

2024 HACKTHEON SEJONG

팀 이름
Team Name

IHHH

문제 이름
Question

Dycrypt Message 1

문제 풀이과정 작성 (캡처화면 필수) / Write-up Details (The screenshot is mandatory)

코드를 보니

$$((((a^c)^d) < 0x10)^c) < 8 / (i + 0xB)) - 0x11 = i$$
$$((((a^c)^d) < 0x10)^c) < 8 = (i + 0x11)(i + 0xB) \dots\dots$$

이런식으로 여러 연산이 필요하였다.

그래서 역연산으로 접근해 보려고 했는데 도저히 풀리지 않아서

가능할법한 문자열들을 2글자씩 끊어서(4Byte) 대입해 비교해 보아서 최종 문자열을 얻어내었다.

The screenshot shows a C++ program named `encrypt.cpp` and its execution results in a terminal window.

Source Code (encrypt.cpp):

```
1 unsigned long* encryption(unsigned long data[], unsigned long size)
2 {
3     unsigned int eax;
4     unsigned int edx;
5     unsigned int ecx;
6     unsigned int byte_address;
7
8     for (byte_address = 0; byte_address < size; byte_address++)
9     {
10        eax = data[byte_address];
11        ecx = eax + 0x11;
12        eax = eax + 0xB;
13        ecx = eax * ecx;
14        edx = ecx;
15        edx = edx >> 8;
16        eax = edx;
17        eax = eax ^ ecx;
18        eax = eax >> 0x10;
19        eax = eax ^ edx;
20        eax = eax ^ ecx;
21        data[byte_address] = eax;
22    }
23    return data;
24 }
```

Terminal Output:

```
c:\Users\vkdnj\OneDrive\Desktop>encrypt Az
Encrypted data in hexadecimal format: 3a553169

c:\Users\vkdnj\OneDrive\Desktop>encrypt !!
Encrypted data in hexadecimal format: 4496ff7

c:\Users\vkdnj\OneDrive\Desktop>encrypt GODGPT!!!!!!
Encrypted data in hexadecimal format: 188d1f2f13cd5b601bd6047f4496ff74496ff74496ff7

c:\Users\vkdnj\OneDrive\Desktop>
```