

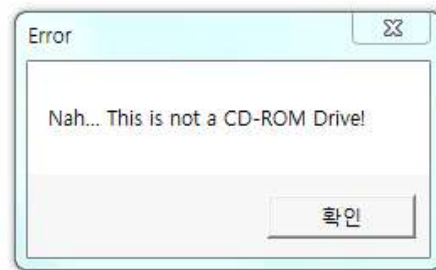
CodeEngn

Solving problems

basic levell



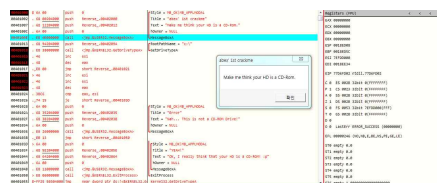
Nick : Cy__h
Email : h6lcker@gmail.com



프로그램을 실행해보면 CD-ROM을 넣으라고 하고 Nah... This is not a CD-ROM Drive! 가 나옵니다.

추측을 해보자면 어떠한 조건을 충족시켜야 error 메시지를 출력하지를 않고 성공 메시지를 호출할것 같습니다.

일단 첫 번째 API 가 호출됩니다.



00401000	64 00	push	0	Style = MB_OK MB_APPLMODAL	Registers (FPU)
00401002	68 00204000	push	Reverse_00402000	Title = "abex 1st crackme"	EAX 00000003
00401007	68 12204000	push	Reverse_00402012	Text = "Make me think your HD is a CD-Rom."	ECX 770830ED ntdll.770830ED
0040100C	64 00	push	0	hOwner = NULL	EDX 00264000
0040100E	E8 4E000000	call	<jmp.0USER32.MessageBoxA>	MessageBoxA	EBX 7EFD0000
00401013	68 94204000	push	Reverse_00402094	RootPathName = "c:\\"	ESP 0010FF0C
00401015	E8 38000000	call	<jmp.&KERNEL32.GetDriveTypeA>	GetDriveTypeA	EBP 0010FF94
00401018	46	inc	esi	esi +1	ESI 00000000
0040101E	48	dec	eax	eax -1	EDI 00000000
0040101F	E8 00	jmp	short Reverse_00401021		EIP 0040101D Reverse_0040101D
00401021	46	inc	esi	esi +1	C 0 ES 002B 32bit 0(FFFFFFFF)
00401023	46	inc	esi	esi +1	P 1 CS 0023 32bit 0(FFFFFFFF)
00401025	48	dec	eax	eax -1	

GetDrive-

Registers (FPU)	
EAX	00000003
ECX	770830ED ntdll.770830ED
EDX	00264000
EBX	7EFD0000
ESP	0010FF0C
EBP	0010FF94
ESI	00000003
EDI	00000000

그리고

eax 는

Type() api를 호출합니다.

EAX 의 값이 3이 되었습니다.

함수의 리턴 값 등등 연산 결과가 저장되는 레지스터입니다.

따라서, HDD를 CD-Rom으로 인식시키기 위해서는 GetDriveTypeA의 리턴값이 무엇이 되어야 하는가는 eax의 값이 리턴 값이 되는 것입니다.

0040101D	46	inc	esi	esi +1
0040101E	48	dec	eax	eax -1
0040101F	E8 00	jmp	short Reverse_.00401021	
00401021	46	inc	esi	esi +1
00401023	46	inc	esi	esi +1
00401025	48	dec	eax	eax -1
00401024	3BC6	cmp	eax, esi	eax == esi 비교
00401026	74 15	je	short Reverse_.0040103D	맞다면 0040103D로 점프

여기서 보자면 esi 는 총 3번 증가하였고 (esi 초기값은 0임)
 eax 는 2번 감소하였다 (eax 초기값은 3임)

cmp 로 eax,esi 값이 같은지를 확인함. (eax == esi)

하지만 eax = 1 , esi = 3

비교해봐도 같지가 않다 즉, 같아 질려면 eax 는 5 가 되어야한다.

eax = 5 일 때를 eax 에 대입해서 결과를 보면

```

Registers (FPU)
EAX 00000003
ECX 77D830ED ntdll.77D830ED
EDX 005DA800
EBX 7EFD0000
ESP 0018FF8C
EBP 0018FF94
ESI 00000003
EDI 00000000

```

```

0040100A $ 6A 00 push 0
00401002 . 68 00204000 push Reverse_.00402000
00401007 . 68 12204000 push Reverse_.00402012
0040100C . 6A 00 push 0
0040100E . E8 4E000000 call <jmp.&USER32.MessageBoxA>
00401013 . 68 94204000 push Reverse_.00402094
00401019 . E8 38000000 call <jmp.&KERNEL32.GetDriveTypeA>
0040101D . 46 inc esi
0040101E . 48 dec eax
0040101F . EB 00 jmp short Reverse_.00401021
00401021 . 46 inc esi
00401022 . 46 inc esi
00401023 . 48 dec eax
00401024 . 3BC6 cmp eax, esi
00401026 . 74 15 je short Reverse_.00401030
00401028 . 6A 00 push 0
0040102A . 68 35204000 push Reverse_.00402035
0040102F . 68 3B204000 push Reverse_.0040203B
00401034 . 6A 00 push 0
00401036 . E8 26000000 call <jmp.&USER32.MessageBoxA>
0040103B . EB 13 jmp short Reverse_.00401050
0040103D . 6A 00 push 0
0040103F . 68 5E204000 push Reverse_.0040205E
00401044 . 68 64204000 push Reverse_.00402064
00401049 . 6A 00 push 0
0040104B . E8 11000000 call <jmp.&USER32.MessageBoxA>
00401050 . E8 06000000 call <jmp.&KERNEL32.ExitProcess>
00401055 $-FF25 50304000 jmp near dword ptr ds:[&KERNEL32.G

```

```

Style = MB_OK|MB_APPLMODAL
Title = "abex' 1st crackme"
Text = "Make me think your HD is a CD-Rom."
hOwner = NULL
MessageBoxA
RootPathName = "c:\\"
GetDriveTypeA
esi +1
eax -1
esi +1
esi +1
eax -1
eax == esi 비교
맞다면 00401030로 점프
Style = MB_OK|MB_APPLMODAL
Title = "Error"
Text = "Nah... This is not a CD-ROM!"
hOwner = NULL
MessageBoxA
Style = MB_OK|MB_APPLMODAL
Title = "YEAH!"
Text = "OK, I really think that your HD is a CD-ROM! :p"
hOwner = NULL
MessageBoxA
ExitProcess
kernel32.GetDriveTypeA

```



```

Registers (FPU)
EAX 00000000
ECX 00000000
EDX 00000000
EBX 00000000
ESP 0018CE74
EBP 0018CEC8
ESI 7EFD0000
EDI 0018CFA0
EIP 77D6FD02 ntdll.77D6FD02
C 0 ES 0028 32bit 0(FFFFFFFF)
P 1 CS 0023 32bit 0(FFFFFFFF)
A 0 SS 0028 32bit 0(FFFFFFFF)
Z 1 DS 0028 32bit 0(FFFFFFFF)
S 0 FS 0053 32bit 7EFD0000(FFF)
T 0 GS 0028 32bit 0(FFFFFFFF)
D 0
O 0 LastErr ERROR_NO_TOKEN (000003F0)
EFL 00000246 (NO,NB,E,OF,NS,PF,GE,LE)
ST0 empty 0.0
ST1 empty 0.0
ST2 empty 0.0
ST3 empty 0.0
ST4 empty 0.0
ST5 empty 0.0
ST6 empty 1.0000000000000000

```

flag : 5