CSE 2010- Secure Coding

WIN 20-21

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Lab experiment - Working with the memory vulnerabilities

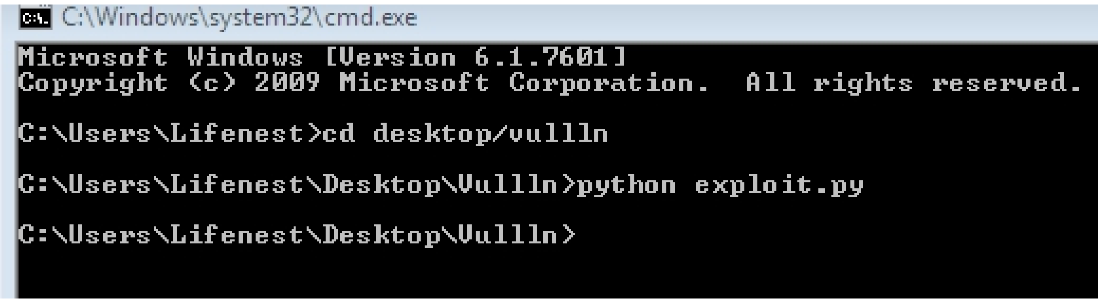
Task

- 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 to generate the payload
- Install Vuln_Program_Stream.exe and Run the same

Analysis

- Crash the Vuln_Program_Stream program and report the vulnerability.

- Run the python script to generate payload.



C:\Windows\system32\cmd.exe

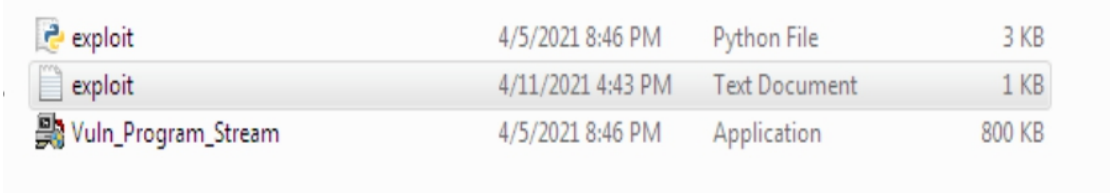
```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\Lifenest>cd desktop/vullln

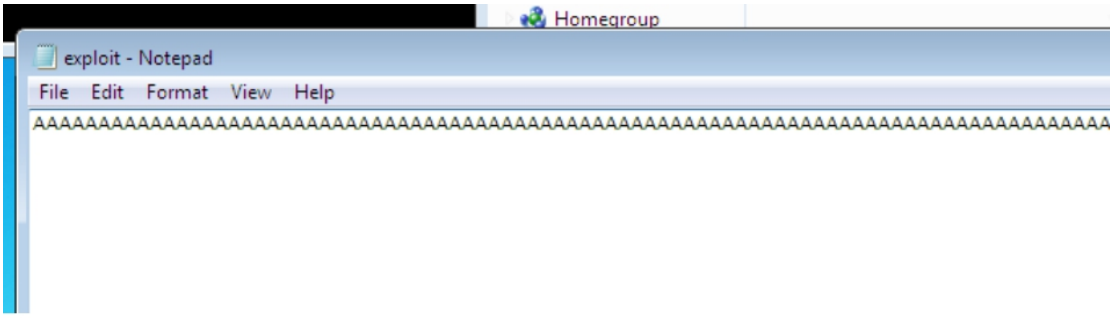
C:\Users\Lifenest\Desktop\Vullln>python exploit.py

C:\Users\Lifenest\Desktop\Vullln>
```

- Payload gets generated.



exploit	4/5/2021 8:46 PM	Python File	3 KB
exploit	4/11/2021 4:43 PM	Text Document	1 KB
Vuln_Program_Stream	4/5/2021 8:46 PM	Application	800 KB



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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
```

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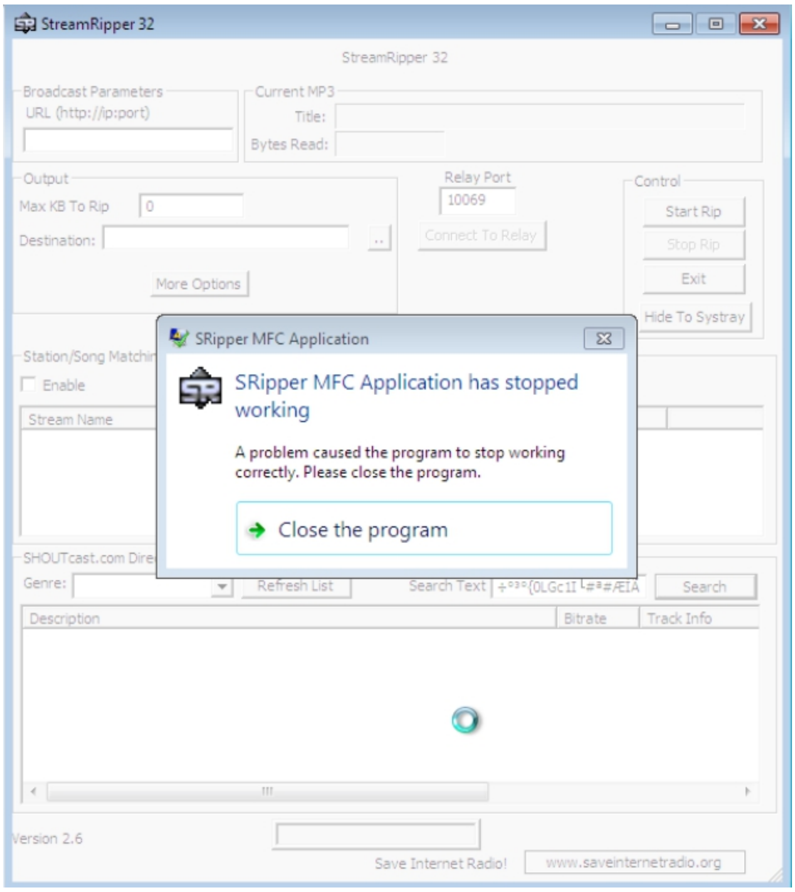
- Open stream ripper and generate payload into intake search bar that has vulnerability.
- Then stream ripper crashes and cmd will open.



SRipper MFC Application has stopped working

A problem caused the program to stop working correctly. Please close the program.

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Now this is because of buffer overflow, a vulnerability that is an anomaly where a program, while writing data to a **buffer**, **overruns** the **buffer's** boundary and overwrites adjacent memory locations.