

POGTEAM

FEBRUARY 15, 2017 BY **RAFAEL_P**

AlexCTF 2017 – CR1: Ultracoded

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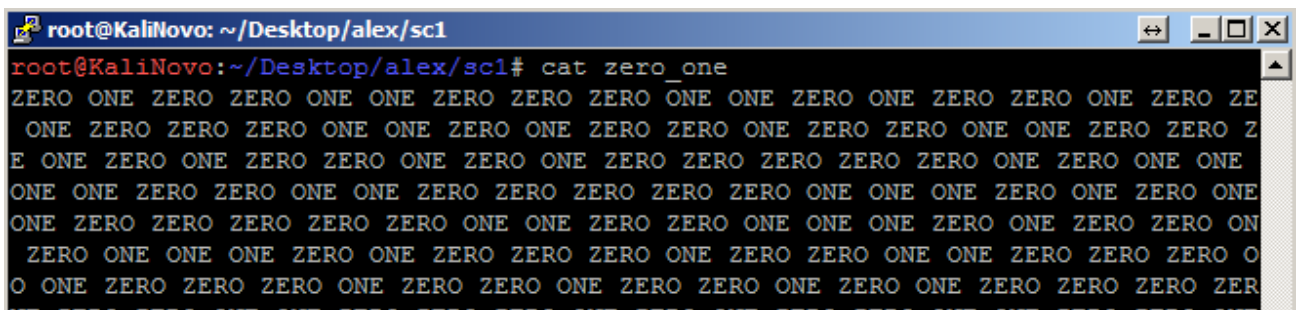
Description

Fady didn't understand well the difference between encryption and encoding, so instead of encrypting some secret message to pass to his friend, he encoded it!

Hint: Fady's encoding doesn't handle any special character

Solution

The challenge gave us a file full of the words ZERO and ONE.



```
root@KaliNovo: ~/Desktop/alex/sc1
root@KaliNovo:~/Desktop/alex/sc1# cat zero_one
ZERO ONE ZERO ZERO ONE ONE ZERO ZERO ZERO ONE ONE ZERO ONE ZERO ZERO ONE ZERO ZE
ONE ZERO ZERO ZERO ONE ONE ZERO ONE ZERO ZERO ONE ZERO ZERO ONE ONE ZERO ZERO Z
E ONE ZERO ONE ZERO ZERO ONE ZERO ONE ZERO ZERO ZERO ZERO ZERO ONE ZERO ONE ONE
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ZERO ONE ONE ONE ZERO ONE ZERO ZERO ZERO ONE ZERO ZERO ONE ONE ZERO ZERO ZERO O
O ONE ZERO ZERO ZERO ONE ZERO ZERO ONE ZERO ONE ZERO ONE ZERO ONE ZERO ZERO ZER
NE ZERO ZERO ONE ONE ZERO ZERO ZERO ONE ZERO ONE ZERO ZERO ONE ONE ZERO ZERO ONE
```

Our first instinct was to replace the words for the numbers 0 and 1, respectively. After that, at the first sight, we spotted a base64 string.

Decoding the base64, it showed a nice morse code string, using [this](<http://www.unit-conversion.info/texttools/morse-code/>) website, we got the following text:

alexctfth15o1so5up3ro5ecr3totxt

After put the flag in the correct format: **ALEXCTF{TH15_1S_5UP3R_5ECR3T_TXT}**

```

1. import binascii
2. import base64
3.
4. with open('zero_one') as f:
5.     r = f.read().split()
6.
7.     print '[+] Bin: ' +
''.join(r).replace('ZERO','0').replace('ONE','1')
8.     print '[+] B64: ' + str(binascii.unhexlify('%x' %
(int(''.join(r).replace('ZERO','0').replace('ONE','1'),2))))
9.     print '[+] B64 Decode: ' +
base64.b64decode(binascii.unhexlify('%x' %
(int(''.join(r).replace('ZERO','0').replace('ONE','1'),2))))

```

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 **2017, WRITEUPS**