

LAB-12: SECURE CODING

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

Step 1:

```
cmd Select Command Prompt
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, --usekbddate   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
```

Step 2:

```
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>
```

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

```
F:\test\wesng>
```

```
File Edit Format View Help
|
Host Name: GARRICK-LAPTOP
OS Name: Microsoft Windows 10 Home Single Language
OS Version: 10.0.19043 N/A Build 19043
OS Manufacturer: Microsoft Corporation
OS Configuration: Standalone Workstation
OS Build Type: Multiprocessor Free
Registered Owner: dmamritesh@gmail.com
Registered Organization:
Product ID: 00327-35820-31051-AAOEM
Original Install Date: 21-04-2021, 01:52:54 AM
System Boot Time: 08-06-2021, 10:03:08 PM
System Manufacturer: Dell Inc.
System Model: Inspiron 5570
System Type: x64-based PC
Processor(s): 1 Processor(s) Installed.
[01]: Intel64 Family 6 Model 142 Stepping 10 GenuineIntel ~1600 Mhz
BIOS Version: Dell Inc. 1.4.1, 24-12-2020
Windows Directory: C:\Windows
System Directory: C:\Windows\system32
Boot Device: \Device\HarddiskVolume6
System Locale: en-us;English (United States)
Input Locale: 00004009
Time Zone: (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
Total Physical Memory: 16,282 MB
Available Physical Memory: 6,993 MB
Virtual Memory: Max Size: 18,714 MB
Virtual Memory: Available: 5,785 MB
Virtual Memory: In Use: 12,929 MB
Page File Location(s): C:\pagefile.sys
Domain: WORKGROUP
Logon Server: \\GARRICK-LAPTOP
Hotfix(s): 13 Hotfix(s) Installed.
[01]: KB5003254
[02]: KB4534170
[03]: KB4537759
[04]: KB4542335
[05]: KB4545706
[06]: KB4557968
[07]: KB4562830
[08]: KB4577586
[09]: KB4580325
```

Step 3:

```
>Select Command Prompt
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

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KB: KB4601050
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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>
```

Step 4:

```
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
[+] 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>
```

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-2021-24
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-2021-24
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