Secure Coding Lab – 13

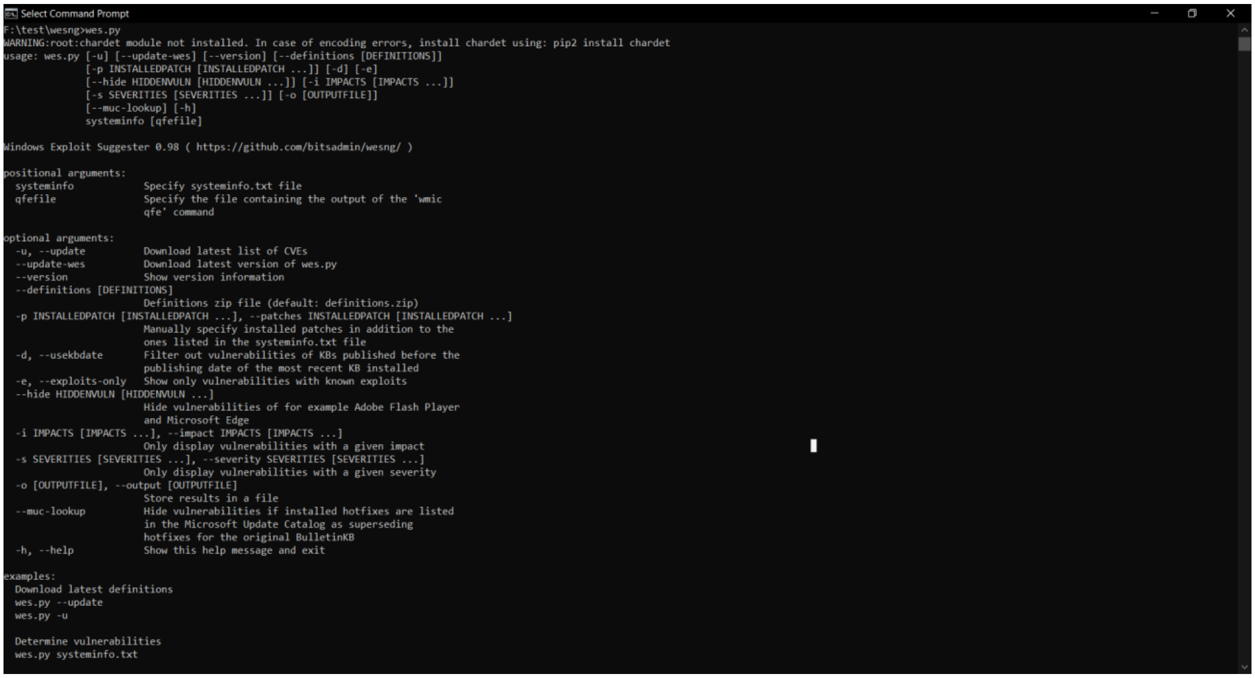
RISHAV DHIMAN

18BCN7030

Windows Exploit Suggester - Next Generation (WES-NG):

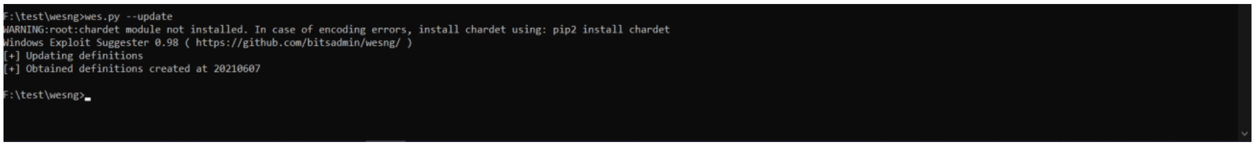
ES-NG is a tool based on the output of Windows' systeminfo utility which provides the list of vulnerabilities the OS is vulnerable to, including any exploits for these vulnerabilities. Every Windows OS between Windows XP and Windows 10, including their Windows Server counterparts, is supported.

>>wes.py



```
F:\test\wesng>wes.py
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip2 install chardet
usage: wes.py [-u] [--update-wes] [--version] [--definitions [DEFINITIONS]]
              [-p INSTALLEDPATCH [INSTALLEDPATCH ...]] [-d] [-e]
              [--hide HIDDENVULN [HIDDENVULN ...]] [-i IMPACTS [IMPACTS ...]]
              [-s SEVERITIES [SEVERITIES ...]] [-o [OUTPUTFILE]]
              [--muc-lookup] [-h]
              systeminfo [qfefile]

Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )

positional arguments:
  systeminfo            Specify systeminfo.txt file
  qfefile               Specify the file containing the output of the 'wmic
                        qfe' command

optional arguments:
  -u, --update          Download latest list of CVEs
  --update-wes          Download latest version of wes.py
  --version             Show version information
  --definitions [DEFINITIONS]
                        Definitions zip file (default: definitions.zip)
  -p INSTALLEDPATCH [INSTALLEDPATCH ...], --patches INSTALLEDPATCH [INSTALLEDPATCH ...]
                        Manually specify installed patches in addition to the
                        ones listed in the systeminfo.txt file
  -d, --usekbdate       Filter out vulnerabilities of KBs published before the
                        publishing date of the most recent KB installed
  -e, --exploits-only   Show only vulnerabilities with known exploits
  --hide HIDDENVULN [HIDDENVULN ...]
                        Hide vulnerabilities of for example Adobe Flash Player
                        and Microsoft Edge
  -i IMPACTS [IMPACTS ...], --impact IMPACTS [IMPACTS ...]
                        Only display vulnerabilities with a given impact
  -s SEVERITIES [SEVERITIES ...], --severity SEVERITIES [SEVERITIES ...]
                        Only display vulnerabilities with a given severity
  -o [OUTPUTFILE], --output [OUTPUTFILE]
                        Store results in a file
  --muc-lookup          Hide vulnerabilities if installed hotfixes are listed
                        in the Microsoft Update Catalog as superseding
                        hotfixes for the original BulletinKB
  -h, --help            Show this help message and exit

examples:
  Download latest definitions
  wes.py --update
  wes.py -u

  Determine vulnerabilities
  wes.py systeminfo.txt
```

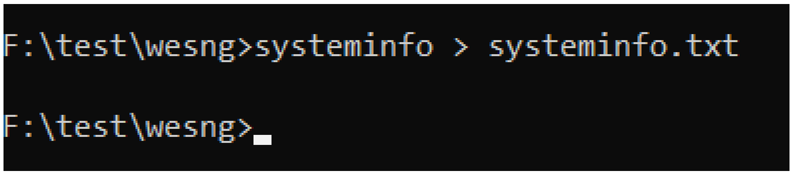
>>wes.py –update



```
F:\test\wesng>wes.py --update
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip2 install chardet
Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )
[+] Updating definitions
[+] Obtained definitions created at 20210607

F:\test\wesng>
```

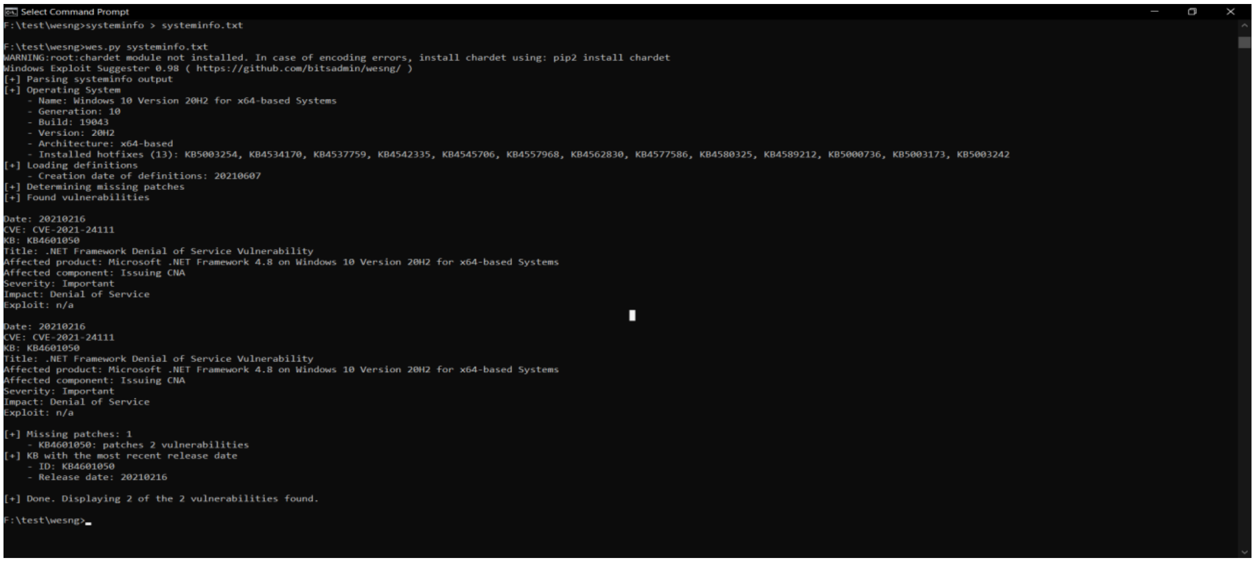
Export SystemInfo into a txt file

>>systeminfo > systeminfo.txt



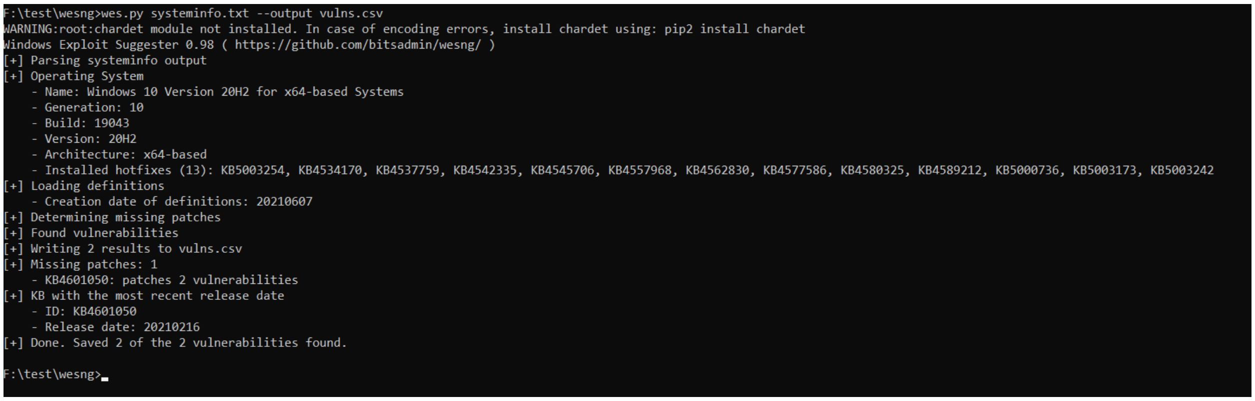
```
F:\test\wesng>systeminfo > systeminfo.txt

F:\test\wesng>_
```

>>wes.py systeminfo.txt

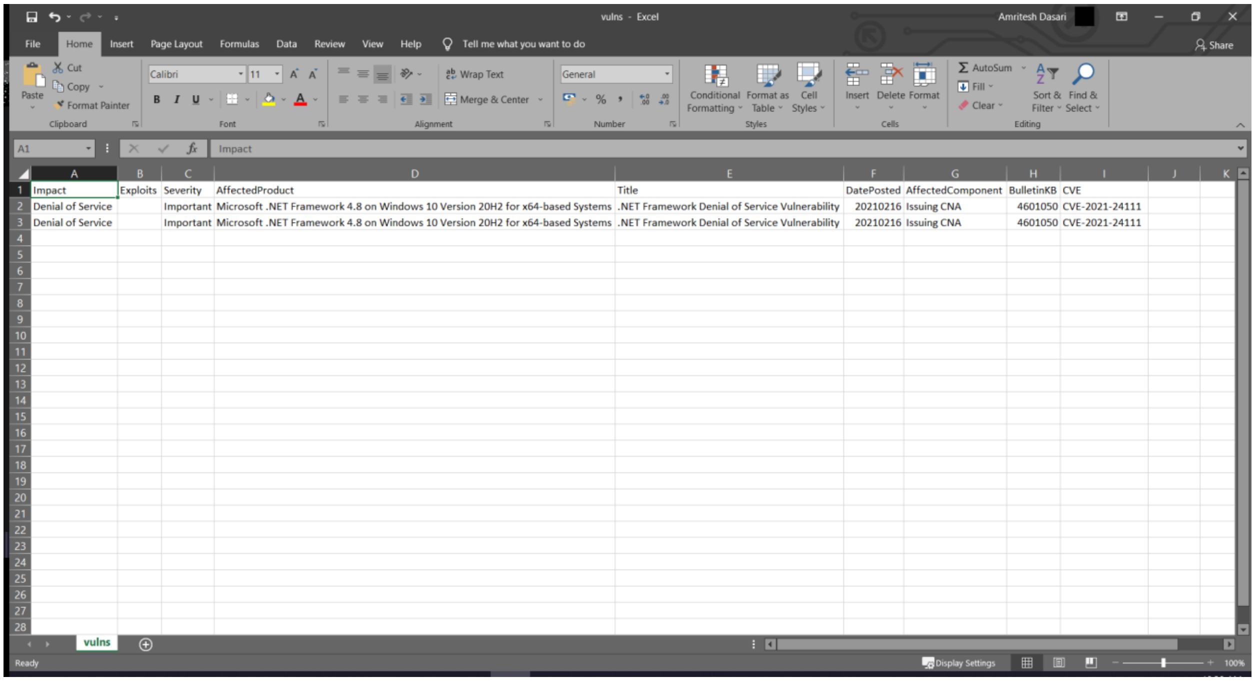


```
F:\test\wesng>systeminfo > systeminfo.txt

F:\test\wesng>wes.py systeminfo.txt
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip2 install chardet
Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )
[+] Parsing systeminfo output
[+] Operating System
    - Name: Windows 10 Version 20H2 for x64-based Systems
    - Generation: 10
    - Build: 19043
    - Version: 20H2
    - Architecture: x64-based
    - Installed hotfixes (13): KB5003254, KB4534170, KB4537759, KB4542335, KB4545706, KB4557968, KB4562830, KB4577586, KB4580325, KB4589212, KB5000736, KB5003173, KB5003242
[+] Loading definitions
    - Creation date of definitions: 20210607
[+] Determining missing patches
[+] Found vulnerabilities

Date: 20210216
CVE: CVE-2021-24111
KB: KB4601050
Title: .NET Framework Denial of Service Vulnerability
Affected product: Microsoft .NET Framework 4.8 on Windows 10 Version 20H2 for x64-based Systems
Affected component: Issuing CNA
Severity: Important
Impact: Denial of Service
Exploit: n/a

Date: 20210216
CVE: CVE-2021-24111
KB: KB4601050
Title: .NET Framework Denial of Service Vulnerability
Affected product: Microsoft .NET Framework 4.8 on Windows 10 Version 20H2 for x64-based Systems
Affected component: Issuing CNA
Severity: Important
Impact: Denial of Service
Exploit: n/a

[+] Missing patches: 1
    - KB4601050: patches 2 vulnerabilities
[+] KB with the most recent release date
    - ID: KB4601050
    - Release date: 20210216

[+] Done. Displaying 2 of the 2 vulnerabilities found.

F:\test\wesng>_
```

>>wes.py systeminfo.txt --output vulns.csv



```
F:\test\wesng>wes.py systeminfo.txt --output vulns.csv
WARNING:root:chardet module not installed. In case of encoding errors, install chardet using: pip2 install chardet
Windows Exploit Suggester 0.98 ( https://github.com/bitsadmin/wesng/ )
[+] Parsing systeminfo output
[+] Operating System
    - Name: Windows 10 Version 20H2 for x64-based Systems
    - Generation: 10
    - Build: 19043
    - Version: 20H2
    - Architecture: x64-based
    - Installed hotfixes (13): KB5003254, KB4534170, KB4537759, KB4542335, KB4545706, KB4557968, KB4562830, KB4577586, KB4580325, KB4589212, KB5000736, KB5003173, KB5003242
[+] Loading definitions
    - Creation date of definitions: 20210607
[+] Determining missing patches
[+] Found vulnerabilities
[+] Writing 2 results to vulns.csv
[+] Missing patches: 1
    - KB4601050: patches 2 vulnerabilities
[+] KB with the most recent release date
    - ID: KB4601050
    - Release date: 20210216
[+] Done. Saved 2 of the 2 vulnerabilities found.

F:\test\wesng>_
```



	A	B	C	D	E	F	G	H	I
1	Impact	Exploits	Severity	AffectedProduct	Title	DatePosted	AffectedComponent	BulletinKB	CVE
2	Denial of Service		Important	Microsoft .NET Framework 4.8 on Windows 10 Version 20H2 for x64-based Systems	.NET Framework Denial of Service Vulnerability	20210216	Issuing CNA	4601050	CVE-2021-24111
3	Denial of Service		Important	Microsoft .NET Framework 4.8 on Windows 10 Version 20H2 for x64-based Systems	.NET Framework Denial of Service Vulnerability	20210216	Issuing CNA	4601050	CVE-2021-24111