专注APT攻击与防御
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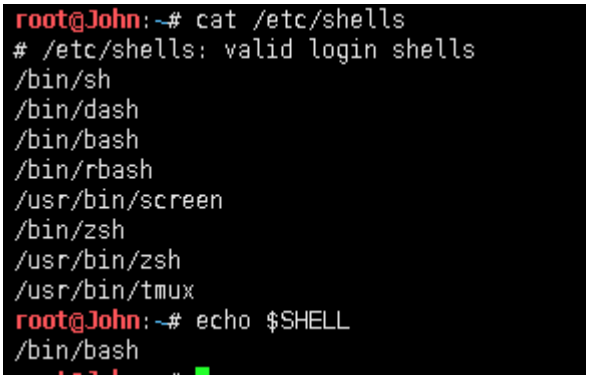
本课是针对前第1-20课时的msfvenom生成payload的自动补全命令补充。虽msfvenom强大，同样有着非常繁琐的参数，参数强大，意味着会增加工作效率，但它并不像MSF有命令补全功能，故本课吸取前20课经验，自动补全msfvenom的参数。

需要zsh的支持：

```
root@John:~# cat /etc/shells
# /etc/shells: valid login shells
/bin/sh
/bin/dash
/bin/bash
/bin/rbash
/usr/bin/screen
/bin/zsh
/usr/bin/zsh
 /usr/bin/tmux
 root@John:~# echo $SHELL
 /bin/bash
```



复制附录A到~/.oh-my-zsh/custom/plugins/msfvenom文件夹下（注：没有msfvenom目录，创建即可）

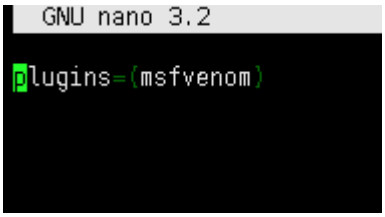
```
root@John:~/.oh-my-zsh/custom/plugins/msfvenom# pwd
/root/.oh-my-zsh/custom/plugins/msfvenom
root@John:~/.oh-my-zsh/custom/plugins/msfvenom# ls
_msfvenom
```

```
root@John:~/.oh-my-zsh/custom/plugins/msfvenom# pwd
/root/.oh-my-zsh/custom/plugins/msfvenom
root@John:~/.oh-my-zsh/custom/plugins/msfvenom# ls
_msfvenom
```

编辑~/.zshrc文件：

```
root@John:~# nano ~/.zshrc
```

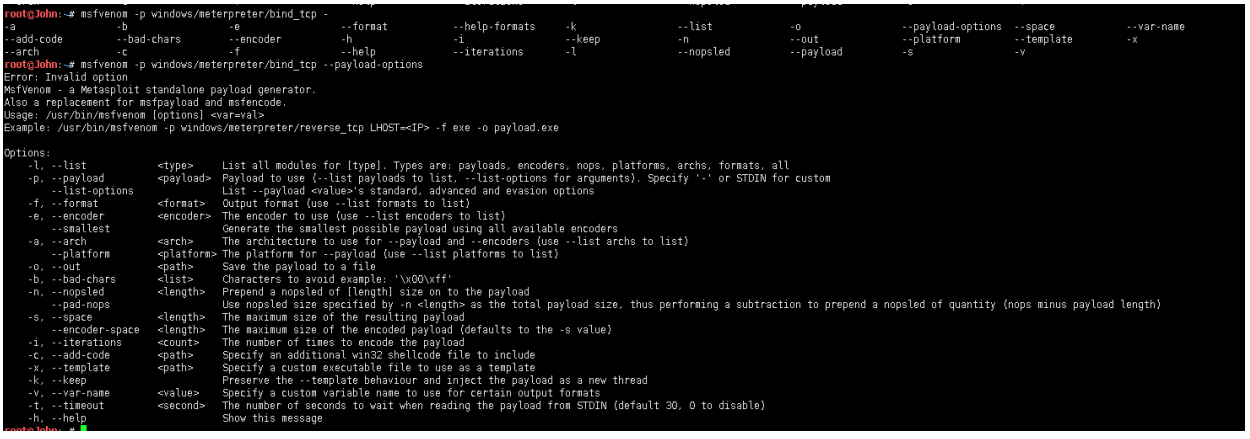
```
root@John:~# nano ~/.zshrc
root@John:~# cat ~/.zshrc
plugins=(msfvenom)
```



更新：

```
root@John:~# source ~/.zshrc
```

效果如下：



附录A：

```
#compdef msfvenom
#autoload
#
# zsh completion for msfvenom in Metasploit Framework Project (https://www.metasploit.com)
#
# github: https://github.com/Green-m/msfvenom-zsh-completion
#
# author: Green-m (greenm.xxoo@gmail.com)
#
# license: GNU General Public License v3.0
#
# Copyright (c) 2018, Green-m
# All rights reserved.
#

VENOM_CACHE_FILE=~/.zsh/venom-cache

venom-clear-cache() {
 rm $VENOM_CACHE_FILE
}

venom-cache-payloads() {

 if [ -x "$(command -v msfvenom)" ]
 then
 VENOM="msfvenom"
 elif [ -n "$_comp_command1" ]
 then
 VENOM=$_comp_command1
 else
 echo "Cound not find msfvenom path in system env, please run msfvenom with path."
 fi

 if [[ ! -d ${VENOM_CACHE_FILE:h} ]]; then
 mkdir -p ${VENOM_CACHE_FILE:h}
 fi

```

```
  if [[ ! -f $VENOM_CACHE_FILE ]]; then
  echo -n "(...caching Metasploit Payloads...)"
  $VENOM --list payload|grep -e "^.*\/" | awk '{print $1}' >> $VENOM_CA
CHE_FILE
  fi
 }


 _msfvenom() {

  local curcontext="$curcontext" state line
  typeset -A opt_args

  _arguments -C \
  '(-h --help)'{-h,--help}'[show help]' \
  '(-l --list)'{-l,--list}'[List all modules for type. Types are: paylo
ads, encoders, nops, platforms, archs, encrypt, formats, all]' \
  '(-p --payload)'{-p,--payload}'[Payload to use (--list payloads to li
st, --list-options for arguments). Specify - or STDIN for custom]' \
  '(--list-options)--list-options[List --payload <value> standard, adva
nced and evasion options]' \
  '(-f --format)'{-f,--format}'[Output format (use --list formats to li
st)]' \
  '(-e --encoder)'{-e,--encoder}'[The encoder to use (use --list encode
rs to list)]' \
  '(--smallest)--smallest[Generate the smallest possible payload using
all available encoders]' \
  '(--encrypt)--encrypt[The type of encryption or encoding to apply to
the shellcode (use --list encrypt to list)]' \
  '(--encrypt-key)--encrypt-key[A key to be used for --encrypt]' \
  '(--encrypt-iv)--encrypt-iv[An initialization vector for --encrypt]'
\
  '(-a --arch)'{-a,--arch}'[the architecture to use for --payload and -
-encoders (use --list archs to list)]' \
  '(--platform)--platform[The platform for --payload (use --list platfo
rms to list)]' \
  '(-o --out)'{-o,--out}'[Save the payload to a file]' \
  '(-b --bad-chars)'{-b,--bad-chars}'[Characters to avoid example: "\x0
0\xff"]' \
  '(-n --nopsled)'{-n,--nopsled}'[Prepend a nopsled of \[length\] size
on to the payload]' \
  '(--encoder-space)--encoder-space[The maximum size of the encoded pay
load (defaults to the -s value)]' \
```

```
  '(-i --iterations)'{-i,--iterations}'[The number of times to encode t
he payload]' \
  '(-c --add-code)'{-c,--add-code}'[Specify an additional win32 shellco
de file to include]' \
  '(-x --template)'{-x,--template}'[Specify a custom executable file to
use as a template]' \
  '(-k --keep)'{-k,--keep}'[Preserve the --template behaviour and injec
t the payload as a new thread]' \
  '(-v --var-name)'{-v,--var-name}'[Specify a custom variable name to u
se for certain output formats]' \
  '(-t --timeout)'{-t,--timeout}'[The number of seconds to wait when re
ading the payload from STDIN (default 30, 0 to disable)]' \
  '*: :($(__msfvenom_options))' && ret=0


  lastword=${words[${#words[@]}-1]}

  case "$lastword" in
  (-p|--payload)
  _values 'payload' $(__msfvenom_payloads)
  ;;

  (-l|--list)
  local lists=('payloads' 'encoders' 'nops' 'platforms' 'archs' 'encryp
t' 'formats' 'all')
  _values 'list' $lists
  ;;

  (-encrypt)
  local encrypts=('aes256' 'base64' 'rc4' 'xor')
  _values 'encrypt' $encrypts
  ;;

  (-a|--arch)
  _values 'arch' $(__msfvenom_archs)
  ;;

  (-platform)
  _values 'platform' $(__msfvenom_platforms)
  ;;

   (-f|--format)
```

```
 _values 'format' $(__msfvenom_formats)
 ;;

 (-e|--encoder)
 _values 'encoder' $(__msfvenom_encoders)
 ;;

 (-o|--out|-x|--template|-c|--add-code)
 _files
 ;;

 (*)

 ;;

 esac
}


__msfvenom_payloads(){
 local msf_payloads

 # we cache the list of packages (originally from the macports plugi
n)
 venom-cache-payloads
 msf_payloads=`cat $VENOM_CACHE_FILE`

 for line in $msf_payloads; do
 echo "$line"
 done
}

__msfvenom_archs(){
 local archs
 archs=(
 'aarch64'
 'armbe'
 'armle'
 'cbea'
 'cbea64'
 'cmd'
```

```
 'dalvik'
 'firefox'
 'java'
 'mips'
 'mips64'
 'mips64le'
 'mipsbe'
 'mipsle'
 'nodejs'
 'php'
 'ppc'
 'ppc64'
 'ppc64le'
 'ppce500v2'
 'python'
 'r'
 'ruby'
 'sparc'
 'sparc64'
 'tty'
 'x64'
 'x86'
 'x86_64'
 'zarch'
 )

 for line in $archs; do
 echo "$line"
 done

}

__msfvenom_encoders(){
 local encoders
 encoders=(
 'cmd/brace'
 'cmd/echo'
 'cmd/generic_sh'
 'cmd/ifs'
 'cmd/perl'
```

```
'cmd/powershell_base64'
'cmd/printf_php_mq'
'generic/eicar'
'generic/none'
'mipsbe/byte_xori'
'mipsbe/longxor'
'mipsle/byte_xori'
'mipsle/longxor'
'php/base64'
'ppc/longxor'
'ppc/longxor_tag'
'ruby/base64'
'sparc/longxor_tag'
'x64/xor'
'x64/xor_dynamic'
'x64/zutto_dekiru'
'x86/add_sub'
'x86/alpha_mixed'
'x86/alpha_upper'
'x86/avoid_underscore_tolower'
'x86/avoid_utf8_tolower'
'x86/bloxor'
'x86/bmp_polyglot'
'x86/call4_dword_xor'
'x86/context_cpuid'
'x86/context_stat'
'x86/context_time'
'x86/countdown'
'x86/fnstenv_mov'
'x86/jmp_call_additive'
'x86/nonalpha'
'x86/nonupper'
'x86/opt_sub'
'x86/service'
'x86/shikata_ga_nai'
'x86/single_static_bit'
'x86/unicode_mixed'
'x86/unicode_upper'
'x86/xor_dynamic'
)
```

```
222
223  for line in $encoders; do
224  echo "$line"
225  done
226 }
227
228 __msfvenom_platforms(){
229  local platforms
230  platforms=(
231  'aix'
232  'android'
233  'apple_ios'
234  'bsd'
235  'bsdi'
236  'cisco'
237  'firefox'
238  'freebsd'
239  'hardware'
240  'hpux'
241  'irix'
242  'java'
243  'javascript'
244  'juniper'
245  'linux'
246  'mainframe'
247  'multi'
248  'netbsd'
249  'netware'
250  'nodejs'
251  'openbsd'
252  'osx'
253  'php'
254  'python'
255  'r'
256  'ruby'
257  'solaris'
258  'unix'
259  'unknown'
260  'windows'
261  )
```

```
262
263  for line in $platforms; do
264  echo "$line"
265  done
266 }
267
268 __msfvenom_formats(){
269  local formats
270  formats=(
271  'asp'
272  'aspx'
273  'aspx-exe'
274  'axis2'
275  'dll'
276  'elf'
277  'elf-so'
278  'exe'
279  'exe-only'
280  'exe-service'
281  'exe-small'
282  'hta-psh'
283  'jar'
284  'jsp'
285  'loop-vbs'
286  'macho'
287  'msi'
288  'msi-nouac'
289  'osx-app'
290  'psh'
291  'psh-cmd'
292  'psh-net'
293  'psh-reflection'
294  'vba'
295  'vba-exe'
296  'vba-psh'
297  'vbs'
298  'war'
299  'bash'
300  'c'
301  'csharp'
```

```
 'dw'
 'dword'
 'hex'
 'java'
 'js_be'
 'js_le'
 'num'
 'perl'
 'pl'
 'powershell'
 'ps1'
 'py'
 'python'
 'raw'
 'rb'
 'ruby'
 'sh'
 'vbapplication'
 'vbscript'
 )

 for line in $formats; do
 echo "$line"
 done
}

# For most common options, not accurately
__msfvenom_options(){
 local options
 options=(
 LHOST= \
 LPORT= \
 EXITFUNC= \
 RHOST= \
 StageEncoder= \
 AutoLoadStdapi= \
 AutoRunScript= \
 AutoSystemInfo= \
 AutoVerifySession= \
 AutoVerifySessionTimeout= \
```

```
 EnableStageEncoding= \
 EnableUnicodeEncoding= \
 HandlerSSLCert= \
 InitialAutoRunScript= \
 PayloadBindPort= \
 PayloadProcessCommandLine= \
 PayloadUUIDName= \
 PayloadUUIDRaw= \
 PayloadUUIDSeed= \
 PayloadUUIDTracking= \
 PrependMigrate= \
 PrependMigrateProc= \
 ReverseAllowProxy= \
 ReverseListenerBindAddress= \
 ReverseListenerBindPort= \
 ReverseListenerComm= \
 ReverseListenerThreaded= \
 SessionCommunicationTimeout= \
 SessionExpirationTimeout= \
 SessionRetryTotal= \
 SessionRetryWait= \
 StageEncoder= \
 StageEncoderSaveRegisters= \
 StageEncodingFallback= \
 StagerRetryCount= \
 StagerRetryWait= \
 VERBOSE= \
 WORKSPACE=
 )

 echo $options
}


#_msfvenom "$@"
```

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