there is nothing（i春秋CTF题解）

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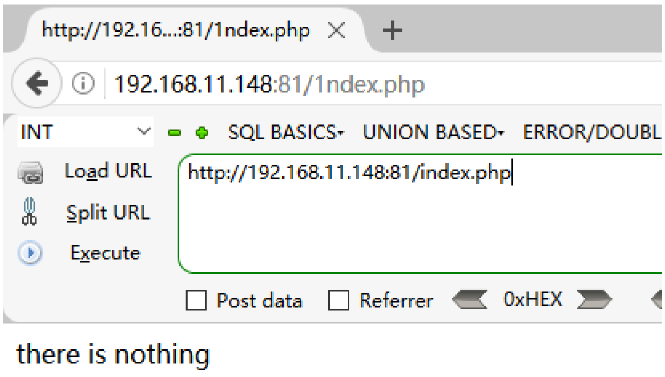
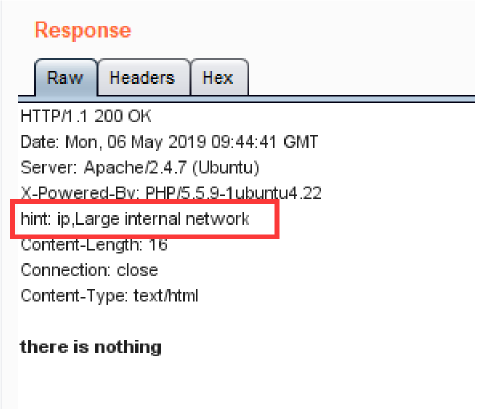
（1）打开页面，显示为：there is nothing



http://192.168.11.148:81/index.php

there is nothing

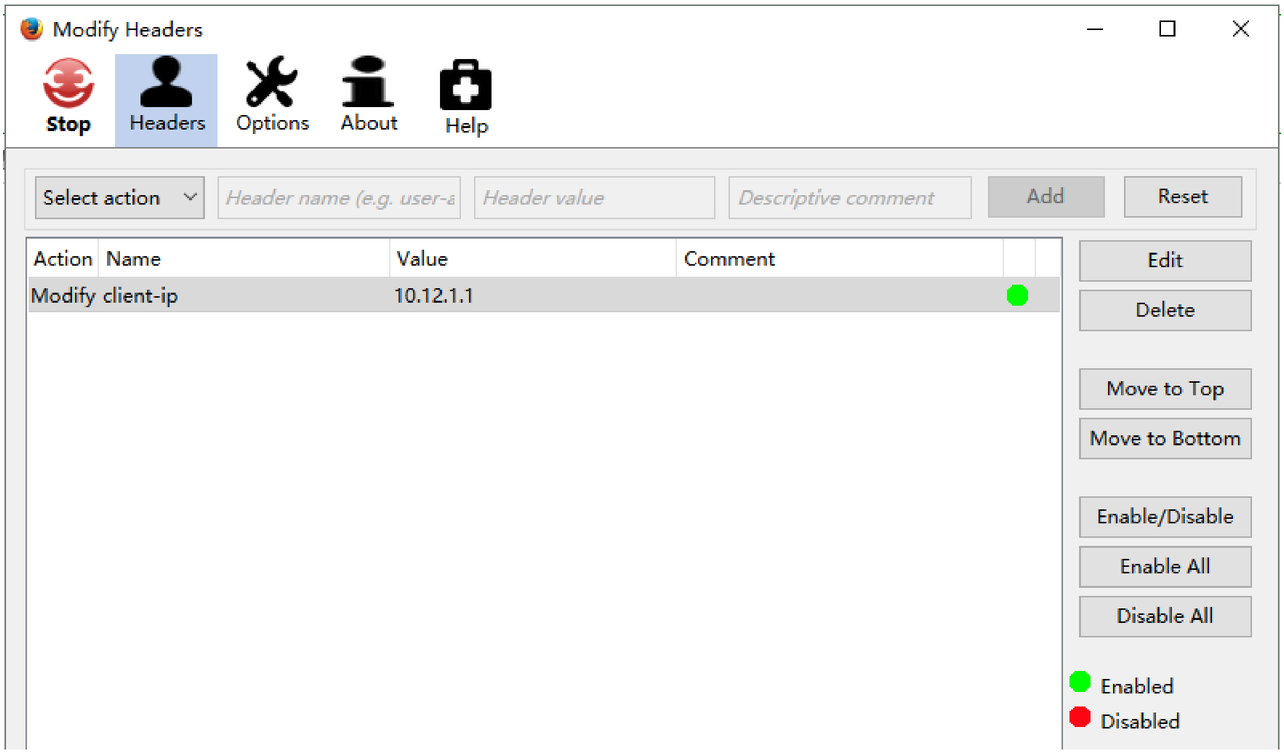
（2）抓包发现提示



```
HTTP/1.1 200 OK
Date: Mon, 06 May 2019 09:44:41 GMT
Server: Apache/2.4.7 (Ubuntu)
X-Powered-By: PHP/5.5.9-1ubuntu4.22
hint: ip,Large internal network
Content-Length: 16
Connection: close
Content-Type: text/html

there is nothing
```

（3）hint:ip,Large internal network

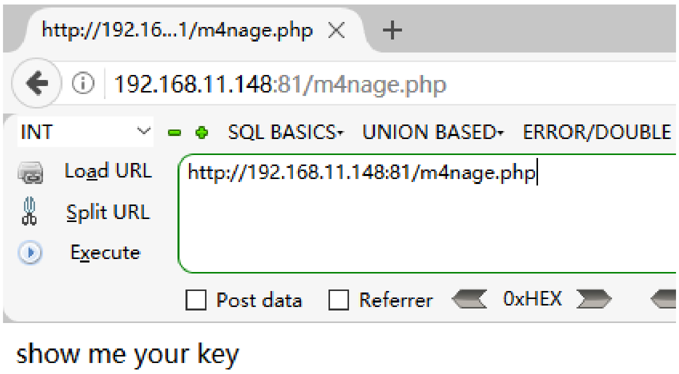
意为最大的内网网段IP，hint: ip,Large internal network（最大内网ip），内网ip中最大的网段应该就是10.0.0.0了，所以我们伪造ip再一次访问题目链接，我们可以用火狐的插件伪造，（modify headers）随便伪造10.0.0.0网段的ip



Action	Name	Value	Comment	
Modify	client-ip	10.12.1.1		●

🟢 Enabled
🔴 Disabled

（4）确定后刷新网页，发现网页自动跳转到别的页面，根据提示，show me your key；使用post或者get请求进行request



http://192.168.11.148:81/m4nage.php

show me your key

（5）很好的出现了以下语句：

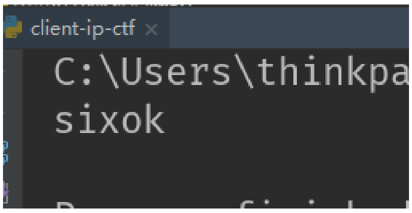
key is not right,md5(key)==="3a7525f5c934d05f8e381a9a8f40cc00",and the key is ichunqiu[a-z]{5}

ichunqiu为md5的前8个字母，后5个字母无告诉，需要根据3a7525f5c934d05f8e381a9a8f40cc00来破解剩下的5个字母。

可以使用：**https://www.somd5.com/**

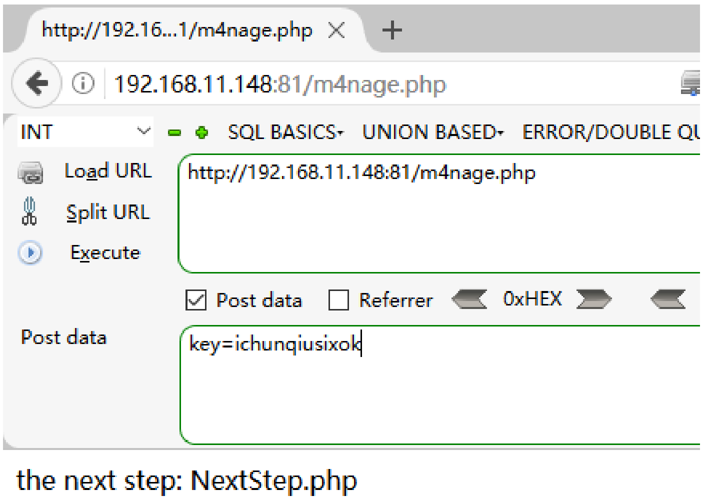
也可以自己写脚本：

```
import hashlib

def md5(data):
m=hashlib.md5()
m.update(data.encode("utf8"))
a=m.hexdigest()
return a

a = 'ichunqiu'
b = 'abcdefghigklmnopqrstuvwxyz'
for q in b:
for w in b:
for e in b:
for r in b:
for t in b:
if md5(a+q+w+e+r+t)=='3a7525f5c934d05f8e381a9a8f40cc00':
print(q+w+e+r+t)
```



```
C:\Users\thinkpa
sixok
```

（6）然后将ichunqiu与sixok拼接为key再次进行请



192.168.11.148:81/m4nage.php

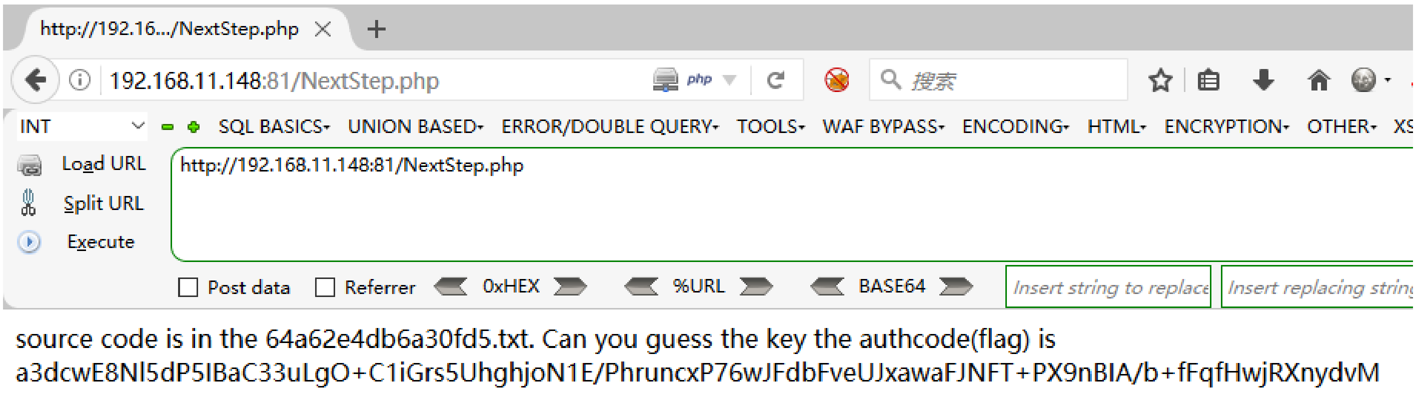
http://192.168.11.148:81/m4nage.php

☑ Post data ☐ Referrer

Post data: key=ichunqiusixok

the next step: NextStep.php

（7）访问NextStep.php页面



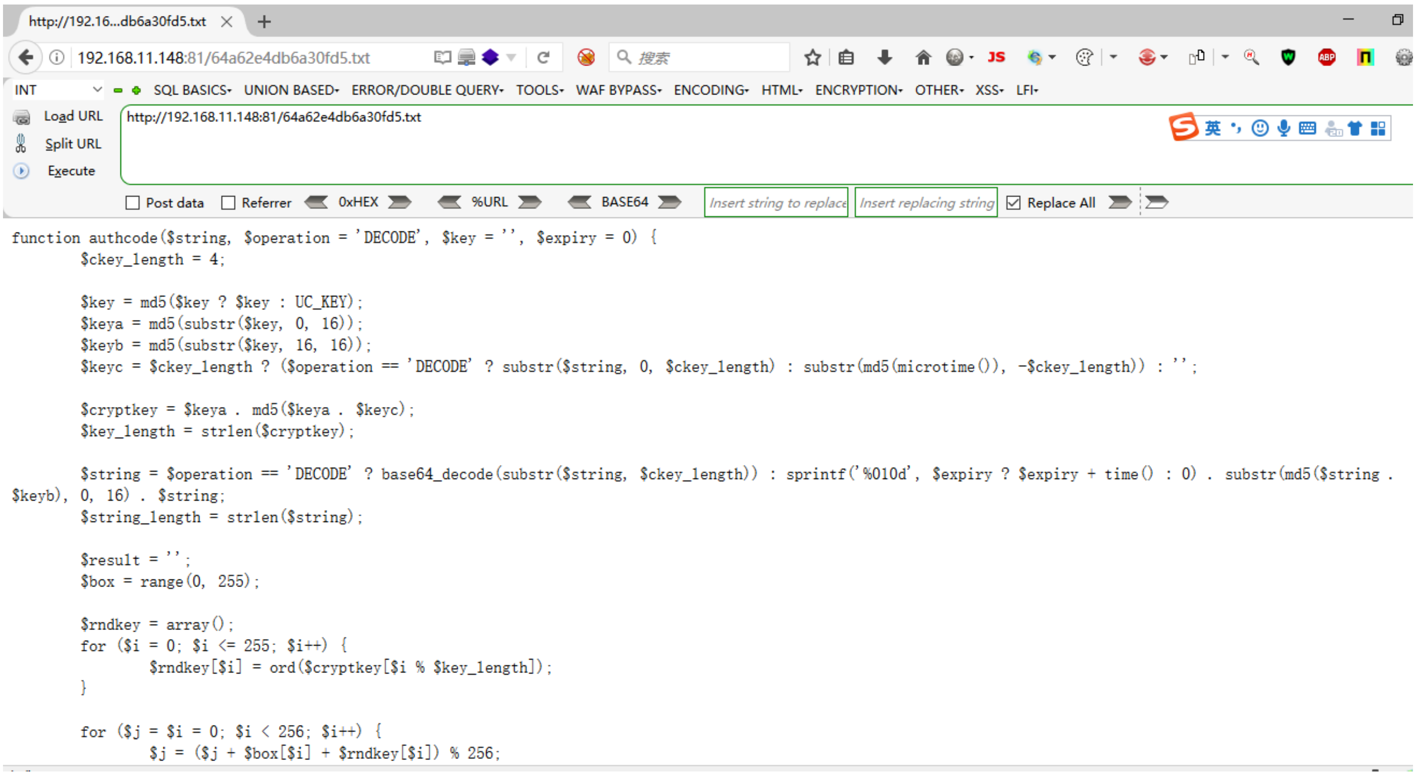
http://192.168.11.148:81/NextStep.php

source code is in the 64a62e4db6a30fd5.txt. Can you guess the key the authcode(flag) is a3dcwE8Nl5dP5lBaC33uLgO+C1iGrs5UhghjoN1E/PhruncxP76wJFdbFveUJxawaFJNFT+PX9nBIA/b+fFqfHwjRXnydvM

（8）接下来进行解密即可：

```php
<?php
function authcode($string, $operation = 'DECODE', $key = '', $expiry = 0) {
$ckey_length = 4;

$key = md5($key ? $key : UC_KEY);
$keya = md5(substr($key, 0, 16));
$keyb = md5(substr($key, 16, 16));
$keyc = $ckey_length ? ($operation == 'DECODE' ? substr($string, 0, $ckey_length) :
substr(md5(microtime()), -$ckey_length)) : '';

$cryptkey = $keya . md5($keya . $keyc);
$key_length = strlen($cryptkey);

$string = $operation == 'DECODE' ? base64_decode(substr($string, $ckey_length)) :
sprintf('%010d', $expiry ? $expiry + time() : 0) . substr(md5($string . $keyb), 0, 16) .
$string;
$string_length = strlen($string);

$result = '';
$box = range(0, 255);

$rndkey = array();
for ($i = 0; $i <= 255; $i++) {
$rndkey[$i] = ord($cryptkey[$i % $key_length]);
}

for ($j = $i = 0; $i < 256; $i++) {
$j = ($j + $box[$i] + $rndkey[$i]) % 256;
$tmp = $box[$i];
$box[$i] = $box[$j];
$box[$j] = $tmp;
}

for ($a = $j = $i = 0; $i < $string_length; $i++) {
$a = ($a + 1) % 256;
$j = ($j + $box[$a]) % 256;
$tmp = $box[$a];
$box[$a] = $box[$j];
$box[$j] = $tmp;
$box[$j] = $tmp;
$result .= chr(ord($string[$i]) ^ ($box[($box[$a] + $box[$j]) % 256]));
}

if ($operation == 'DECODE') {
if ((substr($result, 0, 10) == 0 || substr($result, 0, 10) - time() > 0) && substr($result, 10,
16) == substr(md5(substr($result, 26) . $keyb), 0, 16)) {
return substr($result, 26);
} else {
return '';
}
} else {
return $keyc . str_replace('=', '', base64_encode($result));
}

}

echo
authcode("d04aRj3IDNQMDylF8SRI1gUzQRCIrPKGLMZIN0UEgOk6bElT+K0ghD5h5pv73Vw2S4IKkp1bg77iEnU0228LI9
nYwj0U+Og", $operation = 'DECODE', $key = 'ichunqiusixok', $expiry = 0)

?>
```

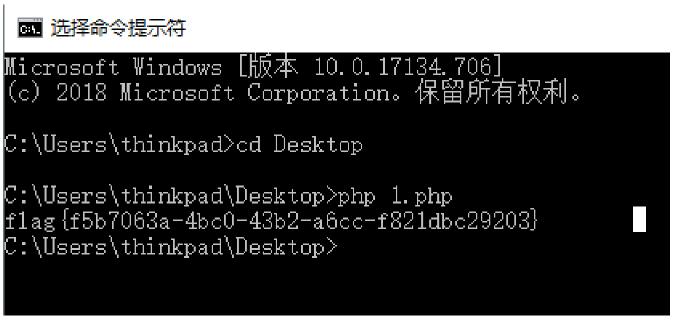
（9）然后进行破解：



http://192.16...db6a30fd5.txt
192.168.11.148:81/64a62e4db6a30fd5.txt
INT
SQL BASICS· UNION BASED· ERROR/DOUBLE QUERY· TOOLS· WAF BYPASS· ENCODING· HTML· ENCRYPTION· OTHER· XSS· LFI·
Load URL
Split URL
Execute
http://192.168.11.148:81/64a62e4db6a30fd5.txt
□ Post data □ Referrer 0xHEX %URL BASE64
Insert string to replace
Insert replacing string
☑ Replace All

```
function authcode($string, $operation = 'DECODE', $key = '', $expiry = 0) {
        $ckey_length = 4;

        $key = md5($key ? $key : UC_KEY);
        $keya = md5(substr($key, 0, 16));
        $keyb = md5(substr($key, 16, 16));
        $keyc = $ckey_length ? ($operation == 'DECODE' ? substr($string, 0, $ckey_length) : substr(md5(microtime()), -$ckey_length)) : '';

        $cryptkey = $keya . md5($keya . $keyc);
        $key_length = strlen($cryptkey);

        $string = $operation == 'DECODE' ? base64_decode(substr($string, $ckey_length)) : sprintf('%010d', $expiry ? $expiry + time() : 0) . substr(md5($string .
$keyb), 0, 16) . $string;
        $string_length = strlen($string);

        $result = '';
        $box = range(0, 255);

        $rndkey = array();
        for ($i = 0; $i <= 255; $i++) {
                $rndkey[$i] = ord($cryptkey[$i % $key_length]);
        }

        for ($j = $i = 0; $i < 256; $i++) {
                $j = ($j + $box[$i] + $rndkey[$i]) % 256;
```

（10）使用php运行代码即可



```
Microsoft Windows [版本 10.0.17134.706]
(c) 2018 Microsoft Corporation。保留所有权利。

C:\Users\thinkpad>cd Desktop

C:\Users\thinkpad\Desktop>php 1.php
flag{f5b7063a-4bc0-43b2-a6cc-f821dbc29203}
C:\Users\thinkpad\Desktop>
```

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