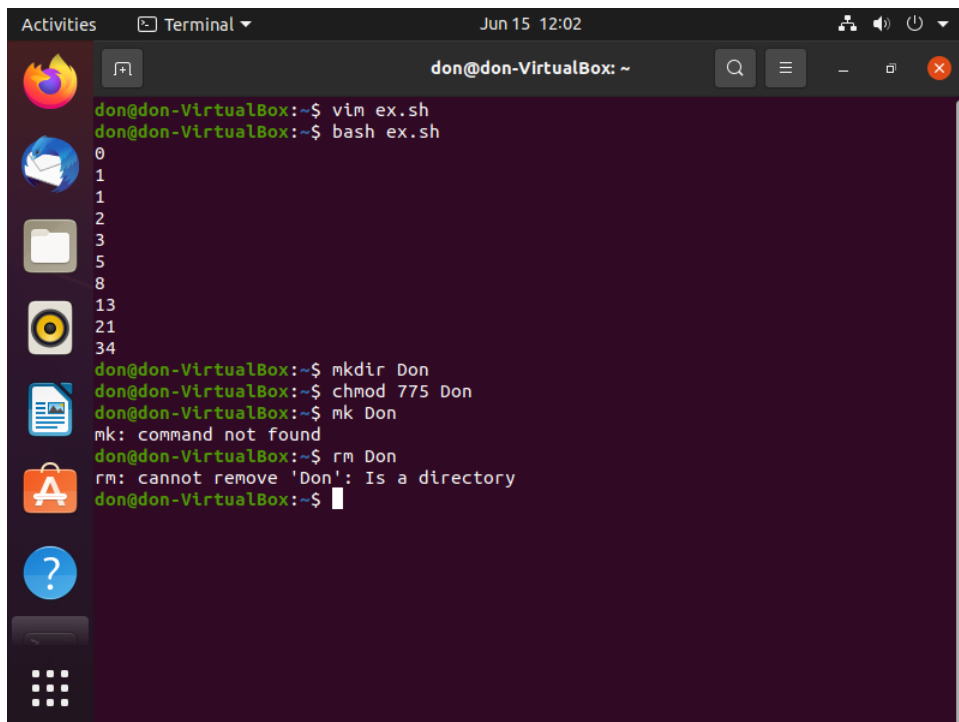


2.

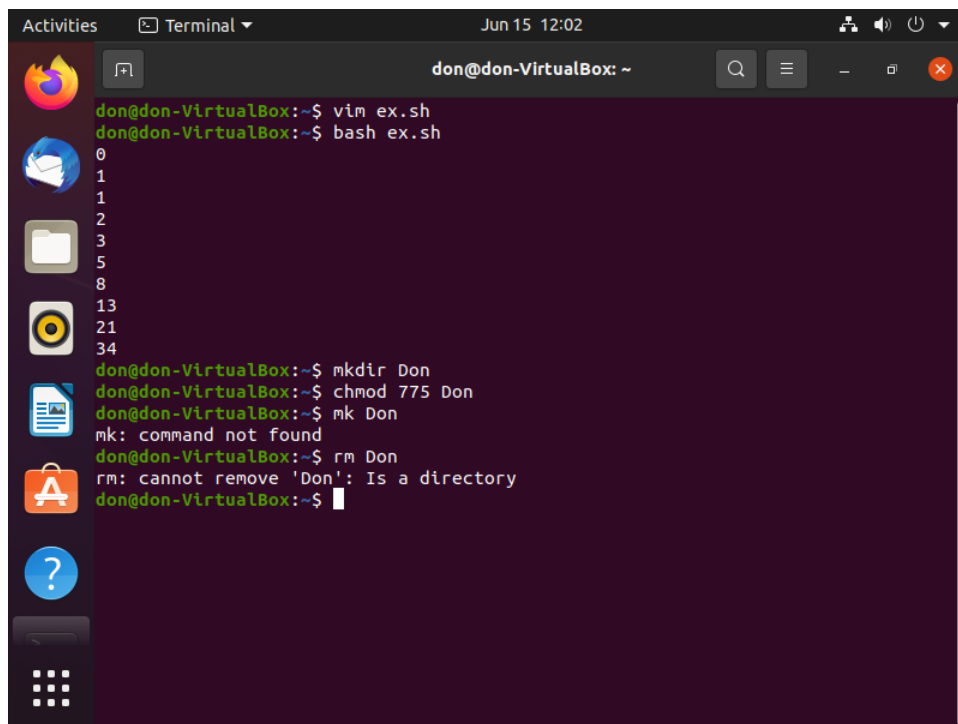


```
^Z
[2]+  Stopped                  bash ex.sh
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ bash ex.sh
0
1
1
2
3
5
8
13
21
34
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ sed -i 's/orignal/new/g' hlo.txt
sed: can't read hlo.txt: No such file or directory
don@don-VirtualBox:~$ vi hlo.txt
don@don-VirtualBox:~$ sed -i 's/orignal/new/g' hlo.txt
don@don-VirtualBox:~$ vi hlo.txt
don@don-VirtualBox:~$ vi hlo.txt
don@don-VirtualBox:~$ vi hlo.txt
don@don-VirtualBox:~$ sed -i 's/Don/Ajil/g' hlo.txt
don@don-VirtualBox:~$ vi hlo.txt
don@don-VirtualBox:~$
```

3.



```
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ bash ex.sh
0
1
1
2
3
5
8
13
21
34
don@don-VirtualBox:~$ mkdir Don
don@don-VirtualBox:~$ chmod 775 Don
don@don-VirtualBox:~$ mk Don
mk: command not found
don@don-VirtualBox:~$ rm Don
rm: cannot remove 'Don': Is a directory
don@don-VirtualBox:~$
```



The image shows a terminal window titled "don@don-VirtualBox: ~" with a dark purple background. The window contains the following text:

```
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ bash ex.sh
0
1
1
2
3
5
8
13
21
34
don@don-VirtualBox:~$ mkdir Don
don@don-VirtualBox:~$ chmod 775 Don
don@don-VirtualBox:~$ mk Don
mk: command not found
don@don-VirtualBox:~$ rm Don
rm: cannot remove 'Don': Is a directory
don@don-VirtualBox:~$
```

The terminal window is part of a desktop environment with a sidebar on the left containing icons for Firefox, a mail client, a file manager, a music player, a document viewer, and an app store. The top of the window shows the "Activities" menu, "Terminal" window title, and the date/time "Jun 15 12:02".

4.

The image consists of two screenshots of a Linux terminal window, likely Ubuntu, showing the process of creating and running a shell script.

Top Screenshot: The terminal window title is "don@don-VirtualBox: ~". The user has executed the following commands:

```
don@don-VirtualBox:~$ vim ex.sh
don@don-VirtualBox:~$ bash ex.sh
```

The terminal output shows the first few lines of the script being executed, with line numbers 0 through 34 visible on the left margin. The prompt returns to the user: `don@don-VirtualBox:~$`.

Bottom Screenshot: The terminal window title is "don@don-VirtualBox: ~". The user has executed the following commands:

```
#!/bin/bash
a=0
b=1
echo $a
echo $b
for((i=0;i<8;i=i+1))
do
    ft=`expr $a + $b`
    echo $ft
    a=$b
    b=$ft
done
```

The terminal output shows the execution of the script, with the prompt returning to the user: `don@don-VirtualBox:~$`. The status bar at the bottom of the terminal window indicates the file is "ex.sh" with 12 lines and 107 characters, and the cursor is at line 6, column 14.

5.
A)

Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

hftp

No.	Time	Source	Destination	Protocol	Length	Info
1620	11:39:15.826175	fe80::55c2:aab3:b64...	fe80::792b:75af:9ac...	HTTP/X	1047	POST /f087ebc2-3c21-45f0-9830-69d632c34d00/ HTTP/1.1

> Frame 1620: 1047 bytes on wire (8376 bits), 1047 bytes captured (8376 bits) on interface \Device\NPF_{4725705C-30E2-480E-A037-E92578534C87}, id 0

> Ethernet II, Src: Hewlett-Packard [fa:19:09:2a:9e:1e:7], Dst: IntelCor_wkilaef [bc:fe:61:a1:a1:a1]

> Internet Protocol Version 6, Src: fe80::55c2:aab3:b644:2c0b, Dst: fe80::792b:75af:9ac7:e629

> Transmission Control Protocol, Src Port: 62838, Dst Port: 5357, Seq: 1, Ack: 1, Len: 973

> Hypertext Transfer Protocol

POST /f087ebc2-3c21-45f0-9830-69d632c34d00/ HTTP/1.1

Host: fe80::792b:75af:9ac7:e629

Content-Type: application/json

Content-Length: 973

Cache-Control: no-cache

Keep-Alive: timeout=5

Connection: close

Packet: 5551 - Displayed: 1 (0.0%)

Profile: Default

Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

hftp

No.	Time	Source	Destination	Protocol	Length	Info
747	11:39:11.715745	172.20.30.35	224.0.0.252	LLMNR	75	Standard query 0x9006 A USER-200-P0221L
748	11:39:11.817382	fe80::a800:9c83:9e1...	ff02::1:3	LLMNR	95	Standard query 0x9006 A USER-200-P0221L
749	11:39:11.817382	172.20.30.35	224.0.0.252	LLMNR	75	Standard query 0x9006 A USER-200-P0221L
773	11:39:11.837888	172.20.30.35	224.0.0.252	MDNS	82	Standard query 0x0000 PTR _googlecast._tcp.local, "QH" question
774	11:39:11.837888	fe80::6d9:9132:0bc...	ff02::1:b	MDNS	102	Standard query 0x0000 PTR _googlecast._tcp.local, "QH" question
788	11:39:11.859033	172.20.30.75	172.20.255.255	NDNS	92	Name query NB UPAD=000
789	11:39:11.859033	172.20.21.17	172.20.255.255	BROWSER	240	Browser Election Request
790	11:39:11.860223	172.20.30.68	172.20.255.255	BROWSER	240	Browser Election Request
791	11:39:11.860223	172.20.21.10	172.20.255.255	BROWSER	240	Browser Election Request
800	11:39:11.947780	172.20.30.35	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1
808	11:39:11.958634	172.20.30.130	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1
809	11:39:11.961242	fe80::f11a:0bbe:70d...	ff02::c	LLMNR	1156	59371 + 3702 Len=1094
810	11:39:11.961811	172.20.30.116	239.255.255.250	UDP	1122	59370 + 3702 Len=1080
811	11:39:11.962373	172.20.30.116	239.255.255.250	UDP	1122	59370 + 3702 Len=1080
813	11:39:11.991641	fe80::f11a:0bbe:70d...	ff02::c	LLMNR	1156	59371 + 3702 Len=1094
814	11:39:11.992761	172.20.30.116	239.255.255.250	UDP	1122	59370 + 3702 Len=1080
815	11:39:11.992761	fe80::f11a:0bbe:70d...	ff02::c	LLMNR	1156	59371 + 3702 Len=1094
823	11:39:12.044767	fe80::a800:9c83:9e1...	ff02::1:3	LLMNR	88	Standard query 0x345 A KLB2_001
824	11:39:12.044767	172.20.30.35	224.0.0.252	LLMNR	60	Standard query 0x345 A KLB2_001
826	11:39:12.046574	172.20.30.35	224.0.0.252	LLMNR	60	Standard query 0x345 A KLB2_001
828	11:39:12.052827	fe80::a800:9c83:9e1...	ff02::1:3	LLMNR	88	Standard query 0x345 A KLB2_001

> Frame 1531: 110 bytes on wire (880 bits), 110 bytes captured (880 bits) on interface \Device\NPF_{4725705C-30E2-480E-A037-E92578534C87}, id 0

> Ethernet II, Src: NetHwLpr_b8:37:75 [68:14:01:b8:37:75], Dst: Broadcast (ff:ff:ff:ff:ff:ff)

> Internet Protocol Version 4, Src: 172.20.30.116, Dst: 172.20.255.255

> User Datagram Protocol, Src Port: 137, Dst Port: 137

> NetBIOS Name Service

ff ff ff ff ff 68 14 01 b8 37 75 00 00 45 00-7u-E-
00 00 55 78 00 00 00 11 6d f8 3a 1e 74 ac 14L.....
ff ff 00 00 00 00 00 4c 65 4e a7 3a 28 10 00 01L..0..1..
00 00 00 00 00 01 20 46 48 45 50 46 43 45 45 45F..P..C..C..
40 40 43 45 50 46 46 46 41 43 43 43 43 43 43 43ACACACAC
41 43 43 43 43 43 43 43 43 43 43 43 43 43 43 43ACACACAC
00 01 00 04 93 00 00 00 c0 00 ac 14 1e 74t

Packet: 1290 - Displayed: 2537 (20.8%)

Profile: Default

Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

hftp

No.	Time	Source	Destination	Protocol	Length	Info
11593	11:40:02.608057	172.20.30.229	172.20.30.21	HTTP/X	1012	POST /f087ebc2-3c21-45f0-9830-69d632c34d00/ HTTP/1.1
12084	11:40:02.756252	172.20.30.229	172.20.30.21	TCP	54	62845 + 5357 [FIN, ACK] Seq=959 Ack=2352 Win=65792 Len=0
12030	11:40:02.821759	172.20.30.229	172.20.30.21	TCP	54	62845 + 5357 [ACK] Seq=960 Ack=2353 Win=65792 Len=0
5377	11:39:12.018006	172.20.30.229	172.20.30.21	TCP	60	57580 + 7078 [FIN, ACK] Seq=1 Ack=1 Win=64 Len=0
11020	11:39:12.150000	172.20.30.25	172.20.30.130	TCP	60	[TCP Retransmission] 57580 + 7078 [ACK] Seq=1 Ack=1 Win=201 Len=1
8212	11:39:12.253599	172.20.30.30	172.20.30.130	TCP	60	60015 + 7078 [ACK] Seq=1 Ack=1 Win=517 Len=1
8968	11:39:12.430118	172.20.30.30	172.20.30.130	TCP	60	60015 + 7078 [FIN, ACK] Seq=2 Ack=1 Win=517 Len=0
3586	11:39:12.431441	172.20.30.120	172.20.30.130	TCP	60	50310 + 7078 [ACK] Seq=1 Ack=1 Win=517 Len=1
3597	11:39:12.431441	172.20.30.120	172.20.30.130	TCP	60	50310 + 7078 [ACK] Seq=1 Ack=1 Win=517 Len=1
13543	11:40:00.445470	172.20.30.120	172.20.30.130	TCP	60	[TCP Keep-Alive] 50320 + 7078 [ACK] Seq=1 Ack=1 Win=517 Len=1
13544	11:40:00.445470	172.20.30.120	172.20.30.130	TCP	60	[TCP Keep-Alive] 50319 + 7078 [ACK] Seq=1 Ack=1 Win=517 Len=1
5935	11:39:12.332943	172.20.30.229	172.20.30.229	TCP	60	60 + 62828 [FIN, ACK] Seq=1 Ack=1 Win=1 Len=0
6149	11:39:12.332943	172.20.30.229	172.20.30.229	TCP	60	[TCP Retransmission] 60 + 62828 [FIN, ACK] Seq=1 Ack=1 Win=1 Len=0
6559	11:39:12.344128	172.20.30.229	172.20.30.229	TCP	60	[TCP Retransmission] 60 + 62828 [FIN, ACK] Seq=1 Ack=1 Win=1 Len=0
7217	11:39:12.344128	172.20.30.229	172.20.30.229	TCP	60	[TCP Retransmission] 60 + 62828 [FIN, ACK] Seq=1 Ack=1 Win=1 Len=0
11666	11:40:01.212475	172.20.30.229	172.20.30.229	TCP	60	[TCP Retransmission] 60 + 62828 [FIN, ACK] Seq=1 Ack=1 Win=1 Len=0
875	11:39:12.122486	fe80::55c2:aab3:b64...	fe80::792b:75af:9ac...	TCP	74	62833 + 5357 [ACK] Seq=1 Ack=234945837 Win=258 Len=0
1414	11:39:12.122486	fe80::55c2:aab3:b64...	fe80::792b:75af:9ac...	TCP	74	62833 + 5357 [ACK] Seq=1 Ack=234945837 Win=258 Len=0
1415	11:39:12.122486	fe80::55c2:aab3:b64...	fe80::792b:75af:9ac...	TCP	86	62838 + 5357 [SYN] Seq=1 Win=65536 Len=0 MSS=1460 WS=256 SACK_PERM=1
1619	11:39:12.624793	fe80::55c2:aab3:b64...	fe80::792b:75af:9ac...	TCP	74	62838 + 5357 [ACK] Seq=1 Ack=1 Win=60048 Len=0

> Frame 1415: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on interface \Device\NPF_{4725705C-30E2-480E-A037-E92578534C87}, id 0

> Ethernet II, Src: Hewlett-Packard [fa:19:09:2a:9e:1e:7], Dst: IntelCor_wkilaef [bc:fe:61:a1:a1:a1]

> Internet Protocol Version 6, Src: fe80::55c2:aab3:b644:2c0b, Dst: fe80::792b:75af:9ac7:e629

> Transmission Control Protocol, Src Port: 62838, Dst Port: 5357, Seq: 0, Len: 0

Packet: 1408 - Displayed: 88 (6.4%)

Profile: Default

B)

The image shows a Wireshark packet capture of an HTTP GET request. The packet list on the left shows a GET request to /kuhs_new/ on port 80. The packet details pane on the right shows the structure of the packet, including the Ethernet II header, Internet Protocol header, and Hypertext Transfer Protocol header. The packet bytes pane at the bottom shows the raw data of the packet.

Packet 705: Ethernet II, Internet Protocol, Hypertext Transfer Protocol. The packet is a GET request to /kuhs_new/ on port 80. The packet details pane shows the structure of the packet, including the Ethernet II header, Internet Protocol header, and Hypertext Transfer Protocol header. The packet bytes pane at the bottom shows the raw data of the packet.

C)

The image shows a Wireshark packet capture of a DNS query. The packet list on the left shows a query for www.google.com on port 53. The packet details pane on the right shows the structure of the packet, including the Ethernet II header, Internet Protocol header, and User Datagram Protocol header. The packet bytes pane at the bottom shows the raw data of the packet.

Packet 507: Ethernet II, Internet Protocol, User Datagram Protocol, Domain Name System. The packet is a query for www.google.com on port 53. The packet details pane shows the structure of the packet, including the Ethernet II header, Internet Protocol header, and User Datagram Protocol header. The packet bytes pane at the bottom shows the raw data of the packet.