

# Prática Laboratório 1 (Linux)

Comando **ls**: mostra os diretórios disponíveis

```
aluno@lab-dacc-08:~$ ls
Android      Documentos  Imagens     Música      snap
'Área de Trabalho' Downloads   Modelos     Público     Vídeos
aluno@lab-dacc-08:~$
```

Comando **pwd**: mostra o diretório atual

```
aluno@lab-dacc-08:~$ pwd
/home/aluno
aluno@lab-dacc-08:~$
```

Comando **cat /etc/lsb-release**: mostra a versão do ubuntu

```
aluno@lab-dacc-08:~$ cat /etc/lsb-release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=20.04
DISTRIB_CODENAME=focal
DISTRIB_DESCRIPTION="Ubuntu 20.04.4 LTS"
aluno@lab-dacc-08:~$
```

Comando **ls -l /bin/ls**: acessa detalhes da pasta ls dentro da bin

```
aluno@lab-dacc-08:~$ ls -l /bin/ls
-rwxr-xr-x 1 root root 142144 set  5  2019 /bin/ls
aluno@lab-dacc-08:~$
```

Comando **ls /etc/host\***: consulta todos os arquivos com nome host

```
aluno@lab-dacc-08:~$ ls /etc/host*
/etc/host.conf /etc/hostid /etc/hostname /etc/hosts /etc/hosts.allow /etc/hosts.deny
aluno@lab-dacc-08:~$
```

Comando **ls /etc/host\*** mostra mais detalhes do anterior

```
aluno@lab-dacc-08:~$ ls -l /etc/host*
-rw-r--r-- 1 root root 92 dez  5  2019 /etc/host.conf
-rw-r--r-- 1 root root  4 fev 23  2022 /etc/hostid
-rw-r--r-- 1 root root 12 abr  5 12:09 /etc/hostname
-rw-r--r-- 1 root root 221 abr  2 19:42 /etc/hosts
-rw-r--r-- 1 root root 411 fev 23  2022 /etc/hosts.allow
-rw-r--r-- 1 root root 711 fev 23  2022 /etc/hosts.deny
aluno@lab-dacc-08:~$
```

Comando **ls -lh /bin/ls**

```
aluno@lab-dacc-08:~$ ls -lh /bin/ls
-rwxr-xr-x 1 root root 139K set  5  2019 /bin/ls
aluno@lab-dacc-08:~$
```

Comando `ls -al`

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```
aluno@lab-dacc-08:~$ ls -al
total 120
drwxr-xr-x 23 aluno aluno 4096 set 22 15:18 .
drwxr-xr-x  4 root  root  4096 abr  2 20:05 ..
drwxrwxr-x  4 aluno aluno 4096 abr  7 16:34 .android
drwxrwxr-x  3 aluno aluno 4096 abr  3 23:23 Android
drwxr-xr-x  2 aluno aluno 4096 abr  6 10:44 .anydesk
drwxr-xr-x  2 aluno aluno 4096 abr  3 23:22 'Área de Trabalho'
-rw-r--r--  1 aluno aluno 1708 jul  5 12:27 .bash_history
-rw-r--r--  1 aluno aluno  220 abr  2 20:05 .bash_logout
-rw-r--r--  1 aluno aluno 3771 abr  2 20:05 .bashrc
drwxr-xr-x 20 aluno aluno 4096 abr 28 14:32 .cache
drwx----- 25 aluno aluno 4096 set 22 15:47 .config
drwxr-xr-x  3 aluno aluno 4096 abr  7 10:28 Documentos
drwxr-xr-x  2 aluno aluno 4096 abr  2 20:18 Downloads
-rw-r--r--  1 aluno aluno   16 abr  7 10:05 .emulator_console_auth_token
drwx-----  3 aluno aluno 4096 set 22 15:13 .gnupg
drwxr-xr-x  3 aluno aluno 4096 set 22 16:03 Imagens
drwxrwxr-x  4 aluno aluno 4096 abr  3 23:22 .java
drwxr-xr-x  3 aluno aluno 4096 abr  2 20:18 .local
drwxr-xr-x  2 aluno aluno 4096 abr  3 22:49 Modelos
drwx-----  4 aluno aluno 4096 abr  6 11:35 .mozilla
drwxr-xr-x  2 aluno aluno 4096 abr  2 20:18 Música
-rw-r--r--  1 aluno aluno   65 abr  7 10:35 .octave_hist
drwx-----  3 aluno aluno 4096 abr  3 23:23 .pki
-rw-r--r--  1 aluno aluno  807 abr  2 20:05 .profile
drwxr-xr-x  2 aluno aluno 4096 abr  2 20:18 Público
-rw-rw-r--  1 aluno aluno    2 abr  6 15:20 .repo_.gitconfig.json
drwx-----  4 aluno aluno 4096 abr  7 16:29 snap
drwx-----  2 aluno aluno 4096 abr  7 10:39 .ssh
drwxr-xr-x  3 aluno aluno 4096 abr  7 10:28 Vídeos
drwxrwxr-x  3 aluno aluno 4096 abr  3 23:23 .vscode
```

Comando `man ls`

```
aluno@lab-dacc-08:~$ man ls
aluno@lab-dacc-08:~$ man ls > manualLS.txt
aluno@lab-dacc-08:~$ head -5 manualLS.txt
LS(1)
User Commands
LS(1)
NAME
ls - list directory contents
```

Comando `tldr ls`

Comando `apt install tldr`

Comando `cd /var/log`

```
aluno@lab-dacc-08:/var/log$ pwd
/var/log
```

Comando cd~ :

```
aluno@lab-dacc-08:/var/log$ cd ~
aluno@lab-dacc-08:~$ pwd
/home/aluno
```

Comando cd /var/log

```
aluno@lab-dacc-08:~$ cd /var/log
aluno@lab-dacc-08:/var/log$ cd
aluno@lab-dacc-08:~$ pwd
/home/aluno
```

Comando cd .

```
aluno@lab-dacc-08:~$ cd .
aluno@lab-dacc-08:~$ pwd
/home/aluno
```

Comando cd ..

```
aluno@lab-dacc-08:~$ cd ..
aluno@lab-dacc-08:/home$ pwd
/home
```

Comando cd -

```
aluno@lab-dacc-08:/home$ cd -
/home/aluno
aluno@lab-dacc-08:~$ pwd
/home/aluno
```

Comando cat /etc/hostname

```
aluno@lab-dacc-08:~$ cat /etc/hostname
lab-dacc-08
```

Comando more /etc/login.defs

```
aluno@lab-dacc-08:~$ more /etc/login.defs
#
# /etc/login.defs - Configuration control definitions for the login package.
#
# Three items must be defined: MAIL_DIR, ENV_SUPATH, and ENV_PATH.
# If unspecified, some arbitrary (and possibly incorrect) value will
# be assumed. All other items are optional - if not specified then
# the described action or option will be inhibited.
#
```

Comando `head -5 /etc/passwd`

```
aluno@lab-dacc-08:~$ head -5 /etc/passwd
root:x: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
```

Comando `tail -5 /etc/passwd`

```
aluno@lab-dacc-08:~$ tail -5 /etc/passwd
systemd-coredump:x:999:999:systemd Core Dumper:./usr/sbin/nologin
aluno::1001:1001:Aluno,,,:/home/aluno:/bin/bash
lightdm:x:128:135:Light Display Manager:/var/lib/lightdm:/bin/false
nvidia-persistenced:x:127:134:NVIDIA Persistence Daemon,,,:/nonexistent:/usr/sbin/nologin
sshd:x:129:65534:./run/sshd:/usr/sbin/nologin
```

Comando `tail -f /var/log/syslog (arquivo manualLS)`

```
tail: manualLS.txt: arquivo truncado
ojioajioijLS(1)
LS(1)
NAME
ls - list directory contents
```

Comando `vi ArquivoTeste.txt`

```
aluno@lab-dacc-08:~$ vi ArquivoTeste.txt
aluno@lab-dacc-08:~$ dir
-al Área\ de\ Trabalho Documentos Imagens Modelos Público Vídeos
Android ArquivoTeste.txt Downloads manualLS.txt Música snap
aluno@lab-dacc-08:~$ cat A
```

Comando `cat ArquivoTeste.txt`

```
aluno@lab-dacc-08:~$ cat ArquivoTeste.txt
Este é um arquivo test
```

Comando `nano ArquivoTeste.txt`

```
aluno@lab-dacc-08:~$ nano ArquivoTeste.txt
GNU nano 4.8 ArquivoTeste.txt
Este é um arquivo teste 2
```

Comando `cp ArquivoTeste.txt ArquivoCOpia.txt`

```
aluno@lab-dacc-08:~$ cp ArquivoTeste.txt ArquivoCOpia.txt
aluno@lab-dacc-08:~$ ls -lh Arquivo[C\|T]*.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 17:01 ArquivoCOpia.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 16:57 ArquivoTeste.txt
aluno@lab-dacc-08:~$ cat A
Android/          ArquivoCOpia.txt  ArquivoTeste.txt
aluno@lab-dacc-08:~$ cat ArquivoCOpia.txt
Este é um arquivo teste 2
```

Comando `cp ArquivoTeste.txt /tmp`

```
aluno@lab-dacc-08:~$ cp ArquivoTeste.txt /tmp
aluno@lab-dacc-08:~$ ls -l ArquivoTeste.txt /tmp/ArquivoTeste.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 16:57 ArquivoTeste.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 17:04 /tmp/ArquivoTeste.txt
```

Comando `mv ArquivoCOpia.txt /tmp`

```
aluno@lab-dacc-08:~$ mv ArquivoCOpia.txt /tmp
aluno@lab-dacc-08:~$ ls -lh /tmp/ArquivoCOpia.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 17:01 /tmp/ArquivoCOpia.txt
```

Comando `mv ArquivoTeste.txt ArquivoRenomeado.txt`

```
aluno@lab-dacc-08:~$ mv ArquivoTeste.txt ArquivoRenomeado.txt
aluno@lab-dacc-08:~$ ls -lh ArquivoRenomeado.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 16:57 ArquivoRenomeado.txt
aluno@lab-dacc-08:~$
```

Comando `mv ArquivoRenomeado.txt /tmp/ArquivoMovido.txt`

```
aluno@lab-dacc-08:~$ mv ArquivoRenomeado.txt /tmp/ArquivoMovido.txt
aluno@lab-dacc-08:~$ ls -lh /tmp/ArquivoMovido.txt
-rw-rw-r-- 1 aluno aluno 27 set 22 16:57 /tmp/ArquivoMovido.txt
aluno@lab-dacc-08:~$
```

Comando `mkdir TesteDir`

```
aluno@lab-dacc-08:~$ mkdir TesteDir
aluno@lab-dacc-08:~$ cd TesteDir
aluno@lab-dacc-08:~/TesteDir$ ls -al
total 8
drwxrwxr-x 2 aluno aluno 4096 set 22 17:11 .
drwxr-xr-x 24 aluno aluno 4096 set 22 17:11 ..
```

Comando `rmdir TesteDir`

```
aluno@lab-dacc-08:~$ rmdir TesteDir
aluno@lab-dacc-08:~$ cd TesteDir
bash: cd: TesteDir: Arquivo ou diretório inexistente
```

Comando `mkdir TesteDir2`

```
aluno@lab-dacc-08:~$ mkdir TesteDir2
aluno@lab-dacc-08:~$ cd TesteDir2
aluno@lab-dacc-08:~/TesteDir2$ echo "Jebediah kerman" > ArquivoTeste.txt
aluno@lab-dacc-08:~/TesteDir2$ cd ..
aluno@lab-dacc-08:~$ rmdir TesteDir2
rmdir: falhou em remover 'TesteDir2': Diretório não vazio
aluno@lab-dacc-08:~$
```

Comando `rm -rf Teste`

```
aluno@lab-dacc-08:~/Teste$ cd ..
aluno@lab-dacc-08:~$ rm -rf Teste
aluno@lab-dacc-08:~$ ls
-al      'Área de Trabalho'  Downloads  manualLS.txt  Música  snap
Android  Documentos          Imagens    Modelos       Público Vídeos
aluno@lab-dacc-08:~$ cd teste
bash: cd: teste: Arquivo ou diretório inexistente
```

## Prática Laboratório 2 (Linux)

Comando `ls -lh /usr/bin > ArquivoDoBin.txt`

```
aluno@lab-dacc-08:~$ ls -lh /usr/bin > ArquivosDoBin.txt
```

Comando `tail -5 ArquivosDoBin.txt`

```
aluno@lab-dacc-08:~$ tail -5 ArquivosDoBin.txt
-rwxr-xr-x 1 root root 92K abr 21 2017 zipsplit
-rwxr-xr-x 1 root root 27K jan 30 2020 zjsdecode
-rwxr-xr-x 1 root root 2,2K abr 8 07:05 zless
-rwxr-xr-x 1 root root 1,8K abr 8 07:05 zmore
-rwxr-xr-x 1 root root 4,5K abr 8 07:05 znew
```

Comando `echo -e ""`

```
aluno@lab-dacc-08:~$ echo -e "(\(\ \ \n(-.-)\no_(\")(\"))"
(\(\
(-.-)
o ("")
```



Comando `echo "primeira linha do arquivo" > ArquivoTeste.txt`

```
aluno@lab-dacc-08:~$ echo "Primeira linha do arquivo" > ArquivoTeste.txt
aluno@lab-dacc-08:~$ cat ArquivoTeste.txt
Primeira linha do arquivo
```

Comando `echo "Segunda linha do arquivo (so que não)" > ArquivoTeste.txt`

```
aluno@lab-dacc-08:~$ echo "Segunda linha do arquivo(só que nao)" > ArquivoTeste.txt
aluno@lab-dacc-08:~$ cat ArquivoTeste.txt
Segunda linha do arquivo(só que nao)
```

Comando `echo "Segunda linha do arquivo (de verdade)" >> ArquivoTeste.txt`

```
aluno@lab-dacc-08:~$ echo "Segunda linha do arquivo(de verdade)" >> ArquivoTeste.txt
aluno@lab-dacc-08:~$ cat ArquivoTeste.txt
Segunda linha do arquivo(só que nao)
Segunda linha do arquivo(de verdade)
```

Comando `ls ArquivoInvalido.txt ArquivoTeste.txt > LsStdout.txt`

```
aluno@lab-dacc-08:~$ ls ArquivoInvalido.txt ArquivoTeste.txt > LsStdout.txt
ls: não foi possível acessar 'ArquivoInvalido.txt': Arquivo ou diretório inexistente
```

Comando `ls ArquivoInvalido.txt ArquivoTeste.txt 2> LsStderr.txt`

```
aluno@lab-dacc-08:~$ ls ArquivoInvalido.txt ArquivoTeste.txt 2> LsStderr.txt
ArquivoTeste.txt
```

Comando `cat LsStderr.txt`

```
aluno@lab-dacc-08:~$ cat LsStderr.txt
ls: não foi possível acessar 'ArquivoInvalido.txt': Arquivo ou diretório inexistente
```

Comando `ls ArquivoInvalido.txt ArquivoTeste.txt &> LsStdoutSdErr.txt`

```
aluno@lab-dacc-08:~$ ls ArquivoInvalido.txt ArquivoTeste.txt &> LsStdoutStdErr.txt
```

Comando `ls ArquivoIncalido.txt ArquivoTeste.txt 2> /dev/null`

```
aluno@lab-dacc-08:~$ ls ArquivoInvalido.txt ArquivoTeste.txt 2> /dev/null
ArquivoTeste.txt
```

Comando `grep a`

```
aluno@lab-dacc-08:~$ grep a
a
a
```

Comando `cat /proc/cpuinfo | grep "model name"`

```
aluno@lab-dacc-08:~$ cat /proc/cpuinfo | grep "model name"
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
```

Comando `cat /proc/cpuinfo | grep "model name" | head -1`

```
aluno@lab-dacc-08:~$ cat /proc/cpuinfo | grep "model name" | head -1
model name      : Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
```

Comando `cat /proc/cpuinfo | grep "model name" | head -1 | cut -d: -f2`

```
aluno@lab-dacc-08:~$ cat /proc/cpuinfo | grep "model name" | head -1 | cut -d: -f2
Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
```

Comando `cat /proc/cpuinfo | grep "model name" | head -1 | cut -d: -f2 | cut -c2-`

```
aluno@lab-dacc-08:~$ cat /proc/cpuinfo | grep "model name" | head -1 | cut -d: -f2 | cut -c2-
Intel(R) Core(TM) i7-8700 CPU @ 3.20GHz
```

Comando `cat /etc/passwd | grep h | wc -l`

```
aluno@lab-dacc-08:~$ cat /etc/passwd | grep h | wc -l
15
```

Comando `cat /etc/passwd | cut -d: -f1 | grep h`

```
aluno@lab-dacc-08:~$ cat /etc/passwd | cut -d: -f1 | grep h
avahi-autoipd
cups-pk-helper
speech-dispatcher
avahi
hplip
whoopsie
lightdm
sshd
```



## Prática Laboratório 3 (Linux)

Comando `ls -flh /etc/passwd /etc/passwd /etc/shadow /etc/shadow /etc/group`

```
aluno@lab-dacc-08:/$ ls -flh /etc/passwd /etc/shadow /etc/group
-rw-r--r-- 1 root root 3,1K abr  4 18:00 /etc/passwd
-rw-r----- 1 root shadow 1,8K abr  7 16:38 /etc/shadow
-rw-r--r-- 1 root root 1,3K abr  7 10:11 /etc/group
```

Comando `cat /etc/fstab`

```
aluno@lab-dacc-08:~/Documentos$ cat /etc/fstab
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options>          <dump> <pass>
# / was on /dev/nvme0n1p8 during installation
UUID=bf741425-5ad0-4865-ad66-906781c30d34 / ext4 errors=remount-ro 0 1
# /boot/efi was on /dev/nvme0n1p1 during installation
UUID=8E68-D768 /boot/efi vfat umask=0077 0 1
# /media/arquivos was on /dev/sda1 during installation
# swap was on /dev/nvme0n1p7 during installation
UUID=3f6a3ca4-191e-450b-be98-daca5bd7e2c7 none swap sw 0 0
/dev/disk/by-uuid/aa17929a-828c-4123-b88e-75c0748befbd /media/arquivos-linux auto defaults 1 1
/dev/disk/by-uuid/B234703834700221 /media/arquivos auto nosuid,nodev,nofail,x-gvfs-show 0 0
```

Comando `cat /etc/hostname`

```
aluno@lab-dacc-08:~$ cat /etc/hostname
lab-dacc-08
```

Comando `cat /etc/protocols | grep UDP`

```
aluno@lab-dacc-08:~$ cat /etc/protocols | grep UDP
udp      17      UDP      # user datagram protocol
udplite  136     UDPLite  # UDP-Lite [RFC3828]
```

Comando `cat /etc/services | grep -P "ssh|http|https|ircd"`

```
aluno@lab-dacc-08:~$ cat /etc/services | grep -P "ssh|http|https|ircd"
# Updated from https://www.iana.org/assignments/service-names-port-numbers/service-names-port-numbers.xhtml
ssh      22/tcp      # SSH Remote Login Protocol
http     80/tcp      # WorldWideWeb HTTP
https    443/tcp     # http protocol over TLS/SSL
ircd     6667/tcp    # Internet Relay Chat
```

Comando `cat /etc/shells`

```
aluno@lab-dacc-08:~$ cat /etc/shells
# /etc/shells: valid login shells
/bin/sh
/bin/bash
/usr/bin/bash
/bin/rbash
/usr/bin/rbash
/bin/dash
/usr/bin/dash
```

Comando `cat /etc/timezone`

```
aluno@lab-dacc-08:~$ cat /etc/timezone
America/Porto Velho
```

Comando `ls -alh ~`

```
aluno@lab-dacc-08:~$ ls -alh ~
total 300K
drwxr-xr-x 23 aluno aluno 4,0K set 23 14:49 .
drwxr-xr-x  4 root  root  4,0K abr  2 20:05 ..
-rw-r--r--  1 aluno aluno 9,7K set 22 16:07 -al
drwxrwxr-x  4 aluno aluno 4,0K abr  7 16:34 .android
drwxrwxr-x  3 aluno aluno 4,0K abr  3 23:23 Android
drwxr-xr-x  2 aluno aluno 4,0K abr  6 10:44 .anydesk
drwxr-xr-x  2 aluno aluno 4,0K abr  3 23:22 'Área de Trabalho'
-rw-rw-r--  1 aluno aluno 130K set 22 17:43 ArquivosDoBin.txt
-rw-rw-r--  1 aluno aluno   75 set 22 17:53 ArquivoTeste.txt
-rw-----  1 aluno aluno 5,3K set 23 16:04 .bash_history
-rw-r--r--  1 aluno aluno  220 abr  2 20:05 .bash_logout
-rw-r--r--  1 aluno aluno 3,7K abr  2 20:05 .bashrc
drwxr-xr-x 20 aluno aluno 4,0K abr 28 14:32 .cache
drwx----- 25 aluno aluno 4,0K set 22 15:47 .config
drwxr-xr-x  3 aluno aluno 4,0K abr  7 10:28 Documentos
drwxr-xr-x  2 aluno aluno 4,0K set 22 17:44 Downloads
-rw-----  1 aluno aluno   16 abr  7 10:05 .emulator console auth token
```

Comando `cat /dev/random`

```
aluno@lab-dacc-08:~$ cat /dev/random
```

```

0' " (P+) ' 0+5BwT~+%%==+^s+++2c@3+B+++X++ +f+K++++9+ek++++f+j|V++++htc++++.
m+{+-BP+xd+
+B+' 2+o+h+3+o+[+c+(+f+j+++++x+9h4>6g0+n+o+F+#++++\ :+++++h+i-+tN+3+-+++Y+<+++++pJ+p+o+F+I+++1U]
p++Lte++5$+{+
;+H++J<60 +
~++*+H+mDH1++j\+x[0x00000000]@++++b+&+ ,+g+|+<+o+ä+f++Z+++;+x[0x00000000]-++++b++x+f. +4+ +++s+7C+!+
[0x00000000]Y+h+E++2WK+V++++V++J;+C+6++à++++6++++Jt+*+z+Dv+)+3#++[0x00000000]q+S+['
+ -h+Gi++++=+Ck+>-+W7+BY+oBff++ ?X'P+)+w+e. Q+ ++G+!+R++lj;+/+)+++q+f++++~+7ta"
I++!+?+a+(Y+l9a++TK+~+P+噪+++++,Dm+o+d+q+%%+Q++v+;+F+7E++o+p+cZ+">1[0x00000000]++&SY+KB+++h+}
+^C
+1y++@lab_dagg_00: 6

```

Comando `echo $RANDOM`

```
aluno@lab-dacc-08:~$ echo $RANDOM
8413
```

Comando `echo "Timber Hearth" > /tmp/OuterWilds.txt`

```
aluno@lab-dacc-08:~$ echo "Timber Hearth" > /tmp/OuterWilds.txt
aluno@lab-dacc-08:~$ cat /tmp/OuterWilds.txt > /dev/stdout
Timber Hearth
```

Comando `cat /proc/diskstats | grep -v loop`

```
aluno@lab-dacc-08:~$ cat /proc/diskstats | grep -v loop
259      0 nvme0n1 97393 26142 7991260 21461 128314 147707 13730274 126466 0 112288 159882 0 0 0 0 4572
3 11954
259      1 nvme0n1p1 1104 974 43106 218 2 0 2 0 0 328 218 0 0 0 0 0 0
259      2 nvme0n1p2 224 0 24160 61 0 0 0 0 0 196 61 0 0 0 0 0 0
259      3 nvme0n1p3 312 0 32704 92 0 0 0 0 0 480 92 0 0 0 0 0 0
259      4 nvme0n1p4 228 0 27152 96 0 0 0 0 0 240 96 0 0 0 0 0 0
259      5 nvme0n1p5 228 0 27152 85 0 0 0 0 0 248 85 0 0 0 0 0 0
259      6 nvme0n1p6 228 0 27152 104 0 0 0 0 0 252 104 0 0 0 0 0 0
259      7 nvme0n1p7 254 0 26752 81 0 0 0 0 0 232 81 0 0 0 0 0 0
259      8 nvme0n1p8 94255 25168 7761642 20620 128312 147707 13730272 126466 0 110772 147086 0 0 0 0 0
0
8        0 sda 429 0 42602 8090 0 0 0 0 0 7900 8090 0 0 0 0 0 0
8        1 sda1 230 0 38144 590 0 0 0 0 0 508 590 0 0 0 0 0 0
```

Comando `iostat | grep -v loop`

```
aluno@lab-dacc-08:~$ iostat | grep -v loop
```

Comando `cat /proc/cmdline`

```
aluno@lab-dacc-08:~$ cat /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.13.0-52-generic root=UUID=bf741425-5ad0-4865-ad66-906781c30d34 ro quiet splash
vt.handoff=7
```

Comando `cat /proc/loadavg`

```
aluno@lab-dacc-08:~$ cat /proc/loadavg
0.58 0.56 0.42 1/1071 80466
```

Comando `cat /proc/meminfo | grep Mem`

```
aluno@lab-dacc-08:~$ cat /proc/meminfo | grep Mem
MemTotal:        16189672 kB
MemFree:         7602452 kB
MemAvailable:    13651100 kB
```

Comando `cat /proc/uptime`

```
aluno@lab-dacc-08:~$ cat /proc/uptime
8722.27 101587.22
```

Comando `cat /proc/version`

```
aluno@lab-dacc-08:~$ cat /proc/version
Linux version 5.13.0-52-generic (buildd@lcy02-amd64-067) (gcc (Ubuntu 9.4.0-1ubuntu1~20.04.1) 9.4.0, GNU
ld (GNU Binutils for Ubuntu) 2.34) #59~20.04.1-Ubuntu SMP Thu Jun 16 21:21:28 UTC 2022
```

Comando `hexdump -c /bin/ls | head -3`

```
aluno@lab-dacc-08:~$ hexdump -C /bin/ls | head -3
00000000  7f 45 4c 46 02 01 01 00  00 00 00 00 00 00 00 00  |.ELF.....|
00000010  03 00 3e 00 01 00 00 00  d0 67 00 00 00 00 00 00  |..>.....g....|
00000020  40 00 00 00 00 00 00 00  c0 23 02 00 00 00 00 00  |@.....#.....|
```

Comando `cd /bin`

```
aluno@lab-dacc-08:~$ cd /bin
aluno@lab-dacc-08:/bin$ ls
['
2to3-2.7          host              ppmtopict
411toppm          hostid           ppmtopj
7z               hostname         ppmtopuzz
7za              hostnamectl      ppmtorgb3
7zr              hp-align         ppmtosixel
aa-enabled        hp-check         ppmtotga
aa-exec           hp-clean         ppmtouil
aconnect          hp-colorcal      ppmtowinicon
acpi_listen       hp-config_usb_printer ppmtoxpm
activity-log-manager hp-doctor        ppmtoyuv
acyclic           hp-firmware      ppmtoyuvsplit
adb               hp-info          ppmtv
add-apt-repository hp-levels         pr
addpart           hp-logcapture    precat
addshell          hp-makeuri       preconv
addshell          hp-ppkcservice   preparations
```

Comando `bash`

```
aluno@lab-dacc-08:/bin$ bash
aluno@lab-dacc-08:/bin$ cd /tmp
aluno@lab-dacc-08:/tmp$ exit
exit
aluno@lab-dacc-08:/bin$
```

Comando `/bin/date`

```
aluno@lab-dacc-08:/bin$ /bin/date
sex 23 set 2022 16:27:54 -04
```

Comando `echo $PATH`

```
aluno@lab-dacc-08:/bin$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/usr/local/cuda/bin
aluno@lab-dacc-08:/bin$
```

Comando **df -h**

```
aluno@lab-dacc-08:/$ df -h
Sist. Arq.      Tam. Usado Disp.  Uso% Montado em
udev            7,7G     0  7,7G    0% /dev
tmpfs           1,6G   3,7M  1,6G    1% /run
/dev/nvme0n1p8  101G   32G   65G   33% /
tmpfs           7,8G     0  7,8G    0% /dev/shm
tmpfs           5,0M   4,0K   5,0M    1% /run/lock
tmpfs           7,8G     0  7,8G    0% /sys/fs/cgroup
/dev/loop0      128K   128K     0  100% /snap/bare/5
/dev/loop3      522M   522M     0  100% /snap/gimp/393
/dev/loop2       56M    56M     0  100% /snap/core18/2566
/dev/loop1      134M   134M     0  100% /snap/chromium/2020
/dev/loop4      401M   401M     0  100% /snap/gnome-3-38-2004/112
/dev/loop7      143M   143M     0  100% /snap/chromium/2105
/dev/loop6       56M    56M     0  100% /snap/core18/2409
/dev/loop5      347M   347M     0  100% /snap/gnome-3-38-2004/115
/dev/loop8      256K   256K     0  100% /snap/gtk2-common-themes/13
/dev/loop9      115M   115M     0  100% /snap/core/13741
/dev/loop10      55M    55M     0  100% /snap/snap-store/558
/dev/loop11      48M    48M     0  100% /snap/snapd/16778
/dev/loop12      47M    47M     0  100% /snap/snapd/16010
/dev/loop13      46M    46M     0  100% /snap/snap-store/599
/dev/loop14     392M   392M     0  100% /snap/gimp/383
/dev/loop15      64M    64M     0  100% /snap/core20/1623
/dev/loop16      62M    62M     0  100% /snap/core20/1518
/dev/loop17      66M    66M     0  100% /snap/gtk-common-themes/1519
/dev/loop18     165M   165M     0  100% /snap/gnome-3-28-1804/161
/dev/loop19     114M   114M     0  100% /snap/core/13308
/dev/nvme0n1p1  496M    81M  416M   17% /boot/efi
/dev/loop20      92M    92M     0  100% /snap/gtk-common-themes/1535
/dev/sda1       466G   114G   352G   25% /media/arquivos
tmpfs           1,6G    20K   1,6G    1% /run/user/125
tmpfs           1,6G    56K   1,6G    1% /run/user/1001
```

Comando **touch /tmp/ArquivoTouch.txt**

```
aluno@lab-dacc-08:/$ touch /tmp/ArquivoTouch.txt
aluno@lab-dacc-08:/$ ls -lh /tmp/ArquivoTouch.txt
-rw-rw-r-- 1 aluno aluno 0 set 23 16:29 /tmp/ArquivoTouch.txt
```

Comando **uname -a**

```
aluno@lab-dacc-08:/$ uname -a
Linux lab-dacc-08 5.13.0-52-generic #59~20.04.1-Ubuntu SMP Thu Jun 16 21:21:28 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
```

Comando **who**

```
aluno@lab-dacc-08:/home$ who
aluno      :1                2022-09-23 14:01 (:1)
```

## Prática Laboratório 4 (Linux)

Comando `whereis who`

```
aluno@lab-dacc-08:~$ whereis who
who: /usr/bin/who /usr/share/man/man1/who.1.gz
```

Comando `whereis ls`

```
aluno@lab-dacc-08:~$ whereis ls
ls: /usr/bin/ls /usr/share/man/man1/ls.1.gz
aluno@lab-dacc-08:~$
```

Comando `whereis hexdump`

```
aluno@lab-dacc-08:~$ whereis hexdump
hexdump: /usr/bin/hexdump /usr/share/man/man1/hexdump.1.gz
```

Comando `whereis grep`

```
aluno@lab-dacc-08:~$ whereis grep
grep: /usr/bin/grep /usr/share/man/man1/grep.1.gz /usr/share/info/grep.info.gz
```

Comando `whereis ifconfig`

```
aluno@lab-dacc-08:~$ whereis ifconfig
ifconfig:
aluno@lab-dacc-08:~$ ifconfig

Comando 'ifconfig' não encontrado, mas poder ser instalado com:

apt install net-tools
Por favor, pergunte seu administrador.

aluno@lab-dacc-08:~$ apt install net-tools
E: Não foi possível abrir arquivo de trava /var/lib/dpkg/lock-frontent - open (13: Permissão negada)
E: Unable to acquire the dpkg frontend lock (/var/lib/dpkg/lock-frontent), are you root?
```

Comando `whereis whereis`

```
aluno@lab-dacc-08:~$ whereis whereis
whereis: /usr/bin/whereis /usr/share/man/man1/whereis.1.gz
```



Comando `find /etc`

```
aluno@lab-dacc-08:~$ find /etc
/etc
/etc/samba
/etc/samba/tls
/etc/samba/smb.conf
/etc/samba/gdbcommands
/etc/chromium
/etc/chromium/native-messaging-hosts
/etc/chromium/native-messaging-hosts/org.gnome.chrome_gnome_shell.json
/etc/console-setup
```

Comando `find /etc | wc -l`

```
aluno@lab-dacc-08:~$ find /etc | wc -l
find: '/etc/polkit-1/localauthority': Permissão negada
find: '/etc/cups/ssl': Permissão negada
find: '/etc/ppp/peers': Permissão negada
find: '/etc/ssl/private': Permissão negada
find: '/etc/chatscripts': Permissão negada
3222
```

Comando `find /etc 2> /dev/null | wc -l`

```
aluno@lab-dacc-08:~$ find /etc 2> /dev/null | wc -l
3222
```

Comando `find /usr/include | grep org`

```
aluno@lab-dacc-08:~$ find /usr/include | grep org
/usr/include/xorg
/usr/include/xorg/wacom-properties.h
/usr/include/xorg/isdv4.h
/usr/include/xorg/wacom-util.h
/usr/include/xorg/Xwacom.h
```

Comando `du -s`

```
aluno@lab-dacc-08:~$ cd /usr
aluno@lab-dacc-08:/usr$ du -s
17190096 .
```

Comando `du -sh`

```
aluno@lab-dacc-08:/usr$ du -sh
17G .
```

Comando `du -sh *`

```
aluno@lab-dacc-08:~$ du -sh *
274M    bin
776K    games
30M     include
7,5G    lib
45M     lib32
4,0K    lib64
14M     libexec
42M     libx32
5,8G    local
36M     sbin
2,0G    share
788M    src
```

Comando `echo "mensagem no arquivo Original" > ArquivoOriginal.txt`

```
aluno@lab-dacc-08:~$ cd #
aluno@lab-dacc-08:~$ echo "Mensagem no arquivo original" > ArquivoOriginal.txt
aluno@lab-dacc-08:~$ ls -lh ArquivoOriginal.txt
-rw-rw-r-- 1 aluno aluno 0 set 23 17:21 ArquivoOriginal.txt
aluno@lab-dacc-08:~$
```

Comando `ls -lh ArquivoLinkSimbolico.txt`

```
aluno@lab-dacc-08:~$ ls -lh ArquivoLinkSimbolico.txt
lrwxrwxrwx 1 aluno aluno 19 set 23 17:20 ArquivoLinkSimbolico.txt -> ArquivoOriginal.txt
aluno@lab-dacc-08:~$
```

Comando `cat ArquivoLinkSimbolico.txt`

```
aluno@lab-dacc-08:~$ cat ArquivoLinkSimbolico.txt
Mensagem no arquivo original
```

Comando `echo "mensagem concatenada no link simbolico" >> ArquivoLinkSimbolico.txt`

```
aluno@lab-dacc-08:~$ echo "Mensagem concatenada no link simbolico" >> ArquivoLinkSimbolico.txt
aluno@lab-dacc-08:~$ cat ArquivoOriginal.txt
Mensagem no arquivo original
Mensagem concatenada no link simbolico
```

Comando `rm ArquivoOriginal.txt`

```
aluno@lab-dacc-08:~$ rm ArquivoOriginal.txt
rm: não foi possível remover 'ArquivoOriginal.txt': Arquivo ou diretório inexistente
aluno@lab-dacc-08:~$ cat ArquivoLinkSimbolico.txt
cat: ArquivoLinkSimbolico.txt: Arquivo ou diretório inexistente
aluno@lab-dacc-08:~$
```

Comando `ls -lh ArquivoLinkSimbolico.txt`

```
aluno@lab-dacc-08:~$ ls -lh ArquivoLinkSimbolico.txt
lrwxrwxrwx 1 aluno aluno 19 set 23 17:20 ArquivoLinkSimbolico.txt -> ArquivoOriginal.txt
```

Comando `echo "Mensagem no arquivo original 2" > ArquivoOriginal2.txt`

```
aluno@lab-dacc-08:~$ echo "Mensagem no arquivo original 2" > ArquivoOriginal2.txt
aluno@lab-dacc-08:~$ ls -lh ArquivoOriginal2.txt
-rw-rw-r-- 1 aluno aluno 31 set 28 14:14 ArquivoOriginal2.txt
```

Comando `ln ArquivoOriginal2.txt ArquivoLinkFisico.txt`

```
aluno@lab-dacc-08:~$ ln ArquivoOriginal2.txt ArquivoLinkFisico.txt
aluno@lab-dacc-08:~$ ls -lh ArquivoOriginal2.txt ArquivoLinkFisico.txt
-rw-rw-r-- 2 aluno aluno 31 set 28 14:14 ArquivoLinkFisico.txt
-rw-rw-r-- 2 aluno aluno 31 set 28 14:14 ArquivoOriginal2.txt
```

Comando `rm ArquivoOriginal2.txt`

```
aluno@lab-dacc-08:~$ rm ArquivoOriginal2.txt
aluno@lab-dacc-08:~$ ls -lh ArquivoLinkFisico.txt
-rw-rw-r-- 1 aluno aluno 31 set 28 14:14 ArquivoLinkFisico.txt
aluno@lab-dacc-08:~$ cat ArquivoLinkFisico.txt
```

Comando `ls -alh | grep "\." | head -2`

```
aluno@lab-dacc-08:~$ ls -alh | grep "\." | head -2
drwxr-xr-x 24 aluno aluno 4,0K set 28 14:17 .
drwxr-xr-x  4 root  root  4,0K abr  2 20:05 ..
```

Comando `mkdir NovoSubdiretorio`

```
aluno@lab-dacc-08:~$ mkdir NovoSubdiretorio
aluno@lab-dacc-08:~$ ls -alh | grep "\." | head -2
drwxr-xr-x 25 aluno aluno 4,0K set 28 14:20 .
drwxr-xr-x  4 root  root  4,0K abr  2 20:05 ..
```

Comando `ls -lh | grep Novosubdiretorio`

```
aluno@lab-dacc-08:~$ ls -lh | grep NovoSubdiretorio
drwxrwxr-x 2 aluno aluno 4,0K set 28 14:20 NovoSubdiretorio
```

Comando `ls -alh NovoSubdiretorio/`

```
aluno@lab-dacc-08:~$ ls -alh NovoSubdiretorio/
total 8,0K
drwxrwxr-x  2 aluno aluno 4,0K set 28 14:20 .
drwxr-xr-x 25 aluno aluno 4,0K set 28 14:20 ..
```

## Prática Laboratório 5 (Linux)

Comando

```
aluno@lab-dacc-08:~$ ps
[  PID TTY          TIME CMD
 14491 pts/0    00:00:00 bash
 15883 pts/0    00:00:00 ps
```

Comando

```
aluno@lab-dacc-08:~$ cat &
[1] 16342
aluno@lab-dacc-08:~$ ps
  PID TTY          TIME CMD
 14491 pts/0    00:00:00 bash
 16342 pts/0    00:00:00 cat
 16347 pts/0    00:00:00 ps

[1]+  Parado                  cat
```

Comando

```
aluno@lab-dacc-08:~$ ps -f
UID          PID    PPID  C STIME TTY          TIME CMD
aluno       14491    14414  0 14:02 pts/0    00:00:00 bash
aluno       16342    14491  0 15:35 pts/0    00:00:00 cat
aluno       16386    14491  0 15:36 pts/0    00:00:00 ps -f
```

Comando

```
aluno@lab-dacc-08:~$ ps -ef
UID          PID    PPID  C STIME TTY          TIME CMD
root           1         0  0 13:38 ?        00:00:02 /sbin/init splash
root           2         0  0 13:38 ?        00:00:00 [kthreadd]
root           3         2  0 13:38 ?        00:00:00 [rcu_gp]
root           4         2  0 13:38 ?        00:00:00 [rcu_par_gp]
```

Comando

```
aluno@lab-dacc-08:~$ ps -ef | wc -l
381
```

## Comando top

```
top - 15:39:36 up 2:01, 1 user, load average: 0,18, 0,34, 0,23
Tarefas: 374 total, 2 em exec., 371 dormindo, 1 parado, 0 zumbi
%CPU(s): 0,4 us, 0,1 sis, 0,0 ni, 99,5 oc, 0,0 ag, 0,0 ih, 0,0 is 0,0 tr
MB mem : 15808,5 total, 9322,1 livre, 2471,1 usados, 4015,3 buff/cache
MB swap: 3906,0 total, 3906,0 livre, 0,0 usados, 12936,9 mem dispon.
```

PID	USUARIO	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TEMPO+	COMANDO
1981	aluno	20	0	4474864	359240	119900	R	7,6	2,2	4:19.88	gnome-shell
1846	root	20	0	6745052	137988	78592	S	4,7	0,9	3:40.03	Xorg
1387	root	-51	0	0	0	0	S	0,7	0,0	1:26.31	irq/144-nvidia
980	message+	20	0	10076	6484	3840	S	0,3	0,0	0:02.22	dbus-daemon
982	root	20	0	552496	22428	19248	S	0,3	0,1	0:06.95	NetworkManager
1389	root	20	0	0	0	0	S	0,3	0,0	0:14.33	nv_queue
1479	gdm	20	0	3988080	178108	98876	S	0,3	1,1	0:05.46	gnome-shell
2125	aluno	20	0	469736	12952	11552	S	0,3	0,1	0:01.20	gsd-sharing
16535	aluno	20	0	12308	4212	3344	R	0,3	0,0	0:00.19	top

## Comando top -o %MEM

```
top - 15:40:48 up 2:02, 1 user, load average: 0,28, 0,34, 0,24
Tarefas: 370 total, 1 em exec., 368 dormindo, 1 parado, 0 zumbi
%CPU(s): 0,7 us, 0,3 sis, 0,0 ni, 99,0 oc, 0,0 ag, 0,0 ih, 0,0 is 0,0 tr
MB mem : 15808,5 total, 9295,9 livre, 2497,7 usados, 4014,8 buff/cache
MB swap: 3906,0 total, 3906,0 livre, 0,0 usados, 12911,1 mem dispon.
```

PID	USUARIO	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TEMPO+	COMANDO
14013	aluno	20	0	4242912	859360	278804	S	1,3	5,3	12:11.53	firefox
15630	aluno	20	0	2915168	385332	131644	S	0,3	2,4	0:46.37	Isolated Web Co
1981	aluno	20	0	4474864	359212	119900	S	8,6	2,2	4:24.03	gnome-shell
15559	aluno	20	0	2577652	208784	121148	S	0,0	1,3	0:12.63	Isolated Web Co
1479	gdm	20	0	3988080	178108	98876	S	0,0	1,1	0:05.49	gnome-shell

## Comando

```
aluno@lab-dacc-08:~$ ps | grep cat | xargs | cut -d " " -f1
16342
```

## Comando

```
aluno@lab-dacc-08:~$ kill 16342
aluno@lab-dacc-08:~$ ps | grep cat
16342 pts/0    00:00:00 cat
```

## Comando

```
aluno@lab-dacc-08:~$ kill -9 16342
aluno@lab-dacc-08:~$ ps | grep cat
[1]+  Morto                  cat
```

Comando

```
aluno@lab-dacc-08:~$ cat &
[1] 16798
aluno@lab-dacc-08:~$ cat &
[2] 16799

[1]+  Parado                cat
aluno@lab-dacc-08:~$ cat &
[3] 16803

[2]+  Parado                cat
aluno@lab-dacc-08:~$ ps | grep cat
 16798 pts/0    00:00:00 cat
 16799 pts/0    00:00:00 cat
 16803 pts/0    00:00:00 cat

[3]+  Parado                cat
```

Comando

```
aluno@lab-dacc-08:~$ killall -9 cat
[1]  Morto                cat
[2]-  Morto                cat
[3]+  Morto                cat
```

Comando

```
aluno@lab-dacc-08:~$ free
              total        usada        livre      compart.  buff/cache  disponivel
Mem.:         16187912      2559112      9517428         85712     4111372     13216260
Swap:          3999740           0       3999740
```

Comando

```
aluno@lab-dacc-08:~$ free -h
              total        usada        livre      compart.  buff/cache  disponivel
Mem.:          15Gi         2,4Gi         9,1Gi         87Mi         3,9Gi         12Gi
Swap:           3,8Gi           0B         3,8Gi
```

Comando

```
aluno@lab-dacc-08:~$ ps -ef | grep -v grep | grep "system-udev\|systemd-resolved\|systemd-timesyncd\|systemd-logind\|cron\|rsyslogd\|atd\|thermald\|acpid\|cupsd\|xorg"
systemd+    940      1  0 13:40 ?        00:00:02 /lib/systemd/systemd-resolved
systemd+    941      1  0 13:40 ?        00:00:00 /lib/systemd/systemd-timesyncd
root        973      1  0 13:40 ?        00:00:01 /usr/sbin/acpid
root        977      1  0 13:40 ?        00:00:00 /usr/sbin/cron -f
root        979      1  0 13:40 ?        00:00:00 /usr/sbin/cupsd -l
rsyslog     1005      1  0 13:40 ?        00:00:00 /usr/sbin/rsyslogd -n -iNONE
root       1019      1  0 13:40 ?        00:00:00 /lib/systemd/systemd-logind
root       1020      1  0 13:40 ?        00:00:00 /usr/sbin/thermald --systemd --dbus-enable --adaptive
root       1288    1286  0 13:40 tty1    00:00:03 /usr/lib/xorg/Xorg vt1 -displayfd 3 -auth /run/user/1
25/gdm/Xauthority -background none -noreset -keeptty -verbose 3
root       1846    1844  3 13:40 tty2    00:04:04 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1
001/gdm/Xauthority -background none -noreset -keeptty -verbose 3
```



### Comando

```
aluno@lab-dacc-08:~$ cat /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.15.0-48-generic root=UUID=bf741425-5ad0-4865-ad66-906781c30d34 ro quiet splash
vt.handoff=7
```

### Comando

```
aluno@lab-dacc-08:~$ ls -ld /sbin/init /etc/init /bin/init
ls: não foi possível acessar '/bin/init': Arquivo ou diretório inexistente
/sbin/init /etc/init
```

### Comando

```
aluno@lab-dacc-08:~$ ls -lh /sbin/init
lrwxrwxrwx 1 root root 20 abr  2 19:41 /sbin/init -> /lib/systemd/systemd
```

### Comando

```
aluno@lab-dacc-08:~$ ls /lib/systemd/system/*.service
/lib/systemd/system/accounts-daemon.service
/lib/systemd/system/acpid.service
/lib/systemd/system/alsa-restore.service
/lib/systemd/system/alsa-state.service
/lib/systemd/system/alsa-utils.service
/lib/systemd/system/anacron.service
/lib/systemd/system/apparmor.service
/lib/systemd/system/appost-autopost.service
```

### Comando

```
aluno@lab-dacc-08:~$ cat /lib/systemd/system/cron.service
[Unit]
Description=Regular background program processing daemon
Documentation=man:cron(8)
After=remote-fs.target nss-user-lookup.target

[Service]
EnvironmentFile=-/etc/default/cron
ExecStart=/usr/sbin/cron -f $EXTRA_OPTS
IgnoreSIGPIPE=false
KillMode=process
Restart=on-failure

[Install]
WantedBy=multi-user.target
```

# Prática Laboratório 6 (Linux)

Comando

```
aluno@lab-dacc-08:~$ tail -5 /etc/passwd
systemd-coredump:x:999:999:systemd Core Dumper:/:usr/sbin/nologin
aluno::1001:1001:Aluno,,,:/home/aluno:/bin/bash
lightdm:x:128:135:Light Display Manager:/var/lib/lightdm:/bin/false
nvidia-persistenced:x:127:134:NVIDIA Persistence Daemon,,,:/nonexistent:/usr/sbin/nologin
sshd:x:129:65534:/:run/ssh:/usr/sbin/nologin
```

Comando

```
aluno@lab-dacc-08:~$ head -1 /etc/passwd
root:x:0:0:root:/root:/bin/bash
```

Comando

```
aluno@lab-dacc-08:~$ cat /etc/passwd | grep "main\|www-data\|syslog\|sshd"
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
syslog:x:104:110:/:home/syslog:/usr/sbin/nologin
sshd:x:129:65534:/:run/ssh:/usr/sbin/nologin
```

Comando

```
aluno@lab-dacc-08:~$ cat /etc/passwd | wc -l
51
```

Comando

```
aluno@lab-dacc-08:~$ cat /etc/passwd | cut -f1 -d: | sort | tr "\n" " " ; echo
administrador aluno _apt avahi avahi-autoipd backup bin colord cups-pk-helper daemon dnsmasq games gdm ge
oclue gnats gnome-initial-setup hplip irc kernoops lightdm list lp mail man messagebus news nm-openvpn no
body nvidia-persistenced proxy pulse root rtkit saned speech-dispatcher sshd sssd sync sys syslog systemd
-coredump systemd-network systemd-resolve systemd-timesync tcpdump tss usbmux uucp uidd whoopsie www-dat
a
```

Comando

```
administrador@lab-dacc-08:~$ cat /etc/passwd | grep "andrefelipe"
andrefelipe:x:1002:1003:,,,:/home/andrefelipe:/bin/bash
```

Comando

```
administrador@lab-dacc-08:~$ cat /etc/shadow
cat: /etc/shadow: Permissão negada
```

## Comando

```
administrador@lab-dacc-08:~$ sudo cat /etc/shadow
root:$6$fyU9Rw3N.LqItk0n$Rj1AFkz9RkC7fA.S9E3oQAujB/W9Xgv9f0yPTV0rADqNc.oRjh7dtGjR20MikCpyrvS6t0/UGj14P60y
g2G0l0:19087:0:99999:7:::
daemon:!:19046:0:99999:7:::
bin:!:19046:0:99999:7:::
```

## Comando

```
administrador@lab-dacc-08:~$ sudo cat /etc/shadow | grep "andrefelipe"
andrefelipe:$6$fxVmoGPzLp2Tbs1G$8I6VZ6KR.K2Sru0RzDLYqVct9oBirWXJz4iUVHxngqwG7BRbgha0exLxmm3mPg5CVmuGwsUW5
KrH8sQxpuhgJ.:19263:0:99999:7:::
```

## Comando

```
administrador@lab-dacc-08:~$ echo -n ncc1701"" | mkpasswd --stdin --method=sha-512 --salt="fxVmoGPzLp2Tbs1G"
$6$fxVmoGPzLp2Tbs1G$w096/LlpaVoRjx0PEe7WnMiKZh86m12/q5P1kXzmSylKvcqvLnRu2Ax1dKC8dRZ0eVHu072loAD0t0B07TK5Z
9
```

## Comando

```
administrador@lab-dacc-08:~$ cat /etc/group
root:x:0:
daemon:x:1:
```

## Comando

```
administrador@lab-dacc-08:~$ head -3 /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
```

## Comando

```
administrador@lab-dacc-08:~$ cat /etc/group | grep '^andrefelipe'
andrefelipe:x:1003:
```

## Comando

```
administrador@lab-dacc-08:~$ cat /etc/group | grep '^adm:'
adm:x:4:syslog,administrador
```

## Comando

```
administrador@lab-dacc-08:~$ sudo addgroup andrefelipe00
Adicionando grupo 'andrefelipe00' (GID 1004) ...
Concluido.
```

## Comando

```
administrador@lab-dacc-08:~$ sudo usermod -a -G andrefelipe00 andrefelipe
```

Comando

```
administrador@lab-dacc-08:~$ cat /etc/group | grep 'andrefelipe00'  
andrefelipe00:x:1004:andrefelipe
```

Comando

```
administrador@lab-dacc-08:~$ groups andrefelipe  
andrefelipe : andrefelipe andrefelipe00
```

Comando

```
administrador@lab-dacc-08:~$ id  
uid=1000(administrador) gid=1000(administrador) gr  
pos=1000(administrador),4(adm),24(cdrom),27(sudo),3  
0(dip),46(plugdev),120(lpadmin),132(lxd),133(sambas  
hare),1002(mount-ntfs)
```

Comando

```
administrador@lab-dacc-08:~$ echo '#!/bin/bash' > HelloBash.h  
administrador@lab-dacc-08:~$ echo '#!/bin/bash' > HelloBash.sh  
administrador@lab-dacc-08:~$ echo 'echo "Hello Bash..." ' >> HelloBash.sh  
administrador@lab-dacc-08:~$ cat HelloBash.sh  
#!/bin/bash  
echo "Hello Bash..."
```

Comando

```
administrador@lab-dacc-08:~$ ls -l HelloBash.sh  
-rw-rw-r-- 1 administrador administrador 33 set 28 17:42 HelloBash.sh
```

Comando

```
administrador@lab-dacc-08:~$ ./HelloBash.sh  
bash: ./HelloBash.sh: Permissão negada
```

Comando

```
administrador@lab-dacc-08:~$ ls -l HelloBash.sh  
-rwxrw-r-- 1 administrador administrador 33 set 28 17:42 HelloBash.sh
```

Comando

```
administrador@lab-dacc-08:~$ ./HelloBash.sh  
Hello Bash...
```

Comando

```
administrador@lab-dacc-08:~$ chmod 700 HelloBash.sh
administrador@lab-dacc-08:~$ ls -l HelloBash.sh
-rwx----- 1 administrador administrador 33 set 28 17:42 HelloBash.sh
```

Comando

```
administrador@lab-dacc-08:~$ chmod 755 HelloBash.sh
administrador@lab-dacc-08:~$ ls -l HelloBash.sh
-rwxr-xr-x 1 administrador administrador 33 set 28 17:42 HelloBash.sh
```

Comando

```
administrador@lab-dacc-08:~$ sudo chgrp andrefelipe HelloBash.sh
administrador@lab-dacc-08:~$ ls -l HelloBash.sh
-rwxr-xr-x 1 administrador andrefelipe 33 set 28 17:42 HelloBash.sh
```

Comando sudo cat /etc/sudoers

```
administrador@lab-dacc-18:~$ sudo cat /etc/sudoers
#
# This file MUST be edited with the 'visudo' command as root.
#
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
#
# See the man page for details on how to write a sudoers file.
#
Defaults        env_reset
Defaults        mail_badpass
Defaults        secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/
sbin:/bin:/snap/bin"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
```

## Prática Laboratório 7 (Linux)

Comando

```
aluno@lab-dacc-08:~$ ls -lh /bin/sh
lrwxrwxrwx 1 root root 4 abr  2 19:41 /bin/sh -> dash
```

Comando

```
aluno@lab-dacc-08:~$ cat /etc/passwd | cut -f 7 -d: | sort | uniq -c
  4 /bin/bash
  7 /bin/false
  1 /bin/sync
 40 /usr/sbin/nologin
```

Comando

```
aluno@lab-dacc-08:~$ /bin/false
aluno@lab-dacc-08:~$ echo $?
1
aluno@lab-dacc-08:~$ /bin/true
aluno@lab-dacc-08:~$ echo $?
0
```

Comando

```
aluno@lab-dacc-08:~$ /usr/sbin/nologin
This account is currently not available.
aluno@lab-dacc-08:~$ echo $?
1
```

Comando

```
aluno@lab-dacc-08:~$ cat /var/log/auth.log | grep nologin | tail -1
cat: /var/log/auth.log: Permissão negada
```

Comando

```
aluno@lab-dacc-08:~$ add
add-apt-repository  addgroup          addr2line          adduser
addgnupghome       addpart           add-shell
```

Comando

```
aluno@lab-dacc-08:~$ cat /etc/adduser.conf
-al                               .config/                      Modelos/
.android/                        Documentos/                    .mozilla/
Android/                         Downloads/                    Música/
.anydesk/                       .emulator_console_auth_token NovoSubdiretorio/
Área de Trabalho/              .gnupg/                       .octave_hist
ArquivoLinkFisico.txt          .gradle/                      .pki/
ArquivoLinkSimbolico.txt       Imagens/                      .profile
ArquivoOrginal.txt            .java/                        Público/
ArquivosDoBin.txt             .local/                      .repo_.gitconfig.json
ArquivoTeste.txt              LsStderr                      snap/
.bash_history                  LsStderr.txt                 .ssh/
.bash_logout                   LsStdoutStdErr.txt          tabela.txt
.bashrc                        LsStdout.txt                 Videos/
.cache/                        manualLS.txt                 .vscode/
aluno@lab-dacc-08:~$ cat /etc/adduser.conf
```



Comando

```
aluno@lab-dacc-08:~$ head -1 /etc/init.d/cron
#!/bin/sh
```

Comando

```
aluno@lab-dacc-08:~$ nano HelloWorld.sh
```

Comando

```
aluno@lab-dacc-08:~$ chmod 700 HelloWorld.sh
aluno@lab-dacc-08:~$ ./HelloWord.sh
Hello world
```

Comando

```
aluno@lab-dacc-08:~$ nano HelloWorld.sh
aluno@lab-dacc-08:~$ ./HelloWord.sh
Hello,Barney Calhoun!
```

Comando

```
aluno@lab-dacc-08:~$ nano HelloWorld.sh
aluno@lab-dacc-08:~$ ./HelloWord.sh
Digite um numero:5
./HelloWord.sh: linha 3: [5: comando não encontrado
./HelloWord.sh: linha 5: [: faltando `]'
0 numero 5 é menor que zero
```

Comando

```
aluno@lab-dacc-08:~$ echo "5" | ./HelloWord.sh
Digite um numero:0 numero 5 é maior que zero!
aluno@lab-dacc-08:~$ echo "0" | ./HelloWord.sh
Digite um numero:0 numero 0 é zero!
aluno@lab-dacc-08:~$ echo "-8" | ./HelloWord.sh
Digite um numero:0 numero -8 é menor que zero
```

Comando

```
aluno@lab-dacc-08:~$ while [ 1 ]; do echo "Loop infinito"; sleep 1; done
Loop infinito
Loop infinito
Loop infinito
Loop infinito
Loop infinito
^C
```

Comando

```
aluno@lab-dacc-08:~$ grep -r "\!/bin/sh" /etc 2> /dev/null
/etc/console-setup/cached_setup_terminal.sh:#!/bin/sh
/etc/console-setup/cached_setup_keyboard.sh:#!/bin/sh
/etc/console-setup/cached_setup_font.sh:#!/bin/sh
```

Comando

```
~/.bashrc: executed by bash(1) for non-login shells.
# see /usr/share/doc/bash/examples/startup-files (in the package bash-doc)
# for examples

# If not running interactively, don't do anything
case $- in
  *) ;;
  *) return;;
esac

# don't put duplicate lines or lines starting with space in the history.
# See bash(1) for more options
```

Comando

```
aluno@lab-dacc-08:~$ nano ~/.bashrc
aluno@lab-dacc-08:~$ source ~/.bashrc
Bash iniciado!
```

Comando

```
| step one of this self-same document, being careful to note that the rotation
| should occur in a clockwise direction, this point also being non-negotiable.
| The above described steps may be performed, at the option of the party of the
| first part, by any or all agents authorized by him, the objective being to
| produce the most possible revenue for the Partnership.
```

```
-----
\      ^  ^
  \    (oo)\_____ )\/\
    (__) \       ||-----w ||
           ||     ||
```