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Emotet Stops Using 0.0.0.0 in Spambot Traffic

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433
Posts
ISC
Handler
Jan
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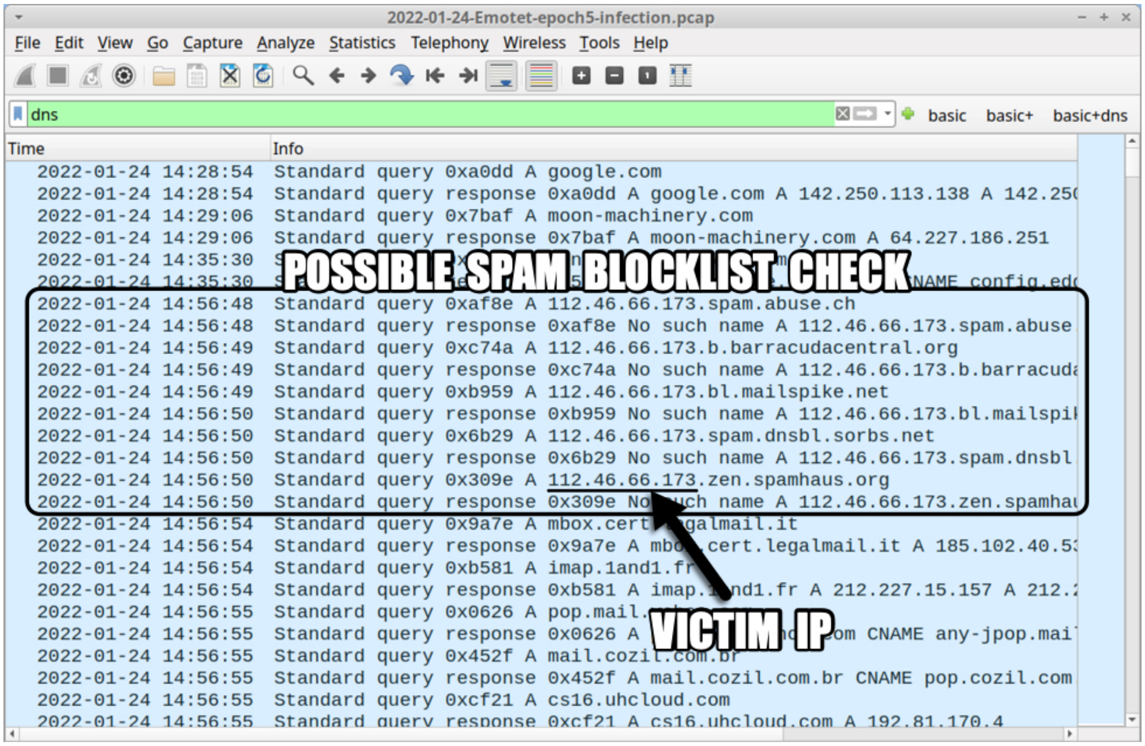
Introduction

Last week, I wrote a diary about Emotet using ***0.0.0.0*** in its spambot traffic instead of the actual IP address of the infected Windows host (link).

Shortly after that diary, Emotet changed from using ***0.0.0.0*** to using the victim's IP address, but with the octet values listed in reverse order.

Details

During a recent Emotet infection on Tuesday 2022-01-24, my infected Windows host was using ***173.66.46.112*** as its source IP. Note that my source IP has been edited for this diary to sanitize/disguise the actual IP address. See the image below for DNS traffic representing a possible spam blocklist check by my infected Windows host. In other malware families like Trickbot, the octet order is reversed. But order is not reversed for this Emotet infection.


2022-01-24-Emotet-epoch5-infection.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
dns
basic
basic+
basic+dns

POSSIBLE SPAM BLOCKLIST CHECK

VICTIM IP

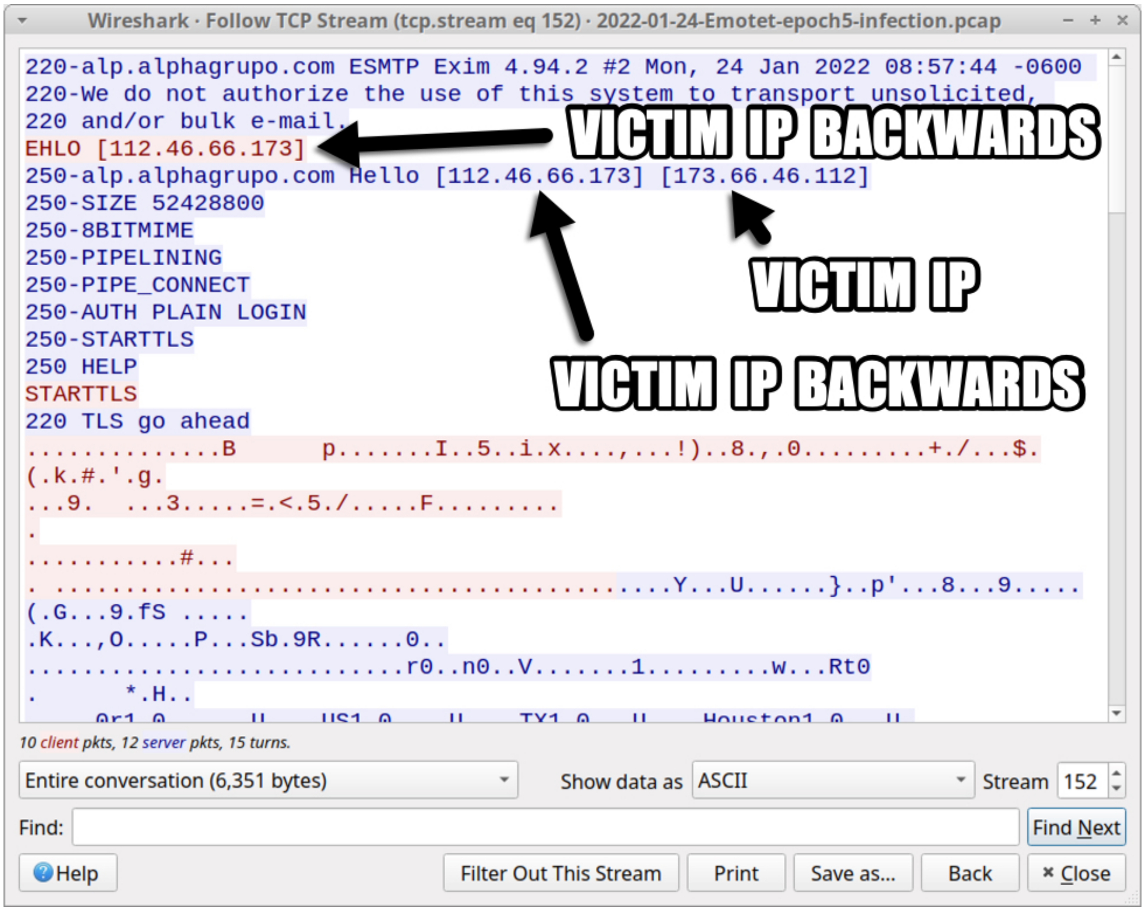
```
Time                 Info
  2022-01-24 14:28:54  Standard query 0xa0dd A google.com
  2022-01-24 14:28:54  Standard query response 0xa0dd A google.com A 142.250.113.138 A 142.250
  2022-01-24 14:29:06  Standard query 0x7baf A moon-machinery.com
  2022-01-24 14:29:06  Standard query response 0x7baf A moon-machinery.com A 64.227.186.251
  2022-01-24 14:35:30  S
  2022-01-24 14:35:30  S                                                NAME config.edc
  2022-01-24 14:56:48  Standard query 0xaf8e A 112.46.66.173.spam.abuse.ch
  2022-01-24 14:56:48  Standard query response 0xaf8e No such name A 112.46.66.173.spam.abuse
  2022-01-24 14:56:49  Standard query 0xc74a A 112.46.66.173.b.barracudacentral.org
  2022-01-24 14:56:49  Standard query response 0xc74a No such name A 112.46.66.173.b.barracuda
  2022-01-24 14:56:49  Standard query 0xb959 A 112.46.66.173.bl.mailspike.net
  2022-01-24 14:56:50  Standard query response 0xb959 No such name A 112.46.66.173.bl.mailspik
  2022-01-24 14:56:50  Standard query 0x6b29 A 112.46.66.173.spam.dnsbl.sorbs.net
  2022-01-24 14:56:50  Standard query response 0x6b29 No such name A 112.46.66.173.spam.dnsbl
  2022-01-24 14:56:50  Standard query 0x309e A 112.46.66.173.zen.spamhaus.org
  2022-01-24 14:56:50  Standard query response 0x309e No such name A 112.46.66.173.zen.spamhau
  2022-01-24 14:56:54  Standard query 0x9a7e A mbox.cert.legalmail.it
  2022-01-24 14:56:54  Standard query response 0x9a7e A mbox.cert.legalmail.it A 185.102.40.53
  2022-01-24 14:56:54  Standard query 0xb581 A imap.1and1.fr
  2022-01-24 14:56:54  Standard query response 0xb581 A imap.1and1.fr A 212.227.15.157 A 212.2
  2022-01-24 14:56:55  Standard query 0x0626 A pop.mail.
  2022-01-24 14:56:55  Standard query response 0x0626 A            om CNAME any-jpop.mai
  2022-01-24 14:56:55  Standard query 0x452f A mail.cozil.com.br
  2022-01-24 14:56:55  Standard query response 0x452f A mail.cozil.com.br CNAME pop.cozil.com
  2022-01-24 14:56:55  Standard query 0xcf21 A cs16.uhcloud.com
  2022-01-24 14:56:55  Standard query response 0xcf21 A cs16.uhcloud.com A 192.81.170.4
```

Shown above: Possibly spam blocklist check by my Emotet-infected host on Tuesday 2022-01-24.

As seen in the above image, the following DNS queries were made:

- ***173.66.46.112spam.abuse.ch***
- ***173.66.46.112.b.barracudacentral.org***
- ***173.66.46.112.bl.mailspike.net***
- ***173.66.46.112.spam.dnsbl.sorbs.net***
- ***173.66.46.112.zen.spamhaus.org***

Again, I normally see the octet order reversed with other malware like Trickbot. This reversed order also appeared during SMTP traffic with the command ***ELHO [112.46.66.173]*** as shown below.


Wireshark · Follow TCP Stream (tcp.stream eq 152) · 2022-01-24-Emotet-epoch5-infection.pcap
VICTIM IP BACKWARDS
VICTIM IP
VICTIM IP BACKWARDS

```
220-alp.alphagrupo.com ESMTP Exim 4.94.2 #2 Mon, 24 Jan 2022 08:57:44 -0600
220-We do not authorize the use of this system to transport unsolicited,
220 and/or bulk e-mail.
EHLO [112.46.66.173]
250-alp.alphagrupo.com Hello [112.46.66.173] [173.66.46.112]
250-SIZE 52428800
250-8BITMIME
250-PIPELINING
250-PIPE_CONNECT
250-AUTH PLAIN LOGIN
250-STARTTLS
250 HELP
STARTTLS
220 TLS go ahead
..............B      p.......I..5..i.x....,...!)..8.,.0.........+./...$.
(.k.#.'.g.
...9.  ...3.....=.<.5./.....F.........
.
..........#...
. ........................................Y...U......}..p'...8...9.....
(.G...9.fS .....
.K...,O.....P...Sb.9R......0..
...........................r0..n0..V.......1.........w...Rt0
.       *.H..
     0r1.0      U    US1.0    U     TX1.0   U      Houston1.0   U
```

10 client pkts, 12 server pkts, 15 turns.

Entire conversation (6,351 bytes) Show data as ASCII Stream 152

Find: Find Next

Help Filter Out This Stream Print Save as… Back × Close

Shown above: Victim IP address in Emotet spambot traffic on Tuesday 2022-01-24.

Twitter discussion for last week's diary indicates Emotet developers may have broken something in the spambot module to produce the previous ***0.0.0.0*** traffic. I'm not sure if this new traffic--the reversed order of the victim's IP address--is intentional or not.

Final words

You can find up-to-date indicators for Emotet malware samples, URLs, and C2 IP addresses at:

- https://urlhaus.abuse.ch/browse/tag/emotet/
- https://feodotracker.abuse.ch/browse/emotet/
- https://bazaar.abuse.ch/browse/tag/Emotet/
- https://threatfox.abuse.ch/browse/malware/win.emotet/

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