

Name: Srinath R

SRN: R24MSC18

Date: 22/09/2025

Module Name: Incident Response Management

### 1) Executive Summary:

- To contain the name of malware

### 2) Victim Details:

- Host name:
- IP address:
- MAC address:
- Windows user account name:
- Name of victim:

### 3) Indicators of Compromise (IOCs):

- IP addresses, domains and URLs associated with the activity.

## Determining Malware

Applied the filter “(http.request or tls.handshake.type eq 1) and !(ssdp)” and the snippet is as shown below.

The highlighted log, foot.php file is suspected malware for command and control

(http.request or tls.handshake.type eq 1) and !(ssdp)							
Time	Src	Src Port	Dst	Dst Port	Host	CNameString	Info
2024-09-04 17:34:40.627894	172.17.0.99	49804	23.195.212.189	443	sso.godaddy.com		Client Hello (SNI=sso.godaddy.com)
2024-09-04 17:34:56.753410	172.17.0.99	49805	13.107.246.57	443	inputsuggestions.msdxcdn...		Client Hello (SNI=inputsuggestions.msdxcdn.microsoft.com)
2024-09-04 17:34:56.788447	172.17.0.99	49805	13.107.246.57	443	inputsuggestions.msdxcdn...		Change Cipher Spec, Client Hello (SNI=inputsuggestions.msdxcdn.microsoft.com)
2024-09-04 17:35:04.852343	172.17.0.99	49806	46.254.34.201	443	www.bellantoniciccioccolato...		Client Hello (SNI=www.bellantoniciccioccolato.it)
2024-09-04 17:35:06.398391	172.17.0.99	49811	40.126.28.12	443	login.microsoftonline.com		Client Hello (SNI=login.microsoftonline.com)
2024-09-04 17:35:06.485925	172.17.0.99	49811	40.126.28.12	443	login.microsoftonline.com		Change Cipher Spec, Client Hello (SNI=login.microsoftonline.com)
2024-09-04 17:35:06.787464	172.17.0.99	49812	23.195.212.189	443	sso.godaddy.com		Client Hello (SNI=sso.godaddy.com)
2024-09-04 17:35:07.421038	172.17.0.99	49813	79.124.78.197	80	79.124.78.197		POST /foots.php HTTP/1.1
2024-09-04 17:35:07.858408	172.17.0.99	49813	79.124.78.197	80	79.124.78.197		POST /foots.php HTTP/1.1
2024-09-04 17:35:08.684143	172.17.0.99	49813	79.124.78.197	80	79.124.78.197		POST /foots.php HTTP/1.1
2024-09-04 17:35:09.448825	172.17.0.99	49815	46.254.34.201	443	www.bellantoniciccioccolato...		Client Hello (SNI=www.bellantoniciccioccolato.it)
2024-09-04 17:35:11.316859	172.17.0.99	49816	79.124.78.197	80	79.124.78.197		GET /index.php?id=&subid=qIOuK7U HTTP/1.1
2024-09-04 17:35:12.546458	172.17.0.99	49816	79.124.78.197	80	79.124.78.197		POST /index.php HTTP/1.1
2024-09-04 17:36:17.781476	172.17.0.99	49821	79.124.78.197	80	79.124.78.197		POST /foots.php HTTP/1.1
2024-09-04 17:36:37.393741	172.17.0.99	49823	204.79.197.203	443	windows.msn.com		Client Hello (SNI=windows.msn.com)
2024-09-04 17:36:37.394047	172.17.0.99	49822	204.79.197.203	443	windows.msn.com		Client Hello (SNI=windows.msn.com)
2024-09-04 17:36:37.466055	172.17.0.99	49823	204.79.197.203	443	windows.msn.com		Change Cipher Spec, Client Hello (SNI=windows.msn.com)

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```
Wireshark - Follow TCP Stream (tcp.stream eq 48) - traffic-analysis-exercise.pcap

POST /foots.php HTTP/1.1
Content-Type: application/octet-stream
Content-Encoding: binary
User-Agent: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 10.0; WOW64; Trident/7.0; .NET4.0C; .NET4.0E; .NET CLR 2.0.50727; .NET CLR 3.0.30729; .NET CLR 3.5.30729)
Host: 79.124.78.197
Content-Length: 94
Connection: Keep-Alive
Cache-Control: no-cache

101|30168213-3be0-a751-81a0-cf3b228c8654|5LHtVruc|f3f3oHg2Lz4XGyHy0LidzFInvSftke//k+cOyr09aBI=
HTTP/1.1 200 OK
Server: nginx
Date: Wed, 04 Sep 2024 17:35:09 GMT
Content-Type: text/html; charset=UTF-8
Transfer-Encoding: chunked
Connection: keep-alive

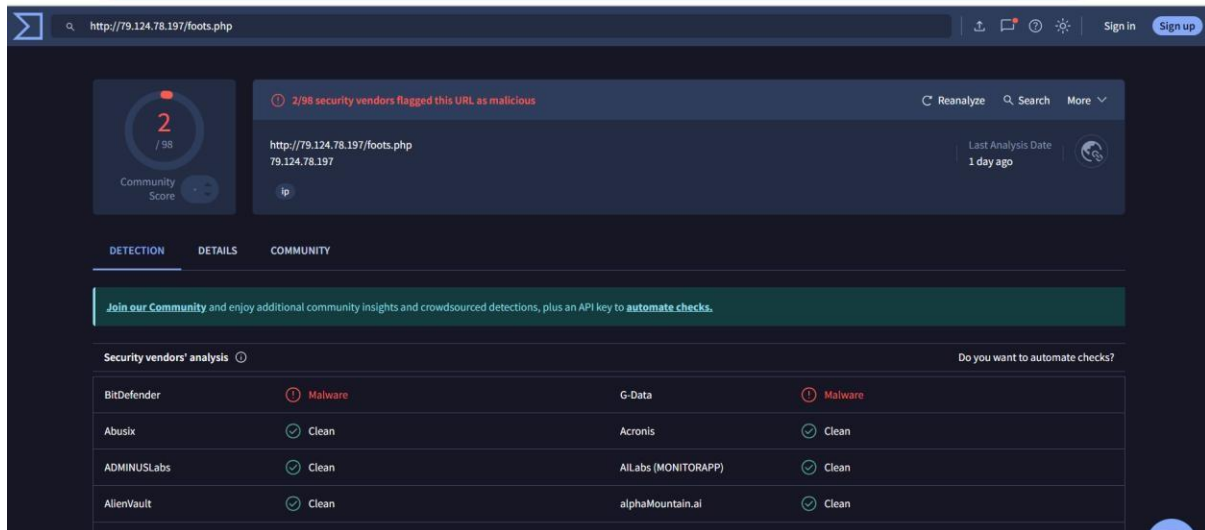
0

POST /foots.php HTTP/1.1
Content-Type: application/octet-stream
Content-Encoding: binary
User-Agent: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 10.0; WOW64; Trident/7.0; .NET4.0C; .NET4.0E; .NET CLR 2.0.50727; .NET CLR 3.0.30729; .NET CLR 3.5.30729)
Host: 79.124.78.197
Content-Length: 112
Connection: Keep-Alive
Cache-Control: no-cache

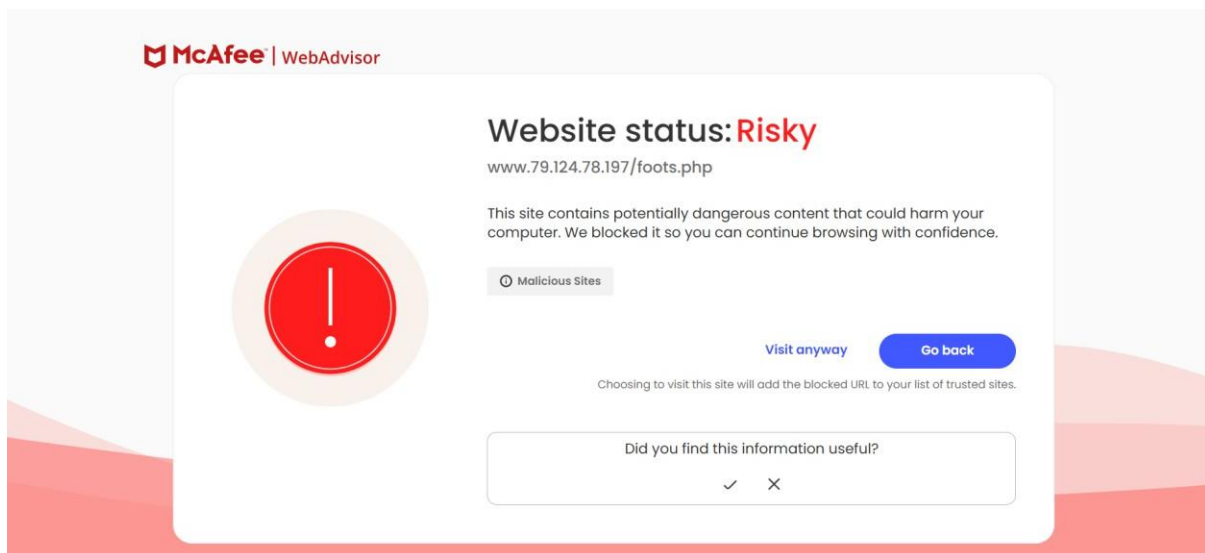
111|30168213-3be0-a751-81a0-cf3b228c8654|XHfhy0tsArXQLIP[=, [U.7.#./n.H --.i
Pm.U.0...yB...vK.s.l.4.].7..1
2
HTTP/1.1 200 OK
Server: nginx
Date: Wed, 04 Sep 2024 17:35:10 GMT
Content-Type: text/html; charset=UTF-8
Transfer-Encoding: chunked
Connection: keep-alive
```

Hypertext Transfer Protocol	
POST /foots.php HTTP/1.1\r\n	0030 ff ff 86 81 00 00 50 4f 53 54 20 2f 66 6f 6f 74 --
Request Method: POST	0040 73 2e 70 68 70 20 48 54 54 50 2f 31 2e 31 0d 0a s.
Request URI: /foots.php	0050 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a 20 61 70 Co
Request Version: HTTP/1.1	0060 70 6c 69 63 61 74 69 6f 6e 2f 6f 63 74 65 74 2d pl
Content-Type: application/octet-stream\r\n	0070 73 74 72 65 61 6d 0d 0a 43 6f 6e 74 65 6e 74 2d st
Content-Encoding: binary\r\n	0080 45 6e 63 6f 64 69 6e 67 3a 20 62 69 6e 61 72 79 En
User-Agent: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 10.0; WOW64; Trident/7.0; .NET4.0C; .NET4.0E; .NET CLR 2.0.50727; .NET CLR 3.0.30729; .NET CLR 3.5.30729)\r\n	0090 0d 0a 55 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f --
Content-Length: 94\r\n	00a0 7a 69 6c 6c 61 2f 34 2e 30 20 28 63 6f 6d 70 61 zi
[Content length: 94]	00b0 74 69 62 6c 65 3b 20 4d 53 49 45 20 37 2e 30 3b ti
Connection: Keep-Alive\r\n	00c0 20 57 69 6e 64 6f 77 73 20 4e 54 20 31 30 2e 30 W
Cache-Control: no-cache\r\n	00d0 3b 20 57 4f 57 36 34 3b 20 54 72 69 64 65 6e 74 ;
\r\n	00e0 2f 37 2e 30 3b 20 2e 4e 45 54 34 2e 30 43 3b 20 /7
[Response in frame: 1670]	00f0 2e 4e 45 54 34 2e 30 45 3b 20 2e 4e 45 54 20 43 .N
[Full request URI: http://79.124.78.197/foots.php]	0100 4c 52 20 32 2e 30 2e 35 30 37 32 37 3b 20 2e 4e LR
Content-encoded entity body (binary): 94 bytes	0110 45 54 20 43 4c 52 20 33 2e 30 2e 33 30 37 32 39 ET
[Expert Info (Warning/Undecoded): Decompression failed]	0120 3b 20 2e 4e 45 54 20 43 4c 52 20 33 2e 35 2e 33 ;
	0130 30 37 32 39 29 0d 0a 48 6f 73 74 3a 20 37 39 2e 07
	0140 31 32 34 2e 37 38 2e 31 39 37 0d 0a 43 6f 6e 74 12
	0150 65 6e 74 2d 4c 65 6e 67 74 68 3a 20 39 34 0d 0a en
	0160 43 6f 6e 6e 65 63 74 69 6f 6e 3a 20 4b 65 65 70 Co
	0170 2d 41 6c 69 76 65 0d 0a 43 61 63 68 65 2d 43 6f -A
	0180 6e 74 72 6f 6c 3a 20 6e 6f 2d 63 61 63 68 65 0d nt

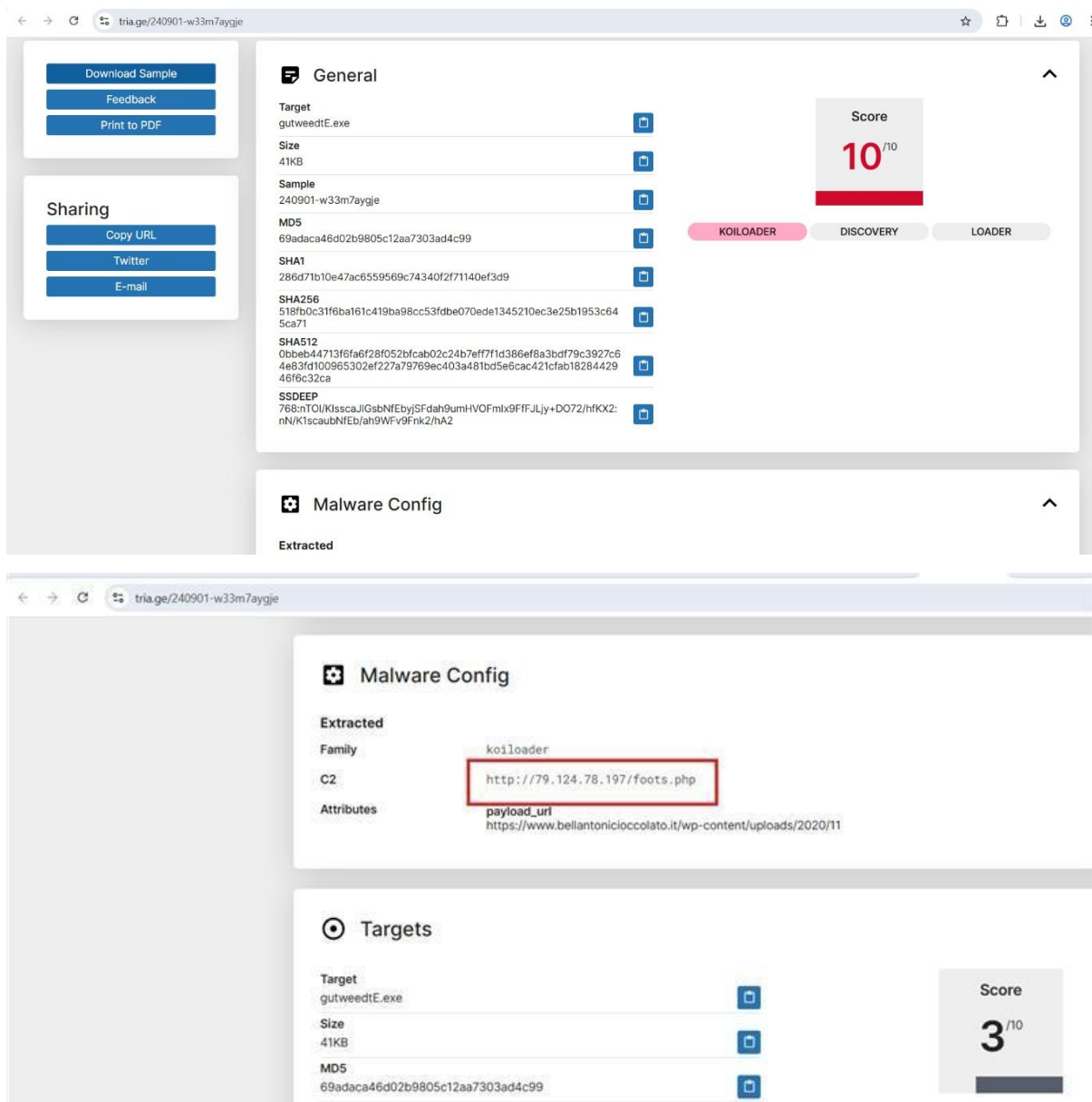
The URL <http://79.124.78.197/foots.php> is tracked as Malware in the virus total.



Also, upon searching the URL on browser the McAfee detects it as the risky URL.



Upon further investigating on the foot.php, it is identified that it belongs to Koiload Family and gutweedtE.exe seems to be the malware.



The image shows two screenshots of the VirusTotal web interface. The top screenshot displays the 'General' tab for a file named 'gutweedtE.exe'. The file size is 41KB, and the sample ID is 240901-w33m7aygie. The MD5 hash is 69adaca46d02b9805c12aa7303ad4c99. The SHA1 hash is 286d71b10e47ac6559569c74340f2f71140ef3d9. The SHA256 hash is 518fb0c31f6ba161c419ba98cc53fde070ede1345210ec3e25b1953c645ca71. The SHA512 hash is 0bbeb44713f6fa6f28f052bfcab02c24b7eff71d386ef8a3bd79c3927c64e83fd100965302ef227a79769ec403a481bd5e6cac421cfab1828442946f6c32ca. The SSDEEP value is 768:nTOI/KlsscaJlGsbNfEbyjSFdah9umHVOFmlx9FFJLjy+D072/hfKX2:nN/K1scaubNfEb/ah9Wfv9Fnk2/hA2. The score is 10/10, and the detection is categorized as KOILOADER. The bottom screenshot displays the 'Malware Config' tab for the same file. The family is identified as 'koiloader'. The C2 address is 'http://79.124.78.197/foots.php', which is highlighted with a red box. The attributes include 'payload\_url' with the value 'https://www.bellantonicioccolato.it/wp-content/uploads/2020/11'. The 'Targets' tab shows the target file 'gutweedtE.exe' with a score of 3/10.

**General**

Target: gutweedtE.exe

Size: 41KB

Sample: 240901-w33m7aygie

MD5: 69adaca46d02b9805c12aa7303ad4c99

SHA1: 286d71b10e47ac6559569c74340f2f71140ef3d9

SHA256: 518fb0c31f6ba161c419ba98cc53fde070ede1345210ec3e25b1953c645ca71

SHA512: 0bbeb44713f6fa6f28f052bfcab02c24b7eff71d386ef8a3bd79c3927c64e83fd100965302ef227a79769ec403a481bd5e6cac421cfab1828442946f6c32ca

SSDEEP: 768:nTOI/KlsscaJlGsbNfEbyjSFdah9umHVOFmlx9FFJLjy+D072/hfKX2:nN/K1scaubNfEb/ah9Wfv9Fnk2/hA2

Score: 10<sup>/10</sup>

KOILOADER DISCOVERY LOADER

**Malware Config**

Extracted

Family: koiloader

C2: <http://79.124.78.197/foots.php>

Attributes: payload\_url: <https://www.bellantonicioccolato.it/wp-content/uploads/2020/11>

**Targets**

Target: gutweedtE.exe

Size: 41KB

MD5: 69adaca46d02b9805c12aa7303ad4c99

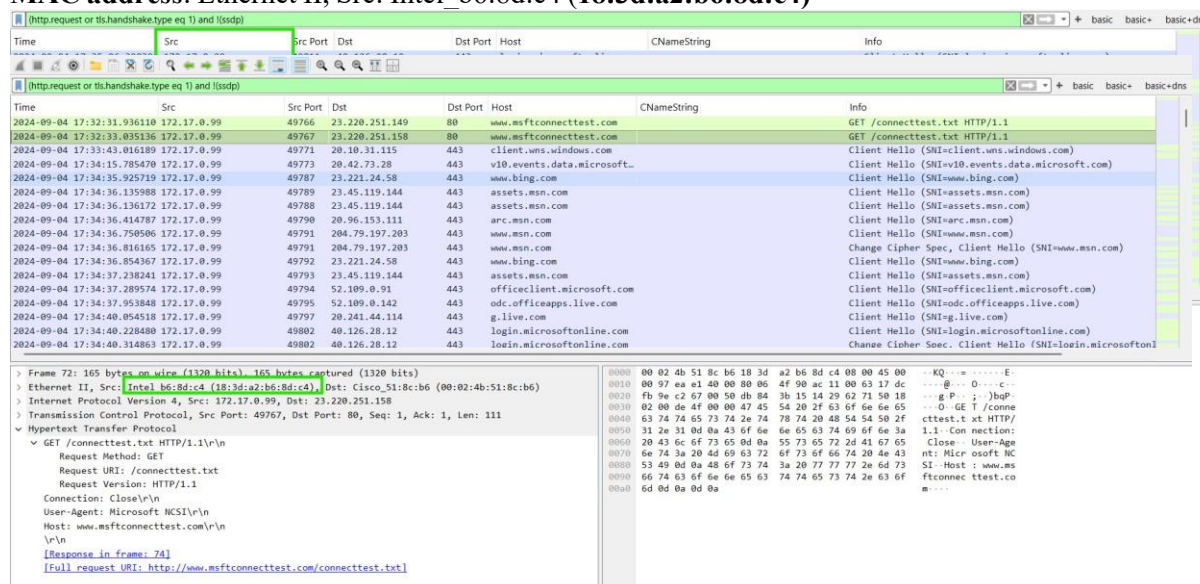
Score: 3<sup>/10</sup>

## Victim Details

Identified the victim IP address and the MAC address from the source tab on the filter “(http.request or tls.handshake.type eq 1) and !(ssdp)”

Victim ip address:172.17.0.99

MAC address: Ethernet II, Src: Intel\_b6:8d:c4 (18:3d:a2:b6:8d:c4)



The image shows a Wireshark packet capture analysis. The top pane displays a list of network traffic. The bottom pane shows a detailed view of a selected packet (Frame 72), which is a GET request to connecttest.txt. The packet details include the Ethernet II header, Internet Protocol Version 4 header, and Hypertext Transfer Protocol header. The packet bytes pane shows the raw data of the packet.

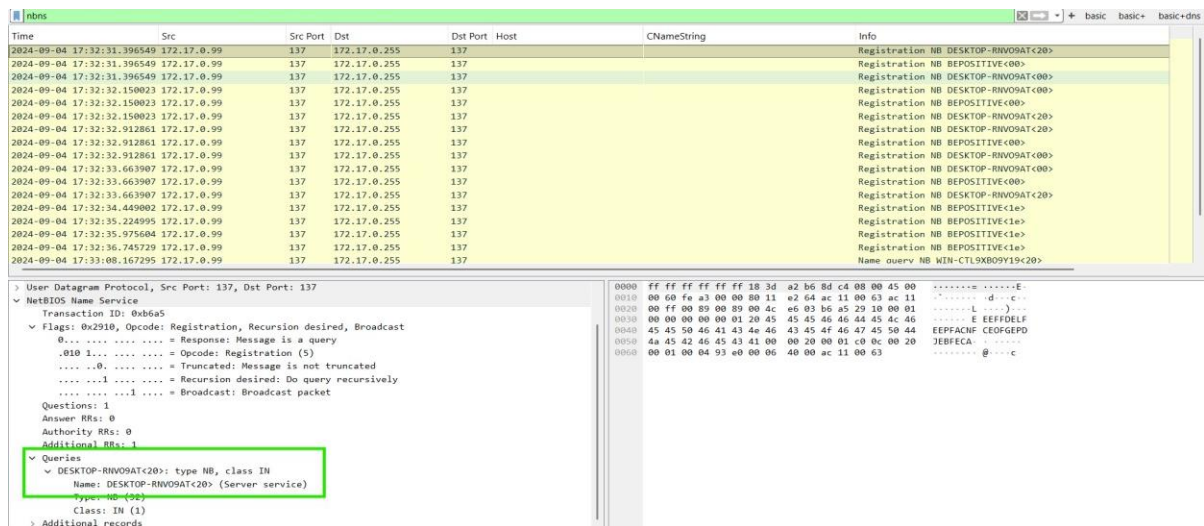
Time	Src	Src Port	Dst	Dst Port	Host	CNameString	Info
2024-09-04 17:32:31.936110	172.17.0.99	49766	23.220.251.149	80	www.msftconnecttest.com		GET /connecttest.txt HTTP/1.1
2024-09-04 17:32:33.035136	172.17.0.99	49767	23.220.251.158	80	www.msftconnecttest.com		GET /connecttest.txt HTTP/1.1
2024-09-04 17:33:43.016189	172.17.0.99	49771	20.10.31.115	443	client.wns.windows.com		Client Hello (SNI=client.wns.windows.com)
2024-09-04 17:34:15.705470	172.17.0.99	49773	20.42.73.28	443	v10.events.data.microsoft.com		Client Hello (SNI=v10.events.data.microsoft.com)
2024-09-04 17:34:35.925719	172.17.0.99	49787	23.221.24.58	443	www.bing.com		Client Hello (SNI=www.bing.com)
2024-09-04 17:34:36.135988	172.17.0.99	49789	23.45.119.144	443	assets.msn.com		Client Hello (SNI=assets.msn.com)
2024-09-04 17:34:36.136172	172.17.0.99	49788	23.45.119.144	443	assets.msn.com		Client Hello (SNI=assets.msn.com)
2024-09-04 17:34:36.414787	172.17.0.99	49790	20.96.153.111	443	arc.msn.com		Client Hello (SNI=arc.msn.com)
2024-09-04 17:34:36.750506	172.17.0.99	49791	204.79.197.203	443	www.msn.com		Client Hello (SNI=www.msn.com)
2024-09-04 17:34:36.816165	172.17.0.99	49791	204.79.197.203	443	www.msn.com		Change Cipher Spec, Client Hello (SNI=www.msn.com)
2024-09-04 17:34:36.854367	172.17.0.99	49792	23.221.24.58	443	www.bing.com		Client Hello (SNI=www.bing.com)
2024-09-04 17:34:37.238241	172.17.0.99	49793	23.45.119.144	443	assets.msn.com		Client Hello (SNI=assets.msn.com)
2024-09-04 17:34:37.289574	172.17.0.99	49794	52.109.0.91	443	officeclient.microsoft.com		Client Hello (SNI=officeclient.microsoft.com)
2024-09-04 17:34:37.953848	172.17.0.99	49795	52.109.0.142	443	odc.officeapps.live.com		Client Hello (SNI=odc.officeapps.live.com)
2024-09-04 17:34:40.054518	172.17.0.99	49797	20.241.44.114	443	g.live.com		Client Hello (SNI=g.live.com)
2024-09-04 17:34:40.228480	172.17.0.99	49802	40.126.28.12	443	login.microsoftonline.com		Client Hello (SNI=login.microsoftonline.com)
2024-09-04 17:34:40.314863	172.17.0.99	49802	40.126.28.12	443	login.microsoftonline.com		Change Cipher Spec, Client Hello (SNI=login.microsoftonline.com)

Frame 72: 165 bytes on wire (1320 bits) - 165 bytes captured (1320 bits) on interface  
Ethernet II, Src: Intel\_b6:8d:c4 (18:3d:a2:b6:8d:c4), Dst: Cisco\_51:8c:b6 (00:02:4b:51:8c:b6)  
Internet Protocol Version 4, Src: 172.17.0.99, Dst: 23.220.251.158  
Transmission Control Protocol, Src Port: 49767, Dst Port: 80, Seq: 1, Ack: 1, Len: 111  
Hypertext Transfer Protocol  
GET /connecttest.txt HTTP/1.1  
Request Method: GET  
Request URI: /connecttest.txt  
Request Version: HTTP/1.1  
Connection: Close  
User-Agent: Microsoft NCSI  
Host: www.msftconnecttest.com  
[Response in frame: 74]  
[Full request URI: http://www.msftconnecttest.com/connecttest.txt]

Used the filter “nbns” and determined the hostname as below.

**Hostname:**

DESKTOP-RNVO9AT<20>



Time	Src	Src Port	Dst	Dst Port	Host	CNameString	Info
2024-09-04 17:32:31.396549	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<20>
2024-09-04 17:32:31.396549	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<00>
2024-09-04 17:32:31.396549	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<00>
2024-09-04 17:32:31.150023	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<00>
2024-09-04 17:32:31.150023	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<00>
2024-09-04 17:32:31.150023	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<20>
2024-09-04 17:32:32.912861	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<00>
2024-09-04 17:32:32.912861	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<00>
2024-09-04 17:32:33.663907	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<00>
2024-09-04 17:32:33.663907	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<00>
2024-09-04 17:32:33.663907	172.17.0.99	137	172.17.0.255	137			Registration NB DESKTOP-RNVO9AT<20>
2024-09-04 17:32:34.449002	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<1e>
2024-09-04 17:32:35.224995	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<1e>
2024-09-04 17:32:35.975604	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<1e>
2024-09-04 17:32:36.745729	172.17.0.99	137	172.17.0.255	137			Registration NB BEPOSITIVE<1e>
2024-09-04 17:33:08.167295	172.17.0.99	137	172.17.0.255	137			Name query NB WIN-CTL9XB09Y19C20>

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

NetBIOS Name Service

Transaction ID: 0xb6a5

Flags: 0x2910, Opcode: Registration, Recursion desired, Broadcast

0... .. = Response: Message is a query

0010 1... .. = Opcode: Registration (5)

... .. = Truncated: Message is not truncated

... .. = Recursion desired: Do query recursively

... .. = Broadcast: Broadcast packet

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 1

Queries

DESKTOP-RNVO9AT<20>: type NB, class IN

Name: DESKTOP-RNVO9AT<20> (Server service)

Type: nb-ns (00)

Class: IN (1)

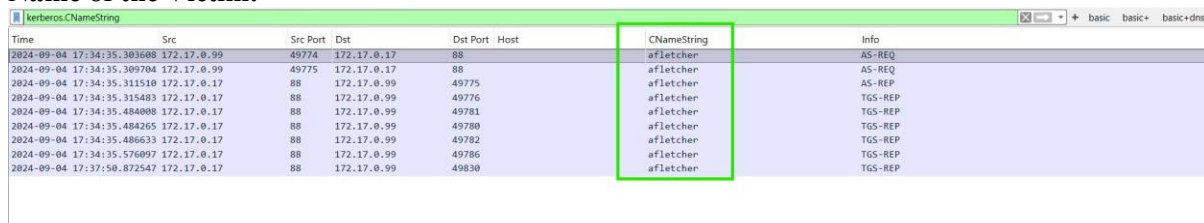
Additional records

0000 ff ff ff ff ff 18 3d a2 b6 bd c4 00 00 45 00 .....E-  
0010 00 60 fe a3 00 00 80 11 e2 64 ac 11 00 63 ac 11 .....d...c...  
0020 00 ff 00 89 00 89 00 4c e6 03 b6 a5 29 10 00 01 .....L...  
0030 00 00 00 00 00 01 20 45 45 46 46 44 45 4c 46 .....E EEEFDELE  
0040 45 45 50 46 41 43 4e 46 43 45 4f 46 47 45 50 44 EEPFACNF CE0FGEPO  
0050 4a 45 42 46 45 43 41 00 00 20 00 01 c0 0c 00 20 JEBFECNA CE0FGEPO  
0060 00 01 00 04 93 e0 00 06 40 00 ac 11 00 63 .....@...c

**Windows user account name:**

Using the Kerberos.CNameString filter, identified the username.(afletcher)

**Name of the Victim:**



Time	Src	Src Port	Dst	Dst Port	Host	CNameString	Info
2024-09-04 17:34:35.383608	172.17.0.99	49774	172.17.0.17	88		afletcher	AS-REQ
2024-09-04 17:34:35.383608	172.17.0.99	49775	172.17.0.17	88		afletcher	AS-REQ
2024-09-04 17:34:35.311510	172.17.0.17	88	172.17.0.99	49775		afletcher	AS-REP
2024-09-04 17:34:35.315483	172.17.0.17	88	172.17.0.99	49776		afletcher	TGS-REP
2024-09-04 17:34:35.484008	172.17.0.17	88	172.17.0.99	49781		afletcher	TGS-REP
2024-09-04 17:34:35.484265	172.17.0.17	88	172.17.0.99	49780		afletcher	TGS-REP
2024-09-04 17:34:35.486633	172.17.0.17	88	172.17.0.99	49782		afletcher	TGS-REP
2024-09-04 17:34:35.576097	172.17.0.17	88	172.17.0.99	49786		afletcher	TGS-REP
2024-09-04 17:37:58.872547	172.17.0.17	88	172.17.0.99	49830		afletcher	TGS-REP

Name of the victim was identified using the filter “ldap contains "CN=Users"”(Andrew Fletcher)



