



Penetration Testing Report

For

“Super Secret Code (But Old)”

S.NO.	Title	#
1.	Challenge Category	Network Security
2.	Challenge Related Files	N/A
3.	File Link / Target IP	N/A

PROCEDURE

1. Notice that when dst of packet is == 10.40.0.23
2. Extra binary data is there in packet
3. Extract all such data in order
4. Morse decode That either by hand or by script At will give the flag.

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```
solve.py — network_easy/solution x solve.py — network_hard/Solution •
1 from scapy.all import *
2 from scapy.layers.inet import IP, ICMP
3 cap = rdpcap('test.pcapng')
4 results = b''
5 MORSE_CODE_DICT = {
6     'A': '.-.', 'B': '-...',
7     'C': '-.-.', 'D': '-..', 'E': '.',
8     'F': '..-.', 'G': '--.', 'H': '....',
9     'I': '..-', 'J': '.---', 'K': '-.-',
10    'L': '-.-.', 'M': '---', 'N': '-.',
11    'O': '---', 'P': '-.-.', 'Q': '--.-',
12    'R': '.-.', 'S': '...', 'T': '-.',
13    'U': '..-', 'V': '...-', 'W': '-.---',
14    'X': '-.-.', 'Y': '---.', 'Z': '---.',
15    '1': '.----', '2': '..---', '3': '...--',
16    '4': '....-', '5': '.....', '6': '-....',
17    '7': '-...-', '8': '--...', '9': '---..',
18    '0': '-----', ' ': ' ',
19    '?': '.....', '/': '-----',
20    '(': '-----', ')': '-----'
21 }
22 def decode_string(s):
23     s = s.replace('0', '.').replace('1', '-')
24     blocks = filter(lambda x: x != '', s.split(' '))
25     decode_dict = {v: k for k, v in MORSE_CODE_DICT.items()}
26     return list(decode_dict.get(block, '?') for block in blocks)
27 def decode(data):
28     data = data.decode()
29     decoded = ''.join(decode_string(data)).replace('.', ' ')
30     return decoded
31 for pkt in cap:
32     if ICMP in pkt:
33         dst = pkt[IP].dst
34         if dst == '10.40.0.23':
35             raw_data = pkt[Raw]
36             # print(raw_data)
37             results += bytes(raw_data)
38 print(f'Got flag data: {decode(results)}')
39
```

Flags:

S.No.	Flag - No.	Flag
1.	Flag 1	HE{SO-MOORSE-WAS-EMBEDED-IN-PCAP}