

Homework Part 1B

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Files submitted: Secret.py, Difference.py,
ChatGPT\Secret.py, ChatGPT\Difference.py

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1 Part 1B - Analyzing Pcap files

1.1 Part 1: Finding Secrets (*Secret.py*)

There were 3 secrets in total labeled secret1, secret2 and secret 3. The table below displays the 3 requests sent to the server containing the secrets within the http headers.

Table 1: Packet requests

Packet Number	Message
4	secret=secret1
18	secret: secret2
29	"secret"."secret3"

1.2 Part 2: Differentiating ass1_2.pcap and ass1_3.pcap (*Difference.py*)

Both of the files *ass1_2.pcap* and *ass1_3.pcap* display a series of ping and pong requests running through a router that are all dropped due to their Time-to-live being exceeded. Aside from the fact that the source and destination IP addresses are different, there are a few smaller subtle differences. We can tell whether the request is a ping or pong by checking if the last 24 bytes of the data were all zeros. By doing this, we can see that in total we routed 20 pings in *ass1_2.pcap* and we routed 18 pings in *ass1_3.pcap* (both routed 12 pongs). In *ass1_3.pcap* we have an extra ping at packet number 9 but then at the end of *ass1_2.pcap* we have 3 extra pings than *ass1_2.pcap*. The IP addresses and packet numbers are displayed in the table below for each of the pcap files.

1.3 Part 5: ChatGPT Implementation (*ChatGPT\Secret.py, ChatGPT\Difference.py*)

Secret.py: <https://chat.openai.com/share/0f019443-fc51-42ec-b098-3088586e2db9>

Difference.py: <https://chat.openai.com/share/436110d5-751f-4cfa-9aa0-ba3615248e8f>

Table 2: IP Addresses

assl_2.pcap	assl_3.pcap
1, 192.168.80.223, 192.168.80.84	1, 10.0.0.1, 10.0.0.252
2, 192.168.80.223, 192.168.80.84	2, 10.0.0.1, 10.0.0.252
3, 192.168.80.223, 192.168.80.84	3, 10.0.0.1, 10.0.0.252
4, 10.6.102.254, 192.168.80.84	4, 96.120.14.125, 10.0.0.252
5, 10.6.102.254, 192.168.80.84	5, 96.120.14.125, 10.0.0.252
6, 10.5.102.254, 192.168.80.84	6, 96.120.14.125, 10.0.0.252
7, 10.176.253.172, 192.168.80.84	7, 96.110.222.141, 10.0.0.252
8, 10.176.253.172, 192.168.80.84	8, 96.110.222.141, 10.0.0.252
9, 10.166.72.77, 192.168.80.84	9, 96.110.222.141, 10.0.0.252
10, 10.166.72.77, 192.168.80.84	10, 68.85.120.246, 10.0.0.252
11, 10.166.72.77, 192.168.80.84	11, 68.85.120.246, 10.0.0.252
12, 10.166.72.82, 192.168.80.84	12, 68.85.120.246, 10.0.0.252
13, 10.166.72.82, 192.168.80.84	13, 96.110.45.237, 10.0.0.252
14, 10.166.72.82, 192.168.80.84	14, 96.110.45.237, 10.0.0.252
15, 10.177.13.84, 192.168.80.84	15, 96.110.45.225, 10.0.0.252
16, 10.177.13.84, 192.168.80.84	16, 96.110.33.10, 10.0.0.252
17, 10.177.13.84, 192.168.80.84	17, 96.110.33.10, 10.0.0.252
18, 10.166.112.1, 192.168.80.84	18, 96.110.33.2, 10.0.0.252
19, 10.166.112.1, 192.168.80.84	19, 50.242.151.138, 10.0.0.252
20, 10.166.112.1, 192.168.80.84	20, 50.242.151.138, 10.0.0.252
21, 152.195.84.214, 192.168.80.84	21, 50.242.151.138, 10.0.0.252
22, 152.195.84.214, 192.168.80.84	22, 152.195.77.129, 10.0.0.252
23, 152.195.84.214, 192.168.80.84	23, 152.195.77.129, 10.0.0.252
24, 152.195.84.139, 192.168.80.84	24, 152.195.77.129, 10.0.0.252
25, 152.195.84.141, 192.168.80.84	25, 93.184.216.34, 10.0.0.252
26, 152.195.84.141, 192.168.80.84	26, 93.184.216.34, 10.0.0.252
27, 93.184.216.34, 192.168.80.84	27, 93.184.216.34, 10.0.0.252
28, 93.184.216.34, 192.168.80.84	28, 93.184.216.34, 10.0.0.252
29, 93.184.216.34, 192.168.80.84	29, 93.184.216.34, 10.0.0.252
30, 93.184.216.34, 192.168.80.84	30, 93.184.216.34, 10.0.0.252
31, 93.184.216.34, 192.168.80.84	
32, 93.184.216.34, 192.168.80.84	