CSRF with MS Word

CSRF with MS Word - David Kierznowski, michaeldaw.org.

- Published: date not stated
- Original: <https://web.archive.org/web/20070101051946/http://michaeldaw.org/md-hacks/csrf-with-msword/>
- Preserved from: https://web.archive.org/web/20070101051946/http://michaeldaw.org/md-hacks/csrf-with-msword/ (manual-import) on 2026-08-07
- Licence: unknown

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Operation n

The Adventures of Michael Daw

CSRF with MS Word

Posted by david.kierznowski On November 24th, 2006 at 12:11

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Posted in Michael Daw's Hacks

[image: image]

Update: 15/12: CSRF in MS Word part II Update 28/11: It is interesting to note that MS Word 2003 will actually warn the user. Obviously, someone at Microsoft saw the potential for badness here. Good stuff.

Microsoft Word has been plagued with vulnerabilities in the past. Therefore, mail servers often restrict email with the .doc extension. However, with applications like Microsoft SharePoint which allows sharing of content between users, the door is opened just slightly to allow for deviance. This article demonstrates using Microsoft Word in Cross Site Request Forgery (CSRF) Attacks.

Our attack vector is found in exploiting MSWord's frame capabilities: By creating malicious frames in a document and pointing them to a malicious URL, we can exploit multiple, persistent CSRF

vulnerabilities (and possibly the browser). The cool part? This all happens transparently with no warnings to the user. Also, this IMG tag can be hidden within a document which means that our malicious code is executed everytime the document is opened. Furthermore, an attacker can use either 302 redirects or modify the infected HTML file to alter his/her targets array. This means our payload can be updated from the attackers end.

This is how we do it:

1. Create new document
    1. Goto Insert > Format > Frames >
    2. Right Click on the frame > Frame Properties >
    3. Set hyperlink to our exploit page which contains malicious IMG tags.

An example target HTML file can be seen below:

```
<html>
<body>
<img src="http://non-existent/login.php?changepass=123&verify=123" alt=""  />
</body>
</html>
```

Obviously curious about how MS Word communicates, I sniffed the connection:

```
GET /login.php?changepass=123&verify=123 HTTP/1.1
Accept: */*
UA-CPU: x86
Accept-Encoding: gzip, deflate
User-Agent: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; .NET CLR 1.1.4322)
Host: non-existent
Connection: Keep-Alive
Cookie: blah
```

As we can see, it is using Internet Explorer to fetch these pages. With some creativity other exploitation techniques may be possible (i.e. ActiveX exploitation). However, attacks are limited due to scripting being disabled by default. Thus we see that MS Word can be used to launch multiple, persistent (well almost) CSRF attacks.

Tested using: MS Word 2000. Expect a part 2 [image: :)]
