

Part A

The top screenshot shows a Wireshark capture of network traffic on the interface 'eth0'. The packet list on the left displays a series of DNS queries and responses between 192.168.217.3 and 192.168.217.2. The selected packet (No. 98) is a Standard query response from 192.168.217.2 to 192.168.217.3, showing details for the Ethernet II, Internet Protocol Version 4, and Internet Control Message Protocol layers. The packet details pane shows the ICMP Echo (ping) request with ID 0x546e, sequence 1/256, and TTL 64.

The bottom screenshot shows a Wireshark capture of network traffic on the interface 'eth0'. The packet list on the left displays a series of ICMP Echo (ping) requests and replies between 192.168.217.3 and 192.168.217.2. The selected packet (No. 98) is an Echo (ping) request from 192.168.217.3 to 192.168.217.2, showing details for the Ethernet II, Internet Protocol Version 4, and Internet Control Message Protocol layers. The packet details pane shows the ICMP Echo (ping) request with ID 0x546e, sequence 1/256, and TTL 64.

File Action View Help

Hyper-V Manager

Attacker Kali - External Workstation on CY01-APUGH006 - Virtual Machine Connection

File Edit View

Wireshark - Packet 1.eth0

Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 192.168.217.3, Dst: 192.168.10.18

Internet Control Message Protocol

Type: 8 (Echo (ping) request)

Code: 0

Checksum: 0x4d65 [correct]

[Checksum Status: Good]

Identifier (BE): 21614 (0x540e)

Identifier (LE): 28244 (0x6e54)

Sequence Number (BE): 1 (0x0001)

Sequence Number (LE): 255 (0x0100)

[Response frame: 4]

0000 00 15 5d 40 57 38 08 15 5d 40 57 27 08 08 45 00 ...]0w8 ...]0w' E

0010 00 5d 4d 6a 49 00 49 01 80 00 00 00 09 03 c0 a8 ... TMjB @

0020 0a 12 08 00 4d 65 54 6e 00 01 b6 83 c9 67 00 00 ... MeTn ... g

0030 00 00 0c 0d 0b 00 00 09 00 00 10 11 12 13 14 15 ... m P#8N

0040 16 17 18 19 1a 1b 1c 1d 1e 1f 20 21 22 23 24 25 I"#8N

0050 26 27 28 29 2a 2b 2c 2d 2e 2f 30 31 32 33 34 35 ... &'()*+,-./012345

0060 30 37 67

No. 1 Time: 0.000000000 Source: 192.168.217.3 Destination: 192.168.10.18 Protocol: ICMP Length: 88 Info: Echo (ping) request id=0x540e, seq=1(255, ttl=64 (reply in 4))

Show packet bytes

Help

Close

Internet Control Message Protocol: Protocol

Packets: 91 - Displayed: 20 (22.0%) - Dropped: 0 (0.0%) - Profile: Default

Activate Windows
Go to Settings to activate Windows.

File Action View Help

Hyper-V Manager

Attacker Kali - External Workstation on CY01-APUGH006 - Virtual Machine Connection

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Destination	Protocol	Length	Info
26	28.154437300	192.168.217.3	192.168.217.2	DNS	88	Standard query 0x1c55 A contile.services.mozilla.com
27	28.154464600	192.168.217.3	192.168.217.2	DNS	88	Standard query 0x1590 AAAA contile.services.mozilla.com
28	28.155891000	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x1c55 Refused
29	28.155897500	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x1590 Refused
30	28.384349400	192.168.217.3	192.168.217.2	DNS	79	Standard query 0x5c41 A spocs.getpocket.com
31	28.384375600	192.168.217.3	192.168.217.2	DNS	79	Standard query 0x8e07 AAAA spocs.getpocket.com
32	28.385759200	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x5c41 Refused
33	28.385772000	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x8e07 Refused
34	33.166741400	192.168.217.3	192.168.217.2	DNS	88	Standard query 0x1c55 A contile.services.mozilla.com
35	33.166770700	192.168.217.3	192.168.217.2	DNS	88	Standard query 0x1590 AAAA contile.services.mozilla.com
36	33.169134100	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x1c55 Refused
37	33.169153800	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x1590 Refused
38	33.387675000	192.168.217.3	192.168.217.2	DNS	79	Standard query 0x5c41 A spocs.getpocket.com
39	33.387704200	192.168.217.3	192.168.217.2	DNS	79	Standard query 0x8e07 AAAA spocs.getpocket.com
40	33.388752700	192.168.217.2	192.168.217.3	DNS	54	Standard query response 0x5c41 Refused

Frame 26: 88 bytes on wire (704 bits), 88 bytes captured (704 bits) on 0
Ethernet II, Src: Microsoft_48:57:27 (08:15:5d:40:57:27), Dst: Microsoft_08:00:00:00:00:00
Destination: Microsoft_48:57:38 (08:15:5d:40:57:38)
Source: Microsoft_48:57:27 (08:15:5d:40:57:27)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.217.3, Dst: 192.168.217.2
User Datagram Protocol, Src Port: 56935, Dst Port: 53
Domain Name System (query)

0000 00 15 5d 40 57 38 08 15 5d 40 57 27 08 08 45 00 ...]0w8 ...]0w' E

0010 00 5d 4d 6a 49 00 49 01 80 00 00 00 09 03 c0 a8 ... J 8@ @ [

0020 09 02 de 07 00 35 00 36 33 9f 1c 55 01 00 00 01 ... g 5 6 3 U

0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00000000

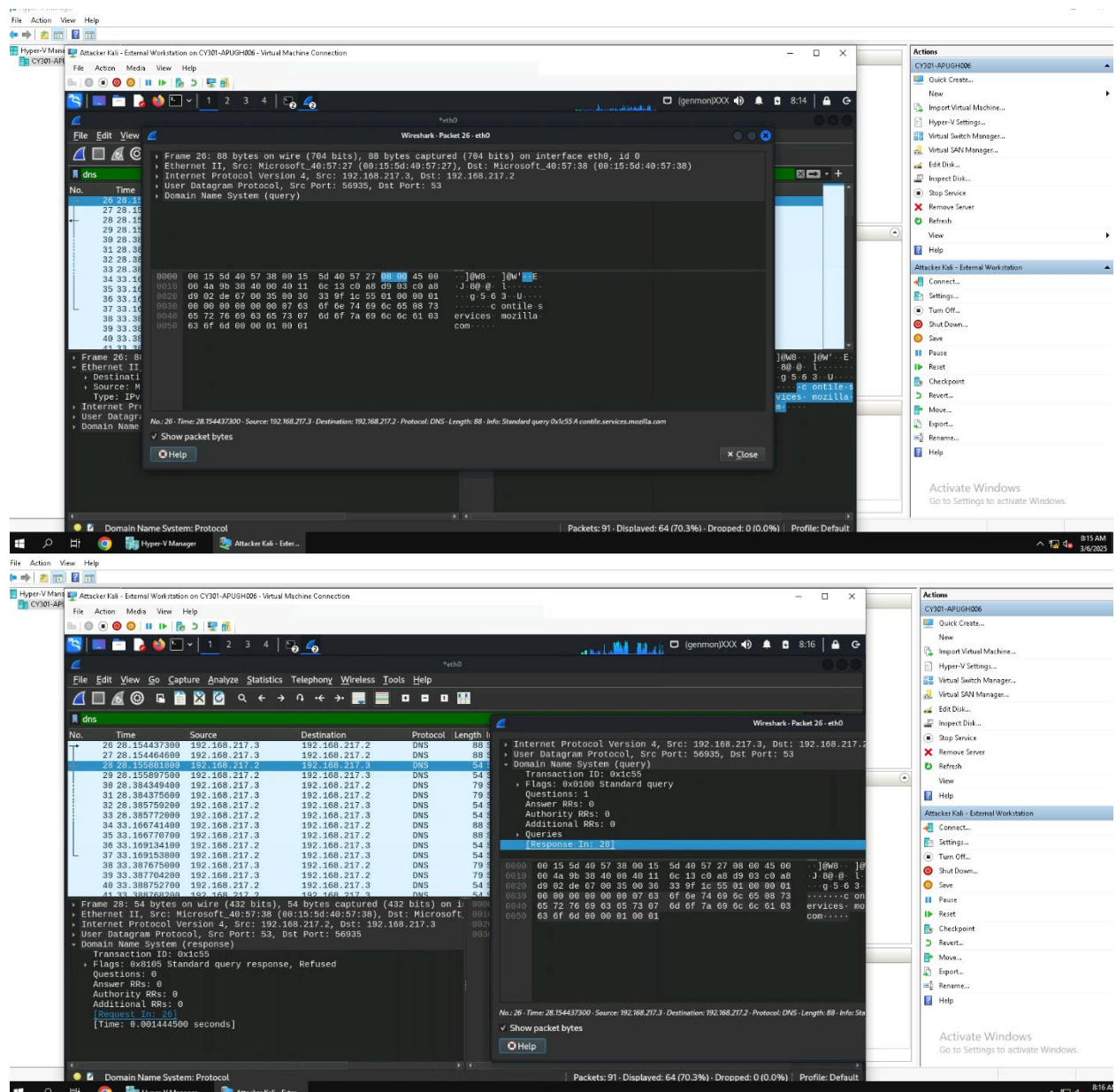
0040 65 72 70 69 63 65 73 87 6d 6f 7a 69 6c 6d 61 93 ... services-mozilla

0050 63 6f 6d 08 00 01 00 01

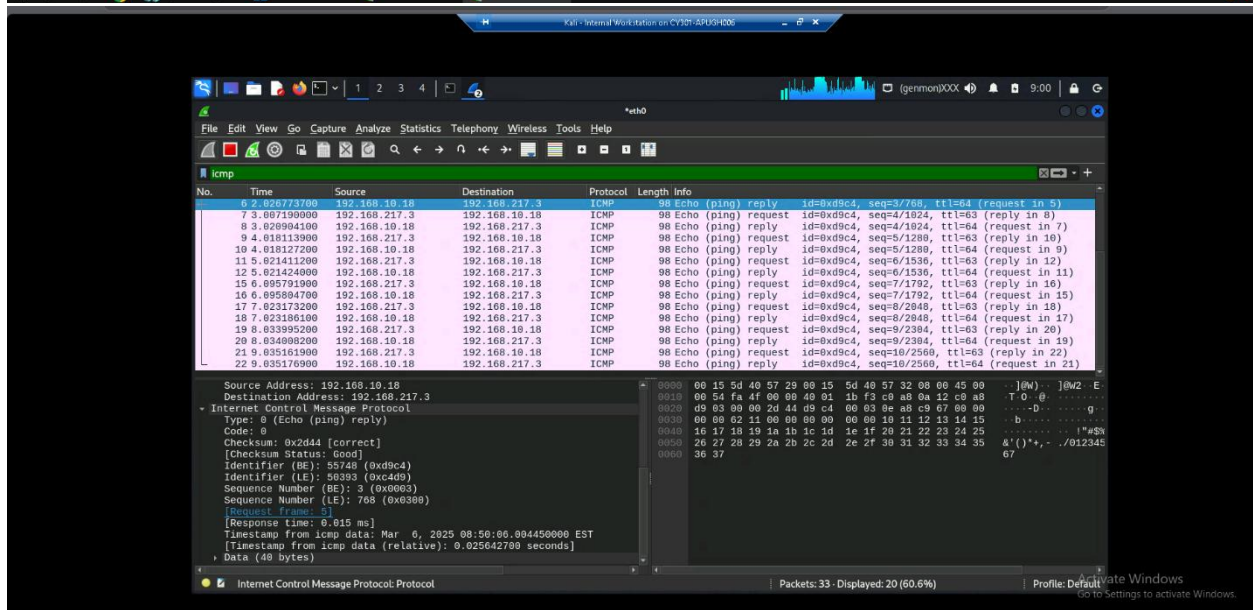
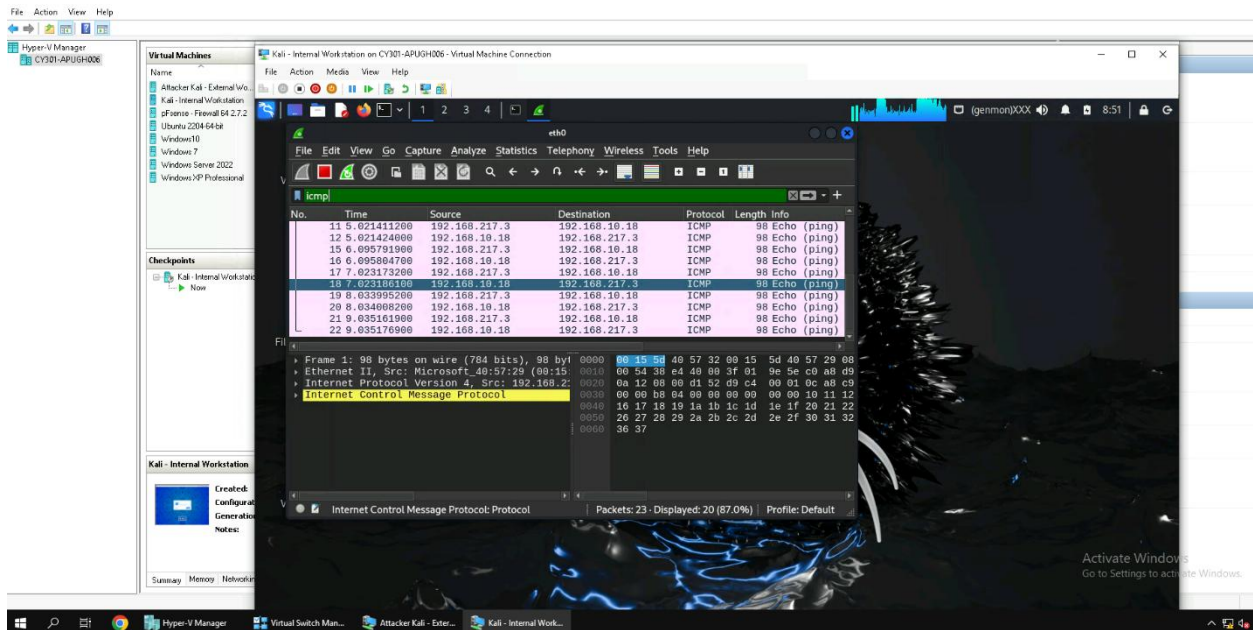
Domain Name System: Protocol

Packets: 91 - Displayed: 64 (70.3%) - Dropped: 0 (0.0%) - Profile: Default

Activate Windows
Go to Settings to activate Windows.



Part B



Hyper-V Manager

File Action View Help

Hyper-V Manager

CY01-APUGH006

Virtual Machines

Name

- Attacker Kali - External V...
- Kali - Internal Workstation
- pFSense - Firewall 64 27.2
- Ubuntu 2204 64 bit
- Windows 10
- Windows 7
- Windows Server 2022
- Windows XP Professional

Checkpoints

Attacker Kali - External V...

Created: ...

Configuration: ...

Generation: ...

Notes: ...

Summary Memory Network

CY01-APUGH006: 1 virtual machine selected.

Kali - Internal Workstation on CY01-APUGH006 - Virtual Machine Connection

File Action Media View Help

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*eth0

File Transfer Protocol (FTP): Protocol

No.	Time	Source	Destination	Protocol	Length	Info
37	944.363996300	192.168.10.18	192.168.217.3	FTP	86	Response: 220 (vsFTPd 3.0.5)
39	957.645396400	192.168.217.3	192.168.10.18	FTP	86	Request: USER student
41	957.646516800	192.168.10.18	192.168.217.3	FTP	100	Response: 331 Please specify the password.
43	960.418560800	192.168.217.3	192.168.10.18	FTP	81	Request: PASS password
45	960.543865400	192.168.10.18	192.168.217.3	FTP	89	Response: 230 Login successful.
47	960.559086800	192.168.217.3	192.168.10.18	FTP	72	Request: SYST
49	960.559108400	192.168.10.18	192.168.217.3	FTP	85	Response: 215 UNIX Type: L8
50	960.559123800	192.168.217.3	192.168.10.18	FTP	72	Request: FEAT
51	960.559139800	192.168.10.18	192.168.217.3	FTP	81	Response: 211-Features:
52	960.559139300	192.168.10.18	192.168.217.3	FTP	87	Response: EPRT
53	960.559156300	192.168.10.18	192.168.217.3	FTP	118	Response: PASV

Frame 37: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on ...

Ethernet II, Src: Microsoft 40:57:32 (00:15:5d:40:57:32), Dst: Microsof...

Internet Protocol Version 4, Src: 192.168.10.18, Dst: 192.168.217.3

0100 = Version: 4

... 0101 = Header Length: 20 bytes (5)

Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

Total Length: 72

Identification: 0x49a1 (18849)

010 = Flags: 0x2, Don't fragment

... 0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 64

Protocol: TCP (6)

Header Checksum: 0x8ca8 [validation disabled]

[Header checksum status: Unverified]

Source Address: 192.168.10.18

Destination Address: 192.168.217.3

File Transfer Protocol (FTP): Protocol

Packets: 55 - Displayed: 11 (20.0%)

Hyper-V Manager

File Action View Help

Hyper-V Manager

CY01-APUGH006

Virtual Machines

Name

- Attacker Kali - External V...
- Kali - Internal Workstation
- pFSense - Firewall 64 27.2
- Ubuntu 2204 64 bit
- Windows 10
- Windows 7
- Windows Server 2022
- Windows XP Professional

Checkpoints

Attacker Kali - External V...

Created: ...

Configuration: ...

Generation: ...

Notes: ...

Summary Memory Network

CY01-APUGH006: 1 virtual machine selected.

Kali - Internal Workstation on CY01-APUGH006 - Virtual Machine Connection

File Action Media View Help

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

*eth0

File Transfer Protocol (FTP): Protocol

No.	Time	Source	Destination	Protocol	Length	Info
52	960.559139300	192.168.10.18	192.168.217.3	FTP	87	Response: EPRT
53	960.559156300	192.168.10.18	192.168.217.3	FTP	118	Response: PASV
56	1186.1947998	192.168.217.3	192.168.10.18	FTP	72	Request: QUIT
57	1186.1955755	192.168.10.18	192.168.217.3	FTP	80	Response: 221 Goodbye.
67	1191.3744568	192.168.10.18	192.168.217.3	FTP	80	[TCP Spurious Retransmission] Response: 220 (vsFTPd 3.0.5)
69	1210.5890798	192.168.10.18	192.168.217.3	FTP	100	Response: 331 Please specify the password.
70	1210.6006007	192.168.10.18	192.168.217.3	FTP	76	Request: PASS off
72	1215.8000773	192.168.217.3	192.168.10.18	FTP	88	Response: 530 Login incorrect.
74	1219.1105965	192.168.10.18	192.168.217.3	FTP	72	Request: QUIT
76	1222.4780998	192.168.217.3	192.168.10.18	FTP	80	Response: 221 Goodbye.
78	1222.4784178	192.168.10.18	192.168.217.3	FTP	86	Response: 220 (vsFTPd 3.0.5)
86	1226.1909317	192.168.10.18	192.168.217.3	FTP	81	Request: USER apugh006
88	1231.3783742	192.168.217.3	192.168.10.18	FTP	81	Request: PASS 01247624
92	1242.8232842	192.168.217.3	192.168.10.18	FTP	88	Response: 530 Login incorrect.
94	1245.8421172	192.168.10.18	192.168.217.3	FTP		

Frame 37: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on ...

Ethernet II, Src: Microsoft 40:57:32 (00:15:5d:40:57:32), Dst: Microsof...

Internet Protocol Version 4, Src: 192.168.10.18, Dst: 192.168.217.3

0100 = Version: 4

... 0101 = Header Length: 20 bytes (5)

Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

Total Length: 72

Identification: 0x49a1 (18849)

010 = Flags: 0x2, Don't fragment

... 0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 64

Protocol: TCP (6)

Header Checksum: 0x8ca8 [validation disabled]

[Header checksum status: Unverified]

Source Address: 192.168.10.18

Destination Address: 192.168.217.3

File Transfer Protocol (FTP): Protocol

Packets: 95 - Displayed: 24 (25.3%)