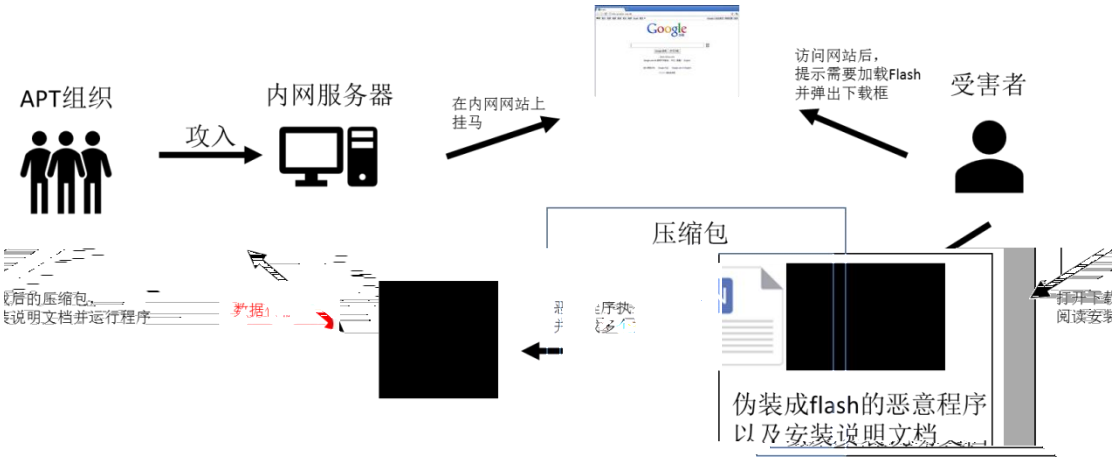
启明星辰公司-金睛安全研究团队

目 录

背景

一、攻击事件还原

1.1 攻击过程分析



1.2 载荷分析

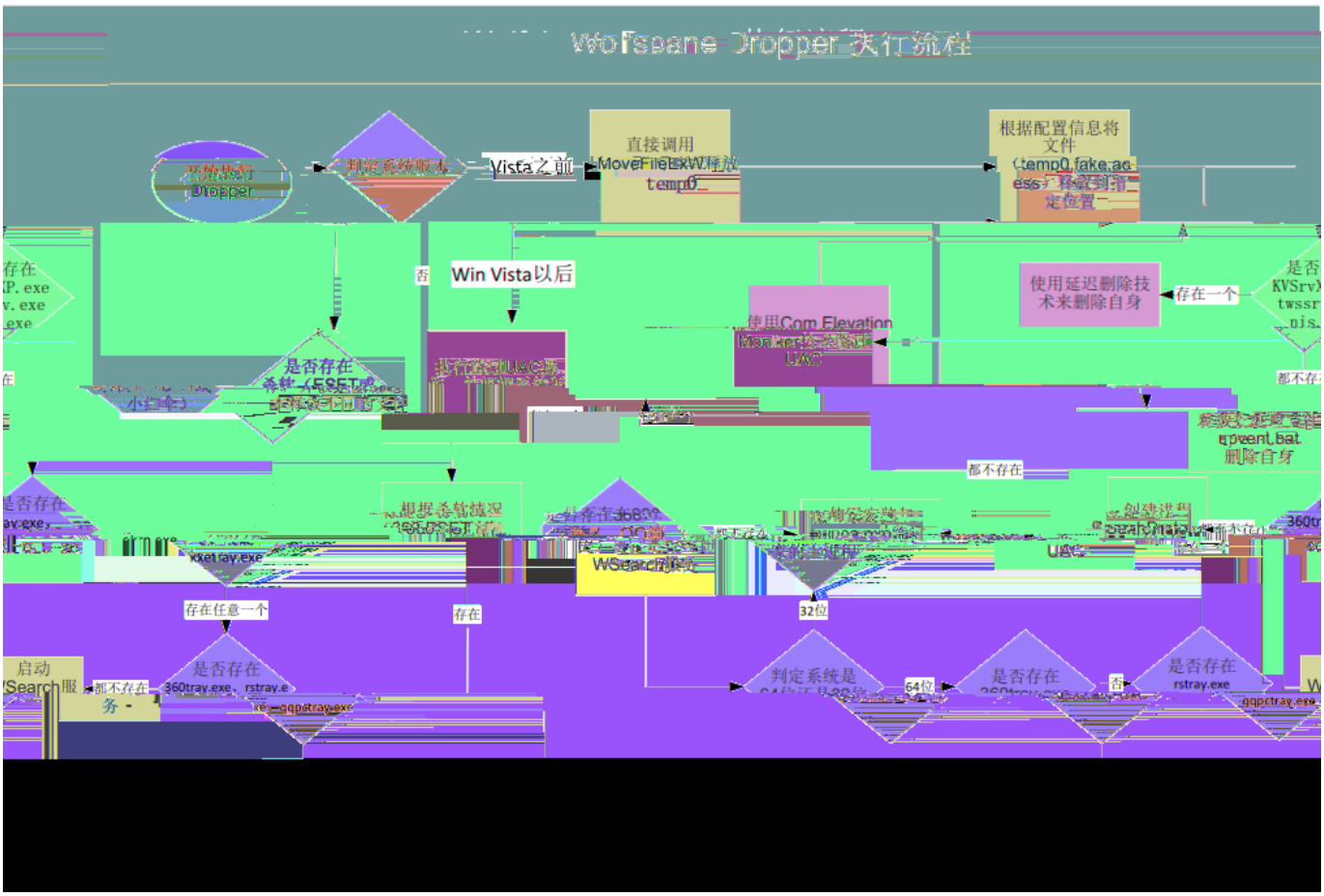
flash_security_component_installer_1.0.0.2.exe	220.0 KB	139.0 KB	应用程序	2018-07-21 16:06
flash安全组件安装说明.doc	93.7 KB	88.4 KB	DOC 文档	2018-07-21 16:48

二、攻击样本分析

2.1 主 Dropper 分析

```
004044DD                mov     word ptr [ebp+Username], 'u'
004044E6                push    eax             ; lpProcessInformation
004044E7                lea     eax, [ebp+StartupInfo]
004044ED                push    eax             ; lpStartupInfo
004044EE                push    ebx             ; lpCurrentDirectory
004044EF                push    ebx             ; lpEnvironment
004044F0                push    ebx             ; dwCreationFlags
004044F1                push    ebx             ; lpCommandLine
004044F2                lea     eax, [ebp+Username]
004044F8                push    [ebp+lpApplicationName] ; lpApplicationName
004044FB                mov     word ptr [ebp+Username+2], 'a'
00404504                mov     word ptr [ebp+Username+4], 'c'
0040450D                mov     word ptr [ebp+Username+6], bx
00404514                push    LOGON_NETCREDENTIALS_ONLY ; dwLogonFlags
00404516                push    offset Password ; "useless"
0040451B                push    offset Domain   ; "is"
00404520                push    eax             ; lpUsername
00404521                call    ds:CreateProcessWithLogonW
```

```
004012F1                push    RT_BITMAP
004012F3                push    110
004012F5                push    eax
004012F6                lea     eax, [ebp+var_194]
004012FC                push    eax
004012FD                call    loadcfqfromres
```



Win Vista以后
Vista之前
直接调用
MoveFileExW释放
temp0
根据配置信息将
文件
(temp0,fake,ac
ess)，释放到指
定位置
使用延迟删除技
术来删除自身
存在一个
都不存在
存在任意一个
存在
32位
64位
否

2.2 释放文件分析


```
74FF755E                mov     edi, offset aSrvlic_dll ; "srvlic.dll"
74FF7563                push    edi             ; wchar_t *
74FF7564                mov     esi, eax
74FF7566                call    ds:wcslen
```

```
push    offset aMstracer_dll ; "msTracer.dll"
push    0Ch             ; int
lea     ecx, [ebp+lpFilename]
call    sub_100D135
push    [ebp+lpFilename] ; lpLibFileName
call    esi ; LoadLibraryW
```

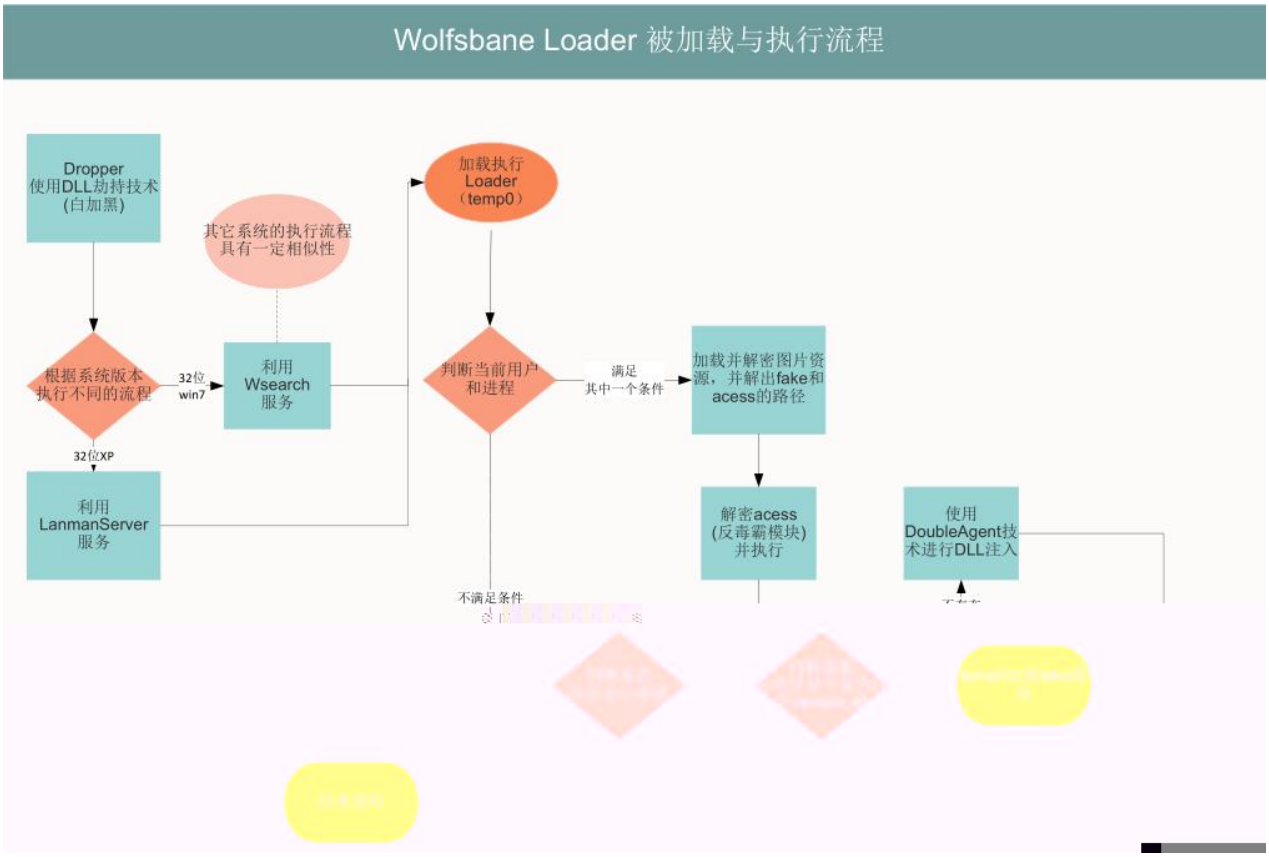
3 temp0

“HKEY_LOCAL_MACHINE

uni0nst.exe”

名称	类型	数据
(默认)	REG_SZ	(数值未设置)
GlobalFlag	REG_SZ	0x100
VerifierDlls	REG_SZ	vfpod.dll
VerifierFlags	REG_DWORD	0x80000000 (2147483648)

地址	值	注释
0012F284	009C3107	CALL 到 WinExec 来自 009C3101
0012F288	0012F4A8	CmdLine = "c:\program files\kingsoft\kingsoft antivirus\\uniOnst.exe"
0012F28C	00000000	ShowState = SW_HIDE



```
Data: 2000000006b1f21793f6e132228d5abfb50728ac9b89
[Length: 36]
  00 0c 29 3c a6 24 00 50  56 e7 13 5b 08 00 45 00
  00 4c 00 21 00 00 80 06  ec 5d 3c a9 01 56 c0 a8
  4f 86 06 1a 04 1f 7e 60  52 99 a5 43 f2 fe 50 18
```

地址	十六进制	ASCII
00B70020	06 B1 F2 17 6B 5A 31 C7 73 6D 83 22 C0 E3 42 6F	-彬kZ1箜m?楞Bo
00B70030	FC FF FF FF FF FF FF FF 00 00 00 00 00 00 00 00	?

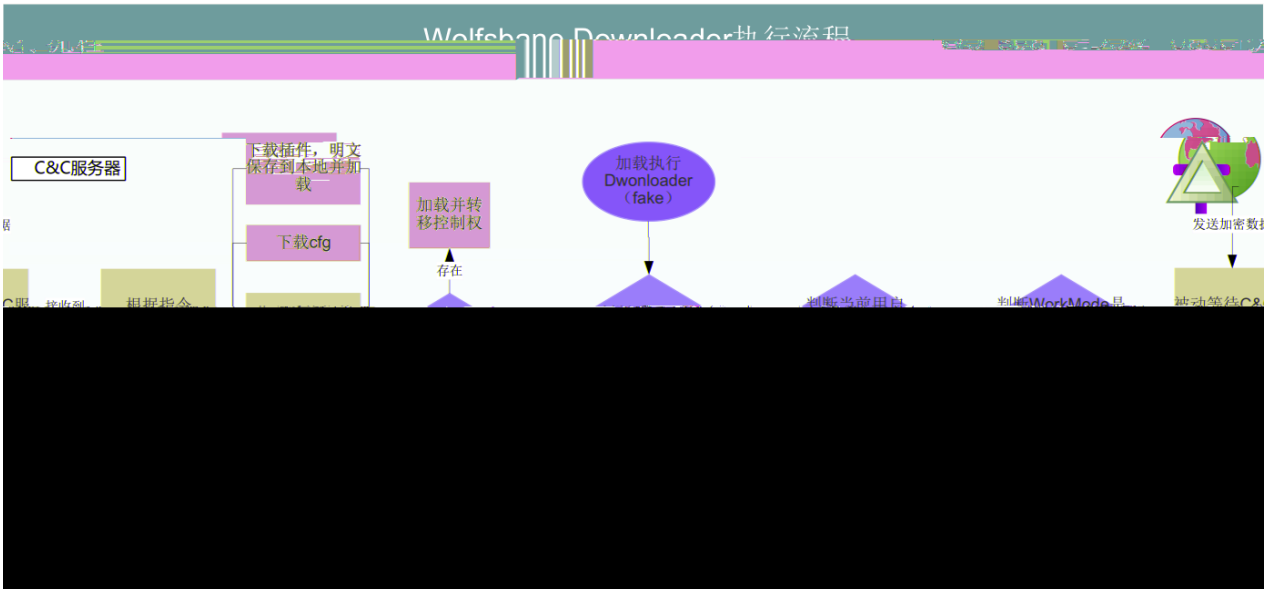
```
10003147  >  3D 736D8322    CMP    EAX,0x22836D73          loc_10003147
1000314C  .v 75 08          JNZ    SHORT <loc_10003156>
1000314E  .  81F9 C0E3426F  CMP    ECX,0x6F42E3C0
10003154  .v 74 58          JE     SHORT <ExecCmd_GetPlatformBits>
10003156  >  3D D2BF5432    CMP    EAX,0x3254BFD2          loc_10003156
1000315B  .v 75 08          JNZ    SHORT <loc_10003165>
1000315D  .  81F9 1797F36F  CMP    ECX,0x6FF39717
10003163  .v 74 3C          JE     SHORT <ExecCmd_LoadLibrary>
10003165  >  3D FF9F74B4    CMP    EAX,0xB4749FFF          loc_10003165
1000316A  .v 75 08          JNZ    SHORT <loc_10003174>
1000316C  .  81F9 829710A7  CMP    ECX,0xA7109782
10003172  .v 74 20          JE     SHORT <loc_10003194>
10003174  >  3D 3E30D7DD    CMP    EAX,0xDDD7303E          loc_10003174
```

```
push    offset aSuccess ; "success"
push    [ebp+arg_4]     ; int
call    sub_10002444
or      [ebp+Src], 0FFFFFFFFh
or      [ebp+var_4], 0FFFFFFFFh
mov     esi, eax
lea     eax, [ebp+Src]
push    8               ; Size
push    eax             ; Src
push    esi             ; Dst
call    memcpy
add     esi, 8
push    offset aX86     ; "X86"
push    esi             ; int
call    sub_10002444
```

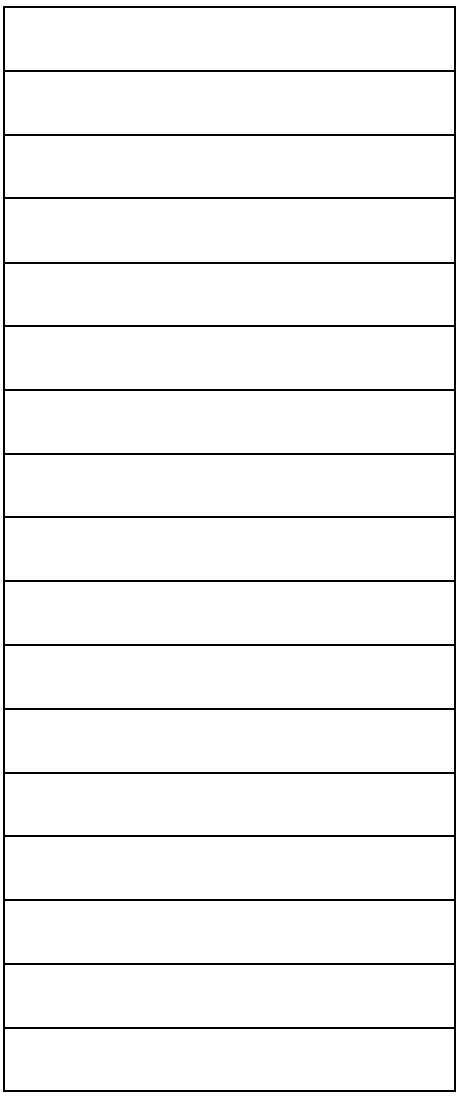
地址	十六进制	UNICODE
00B7002C	07 00 00 00 73 00 75 00 63 00 63 00 65 00 73 00	•.succes
00B7003C	73 00 FF FF FF FF FF FF FF FF 03 00 00 00 58 00	s.....ㄴX
00B7004C	38 00 36 00 00 00 00 00 00 00 00 00 00 00 00 00	86......

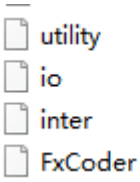
```
lea     rdx, aSuccess   ; "success"
mov     rcx, rdi
call    sub_100027B4
lea     rdx, [rsp+38h+Src] ; Src
mov     r8d, 8          ; Size
mov     rcx, rax        ; Dst
mov     rbx, rax
mov     [rsp+38h+Src], 0FFFFFFFFFFFFFFFFh
call    memcpy
lea     rcx, [rbx+8]
lea     rdx, aX64       ; "X64"
call    sub_100027B4
```

地址	十六进制												ASCII
00B70020	30	00	00	00	42	56	2A	5E	3C	45	EF	4F	0...BV*^<E睦
00B70030	0C	BB	FA	BB	65	BB	65	BB	53	BB	0C	BB	.机篧篧篧??
00B70040	B8	B8	B8	B8	B8	B8	A4	BB	BB	BB	F9	BB	父父父父换
00B70050	BB	BB	BB	BB	00	00	00	00	00	00	00	00	换.....

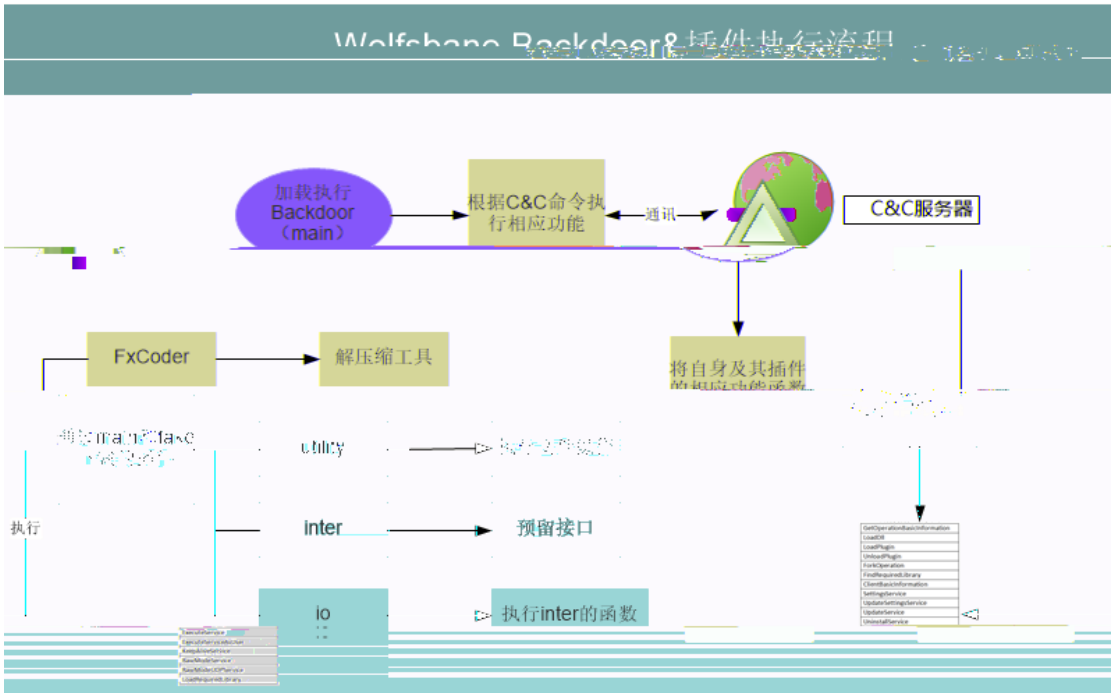


```
10089054 aServicecontext:                        ; DATA XREF: sub_100
10089054                 unicode 0, <ServiceContext::ServiceTable>,0
1008908E                 align 10h
10089090 aServiceFunctio:                        ; DATA XREF: sub_100
10089090                                         ; sub_10028580+31↑o
10089090                 unicode 0, <Service::FunctionTableSection>,0
```

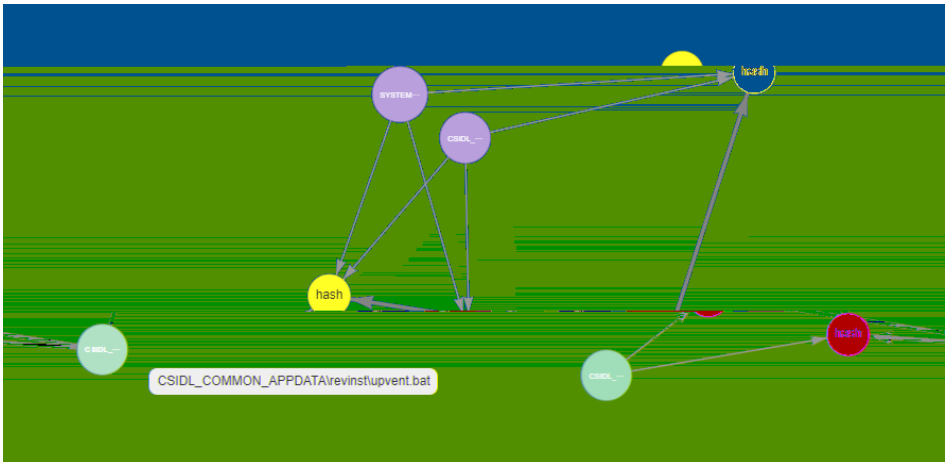




CreateFileService
ClientStatusService
BasicInformationService
ListFileService
ListFileRecursiveService
OpenFileService
CloseFileService
DeleteFileService
FileSizeService


加载执行
Backdoor
（main）
根据C&C命令执行相应功能
通讯
C&C服务器
FxCoder
解压缩工具
将自身及其插件
utility
执行
inter
预留接口
io
执行inter的函数

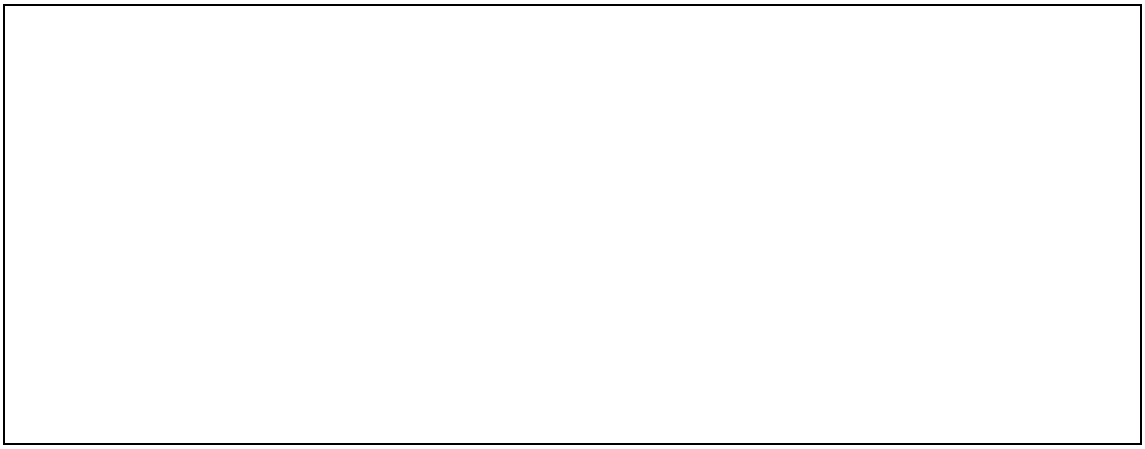
三、关联样本分析



3.1 配置信息比较

```
00403783                mov     [ebp+Str], '3'
00403789                mov     [ebp+var_36], '6'
0040378F                mov     [ebp+var_34], '0'
00403795                mov     [ebp+var_32], 't'
0040379B                mov     [ebp+var_30], 'r'
004037A1                mov     [ebp+var_2E], 'a'
004037A7                mov     [ebp+var_2C], 'y'
004037AD                mov     [ebp+var_2A], '.'
004037B3                mov     [ebp+var_28], 'c'
004037B9                mov     [ebp+var_26], 'o'
004037BF                mov     [ebp+var_24], 'm'
```

3.2 释放文件比较

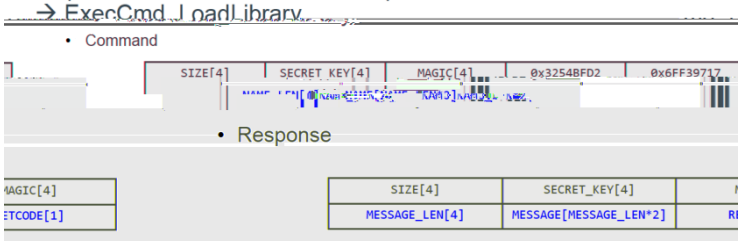


```
1000943C a64loadpath7:
1000943C                unicode 0, <64loadpath7>
10009452                dd 13h
10009456 aSystemMstracer:
10009456                unicode 0, <system/msTracer.dll>
1000947C                dd 0Ch
10009480 a64loadpathsv:
10009480                unicode 0, <64loadpathsv>
10009498                dd 11h
1000949C aWindowsFxsst_d:
1000949C                unicode 0, <windows/fxsst.dll>
```


四、溯源分析

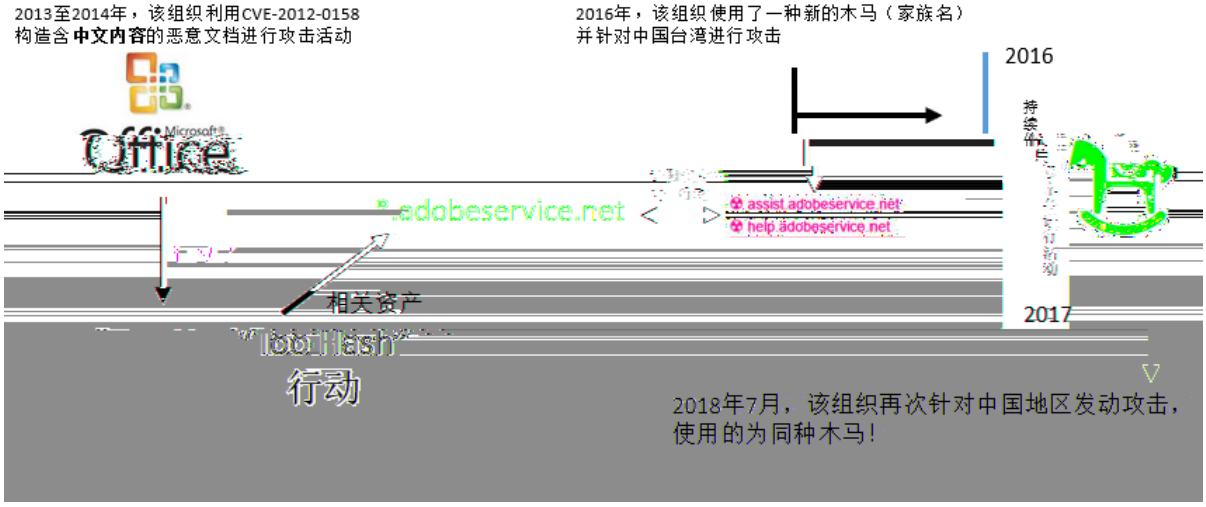
```
1  bool *__cdecl sub_1000311C(int a1, int a2, int Src, int a4)
2  {
3    if ( a1 == 0x134A6D30 && a2 == 0x100B4627 )
4      return sub_10002D44(Src, a4);
5    if ( a1 == 0xC558B012 && a2 == 0x5047A6F4 )
6      return sub_10002E61(Src, a4);
7    if ( a1 == 0x22836D73 && a2 == 0x6F42E3C0 )
8      return sub_1000251B(Src, a4);
9    if ( a1 == 0x3254BFD2 && a2 == 0x6FF39717 )
10     return sub_10002566(Src, a4);
11   if ( a1 == 0xB4749FFF && a2 == 0xA7109782 )
12     return sub_10002ECC(Src, a4);
13   if ( a1 == 0xDDD7303E && a2 == 0xCDF2E7F4 )
14     return sub_10003109(Src, a4);
15   return 0;
```

- If opcode1 == 0x3254BFD2 and opcode2 == 0x6FF39717
  → ExecCmd LoadLibrary



- makecab.exe /V1 "C:\Users\<USERNAME>\AppData\Local\Temp\msTracer.dll"
  "C:\Users\<USERNAME>\AppData\Local\Temp\msTracer.dll.msu“

- wusa.exe /quiet "C:\Users\<USERNAME>\AppData\Local\Temp\\msTracer.dll.msu"
  /extract:C:\Windows\syst[redacted]32


2013至2014年，该组织利用CVE-2012-0158
构造含**中文内容**的恶意文档进行攻击活动
2016年，该组织使用了一种新的木马（家族名）
并针对中国台湾进行攻击
2016
adobeservice.net
assist.adobeservice.net
help.adobeservice.net
相关资产
行动
2017
2018年7月，该组织再次针对中国地区发动攻击，
使用的为同种木马！

五、总结

六、IOC

七、参考