So Long, and Thanks for All the Fish

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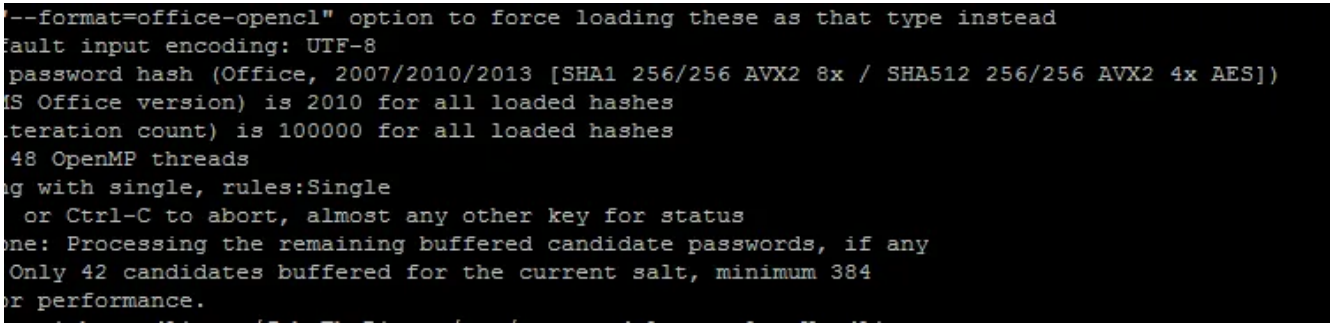

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Cracking Microsoft Excel Documents using John The Ripper

Written by Andrea Fortuna • on March 20, 2019 • in Cybersecurity

Recently, during a forensic analysis on a laptop of an employee charged with corporate espionage, I've carved from disk a suspicious Excel file.

Obviously, the file was password protected, and I had to find a way to read it.

I did it,and now i'd like to share workflow for **XLSX** cracking.

What tools do i use?

The encryption algorithm of encrypted **Microsoft Excel** files is **40bit RC4**.
As it is encrypted nothing could be tweaked by opening the document with a hex editor.

The correct way is to extract the password hash from the file and then cracking it using **John The Ripper**.

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For this purpose, you need to get a '**jumbo' build** of **John The Ripper**, that supports Office files cracking.

First, clone the git repository:

```
$ git clone https://github.com/magnumripper/JohnTheRipper.git
```

Then compile the sources:

```
$ cd JohnTheRipper/src

$ ./configure && make
```

If everything goes well, the executables for John and its related utilities will be created under "../run/".

Now, under "run" you can also find a python script, ***office2john.py***: you can use it for extract the hash from the encrypted XLSX file:

```
$ python office2john.py ./test.xlsx > hash.txt

$ cat hash.txt
test.xlsx:$office$2010100000128 16b1203fe2e498cec4d5452e1d0aea3775cd130baf73f5de29ec
```

Finally, you can start a bruteforce session with John The Ripper, maybe using a specific wordlist:

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```
$ john --rules --wordlist=yourwordlist.txt hash.txt
```

Now, make a cup of coffee, sit back and wait for John to do its thing.

References

- John the Ripper password cracker
- magnumripper/JohnTheRipper

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