

实验吧CTFreverse题目证明自己吧writeup

原创

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订阅专栏

题目地址: <http://ctf5.shiyanbar.com/crackme/>

先运行下

```
Can you Guess the Code: 1111111111  
  
https://blog.csdn.net/xiangshangbashaonian
```

发现输入错误就会闪退

没有加壳

载入IDA 搜索字符串

```
t || [s] .rdata:0... 0000000C C MessageBoxA  
t || [s] .rdata:0... 0000000B C user32.dll  
t || [s] .rdata:0... 0000000D C KERNEL32.dll  
t || [s] .data:00... 00000015 C You Don't Guess it~\n  
t || [s] .data:00... 00000025 C Good! The Key is your input o(^o^)o\n  
t || [s] .data:00... 00000019 C Can you Guess the Code:  
t || [s] .data:00... 00000006 C 粒家  
t || [s] .data:00... 00000006 C 粒家 https://blog.csdn.net/xiangshangbashaonian  
t || [s] .data:00... 00000006 C 潛珉
```

```

• .data:00407045 align 4
• .data:00407048 aGoodTheKeyIsYo db 'Good! The Key is your input o(^o^)o',0Ah_0
• .data:00407048 ; DATA XREF: _main+4R↑o
• .data:0040706D align 10h
• .data:00407070 aCanYouGuessThe db 'Can you Guess the Code: ',0
• .data:00407070 ; DATA XREF: _main+6↑o
• .data:00407089 align 4
• .data:0040708C dword_40708C dd 48195768h ; DATA XREF: sub_401060+3↑r
• .data:00407090 dword_407090 dd 78586E50h ; DATA XREF://sub_401060+8↑r/xiangshangbashaonian
• .data:00407094 dword_407094 dd E0106AE5h ; DATA XREF: sub_401060+30h

```

IDA View-A Pseudocode-B Pseudocode-A Strings window Hex View-1 Structures Enums

```

1 int __cdecl main(int argc, const char **argv, const char **envp)
2 {
3     int v4; // [esp+0h] [ebp-7D0h]
4
5     sub_4011BA(aCanYouGuessThe, v4);           // 获得输入
6     gets(&v4);                                // 我们的input经过函数sub_401060()的处理返回值为1 那就正确
7     if ( sub_401060(&v4) )                      // 正确
8         sub_4011BA(aGoodTheKeyIsYo, v4);
9     else
10        sub_4011BA(aYouDonTGuessIt, v4);
11    return 0;
12}

```

<https://blog.csdn.net/xiangshangbashaonian>

```

signed int __cdecl sub_401060(const char *input)

{
    unsigned int i; // edx
    unsigned int j; // edx
    int v3; // edx
    int v5; // [esp+Ch] [ebp-10h]
    int v6; // [esp+10h] [ebp-Ch]
    int v7; // [esp+14h] [ebp-8h]
    __int16 v8; // [esp+18h] [ebp-4h]
    char v9; // [esp+1Ah] [ebp-2h]

    v5 = dword_40708C;
    v6 = dword_407090;
    v8 = word_407098;
    v9 = byte_40709A;
    v7 = dword_407094;

    if ( strlen(input) == strlen(&v5) )          // 如果我们输入的长度=v5的长度
    {

```

```
i = 0;

if ( strlen(input) != 0 ) // 如果len(input) != 0 且i<len(input)

{

do

    input[i++] ^= 0x20u; // 与0x20u异或

    while ( i < strlen(input) );

}

j = 0;

if ( strlen(&v5) != 0 ) // 对v5进行-5

{

do

    *(&v5 + j++) -= 5;

    while ( j < strlen(&v5) ); // 那我们只需要倒过来操作 先-5 再与0x20异或即可得到flag

}

v3 = 0;

if ( strlen(&v5) == 0 )

    return 1;

while ( *(&v5 + v3 + input - &v5) == *(&v5 + v3) )

{

if ( ++v3 >= strlen(&v5) )

    return 1;

}

return 0;
}
```

The screenshot shows the PyCharm IDE interface. The top window displays the code for '证明自己吧.py':

```
1 v5 = [0x68, 0x57, 0x19, 0x48, 0x50, 0x6E, 0x58, 0x78, 0x54, 0x6A,
2     0x19, 0x58, 0x5E, 0x06]
3 flag =
4 for i in range(0, len(v5)):
5     v5[i] -= 5
6     v5[i] ^= 0x20
7     flag += chr(v5[i])
8 print(flag)
9
```

The bottom window shows the 'Run' tab with the output of the script:

Run: 证明自己吧 ×
C:\Users\...\PycharmProjects\test\Scripts\python.exe C:/Users/.../PycharmProjects/reverse/实验吧/证明自己吧.py
Cr4ckIsSoE4sy!
Process finished with exit code 0

得到flag: Cr4ckIsSoE4sy!