HGAME-WEEK4-wp

misc Akira之瞳-1

描述

有人想问 Akira 为什么总喜欢用眼睛当头像，Akira 说：“我给你讲个故事吧，从前有一天一位原画师在上班，不幸的是突然起了火灾，情急之下 IT 部门把她没保存的工作 dump 了下来并传到了网上 ……”

题目地址

https://1.oss.hgame2021.vidar.club/important_work_bf81f2db20bfa2045a4cd2f6e6214544.7z

wp

下载得到后缀为raw的文件，又根据题目描述“dump”，得知使用volatility工具分析。

ps：难受的是，由于python2的原因kali2020版本已经废除volatility工具，虽然可以手动下载源码安装（kali-linux和windows都可以），但实测发现使用起来十分麻烦，还是尝试在Ubuntu下使用，发现Ubuntu20.04可以直接下载安装volatility。

先按如下输入命令：

```
ubuntu@ubuntu:~/Desktop$ volatility -f 2.raw imageinfo
Volatility Foundation Volatility Framework 2.6.1
INFO    : volatility.debug    : Determining profile based on KDBG search...
          Suggested Profile(s) : Win7SP1x64, Win7SP0x64, Win2008R2SP0x64, Win2008R2SP1x64_24000, Win2008R2SP1x64_23418, Win2008R2SP
1x64, Win7SP1x64_24000, Win7SP1x64_23418
                     AS Layer1 : WindowsAMD64PagedMemory (Kernel AS)
                     AS Layer2 : FileAddressSpace (/home/ubuntu/Desktop/2.raw)
                      PAE type : No PAE
                           DTB : 0x187000L
                          KDBG : 0xf80003ff7120L
          Number of Processors : 16
     Image Type (Service Pack) : 1
                KPCR for CPU 0 : 0xfffff80003ff9000L
                KPCR for CPU 1 : 0xfffff88004500000L
                KPCR for CPU 2 : 0xfffff8800457d000L
                KPCR for CPU 3 : 0xfffff880009b9000L
                KPCR for CPU 4 : 0xfffff88004654000L
                KPCR for CPU 5 : 0xfffff880046d1000L
                KPCR for CPU 6 : 0xfffff8800474e000L
                KPCR for CPU 7 : 0xfffff880047cb000L
                KPCR for CPU 8 : 0xfffff88004848000L
                KPCR for CPU 9 : 0xfffff880048c5000L
               KPCR for CPU 10 : 0xfffff88004942000L
               KPCR for CPU 11 : 0xfffff880049bf000L
               KPCR for CPU 12 : 0xfffff88004a40000L
               KPCR for CPU 13 : 0xfffff88004abd000L
               KPCR for CPU 14 : 0xfffff88004b3a000L
               KPCR for CPU 15 : 0xfffff88004bb7000L
            KUSER_SHARED_DATA : 0xfffff78000000000L
```

得到：

> Suggested Profile(s) : Win7SP1x64, Win7SP0x64, Win2008R2SP0x64, Win2008R2SP1x64_24000, Win2008R2SP1x64_23418, Win2008R2SP1x64, Win7SP1x64_24000, Win7SP1x64_23418

ps：以下涉及到的步骤都使用了第一个“Win7SP1x64”

然后如下图操作，获得命令行记录：

```
ubuntu@ubuntu:~/Desktop$ volatility -f 1.raw --profile=Win7SP1x64 cmdline
Volatility Foundation Volatility Framework 2.6.1
************************************************************************
System pid:      4
************************************************************************
smss.exe pid:    364
Command line : \SystemRoot\System32\smss.exe
************************************************************************
csrss.exe pid:    456
Command line : %SystemRoot%\system32\csrss.exe ObjectDirectory=\Windows SharedSection=1024,20480,768 Windows=On SubSystemType=Windo
ws ServerDll=basesrv,1 ServerDll=winsrv:UserServerDllInitialization,3 ServerDll=winsrv:ConServerDllInitialization,2 ServerDll=sxssr
v,4 ProfileControl=Off MaxRequestThreads=16
************************************************************************
wininit.exe pid:    500
Command line : wininit.exe
************************************************************************
csrss.exe pid:    520
Command line : %SystemRoot%\system32\csrss.exe ObjectDirectory=\Windows SharedSection=1024,20480,768 Windows=On SubSystemType=Windo
ws ServerDll=basesrv,1 ServerDll=winsrv:UserServerDllInitialization,3 ServerDll=winsrv:ConServerDllInitialization,2 ServerDll=sxssr
v,4 ProfileControl=Off MaxRequestThreads=16
************************************************************************
services.exe pid:    568
Command line : C:\Windows\system32\services.exe
************************************************************************
```

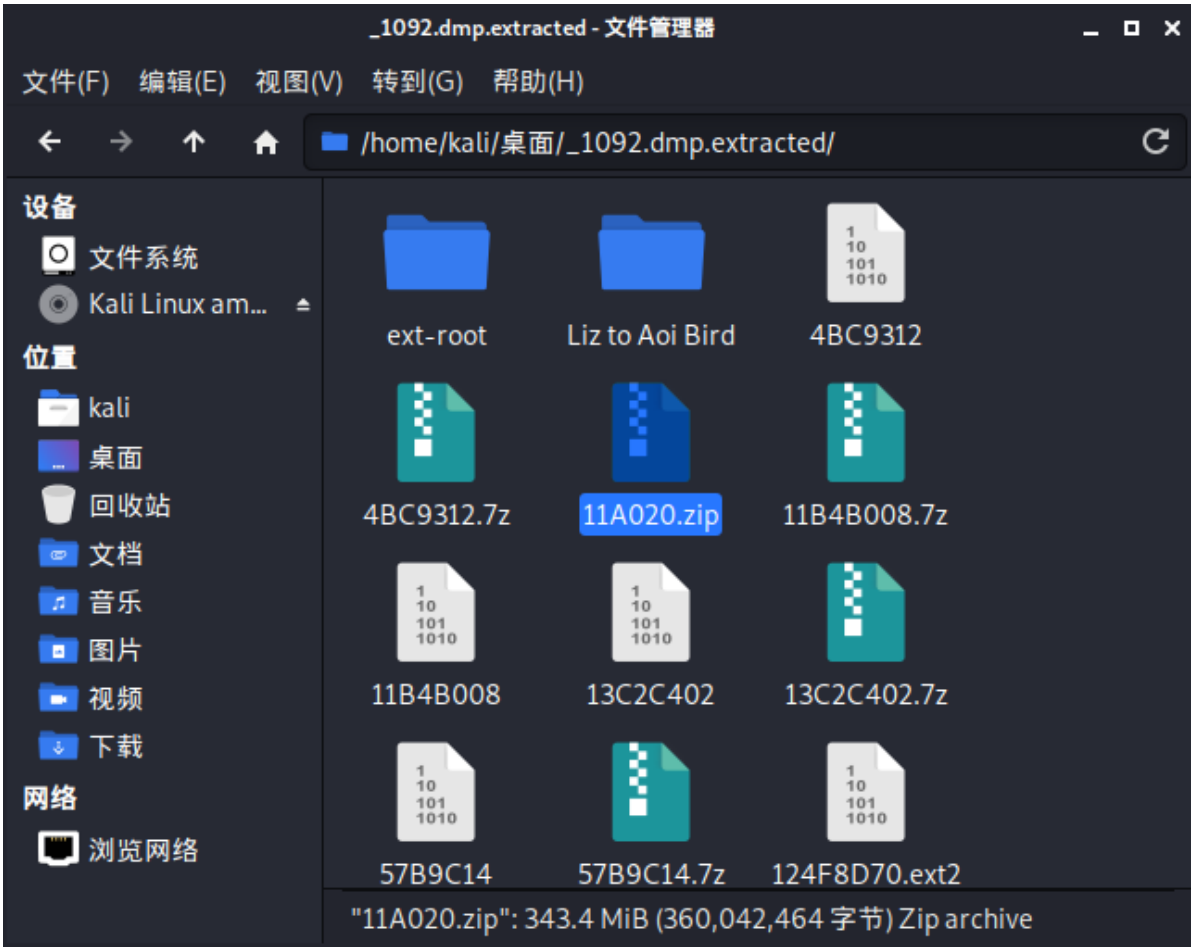
往下拉，发现其中有一步可疑的操作：

```
important_work pid:   1092
Command line : "C:\Users\Genga03\Desktop\important_work.exe" C:\Users\Genga03\Desktop\work.zip
************************************************************************
```

记下`pid: 1092`，然后如下操作，意为提取出可疑步骤的文件，并以dmp文件形式保存在文件夹3中

```
ubuntu@ubuntu:~/Desktop$ volatility -f 1.raw --profile=Win7SP1x64 memdump -p 1092 -D 3
Volatility Foundation Volatility Framework 2.6.1
************************************************************************
Writing important_work [  1092] to 1092.dmp
```

因为不熟悉ubuntu的工具，所以将`1092.dmp`复制粘贴到kali中，利用binwalk分离文件，得到:



复制`11A020.zip`到本机，发现解压需要密码，但也发现备注信息：

> 锘緪assword is sha256(login_password)

所以要先拿到登陆密码（利用hashdump命令）：

```
ubuntu@ubuntu:~/Desktop$ volatility -f 1.raw --profile=Win7SP1x64 hashdump
Volatility Foundation Volatility Framework 2.6.1
Administrator:500:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
Genga03:1001:aad3b435b51404eeaad3b435b51404ee:84b0d9c9f830238933e7131d60ac6436:::
```

查阅资料得知密码就是上面的：

> 84b0d9c9f830238933e7131d60ac6436

利用工具：https://www.cmd5.com/ 得到：

> asdqwe123

再利用sha256加密，得到压缩文件的密码：

> 20504cdfddaad0b590ca53c4861edd4f5f5cf9c348c38295bd2dbf0e91bca4c3

提取文件，发现两张图片，根据提示blind，应该需要用到`BlindWaterMark-master`

下载链接：https://github.com/chishaxie/BlindWaterMark

如下图操作，可以得到水印图`1.png`：

```
PS C:\...\ctf\工具\BlindWaterMark-master> python bwmforpy3.py decode src.png Blind.png 1.png
image<src.png> + image(encoded)<Blind.png> -> watermark<1.png>
```

打开1.png，放大可勉强看清flag（实测用StegSolove查看会清楚一些）：

得到flag：

> hgame{7he_f1ame_brin9s_me_end1ess_9rief}

misc Akira之瞳-2

描述

……
"最后呢？"
"最后她还是没能幸免，人们在保险箱旁发现了她烧焦的尸体，打开保险箱人们发现了一个U盘，是她将回家画好的原稿带来时用的 ……"

题目地址

https://1.oss.hgame2021.vidar.club/secret_work_bd40aea1c133a4d6422925deccb139e9.7z

wp

与上题一样，还是先查看profile值：

```
ubuntu@ubuntu:~/Desktop$ volatility -f 2.raw imageinfo
Volatility Foundation Volatility Framework 2.6.1
INFO    : volatility.debug    : Determining profile based on KDBG search...
          Suggested Profile(s) : Win7SP1x64, Win7SP0x64, Win2008R2SP0x64, Win2008R2SP1x64_24000, Win2008R2SP1x64_23418, Win2008R2SP
1x64, Win7SP1x64_24000, Win7SP1x64_23418
                     AS Layer1 : WindowsAMD64PagedMemory (Kernel AS)
                     AS Layer2 : FileAddressSpace (/home/ubuntu/Desktop/2.raw)
                      PAE type : No PAE
                           DTB : 0x187000L
                          KDBG : 0xf80003ff7120L
          Number of Processors : 16
     Image Type (Service Pack) : 1
                KPCR for CPU 0 : 0xfffff80003ff9000L
                KPCR for CPU 1 : 0xfffff88004500000L
                KPCR for CPU 2 : 0xfffff8800457d000L
                KPCR for CPU 3 : 0xfffff880009b9000L
                KPCR for CPU 4 : 0xfffff88004654000L
                KPCR for CPU 5 : 0xfffff880046d1000L
                KPCR for CPU 6 : 0xfffff8800474e000L
                KPCR for CPU 7 : 0xfffff880047cb000L
                KPCR for CPU 8 : 0xfffff88004848000L
                KPCR for CPU 9 : 0xfffff880048c5000L
               KPCR for CPU 10 : 0xfffff88004942000L
               KPCR for CPU 11 : 0xfffff880049bf000L
               KPCR for CPU 12 : 0xfffff88004a40000L
               KPCR for CPU 13 : 0xfffff88004abd000L
               KPCR for CPU 14 : 0xfffff88004b3a000L
               KPCR for CPU 15 : 0xfffff88004bb7000L
             KUSER_SHARED_DATA : 0xfffff78000000000L
           Image date and time : 2021-02-19 08:23:04 UTC+0000
     Image local date and time : 2021-02-19 16:23:04 +0800
```

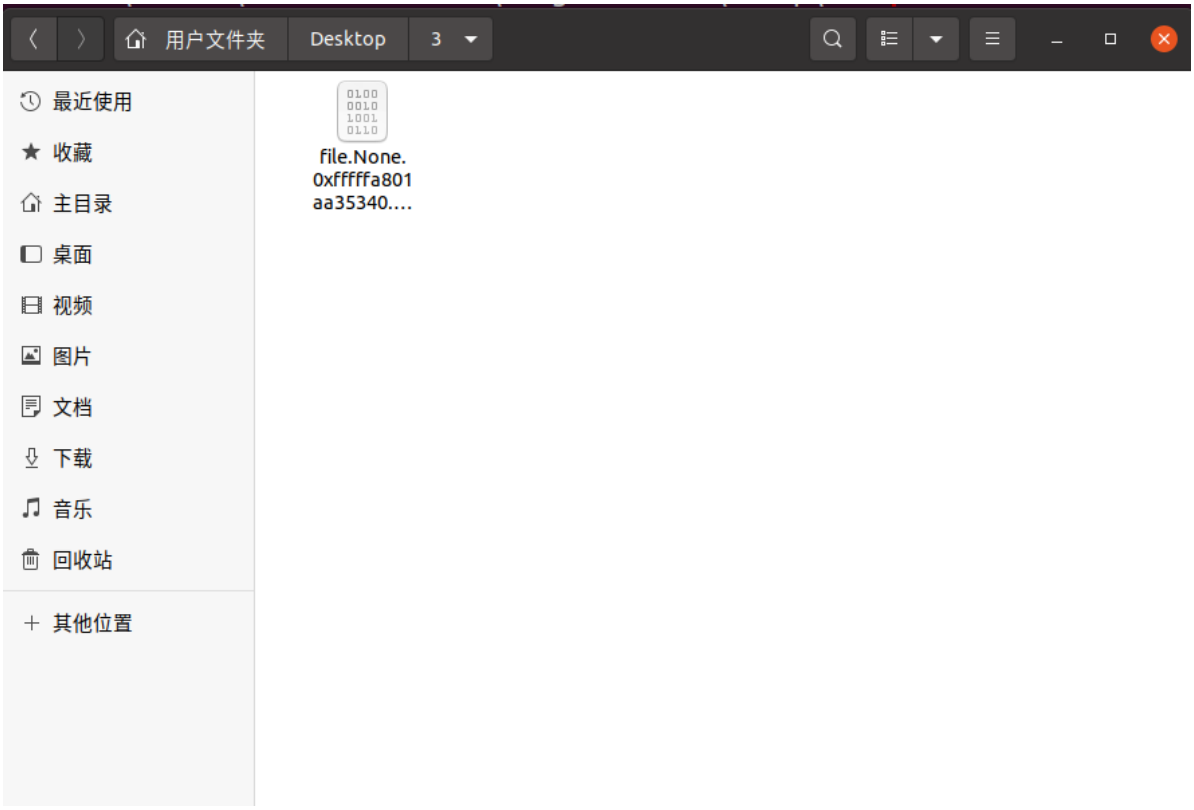
然后扫描文件，并加上筛选条件（txt）：

```
ubuntu@ubuntu:~/Desktop$ volatility -f 2.raw --profile=Win7SP1x64 filescan |grep txt
Volatility Foundation Volatility Framework 2.6.1
0x000000003ee1f070     20      2 -W-rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware VGAuth\logfile.txt.0
0x000000003efb7f20     16      0 R--r-- \Device\HarddiskVolume1\Windows\KMS10\请勿删除此目录文件.txt
0x000000007ecdd2e0      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\vistasidebar.txt
0x000000007ecddbc0      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\googledesktop.txt
0x000000007ecde070      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\adobeflashcs3.txt
0x000000007ecde320      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\microsoftoffice.txt
0x000000007ece0590      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\adobephotoshopcs3.txt
0x000000007ece08f0      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\visualstudio2005.txt
0x000000007ece1660      2      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\win7gadgets.txt
0x000000007ece1c10     16      0 R--rw- \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\Unity Filters\vmwarefilters.txt
0x000000007ed83300      2      0 RW-rw- \Device\HarddiskVolume1\Users\Genga03\AppData\Roaming\Microsoft\Windows\Recent\cmp1.txt.lnk
0x000000007ef94820      2      0 RW-r-- \Device\HarddiskVolume1\Users\Genga03\Desktop\dumpme.txt
0x000000007efbbc00      1      1 -W-rw- \Device\HarddiskVolume1\Users\Genga03\AppData\Local\Temp\FXSAPIDebugLogFile.txt
0x000000007f26d330      1      0 R--r-- \Device\HarddiskVolume1\Program Files\7-Zip\Lang\zh-cn.txt
0x000000007f2b5f20      2      0 RW-rw- \Device\HarddiskVolume1\Users\Genga03\AppData\Roaming\Microsoft\Windows\Recent\dumpme.txt.l
nk
0x000000007f497ea0      2      0 RW-rw- \Device\HarddiskVolume1\Users\Genga03\AppData\Roaming\Microsoft\Windows\Recent\cmp2.txt.lnk
0x000000007f5be180     16      0 R--rwd \Device\HarddiskVolume1\ProgramData\VMware\VMware Tools\manifest.txt
```

发现可疑(白给)文件：`0x000000007ef94820：dumpme.txt`，所以dump它：

```
ubuntu@ubuntu:~/Desktop$ volatility -f 2.raw --profile=Win7SP1x64 dumpfiles -Q 0x000000007ef94820 -D 3
Volatility Foundation Volatility Framework 2.6.1
DataSectionObject 0x7ef94820   None   \Device\HarddiskVolume1\Users\Genga03\Desktop\dumpme.txt
```

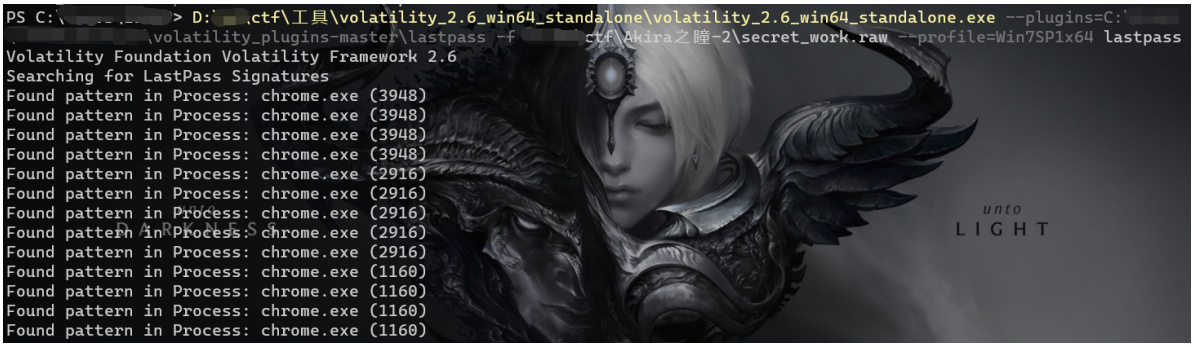
在文件夹3中得到文件：

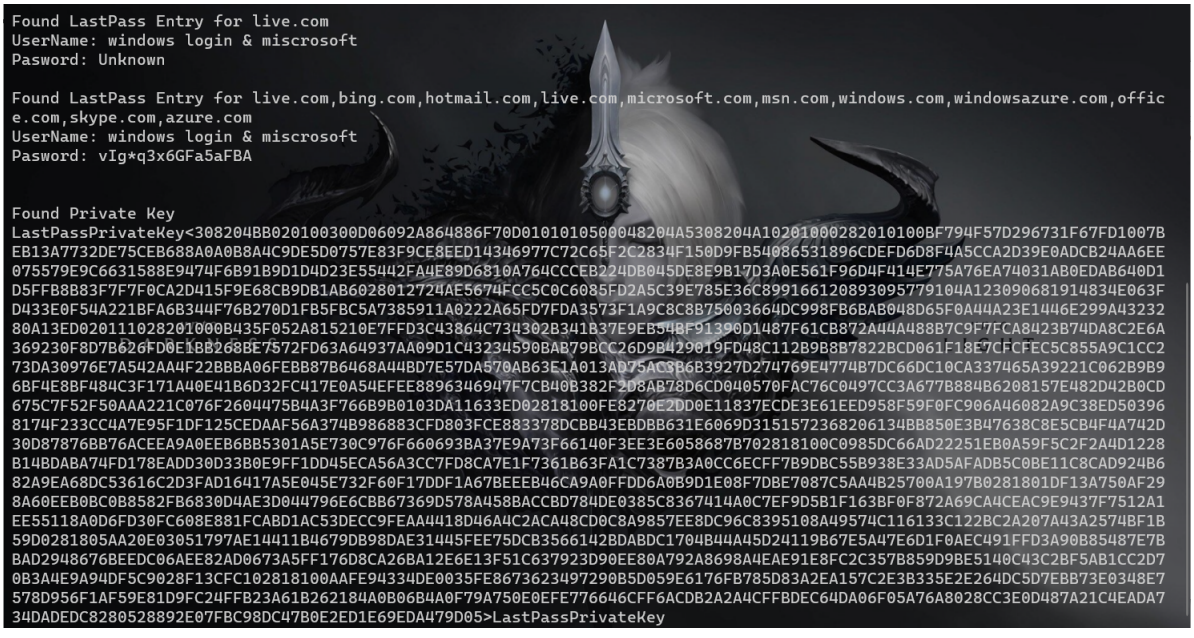


将该文件拖到主机，并用notepad++打开，得到：

> zip password is: 5trqES&P43#y&1TO
> And you may need LastPass

然后千辛万苦找到lastpass插件，结果我在Ubuntu里volatility的环境又不能用了，只好回到本机用volatility官网下的程序运行：





接下来应该是解密cookies

但题解写到这里就下不去了。。。终于还是失败了

是misc的魅力吸引我一次次去尝试，真的能让我感受到，仰止弥高，钻之弥坚，再尝试一次就能更接近一些