

CSI Cybersecurity Task

Problem 1: Wireshark Capture

While sitting in a coffee shop, I captured a Wireshark trace of the network traffic. There seems to be some hidden data in the air. Can you retrieve the concealed information?

Solution

- To analyze the packet capture I used an online tool <https://apackets.com/>.
- Upon Inspection there was a HTTP requests for an image.
- There was also a FTP authentication.
- The Image contained the flag

The flag is:
{dolphin}

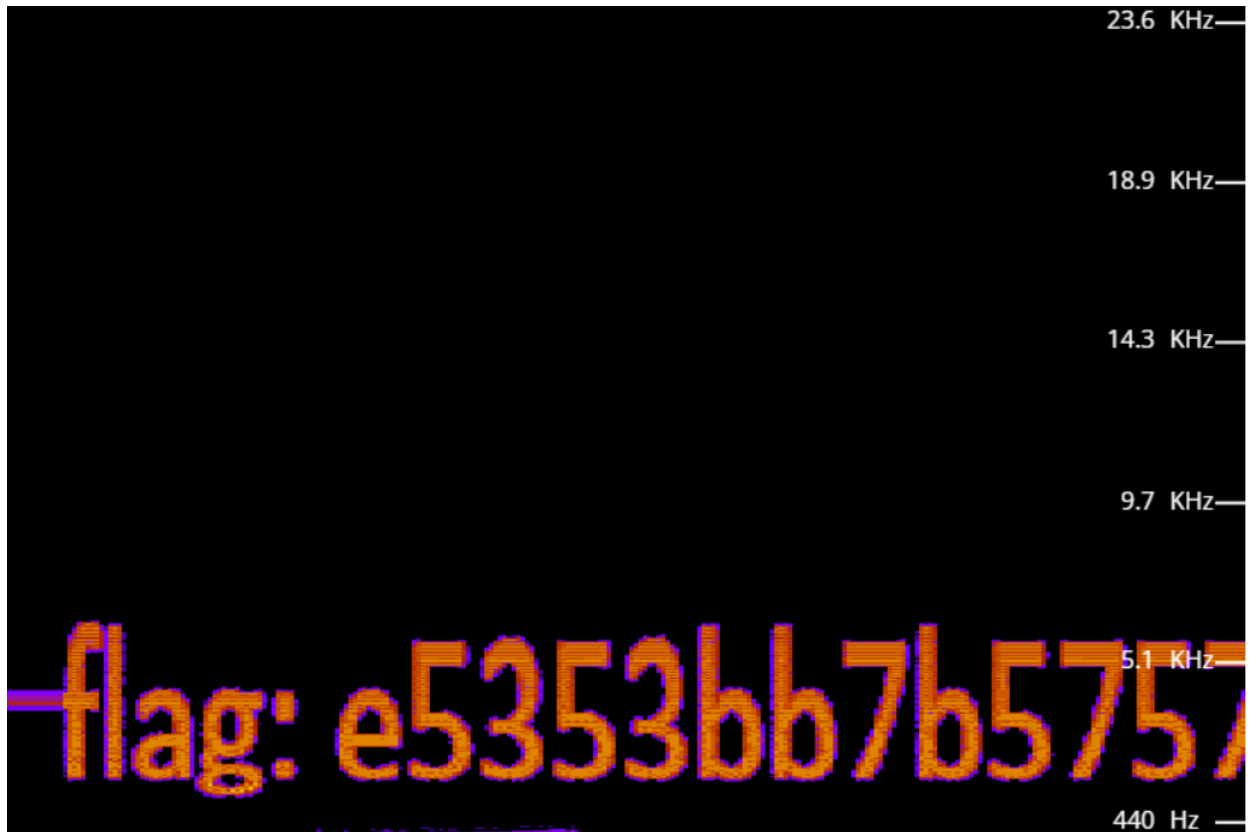
- The FTP Credentials were
 - Username: 0ffs3cUs3r3
 - Password: very_secret_password

Problem 2: Sound.wav File

Sound files don't just contain sounds.

Solution

- Used an Spectrum Analyzer tool online <https://academo.org/demos/spectrum-analyzer/>
- When the audio was played it used different frequencies to encode text in it.



- The Flag is `e5353bb7b57578bd4da1c898a8e2d767`

Problem 3: encrypted.txt

Blank space? But is it really?

Solution

- Upon reading the file in command line using `cat` command i observed `\t` characters in the file.
- Upon closer inspection the tabs had spaces in between them in some pattern.
- Then i wrote a small python script to replace all tabs with 1 and all spaces with 0.
- I also split the final binary output by 8 Bits each.
- Below is the code used for the same.

```
with open('encrypted.txt','r') as file:
    data = file.read()
data = data.replace("\t","1")
data = data.replace(" ","0")
for i in range(0,len(data),8):
    print(data[i:i+8])
```

- The Output of the code was:

```
01100011 01110011 01101001 01111011 01101110 01101111 01110100 01011111 01100001
01101100 01101100 01011111 01110011 01110000 01100001 01100011 01100101 01110011
01011111 01100001 01110010 01100101 01011111 01100010 01101111 01110010 01101110
01011111 01110100 01101000 01100101 01011111 01110011 01100001 01101101 01100101
01111101
```

- After this I ran the output through a binary to text converter which gave me the flag

```
csi{not_all_spaces_are_born_the_same}
```

Flags

Problem	Flag
Problem 1: Wireshark Capture	{dolphin}
Problem 2: Sound.wav File	e5353bb7b57578bd4da1c898a8e2d767
Problem 3: encrypted.txt	csi{not_all_spaces_are_born_the_same}