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Topic: Automated Vulnerability Analysis and Patch Management

Downloading the required files from github

- After that click setup.py to set up wes-ng
- Using cmd we will find the exploit and fix it
- First you have to create a systeminfo text file.

```
C:\Users\user\Desktop\wesng-master\wesng-master>systeminfo >systeminfo_sc_lab.txt

C:\Users\user\Desktop\wesng-master\wesng-master>dir
 Volume in drive C has no label.
 Volume Serial Number is A0D4-F368

 Directory of C:\Users\user\Desktop\wesng-master\wesng-master

11-06-2021  20:30    <DIR>          .
11-06-2021  20:30    <DIR>          ..
08-06-2021  00:36             1,760 .gitignore
08-06-2021  00:36             3,166 CHANGELOG.md
08-06-2021  00:36             3,760 CMDLINE.md
08-06-2021  00:36    <DIR>          collector
11-06-2021  20:28         1,461,713 definitions.zip
08-06-2021  00:36           688,951 demo.gif
08-06-2021  00:36             1,458 LICENSE.txt
08-06-2021  00:36             5,629 muc_lookup.py
08-06-2021  00:36             4,864 README.md
08-06-2021  00:36             1,727 setup.py
11-06-2021  20:30             4,166 systeminfo_sc_lab.txt
08-06-2021  00:36    <DIR>          validation
08-06-2021  00:36            31,016 wes.py
```

- Now update wes.py file

```
C:\Users\user\Desktop\wesng-master\wesng-master>python wes.py --update
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip3 install chardet
Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )
[+] Updating definitions
[+] Obtained definitions created at 20210607
```

- Now run the wes.py file with systeminfo.txt file to find

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vulnerabilities

```
C:\Users\user\Desktop\wesng-master\wesng-master>python wes.py systeminfo_sc_lab.txt
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip3 install
Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )
[+] Parsing systeminfo output
[+] Operating System
    - Name: Windows 10 Version 2004 for x64-based Systems
    - Generation: 10
    - Build: 19041
    - Version: 2004
    - Architecture: x64-based
    - Installed hotfixes (12): KB4601554, KB5003254, KB4561600, KB4566785, KB4577586, KB4580325, KB458422
B4593175, KB4598481, KB5003637, KB5003503
[+] Loading definitions
    - Creation date of definitions: 20210607
[+] Determining missing patches
[+] Found vulnerabilities
```

```
KB: KB5003173
Title: Hyper-V Remote Code Execution Vulnerability
Affected product: Windows 10 Version 2004 for x64-based Systems
Affected component: Issuing CNA
Severity: Critical
Impact: Remote Code Execution
Exploit: n/a

Date: 20210511
CVE: CVE-2021-28476
KB: KB5003173
Title: Hyper-V Remote Code Execution Vulnerability
Affected product: Windows 10 Version 2004 for x64-based Systems
Affected component: Issuing CNA
Severity: Critical
Impact: Remote Code Execution
Exploit: n/a

[+] Missing patches: 3
    - KB5003173: patches 50 vulnerabilities
    - KB4569745: patches 2 vulnerabilities
    - KB4601050: patches 2 vulnerabilities
[+] KB with the most recent release date
    - ID: KB5003173
    - Release date: 20210511

[+] Done. Displaying 54 of the 54 vulnerabilities found.
```

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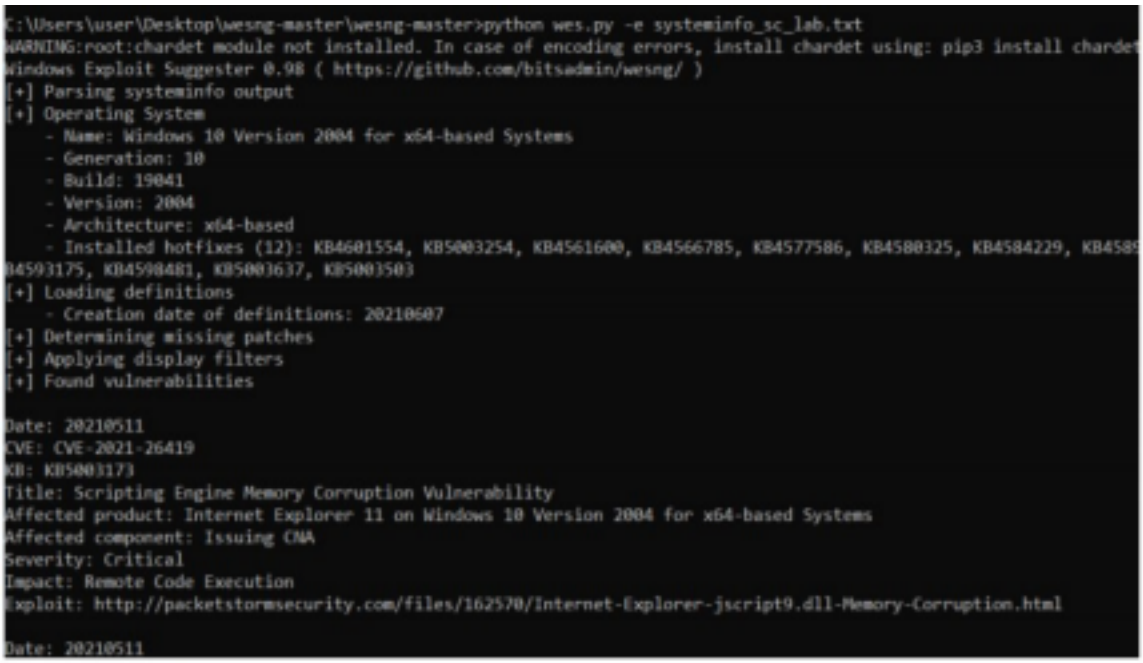
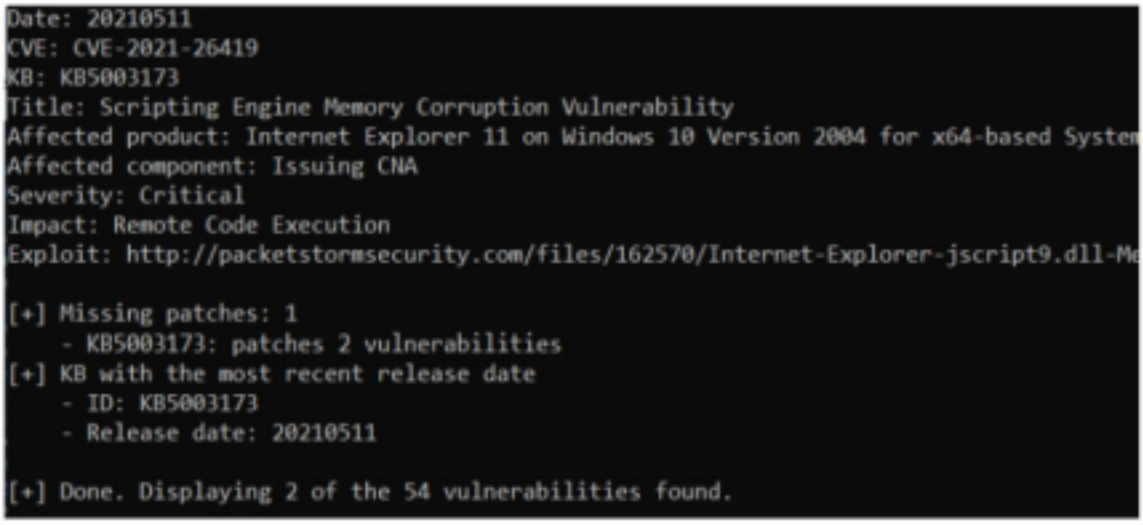
- Now find one exploit to patch





- Now fix that exploit

```
C:\Users\user\Desktop\wesng-master\wesng-master>python wes.py -e systeminfo_sc_lab.txt -p KB5003173
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip3 install chardet
Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )
[+] Parsing systeminfo output
[+] Operating System
    - Name: Windows 10 Version 2004 for x64-based Systems
    - Generation: 10
    - Build: 19041
    - Version: 2004
    - Architecture: x64-based
    - Installed hotfixes (12): KB4601554, KB5003254, KB4561600, KB4566785, KB4577586, KB4580325, KB4584229, KB4589212,
84593175, KB4598481, KB5003637, KB5003503
    - Manually specified hotfixes (1): KB5003173
[+] Loading definitions
    - Creation date of definitions: 20210607
[+] Determining missing patches
[+] Applying display filters
[-] No vulnerabilities found
```