Intro Rev

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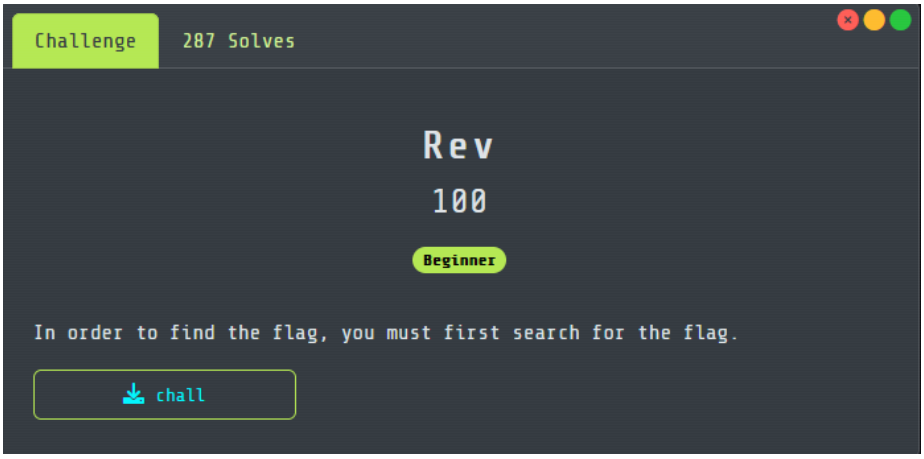


1 Abstract of challenge

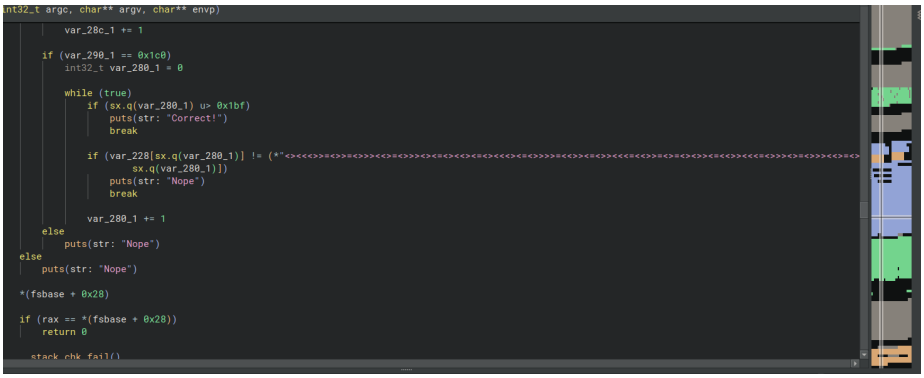
This challenge is part of the Intro category, which is a category of easy challenges that are a way for people who are new to CTFs to have an easy start into this type of competition. In this challenge, we are given a binary called chall, the functionality of which is completely unimportant.

1.1 Problem description

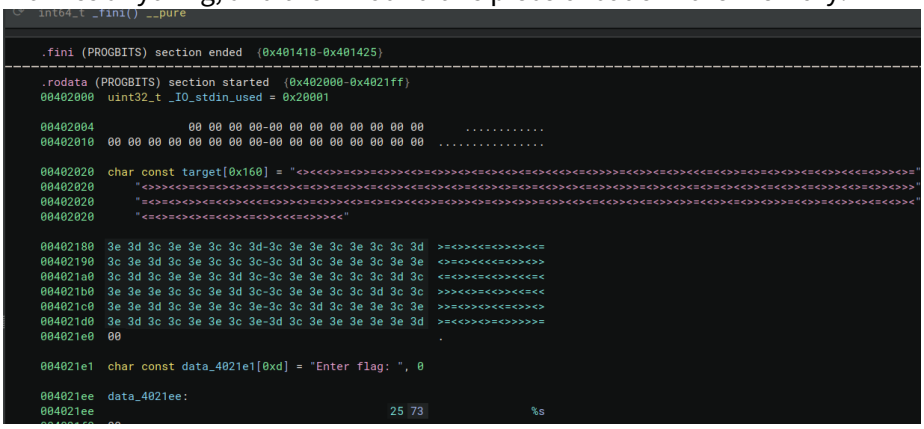
In order to find the flag, you must first search for the flag.

2 Solution

The first step I took to solving this problem was to open the binary with Binary Ninja in order to decypher the contents of it. After opening it, I found this suspicious string of code:



It seemed to be a sort of encoded message, which, in the context it was found in, seemed to be the string that would give a correct answer, AKA, the flag. I went looking throughout the whole binary, just to make sure that I didn't miss anything, and then I found this piece of code in the memory:



This is an extension to the encrypted string from before, that was not found in the if statement itself.

3 Decypher Code

In the end, I made the following script in order to decode the string.

solve.py > (function) def decode_sequence(seq: Any) -> int

```python
def decode_sequence(seq):
    low, high = 0, 255
    for ch in seq:
        mid = (low + high) // 2
        if ch == '=':
            return mid  # found the character
        elif ch == '<':
            high = mid - 1
        elif ch == '>':
            low = mid + 1
    raise ValueError("Invalid sequence!")

# Load the encoded string
with open("encoded.txt", "r") as f:
    data = f.read().strip()

flag = []
current = []
for c in data:
    current.append(c)
    if c == '=':  # end of one character's encoding
        flag.append(chr(decode_sequence(current)))
        current = []

print("Recovered flag:", "".join(flag))
```

After running the code, I get the flag:

```
lambda@LambdaFaux:~/Downloads$ /bin/python3 /home/lambda/Downloads/solve.py
Recovered flag: FortID{3a7_Y0ur_V3gg1e5_4nd_L3rn_Y0ur_Fund4m3n741_S3arch_Alg0r17hm5}
```