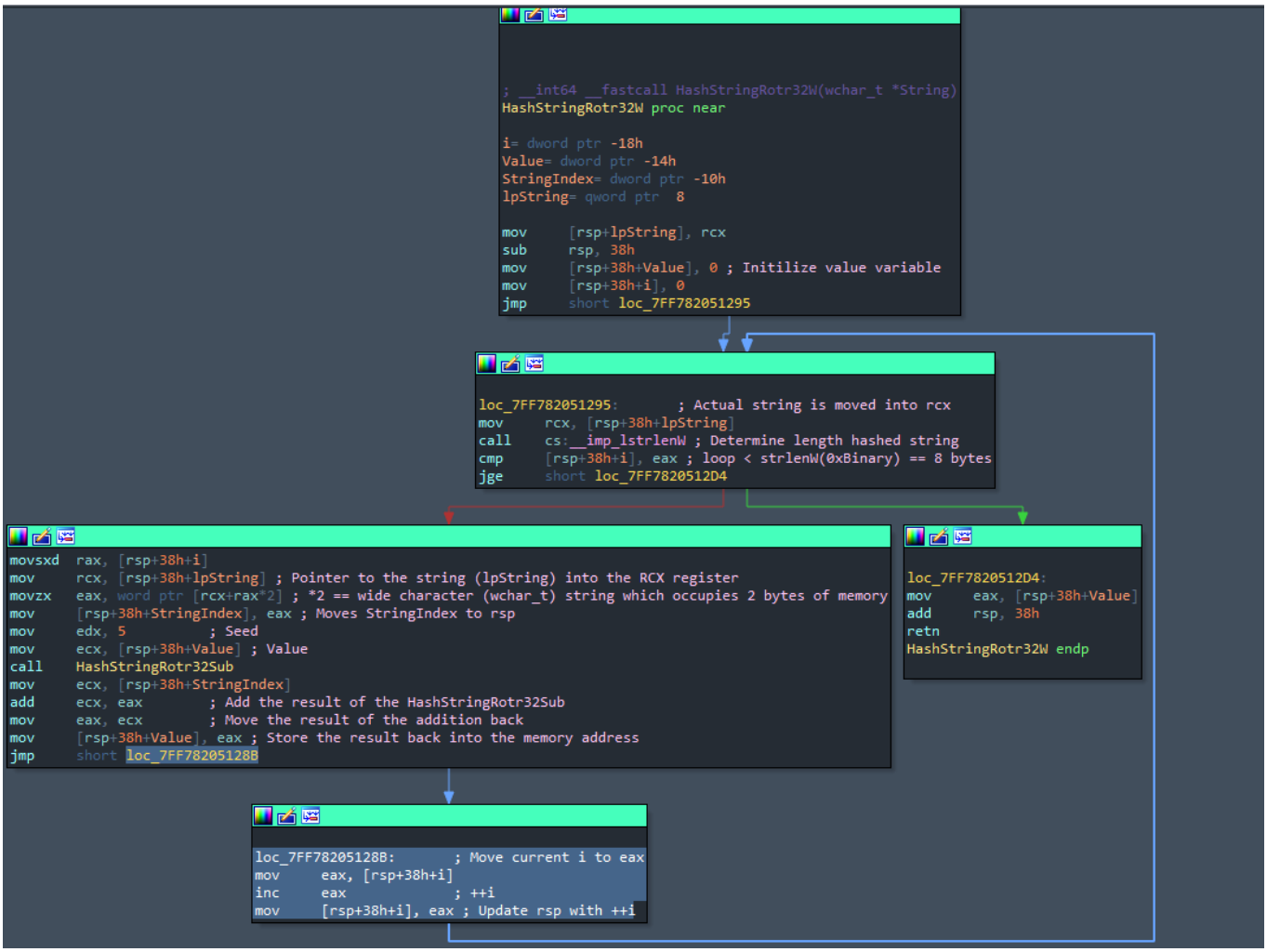
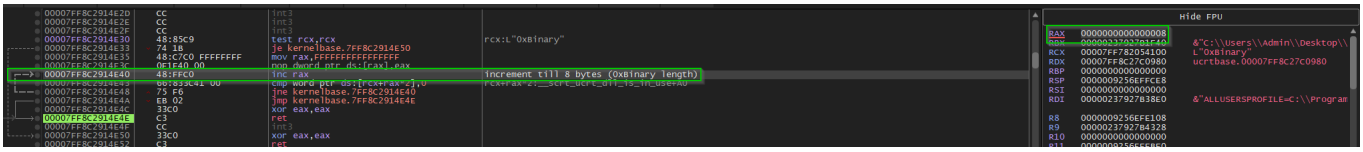
ROTR 32 Hashing Algorithm

ROTR 32 Subroutine

I explained in great detail how this subroutine works.



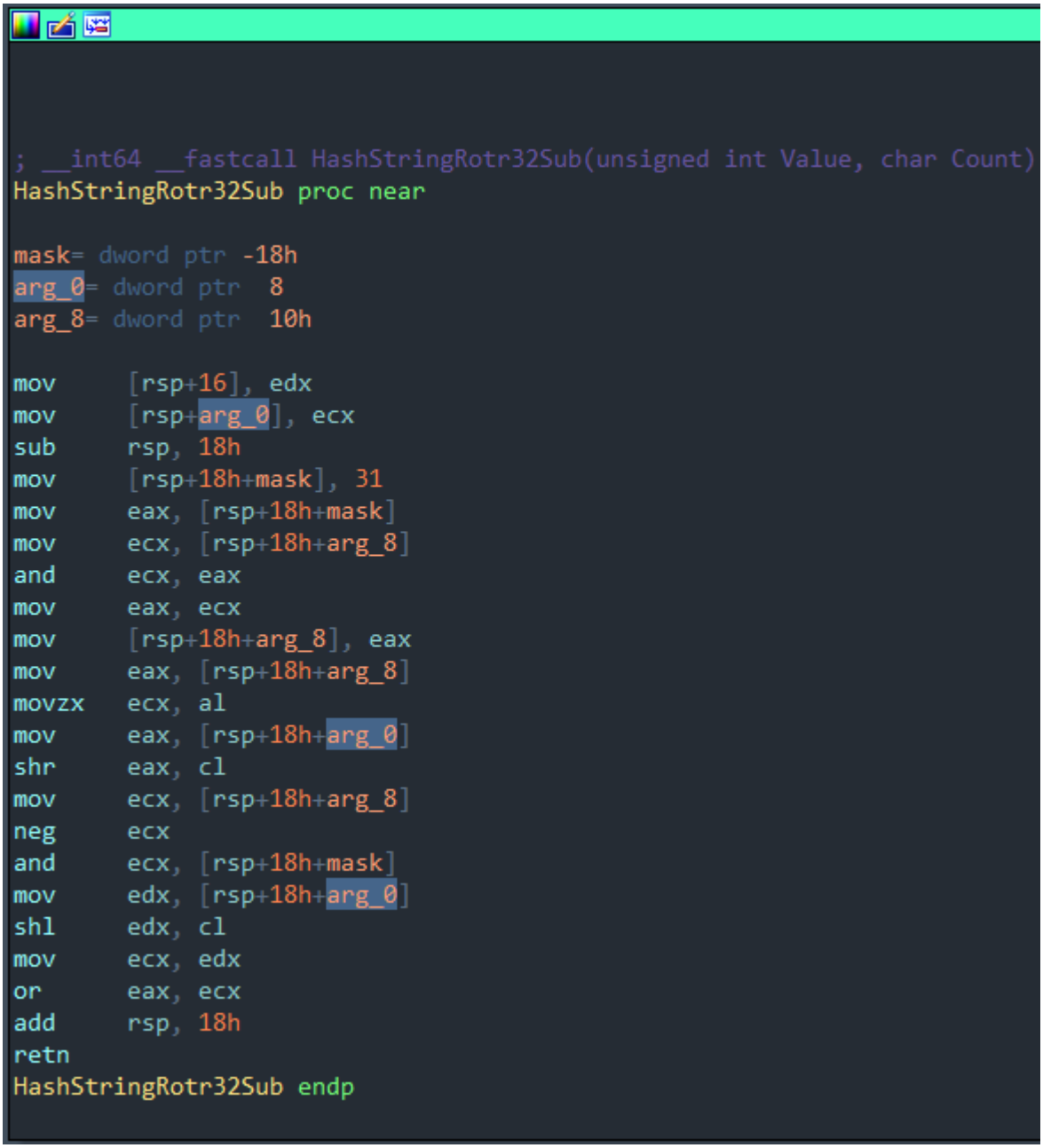


HashStringRotr32Sub

This subroutine performs a rotation operation on the input `Value` by `Count` positions to the right while ensuring that the count stays within the valid bit range.

This code block rotates the bits of `Value` to the right by `Count` positions (`Value >> Count`). It then rotates the bits of `Value` to the left by the complement of `Count` (effectively rotating left by

`32 - Count` positions) and masks the result with `Mask` to ensure it stays within the valid bit range. Finally, it combines the two results using bitwise OR (`|`).



```
; __int64 __fastcall HashStringRotr32Sub(unsigned int Value, char Count)
HashStringRotr32Sub proc near

mask= dword ptr -18h
arg_0= dword ptr  8
arg_8= dword ptr  10h

mov     [rsp+16], edx
mov     [rsp+arg_0], ecx
sub     rsp, 18h
mov     [rsp+18h+mask], 31
mov     eax, [rsp+18h+mask]
mov     ecx, [rsp+18h+arg_8]
and     ecx, eax
mov     eax, ecx
mov     [rsp+18h+arg_8], eax
mov     eax, [rsp+18h+arg_8]
movzx   ecx, al
mov     eax, [rsp+18h+arg_0]
shr     eax, cl
mov     ecx, [rsp+18h+arg_8]
neg     ecx
and     ecx, [rsp+18h+mask]
mov     edx, [rsp+18h+arg_0]
shl     edx, cl
mov     ecx, edx
or      eax, ecx
add     rsp, 18h
retn
HashStringRotr32Sub endp
```