Test SHA-256

Localisation: `0040331B` **Fonction:** `?`
Type: Hash **Sévérité:** Moyenne

```
.text:00401F6F ; __unwind { // sub_474F60
.text:00401F6F                 lea     eax, [ebp+var_A]
.text:00401F72                 mov     [esp+8], eax    ; int
.text:00401F76                 mov     dword ptr [esp+4], offset aHelloWorld ; "Hello, World!"
.text:00401F7E                 mov     dword ptr [esp], offset dword_565030 ; int
.text:00401F85                 mov     [ebp+fctx.call_site], 2
.text:00401F8C                 call    sub_448120
.text:00401F91                 mov     dword ptr [esp], offset sub_4020A0 ; _onexit_t
.text:00401F98                 call    sub_409C20
.text:00401F9D                 lea     eax, [ebp+var_A+1]
.text:00401FA0                 mov     [esp+8], eax    ; int
.text:00401FA4                 mov     dword ptr [esp+4], offset aBea8e217036cb3 ; "bea8e217036cb3b738e207fe5d40266828bc196"...
.text:00401FAC                 mov     dword ptr [esp], offset dword_565034 ; int
.text:00401FB3                 mov     [ebp+fctx.call_site], 1
.text:00401FBA                 call    sub_448120
.text:00401FBF                 mov     dword ptr [esp], offset sub_401FF0 ; _onexit_t
.text:00401FC6                 call    sub_409C20
.text:00401FCB                 lea     eax, [ebp+fctx]
.text:00401FCE                 mov     [esp], eax      ; lpfctx
.text:00401FD1                 call    _Unwind_SjLj_Unregister
.text:00401FD6                 leave
.text:00401FD7                 retn
```

Analyse

Dans la fonction ci-dessus, le programme stocke la valeur

bea8e217036cb3b738e207fe5d40266828bc1969fd8538d533ea39f4e40ffc8f

qui semble être un digest (SHA-256) en `dword_565034`.

```
.text:00403770 loc_403770:
.text:00403770                 cmp     ecx, ecx
.text:00403772                 repe cmpsb
.text:00403774                 jnz     loc_403333
.text:0040377A                 mov     eax, [ebp+var_24]
.text:0040377D                 mov     edi, [eax-0Ch]
.text:00403780                 lea     edx, [eax-0Ch]
.text:00403783                 test    edi, edi
.text:00403785                 jnz     loc_403996
```

Analyse

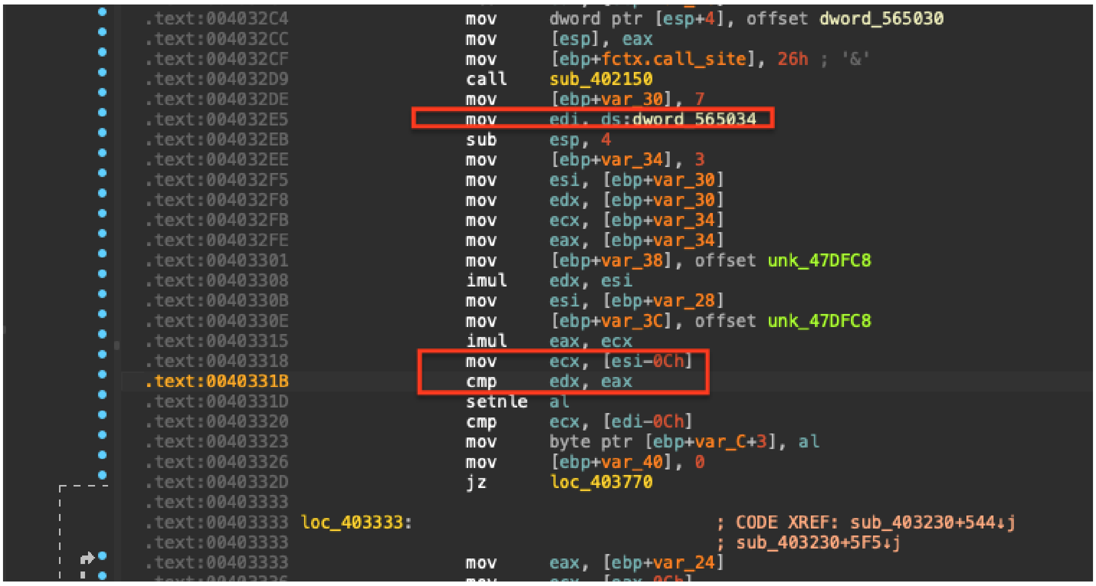
Ensuite, le programme compare le SHA-256 de l'entrée utilisateur avec la valeur de hash. Si les deux sont identiques, le programme saute à la fonction situé en `loc_403996`

```
loc_403996:
.text:00403996                  mov     esi, [edx+8]
.text:00403999                  test    esi, esi
.text:0040399B                  js      short loc_4039B5
.text:0040399D                  lea     eax, [ebp+var_24]
.text:004039A0                  mov     [esp], eax
.text:004039A3                  mov     [ebp+fctx.call_site], 25h ; '%'
.text:004039AD                  call    sub_445EE0
.text:004039B2                  mov     eax, [ebp+var_24]
.text:004039B5
.text:004039B5 loc_4039B5:
.text:004039B5                  movzx   eax, byte ptr [eax]
.text:004039B8                  mov     dword ptr [esp], offset Format ; "Byte 0: %02x\n"
.text:004039BF                  mov     [ebp+fctx.call_site], 25h ; '%'
.text:004039C9                  mov     [esp+4], eax
.text:004039CD                  call    printf
.text:004039D2                  jmp     loc_40378B
```

Analyse

La fonction `loc_4039B5` permet d'afficher le premier octet de l'entrée : le message de victoire.

Screenshot



```
.text:004032C4                 mov     dword ptr [esp+4], offset dword_565030
.text:004032CC                 mov     [esp], eax
.text:004032CF                 mov     [ebp+fctx.call_site], 26h ; '&'
.text:004032D9                 call    sub_402150
.text:004032DE                 mov     [ebp+var_30], 7
.text:004032E5                 mov     edi, ds:dword_565034
.text:004032EB                 sub     esp, 4
.text:004032EE                 mov     [ebp+var_34], 3
.text:004032F5                 mov     esi, [ebp+var_30]
.text:004032F8                 mov     edx, [ebp+var_30]
.text:004032FB                 mov     ecx, [ebp+var_34]
.text:004032FE                 mov     eax, [ebp+var_34]
.text:00403301                 mov     [ebp+var_38], offset unk_47DFC8
.text:00403308                 imul    edx, esi
.text:0040330B                 mov     esi, [ebp+var_28]
.text:0040330E                 mov     [ebp+var_3C], offset unk_47DFC8
.text:00403315                 imul    eax, ecx
.text:00403318                 mov     ecx, [esi-0Ch]
.text:0040331B                 cmp     edx, eax
.text:0040331D                 setnle  al
.text:00403320                 cmp     ecx, [edi-0Ch]
.text:00403323                 mov     byte ptr [ebp+var_C+3], al
.text:00403326                 mov     [ebp+var_40], 0
.text:0040332D                 jz      loc_403770
.text:00403333
.text:00403333 loc_403333:                             ; CODE XREF: sub_403230+544↓j
.text:00403333                                         ; sub_403230+5F5↓j
.text:00403333                 mov     eax, [ebp+var_24]
```