Reversing102 (Easy) - Rev

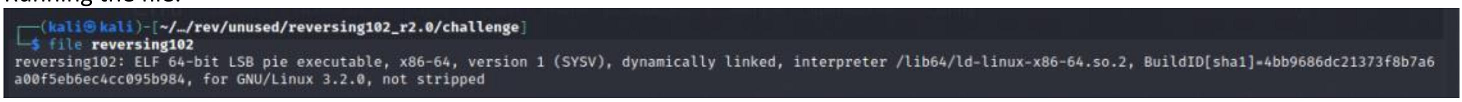
Sunday, June 11, 2023 12:47 AM

Description

"Uncover the hidden secrets of the binary underworld and decode the flag that lies within."

Solution

Running the file.



Running the binary.

Nothing pops out in ltrace either.

Ghidra.

Upon decompilation on ghidra, we see some variable initializations and a XOR operation being performed in a loop.

```
local_128[0] = 0xdede;
  local_128[1] = 0xded8;
  local_128[2] = 0xdedd;
  local_128[3] = 0xde9e;
  local_118 = 0xdedf;
  local_114 = 0xdede;
  local_110 = 0xde9e;
  local_10c = 0xdece;
  local_108 = 0xdedf;
  local_104 = 0xde9e;
  local_100 = 0xded9;
```

```
 local_1c = 0xb;
 for (local_c = 0; local_c < local_1c; local_c = local_c + 1) {
   local_128[local_c] = local_128[local_c] ^ 0xdead;
 }
```

Further ahead, there's our comparison for the secret key.

```
printf("Enter the secret key: ");
 __isoc99_scanf(&DAT_001021a5,local_88);
 sVar1 = strlen(local_88);
 if (sVar1 == 0xb) {
   for (local_10 = 0; local_10 < 0xb; local_10 = local_10 + 1) {
     if ((int)local_88[local_10] != local_128[local_10]) {
       printf("Access Denied! You\'re not allowed in here.");
     }
   }
```

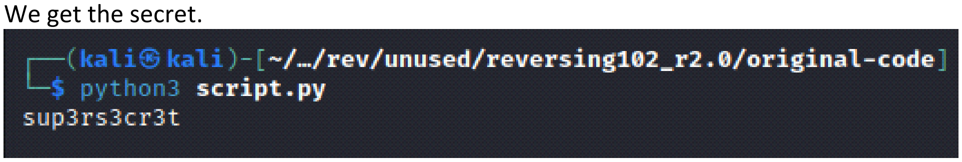
Notice that it checks each character of our input with secret key that is local_128.

To get the actual secret key, we can use the following script.

```
key = [0xdede,0xded8,0xdedd,0xde9e,0xdedf,0xdede,0xde9e,0xdece,0xdedf,0xde9e,0xded9]

for i in range(len(key)):
	print(chr(key[i] ^ 0xdead), end="")
```

We get the secret.



Enter the secret in the binary and you'll get the flag.

Flag: NCC{1ts_0nly_th3_b3ginning}