

TP – Reconnaître les attaques

Capture 1

Wireshark packet capture showing a SYN flood attack. The filter is `tcp.flags.syn == 1 and tcp.flags.ack == 0`. The packet list shows 14 SYN packets from various sources to 192.168.1.159. The packet details show the TCP header with SYN flag set and Seq=0. The packet bytes show the raw TCP segment.

No.	Time	Source	Destination	Protocol	Length	Info
2708...	351.613329	167.203.102.117	192.168.1.159	TCP	174	15120 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2708...	351.614781	52.27.161.215	192.168.1.159	TCP	174	15409 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2708...	351.615356	209.92.25.229	192.168.1.159	TCP	174	15701 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2708...	351.615473	149.221.46.147	192.168.1.159	TCP	174	15969 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2708...	351.616366	192.183.44.102	192.168.1.159	TCP	174	16247 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2708...	351.617248	152.178.159.141	192.168.1.159	TCP	174	16532 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.618094	203.98.141.133	192.168.1.159	TCP	174	16533 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.618857	115.48.48.185	192.168.1.159	TCP	174	16718 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.619789	147.29.251.74	192.168.1.159	TCP	174	17009 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.620622	29.158.7.85	192.168.1.159	TCP	174	17304 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.621398	133.119.25.131	192.168.1.159	TCP	174	17599 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.622245	89.99.115.209	192.168.1.159	TCP	174	17874 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.623161	221.19.65.45	192.168.1.159	TCP	174	18160 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.624003	124.97.107.209	192.168.1.159	TCP	174	18448 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]
2709...	351.624765	140.147.97.13	192.168.1.159	TCP	174	18740 → 80 [SYN] Seq=0 Win=64 Len=120 [TCP segment]

- De quel type est cette attaque ?

Capture 2

```
Line-based text data: text/html (29 lines)
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">\r\n
<html xmlns="http://www.w3.org/1999/xhtml">\r\n
<head>\r\n
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"/>\r\n
<title>401 - Non autoris   acc  s refus   en raison d'informations d'identification non valides.</title>\r\n
<style type="text/css">\r\n
<!--\r\n
body{margin:0;font-size:.7em;font-family:Verdana, Arial, Helvetica, sans-serif;background:#EEEEEE;}\r\n
fieldset{padding:0 15px 10px 15px;}\r\n
h1{font-size:2.4em;margin:0;color:#FFF;}\r\n
h2{font-size:1.7em;margin:0;color:#CC0000;}\r\n
h3{font-size:1.2em;margin:10px 0 0 0;color:#000000;}\r\n
#header{width:96%;margin:0 0 0 0;padding:6px 2% 6px 2%;font-family:"trebuchet MS", Verdana, sans-serif;color:#FFF;\r\n
background-color:#555555;}\r\n
#content{margin:0 0 2%;position:relative;}\r\n
.content-container{background:#FFF;width:96%;margin-top:8px;padding:10px;position:relative;}\r\n
-->\r\n
</style>\r\n
</head>\r\n
<body>\r\n
```

- Que représente le contenu de cette trame ?

Capture 3

```

Hypertext Transfer Protocol
  GET / HTTP/1.1\r\n
  > [Expert Info (Chat/Sequence): GET / HTTP/1.1\r\n]
    Request Method: GET
    Request URI: /
    Request Version: HTTP/1.1
  Accept: application/x-ms-application, image/jpeg, application/xaml+xml, image/gif, image/pjpeg, application/x-ms-xbap, */*\r\n
  Accept-Language: fr-FR\r\n
  User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0)\r\n
  Accept-Encoding: gzip, deflate\r\n
  If-Modified-Since: Sun, 03 Apr 2022 10:47:06 GMT\r\n
  If-None-Match: "15ab47294847d81:0"\r\n
  Host: 192.168.2.1\r\n
  Connection: Keep-Alive\r\n
  Authorization: Basic cGllcnJlOjBhJCR3b3Jk\r\n
  Credentials: pierre:Pa$$word

```

- Quel est le navigateur utilisé ?
- Quelle est l'authentification utilisée ?
- Trouve-t-on des informations sensibles ?

Capture 4

Capture avant spoofing

```

✓ Ethernet II, Src: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c), Dst: PcsCompu_67:68:fe (08:00:27:67:68:fe)
  > Destination: PcsCompu_67:68:fe (08:00:27:67:68:fe)
  > Source: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c)
  Type: IPv4 (0x0800)
✓ Internet Protocol Version 4, Src: 192.168.2.3, Dst: 192.168.2.1
  0100 .... = Version: 4
  .... 0101 = Header Length: 20 bytes (5)
  > Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
  Total Length: 539
  Identification: 0x0035 (53)
  > Flags: 0x40, Don't fragment
  ...0 0000 0000 0000 = Fragment Offset: 0
  Time to Live: 128
  Protocol: TCP (6)
  Header Checksum: 0x7353 [validation disabled]
  [Header checksum status: Unverified]
  Source Address: 192.168.2.3
  Destination Address: 192.168.2.1
  > Transmission Control Protocol, Src Port: 49157, Dst Port: 80, Seq: 1, Ack: 1, Len: 499
✓ Hypertext Transfer Protocol
  > GET / HTTP/1.1\r\n
  Accept: application/x-ms-application, image/jpeg, application/xaml+xml, image/gif, image/pjpeg, application/x
  Accept-Language: fr-FR\r\n
  User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727;

```

Capture après spoofing

```

Ethernet II, Src: PcsCompu_96:18:98 (08:00:27:96:18:98), Dst: PcsCompu_67:68:fe (08:00:27:67:68:fe)
> Destination: PcsCompu_67:68:fe (08:00:27:67:68:fe)
> Source: PcsCompu_96:18:98 (08:00:27:96:18:98)
  Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.2.3, Dst: 192.168.2.1
  0100 .... = Version: 4
  .... 0101 = Header Length: 20 bytes (5)
> Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
  Total Length: 539
  Identification: 0x0040 (64)
> Flags: 0x40, Don't fragment
  ...0 0000 0000 0000 = Fragment Offset: 0
  Time to Live: 128
  Protocol: TCP (6)
  Header Checksum: 0x7348 [validation disabled]
  [Header checksum status: Unverified]
  Source Address: 192.168.2.3
  Destination Address: 192.168.2.1
Transmission Control Protocol, Src Port: 49158, Dst Port: 80, Seq: 1, Ack: 1, Len: 499
Hypertext Transfer Protocol
> GET / HTTP/1.1\r\n
  Accept: application/x-ms-application, image/jpeg, application/xaml+xml, image/gif, image/pjpeg, application/x-ms-xbap,
  Accept-Language: fr-FR\r\n
  User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR
  Accept-Encoding: gzip, deflate\r\n
  If-Modified-Since: Sun, 03 Apr 2022 10:47:06 GMT\r\n
  If-None-Match: "15ab47294847d81:0"\r\n

```

- Repérer les différences dans la couche Ethernet
- Repérer les différences dans la couche IP
- Repérer les différences dans la couche http

Capture 5

```

Transmission Control Protocol, Src Port: 21, Dst Port: 49159, Seq: 28, Ack: 1, Len: 14
  Source Port: 21
  Destination Port: 49159
  [Stream index: 0]
  [Conversation completeness: Complete, WITH_DATA (31)]
  [TCP Segment Len: 14]
  Sequence Number: 28      (relative sequence number)

```

- Quels ports sont utilisés lors de la connexion ?
- De quelle application s'agit-il ?

Capture 6

```

✓ File Transfer Protocol (FTP)
  ✓ 331 Password required\r\n
    Response code: User name okay, need password (331)
    Response arg: Password required
  [Current working directory: ]

```

- Que demande l'applcatif ?

Capture 7

```

✓ Ethernet II, Src: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c), Dst: PcsCompu_67:68:fe (08:00:27:67:68:fe)
  > Destination: PcsCompu_67:68:fe (08:00:27:67:68:fe)
  > Source: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c)
    Type: IPv4 (0x0800)
  > Internet Protocol Version 4, Src: 192.168.2.3, Dst: 192.168.2.1
  > Transmission Control Protocol, Src Port: 49160, Dst Port: 21, Seq: 14, Ack: 65, Len: 15
  > File Transfer Protocol (FTP)
    [Current working directory: ]

```

0000	08 00 27 67 68 fe 08 00 27 b1 a1 6c 08 00 45 00	.. 'gh... '...l...E..
0010	00 37 00 51 40 00 80 06 75 1b c0 a8 02 03 c0 a8	..7..Q@... u.....
0020	02 01 c0 08 00 15 79 8d 78 a2 e2 02 13 a8 50 18	y.. x.....P..
0030	40 19 1b 57 00 00 50 41 53 53 20 50 61 24 24 77	@..W..PA SS Pa\$\$w
0040	6f 72 64 0d 0a	ord..

- Quel est le mot de passe saisi ?

Capture 8

```

✓ Ethernet II, Src: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c), Dst: PcsCompu_67:68:fe (08:00:27:67:68:fe)
  > Destination: PcsCompu_67:68:fe (08:00:27:67:68:fe)
  > Source: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c)
    Type: IPv4 (0x0800)
  > Internet Protocol Version 4, Src: 192.168.2.3, Dst: 192.168.2.1
  > Transmission Control Protocol, Src Port: 49160, Dst Port: 21, Seq: 1, Ack: 42, Len: 13
  > File Transfer Protocol (FTP)
    [Current working directory: ]

```

0000	08 00 27 67 68 fe 08 00 27 b1 a1 6c 08 00 45 00	.. 'gh... '...l...E..
0010	00 35 00 50 40 00 80 06 75 1e c0 a8 02 03 c0 a8	..5..P@... u.....
0020	02 01 c0 08 00 15 79 8d 78 95 e2 02 13 91 50 18	y.. x.....P..
0030	40 1e 3c 7d 00 00 55 53 45 52 20 70 69 65 72 72	@.<}>..US ER pierr
0040	65 0d 0a	e..

- Quel est le nom de l'utilisateur ?

Capture 9

```

> Destination: PcsCompu_67:68:fe (08:00:27:67:68:fe)
> Source: PcsCompu_b1:a1:6c (08:00:27:b1:a1:6c)
  Type: IPv4 (0x0800)
> Internet Protocol Version 4, Src: 192.168.2.3, Dst: 192.168.2.1
> Transmission Control Protocol, Src Port: 49167, Dst Port: 21, Seq: 65, Ack: 177, Len: 22
✓ File Transfer Protocol (FTP)
  RETR /Secret/mdp.txt\r\n
    Request command: RETR
    Request arg: /Secret/mdp.txt
    [Current working directory: ]

```

0000	08 00 27 67 68 fe 08 00 27 b1 a1 6c 08 00 45 00	.. 'gh... '...l...E.
0010	00 3e 00 92 40 00 80 06 74 d3 c0 a8 02 03 c0 a8	.>...@... t.....
0020	02 01 c0 0f 00 15 fe 55 83 9c be c5 9c a1 50 18	UP.
0030	3f fd 22 03 00 00 52 45 54 52 20 2f 53 65 63 72	?...RE TR /Secr
0040	65 74 2f 6d 64 70 2e 74 78 74 0d 0a	et/mdp.t xt..

- Dans quel répertoire se situe-t-on ?

Capture 10

```

FTP Data (22 bytes data)
[Setup frame: 32]
[Setup method: PASV]
[Command: SIZE /Secret/mdp.txt]
Command frame: 36
[Current working directory: ]
✓ Line-based text data (3 lines)
password\r\n
azerty\r\n
toto

```

0000	08 00 27 b1 a1 6c 08 00 27 67 68 fe 08 00 45 00	.. 'gh... '...l...E.
0010	00 3e 10 db 40 00 80 06 00 00 c0 a8 02 01 c0 a8	.>...@.....
0020	02 03 c5 66 c0 10 b1 7f f7 b7 a0 a0 d7 25 50 18	...f... ..%P.
0030	08 05 85 85 00 00 70 61 73 73 77 6f 72 64 0d 0a	pa ssword..
0040	61 7a 65 72 74 79 0d 0a 74 6f 74 6f	azerty... toto

- Quel est le nom du fichier
- Quel est son contenu

Capture 11

144	58.817616	60	192.168.2.3	192.168.2.1	SMTP	C: mail f
148	59.393688	60	192.168.2.3	192.168.2.1	SMTP	C: mail fro
150	59.665645	60	192.168.2.3	192.168.2.1	SMTP	C: mail from
156	63.881620	60	192.168.2.3	192.168.2.1	SMTP	C: mail from:
158	65.665684	60	192.168.2.3	192.168.2.1	SMTP	C: mail from:
160	68.153606	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: s
164	68.641619	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: ser
166	69.217723	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serv
170	69.953676	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: servic
174	70.393631	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: servicec
176	70.817663	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: servicecl
180	71.305765	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclie
184	71.713647	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient
186	72.577710	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@
190	73.609671	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@go
194	74.073726	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@goog
199	74.593679	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@google
201	74.937671	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@google.
205	75.577661	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@google.co
207	75.825667	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@google.com
209	76.961599	60	192.168.2.3	192.168.2.1	SMTP	C: mail from: serviceclient@google.com

- Quel est le protocole utilisé ?
- D'où provient le message ?
- Avec quel applicatif a été créé le message ?

Capture 12

```

Domain Name System (response)
  Transaction ID: 0xfc52
  > Flags: 0x8580 Standard query response, No error
  Questions: 1
  Answer RRs: 1
  Authority RRs: 0
  Additional RRs: 0
  ✓ Queries
    > smtp.test.lan: type A, class IN
  ✓ Answers
    > smtp.test.lan: type A, class IN, addr 192.168.2.1

```

- De quel protocole s'agit-il ?
- Quelle est la demande du client ?
- Quelle est la réponse du serveur ?

Capture 13

```

08 00 27 96 18 98 08 00 27 67 68 fe 08 00 45 00 ..'.....'gh...E.
00 54 58 d7 00 00 80 01 00 00 c0 a8 02 01 c0 a8 .TX.....
02 02 00 00 8e e1 02 d2 00 04 ee a9 52 62 40 39 .....Rb@9
02 00 08 09 0a 0b 0c 0d 0e 0f 10 11 12 13 14 15 .....
16 17 18 19 1a 1b 1c 1d 1e 1f 20 21 22 23 24 25 .....! "$%
26 27 28 29 2a 2b 2c 2d 2e 2f 30 31 32 33 34 35 &'()*+,-./012345
36 37 67

```

```

08 00 27 67 68 fe 08 00 27 b1 a1 6c 08 00 45 00 ..'gh...'.1..E.
00 3c 02 28 00 00 80 01 b3 44 c0 a8 02 03 c0 a8 .<.(.....D.....
02 01 08 00 4d 55 00 01 00 06 61 62 63 64 65 66 ....MU...abcdef
67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76 ghijklmn opqrstuv
77 61 62 63 64 65 66 67 68 69 wabcdefgh hi

```