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Descobrindo Shell

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ echo $SHELL  
/bin/bash  
erick@Desktop-Erick:~$ cat /etc/shells  
# /etc/shells: valid login shells  
/bin/sh  
/bin/bash  
/usr/bin/bash  
/bin/rbash  
/usr/bin/rbash  
/usr/bin/sh  
/bin/dash  
/usr/bin/dash  
/usr/bin/tmux  
/usr/bin/screen  
erick@Desktop-Erick:~$
```

Exibindo mensagens

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ echo teste  
teste  
erick@Desktop-Erick:~$ echo 'teste'  
teste  
erick@Desktop-Erick:~$ echo "teste"  
teste  
erick@Desktop-Erick:~$ echo -e "string1\tstring2\  
> nstring3"  
string1 string2nstring3  
erick@Desktop-Erick:~$
```

Historico do terminal

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ echo teste
teste
erick@Desktop-Erick:~$ echo 'teste'
teste
erick@Desktop-Erick:~$ echo "teste"
teste
erick@Desktop-Erick:~$ echo -e "string1\tstring2\
> nstring3"
string1 string2nstring3
erick@Desktop-Erick:~$ echo -e "string1\tstring2\
nstring3"
string1 string2nstring3
erick@Desktop-Erick:~$ history
 1 sudo
 2 sudo -
 3 su -
 4 vi /etc/hostname
 5 clear
 6 echo $SHELL
 7 cat /etc/shells
 8 /bin/ls
 9 cleat
10 clear
11 echo teste
12 echo 'teste'
13 echo "teste"
14 echo -e "string1\tstring2\
nstring3"
15 echo -e "string1\tstring2\
nstring3"
16 history
erick@Desktop-Erick:~$ history | grep sshd
17 history | grep sshd
erick@Desktop-Erick:~$ history -c
erick@Desktop-Erick:~$ history
 1 history
erick@Desktop-Erick:~$ echo $HISTSIZE
1000
erick@Desktop-Erick:~$ export HISTSIZE=100
erick@Desktop-Erick:~$ export HISTSIZE=0
erick@Desktop-Erick:~$ echo $HISTSIZE
0
erick@Desktop-Erick:~$ export HISTSIZE=100
erick@Desktop-Erick:~$ echo $HISTSIZE
100
erick@Desktop-Erick:~$ cat ~/.bash_history
cat: /home/erick/.bash_history: No such file or directory

```

Usuário Root

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ sudo apt install vim
[sudo] password for erick:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libfreetype6
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  vim-common vim-runtime vim-tiny
Suggested packages:
  ctags vim-doc vim-scripts indent
The following packages will be upgraded:
  vim vim-common vim-runtime vim-tiny
4 upgraded, 0 newly installed, 0 to remove and 58 not upgraded.
Need to get 9,345 kB of archives.
After this operation, 1,024 B of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim amd64 2:8.2.3995-1ubuntu2.1 [1,727 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-tiny amd64 2:8.2.3995-1ubuntu2.1 [704 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-runtime all 2:8.2.3995-1ubuntu2.1 [6,832 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-common all 2:8.2.3995-1ubuntu2.1 [81.5 kB]
Fetched 9,345 kB in 3s (3,254 kB/s)
(Reading database ... 34612 files and directories currently installed.)
Preparing to unpack .../vim_2%3a8.2.3995-1ubuntu2.1_amd64.deb ...
Unpacking vim (2:8.2.3995-1ubuntu2.1) over (2:8.2.3995-1ubuntu2) ...
Preparing to unpack .../vim-tiny_2%3a8.2.3995-1ubuntu2.1_amd64.deb ...
Unpacking vim-tiny (2:8.2.3995-1ubuntu2.1) over (2:8.2.3995-1ubuntu2) ...
Preparing to unpack .../vim-runtime_2%3a8.2.3995-1ubuntu2.1_all.deb ...
Unpacking vim-runtime (2:8.2.3995-1ubuntu2.1) over (2:8.2.3995-1ubuntu2) ...
Preparing to unpack .../vim-common_2%3a8.2.3995-1ubuntu2.1_all.deb ...
Unpacking vim-common (2:8.2.3995-1ubuntu2.1) over (2:8.2.3995-1ubuntu2) ...
Setting up vim-common (2:8.2.3995-1ubuntu2.1) ...
Setting up vim-runtime (2:8.2.3995-1ubuntu2.1) ...
Setting up vim (2:8.2.3995-1ubuntu2.1) ...
Setting up vim-tiny (2:8.2.3995-1ubuntu2.1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning processor microcode...
Scanning linux images...

Failed to retrieve available kernel versions.

Failed to check for processor microcode upgrades.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.

```

Ligando e Desligando o Linux

WSL não permite com que o Ubuntu se conecte com a porta na qual é usada para desligar e reinicializar o sistema da máquina.

```

erick@Desktop-Erick:~$ sudo shutdown -h +5 " Desligando em 5 minutos "
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
erick@Desktop-Erick:~$ sudo shutdown -r +3 " Reboot em 3 minutos "
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down

```

Informação de Arquivos

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ ls
erick@Desktop-Erick:~$ cat arquivo1.txt
cat: arquivo1.txt: No such file or directory
erick@Desktop-Erick:~$ vim arquivo1.txt
erick@Desktop-Erick:~$ ls
arquivo1.txt
erick@Desktop-Erick:~$ vim arquivo2.txt
erick@Desktop-Erick:~$ ls
arquivo1.txt  arquivo2.txt
erick@Desktop-Erick:~$ ls -l
arquivo1.txt
arquivo2.txt
erick@Desktop-Erick:~$ ls -l
total 0
-rw-r--r-- 1 erick erick 0 Oct  8 11:59 arquivo1.txt
-rw-r--r-- 1 erick erick 0 Oct  8 12:00 arquivo2.txt
erick@Desktop-Erick:~$ ls -l /etc/hosts
-rw-r--r-- 1 root root 537 Oct  7 18:18 /etc/hosts
erick@Desktop-Erick:~$ mkdir teste
erick@Desktop-Erick:~$ ls
arquivo1.txt  arquivo2.txt  teste
erick@Desktop-Erick:~$ ls -l -l
total 4
-rw-r--r-- 1 erick erick  0 Oct  8 11:59 arquivo1.txt
-rw-r--r-- 1 erick erick  0 Oct  8 12:00 arquivo2.txt
drwxr-xr-x 2 erick erick 4096 Oct  8 12:01 teste
erick@Desktop-Erick:~$ ls -ld /etc
drwxr-xr-x 96 root root 4096 Oct  7 18:18 /etc
erick@Desktop-Erick:~$ ls -a
.  ..  arquivo1.txt  arquivo2.txt  .bash_logout  .bashrc  .landscape  .motd_shown  .profile  .sudo_as_admin_successful  teste  .viminfo
erick@Desktop-Erick:~$ ls -a -l
.
..
arquivo1.txt
arquivo2.txt
.bash_logout
.bashrc
.landscape
.motd_shown
.profile
.sudo_as_admin_successful
teste
.viminfo
erick@Desktop-Erick:~$ ls -F
arquivo1.txt  arquivo2.txt  teste/

```

```

erick@Desktop-Erick:~$ ls -s
total 4
0 arquivo1.txt 0 arquivo2.txt 4 teste
erick@Desktop-Erick:~$ cd /etc
erick@Desktop-Erick:/etc$ ls -F
adduser.conf          debian_version        hosts                logrotate.conf       nftables.conf*       rc5.d/               sudo_logsrvd.conf
alternatives/         default/              hosts.allow          logrotate.d/          nsswitch.conf        rc6.d/               sysctl.conf
apparmor/             deluser.conf          hosts.deny            lsb-release           opt/                 rc5.d/               sysctl.d/
apparmor.d/           depmod.d/            init.d/              lvm/                  os-release@          resolv.conf@         systemd/
apport/              dhcp/                initramfs-tools/     machine-id            overlayroot.conf     rmt@                 terminfo/
apt/                 dictionaries-common/ inputrc              magic                 overlayroot.local.conf rpc                    timezone
bash.bashrc          dpkg/                iproute2/            magic.mime            PackageKit/          rsyslog.conf         tmpfiles.d/
bash_completion      e2scrub.conf         iscsi/               manpath.config        pam.conf             rsyslog.d/           ubuntu-advantage/
bindresvport.blacklist ec2_version          issue                mdadm/               passwd               screenrc              ucf.conf
binfmt.d/            emacs/               issue.net            mime.types            passwd              security/            udev/
bindresvport.blacklist ec2_version          kernel/              mke2fs.conf          passwd-             selinux/             udisks2/
byobu/               ethertypes           kernel-img.conf     modprobe.d/          perl/               services             ufw/
ca-certificates/     fstab                landscape/           modules               polkit-1/           shadow              update-manager/
ca-certificates.conf fuse.conf            ldap/               modules-load.d/      pollinate/          shells              update-motd.d/
cloud/              fwupd/              ld.so.cache         mtab@                profile             skel/               update-notifier/
console-setup/       gai.conf            ld.so.conf          multipath.conf        profile.d/          sos/               usb_modeswitch.conf
cron.d/              groff/             ld.so.conf.d/       nanorc               protocols           ssh/              usb_modeswitch.d/
cron.daily/          group              libaudit.conf       netconfig            python3/            ssl/               vim/
cron.hourly/         grub.d/            libblockdev/        netplan/             python3.10/         subgid             vmware-tools/
cron.monthly/        gshadow            libl3/              network/             rc0.d/              subuid             vtrgb@
crontab              gshadow-           libn1-3/            networkd-dispatcher/ rc1.d/              subuid             wgetrc
cron.weekly/         gss/              locale.alias        NetworkManager/      rc2.d/              sudo.conf           wsl.conf
cryptsetup-initramfs hdparm.conf        localtime@          NetworkManager/     rc3.d/              sudoers             xattr.conf
crypttab             hdparm.conf        logcheck/           networks             rc4.d/              sudoers.d/          xdg/
dbus-1/              hostname           login.defs          newt/                rc4.d/              sudoers.d/          zsh_command_not_found
debconf.conf
erick@Desktop-Erick:/etc$ cd /usr/local
erick@Desktop-Erick:/usr/local$ ls -s
total 32
4 bin 4 etc 4 games 4 include 4 lib 0 man 4 sbin 4 share 4 src
erick@Desktop-Erick:/usr/local$ ls -sl1
total 32
4 drwxr-xr-x 2 root root 4096 Aug 10 03:56 bin
4 drwxr-xr-x 2 root root 4096 Aug 10 03:56 etc
4 drwxr-xr-x 2 root root 4096 Aug 10 03:56 games
4 drwxr-xr-x 2 root root 4096 Aug 10 03:56 include
4 drwxr-xr-x 3 root root 4096 Aug 10 03:56 lib
0 lrwxrwxrwx 1 root root 9 Aug 10 03:56 man -> share/man
4 drwxr-xr-x 2 root root 4096 Aug 10 03:56 sbin
4 drwxr-xr-x 4 root root 4096 Aug 10 03:56 share
4 drwxr-xr-x 2 root root 4096 Aug 10 03:56 src
erick@Desktop-Erick:/usr/local$ ls -alF
total 40
drwxr-xr-x 10 root root 4096 Aug 10 03:56 ./
drwxr-xr-x 14 root root 4096 Aug 10 03:56 ../
drwxr-xr-x 2 root root 4096 Aug 10 03:56 bin/
drwxr-xr-x 2 root root 4096 Aug 10 03:56 etc/
drwxr-xr-x 2 root root 4096 Aug 10 03:56 games/
drwxr-xr-x 2 root root 4096 Aug 10 03:56 include/
drwxr-xr-x 3 root root 4096 Aug 10 03:56 lib/
lrwxrwxrwx 1 root root 9 Aug 10 03:56 man -> share/man/
drwxr-xr-x 2 root root 4096 Aug 10 03:56 sbin/
drwxr-xr-x 4 root root 4096 Aug 10 03:56 share/
drwxr-xr-x 2 root root 4096 Aug 10 03:56 src/

```

```

erick@Desktop-Erick:/usr/local$ ls -R /etc/
/etc/:
adduser.conf          crypttab            gshadow            legal              modules-load.d     perl               screenrc           timezone
alternatives/        dbus-1             gshadow-          libaudit.conf     mtab               pki               security          tmpfiles.d
apparmor             debconf.conf       gss               libblockdev       multipath.conf     pm               selinux           ubuntu-advantage
apparmor.d           deluser.conf       hdparm.conf       libl3             nanorc            polkit-1          services          ucf.conf
apport              default            host.conf         locale.alias      needrestart        pollinate         shadow           udev
apt                 deluser.conf       hostname          locale.gen        netconfig         profile           shadow-          udisks2
bash.bashrc          depmod.d           hosts            localtime         netplan           protocols         shells           ufw
bash_completion     dhcp              hosts.allow      logcheck          network           python3           skel             update-manager
bindresvport.blacklist e2scrub.conf      hosts.deny       login.defs        networkd-dispatcher python3           sos             update-motd.d
binfmt.d            dpkg              init.d           logrotate.conf   NetworkManager   python3.10       ssh             update-notifier
bindresvport.blacklist e2scrub.conf      inputrc          logrotate.d       networks          rc0.d             ssl             usb_modeswitch.conf
byobu              ec2_version       iproute2         lsb-release       newt              rc1.d             subgid           usb_modeswitch.d
ca-certificates     emacs             iscsi            lvm               nftables.conf     rc2.d             subuid           vim
ca-certificates.conf environment        iscsi            machine-id        nsswitch.conf     rc3.d             subuid           vmware-tools
cloud              ethertypes        issue            magic             os-release        rc4.d             subuid           vtrgb
console-setup       fuse.conf         issue.net        magic.mime        overlayroot.conf  rc5.d             sudo.conf        wgetrc
cron.d             fwupd            kernel           manpath.config   overlayroot.local.conf rc6.d             sudoers          wsl.conf
cron.daily          gai.conf         kernel-img.conf  mdadm            PackageKit        rcS.d             sudoers.d        X11
cron.hourly         groff            landscape        mke2fs.conf      pam.conf          resolv.conf       sudo_logsrvd.conf xattr.conf
cron.monthly        group           ld.so.cache     modprobe.d       pam.d             rmt              sysctl.conf      xdg
crontab            grub.d           ld.so.conf      modules           passwd            rpc              sysctl.d         zsh_command_not_found
cryptsetup-initramfs grub.d           ld.so.conf.d    modules           passwd            rsyslog.conf     systemd          terminfo

/etc/alternatives:
arptables          ex.1.gz            iptables          lzdiff.1.gz      lzmore.1.gz      pico              rsh              vi.de.1.gz      vi.ja.1.gz      which.ja1.gz
arptables-restore  ex.da.1.gz         iptables-restore  lzgrep           mt               pico.1.gz        rsh.1.gz        view            vim             which.pl1.gz
arptables-save     ex.de.1.gz         iptables-save     lzgrep.1.gz     mt.1.gz          pinentry         rview           view.1.gz      vimgdiff       which.sl1.gz
awk                ex.fr.1.gz         iptables          lzfgrep          nawk.1.gz        pinentry.1.gz   rvim            view.da.1.gz   vi.pl.1.gz     write
awk.1.gz           ex.it.1.gz         iptables-restore  lzfgrep.1.gz    nc               pybabel          telnet          view.de.1.gz   vi.ru.1.gz     write.1.gz
ebtables           ex.ja.1.gz         iptables-save     lzgrep           nc.1.gz          rcp              telnet.1.gz     view.fr.1.gz   vtrgb
ebtables           ex.pl.1.gz         jsondiff          lzgrep.1.gz     netcat           rcp.1.gz         text.plymouth   view.it.1.gz   which
ebtables-restore   ex.ru.1.gz         lzcat             lzless           netcat           README           unlzma          view.ja.1.gz   which.1.gz
ebtables-save      ftp                lzcat.1.gz        lzless.1.gz     netcat.1.gz     rlogin           unlzma.1.gz     view.pl.1.gz   which.de1.gz
editor             ftp.1.gz           lzcmp             lzma             newt-palette     rlogin.1.gz     vi              view.ru.1.gz   which.es1.gz
editor.1.gz        infobrowser        lzcmp.1.gz        lzma.1.gz        pager            rmt              vi.1.gz         vi.fr.1.gz     which.fr1.gz
ex                 infobrowser.1.gz   lzdiff            lzmore           pager.1.gz       rmt.8.gz        vi.da.1.gz     vi.it.1.gz     which.it1.gz

```

```

/etc/apparmor:
init parser.conf

/etc/apparmor/init:
network-interface-security

/etc/apparmor/init/network-interface-security:
sbin.dhclient

```

Manipulação de Diretórios

```
erick@Desktop-Erick:/usr/local$ cd ~
erick@Desktop-Erick:~$ echo ~
/home/erick
```

```
erick@Desktop-Erick: /home
erick@Desktop-Erick:~$ ls -la .
total 32
drwxr-x--- 4 erick erick 4096 Oct  8 12:01 .
drwxr-xr-x 3 root  root 4096 Oct  7 18:15 ..
-rw-r--r-- 1 erick erick  0 Oct  8 11:59 arquivo1.txt
-rw-r--r-- 1 erick erick  0 Oct  8 12:00 arquivo2.txt
-rw-r--r-- 1 erick erick 220 Jan  6 2022 .bash_logout
-rw-r--r-- 1 erick erick 3771 Jan  6 2022 .bashrc
drwxr-xr-x 2 erick erick 4096 Oct  7 18:18 .landscape
-rw-r--r-- 1 erick erick  0 Oct  7 18:18 .motd_shown
-rw-r--r-- 1 erick erick 807 Jan  6 2022 .profile
-rw-r--r-- 1 erick erick  0 Oct  7 18:23 .sudo_as_admin_successful
drwxr-xr-x 2 erick erick 4096 Oct  8 12:01 teste
-rw-r----- 1 erick erick 2367 Oct  8 12:00 .viminfo
erick@Desktop-Erick:~$ ls -F ..
erick/
erick@Desktop-Erick:~$ cd ..
```

```
erick@Desktop-Erick:/home$ cd /home/erick
erick@Desktop-Erick:~$ cd ..
```

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:/home$ pwd
/home
erick@Desktop-Erick:/home$ cd
erick@Desktop-Erick:~$ pwd
/home/erick
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt teste
erick@Desktop-Erick:~$ ls /home/erick/
arquivo1.txt arquivo2.txt teste
erick@Desktop-Erick:~$ cp arquivo1.txt /home/erick/teste
erick@Desktop-Erick:~$ cp arquivo1.txt /home/erick/documentos
erick@Desktop-Erick:~$ ls /home/erick/documentos
/home/erick/documentos
```

```
erick@Desktop-Erick:~$ cp arquivo1.txt arquivo2.txt
erick@Desktop-Erick:~$ cp -i arquivo1.txt arquivo2.txt
cp: overwrite 'arquivo2.txt'? yes
```

```
erick@Desktop-Erick:~$ cp -r teste teste2
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt documentos teste teste2
```

```
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt
erick@Desktop-Erick:~$ mkdir teste
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt teste
erick@Desktop-Erick:~$ rmdir teste
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt
erick@Desktop-Erick:~$
```

```
erick@Desktop-Erick:~$ touch teste.txt
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt documentos teste teste2 teste.txt
erick@Desktop-Erick:~$ TMPFILE=$(mktemp)
erick@Desktop-Erick:~$ echo $TMPFILE
/tmp/tmp.y0NUefdyz
erick@Desktop-Erick:~$ echo "temp_file" > $TMPFILE
erick@Desktop-Erick:~$ ls
arquivo1.txt arquivo2.txt documentos teste teste2 teste.txt
erick@Desktop-Erick:~$ ls -a
. arquivo1.txt .bash_logout documentos .motd_shown .sudo_as_admin_successful teste2 .viminfo
.. arquivo2.txt .bashrc .landscape .profile teste teste.txt
erick@Desktop-Erick:~$ cat $TMPFILE
temp_file
erick@Desktop-Erick:~$ rm $TMPFILE
erick@Desktop-Erick:~$ ls $TMPFILE
ls: cannot access '/tmp/tmp.y0NUefdyz': No such file or directory
erick@Desktop-Erick:~$
```

Soft Link

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ touch arq1
erick@Desktop-Erick:~$ echo "Laranja" >> arq1
erick@Desktop-Erick:~$ ln -s arq1 arq1-soft
erick@Desktop-Erick:~$ ls -l arq1*
-rw-r--r-- 1 erick erick 8 Oct  8 15:35 arq1
lrwxrwxrwx 1 erick erick 4 Oct  8 15:35 arq1-soft -> arq1
erick@Desktop-Erick:~$ cat arq1-soft
Laranja
erick@Desktop-Erick:~$ mkdir arq2
erick@Desktop-Erick:~$ mv arq1 arq2
erick@Desktop-Erick:~$ ls -l arq1*
lrwxrwxrwx 1 erick erick 4 Oct  8 15:35 arq1-soft -> arq1
erick@Desktop-Erick:~$ cat arq1-soft
cat: arq1-soft: No such file or directory
erick@Desktop-Erick:~$ ls -l arq1-soft
lrwxrwxrwx 1 erick erick 4 Oct  8 15:35 arq1-soft -> arq1
erick@Desktop-Erick:~$
```

Hard Link

```
erick@Desktop-Erick:~$ cat arq1
Laranja
erick@Desktop-Erick:~$ ln arq1 arq1-hard
erick@Desktop-Erick:~$ cat arq1-hard
Laranja
erick@Desktop-Erick:~$ ls -l arq1*
-rw-r--r-- 2 erick erick 8 Oct  8 15:35 arq1
-rw-r--r-- 2 erick erick 8 Oct  8 15:35 arq1-hard
erick@Desktop-Erick:~$ mkdir arq2
erick@Desktop-Erick:~$ mv arq1 arq2
erick@Desktop-Erick:~$ cat arq1-hard
Laranja
erick@Desktop-Erick:~$ ls -l arq1-hard
-rw-r--r-- 2 erick erick 8 Oct  8 15:35 arq1-hard
erick@Desktop-Erick:~$ █
```

Echo

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ echo "Olá Erick!"
Olá Erick!
erick@Desktop-Erick:~$ echo "Hello World"
Hello World
```

Cat

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ seq 1 5
1
2
3
4
5
erick@Desktop-Erick:~$ seq 1 5 > arq1.txt
erick@Desktop-Erick:~$ seq 6 10 > arq2.txt
erick@Desktop-Erick:~$ cat arq1.txt arq2.txt
1
2
3
4
5
6
7
8
9
10
```


Cut

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ echo "Hello wordl from WSL" | cut -c 1-10  
Hello word
```

Seq

```
erick@Desktop-Erick:~$ seq 3  
1  
2  
3  
erick@Desktop-Erick:~$ seq 3 5  
3  
4  
5  
erick@Desktop-Erick:~$ seq 1.1 0.1 1.3  
1.1  
1.2  
1.3
```

Fmt & fold

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ fmt -w10 cidades.txt
SP Sao
Paulo :
pedro SP
Campinas
: andre
MG Belo
Horizonte
:
marta MG
Diamantina
: lucas
MG Lavras
: rafael
MG Bom
Sucesso :
lisa RJ
Rio de
Janeiro :
alexandro
erick@Desktop-Erick:~$ fold -w 10 cidades.txt
SP Sao Pau
lo : pedro
SP Campina
s : andre
MG Belo Ho
rizonte :
marta
MG Diamant
ina : luca
s
MG Lavras
: rafael
MG Bom Suc
esso : lis
a
RJ      Rio
de Janeir
o : alexan
dro
erick@Desktop-Erick:~$ fold -ws 10 cidades.txt
fold: invalid number of columns: 's'
erick@Desktop-Erick:~$ fold -s -w 10 cidades.txt
SP Sao
Paulo :
pedro
SP
Campinas
: andre
MG Belo
Horizonte
: marta
MG
Diamantina
: lucas
MG Lavras
: rafael
MG Bom
Sucesso :
lisa
RJ
Rio de
Janeiro :
alexandro

```

Grep & Egrep & Fgrep

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ cat cidades.txt | grep sao
erick@Desktop-Erick:~$ cat cidades.txt | grep Sao
SP Sao Paulo : pedro
```

```
erick@Desktop-Erick:~$ dmesg | egrep "firmware|amd"
[ 0.207163] Spectre V2 : Enabling Restricted Speculation for firmware calls
[ 0.907363] has_svm: not amd or hygon
erick@Desktop-Erick:~$ dmesg | fgrep "@"
[ 0.000000] Linux version 5.10.16.3-microsoft-standard-WSL2 (oe-user@oe-host) (x86_64-msft-linux-gcc (GCC) 9.3.0, GNU ld (GNU Binutils) 2.34.0.20200220) #
 SMP Fri Apr 2 22:23:49 UTC 2021
[ 0.207443] smpboot: CPU0: Intel(R) Core(TM) i5-3230M CPU @ 2.60GHz (family: 0x6, model: 0x3a, stepping: 0x9)
[ 0.911949] Installing knfsd (copyright (C) 1996 okir@monad.swb.de).
[ 1.003819] wireguard: Copyright (C) 2015-2019 Jason A. Donenfeld <Jason@zx2c4.com>. All Rights Reserved.
[ 1.292592] device-mapper: ioctl: 4.43.0-ioctl (2020-10-01) initialised: dm-devel@redhat.com
```

Head & Tail

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ head cidades.txt
SP Sao Paulo : pedro
SP Campinas : andre
MG Belo Horizonte : marta
MG Diamantina : lucas
MG Lavras : rafael
MG Bom Sucesso : lisa
RJ      Rio de Janeiro : alexandro
erick@Desktop-Erick:~$ head -2 cidades.txt
SP Sao Paulo : pedro
SP Campinas : andre
erick@Desktop-Erick:~$ tail cidades.txt
SP Sao Paulo : pedro
SP Campinas : andre
MG Belo Horizonte : marta
MG Diamantina : lucas
MG Lavras : rafael
MG Bom Sucesso : lisa
RJ      Rio de Janeiro : alexandro
erick@Desktop-Erick:~$ tail -2 cidades.txt
MG Bom Sucesso : lisa
RJ      Rio de Janeiro : alexandro
```

File

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ file cidades.txt
cidades.txt: ASCII text
```

```
erick@Desktop-Erick:~$ wget -q http://www.gutenberg.org/files/4300/4300-0.txt
erick@Desktop-Erick:~$ file 4300-0.txt
4300-0.txt: Unicode text, UTF-8 (with BOM) text, with CRLF line terminators
```

```
erick@Desktop-Erick:~$ nl cidades.txt
 1 SP Sao Paulo : pedro
 2 SP Campinas : andre
 3 MG Belo Horizonte : marta
 4 MG Diamantina : lucas
 5 MG Lavras : rafael
 6 MG Bom Sucesso : lisa
 7 RJ Rio de Janeiro : alexandro
```

```
erick@Desktop-Erick:~$ cat notas.txt
10 20
30 30
40 10
50 60
NC 10

erick@Desktop-Erick:~$ cat nomes.txt
alexandro
pedro
marcos
andre
luciana
erick@Desktop-Erick:~$ paste nomes.txt notas.txt
alexandro      10 20
pedro          30 30
marcos         40 10
andre          50 60
luciana        NC 10
```

Rev

```
erick@Desktop-Erick:~$ echo "teste" | rev
etset
```

Sort

```
erick@Desktop-Erick:~$ cat cidades.txt | sort -n
MG Belo Horizonte : marta
MG Bom Sucesso : lisa
MG Diamantina : lucas
MG Lavras : rafael
RJ Rio de Janeiro : alexandro
SP Campinas : andre
SP Sao Paulo : pedro
```

WC

```
erick@Desktop-Erick:~$ wc cidades.txt
 7  33 164 cidades.txt
```

Compgen

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ compgen -c
alert
egrep
fgrep
grep
l
la
ll
ls
if
then
else
elif
fi
case
esac
for
select
while
until
do
done
in
function
time
f
```

Whoami & pwd

```
erick@Desktop-Erick:~$ whoami
erick
erick@Desktop-Erick:~$ pwd
/home/erick
```

Id

```
erick@Desktop-Erick:~$ id
uid=1000(erick) gid=1000(erick) groups=1000(erick),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),119(lxd)
```

Passwd

```
erick@Desktop-Erick:~$ passwd
Changing password for erick.
Current password:
New password:
Retype new password:
You must choose a longer password.
New password:
Retype new password:
passwd: password updated successfully
```

Free

```
erick@Desktop-Erick:~$ free
              total        used        free      shared  buff/cache   available
Mem:           12995888       746564       6146888         1628       6102436       11927384
Swap:           4194304           0         4194304
```

Uname

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ uname
Linux
erick@Desktop-Erick:~$ uname -s
Linux
erick@Desktop-Erick:~$ uname -r
5.10.16.3-microsoft-standard-WSL2
erick@Desktop-Erick:~$ uname -m
x86_64
erick@Desktop-Erick:~$ uname -n
Desktop-Erick
erick@Desktop-Erick:~$ uname -a
Linux Desktop-Erick 5.10.16.3-microsoft-standard-WSL2 #1 SMP Fri Apr 2 22:23:49 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
```

Uptime

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ uptime
16:27:21 up 10:35,  0 users,  load average: 0.02, 0.06, 0.02
```

Path

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/wsl/lib:/mnt/c/Program Files/WindowsApps/CanonicalGroupLimited.Ubuntu_2204.1.6.0_x64__79rhkpfndgsc:/mnt/c/Python310/Scripts:/mnt/c/Python310:/mnt/c/Windows/system32:/mnt/c/Windows:/mnt/c/Windows/System32/Wbem:/mnt/c/Windows/System32/WindowsPowerShell/v1.0:/mnt/c/Windows/System32/OpenSSH:/mnt/c/Program Files/nodejs:/mnt/c/ProgramData/chocolatey/bin:/mnt/c/Program Files/dotnet:/mnt/c/Program Files/Git/cmd:/mnt/c/Program Files/Docker/Docker/resources/bin:/mnt/c/ProgramData/DockerDesktop/version-bin:/mnt/c/Program Files/Terraform:/mnt/c/Users/erick/AppData/Local/Microsoft/WindowsApps:/mnt/c/Users/erick/AppData/Local/Programs/Microsoft VS Code/bin:/mnt/c/Users/erick/AppData/Roaming/npm:/mnt/c/Users/erick/AppData/Local/Google/Cloud SDK/google-cloud-sdk/bin:/snap/bin
```

Timeout

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ timeout 5 ping www.ufvjm.edu.br
PING www.ufvjm.edu.br (200.131.252.165) 56(84) bytes of data.
64 bytes from www.ufvjm.edu.br (200.131.252.165): icmp_seq=1 ttl=48 time=25.2 ms
64 bytes from www.ufvjm.edu.br (200.131.252.165): icmp_seq=2 ttl=48 time=26.0 ms
64 bytes from www.ufvjm.edu.br (200.131.252.165): icmp_seq=3 ttl=48 time=25.0 ms
64 bytes from www.ufvjm.edu.br (200.131.252.165): icmp_seq=4 ttl=48 time=25.8 ms
64 bytes from www.ufvjm.edu.br (200.131.252.165): icmp_seq=5 ttl=48 time=25.4 ms
```

W

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ w
 16:29:26 up 10:37,  0 users,  load average: 0.00, 0.04, 0.01
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
```

Whereis

```
erick@Desktop-Erick:~$ whereis gcc
gcc: /usr/share/gcc
```

Which

```
erick@Desktop-Erick:~$ which ls
/usr/bin/ls
```

clear

```
erick@Desktop-Erick:~$ whatis clear
clear (1)                - clear the terminal screen
```

Multiplos comandos

```
erick@Desktop-Erick:~$ hostname; date;ls;
Desktop-Erick
Sun Oct  9 12:24:23 PM -03 2022
4300-0.txt  arq1.txt  arq2.txt  cidades.txt  nomes.txt  notas.txt
```

Comandos no Background

```
erick@Desktop-Erick:~$ emacs &
[1] 1007
erick@Desktop-Erick:~$ Command 'emacs' not found, but can be installed with:
sudo apt install e3 # version 1:2.82+dfsg-2, or
sudo apt install emacs-gtk # version 1:27.1+1-3ubuntu5
sudo apt install emacs-lucid # version 1:27.1+1-3ubuntu5
sudo apt install emacs-nox # version 1:27.1+1-3ubuntu5
sudo apt install jove # version 4.17.3.6-2
```

Comandos de Processos

```
erick@Desktop-Erick:~$ ps -aef
UID          PID    PPID  C   TIME TTY          TIME CMD
root           1        0  0  04:01 ?        00:00:00 /init
root          14         1  0  04:01 ?        00:00:00 /init
root          15         1  0  04:01 ?        00:00:01 /init
erick         16         1  0  04:01 pts/0    00:00:08 -bash
erick        1016        16  0  12:25 pts/0    00:00:00 ps -aef

erick@Desktop-Erick:~$ ps -u erick
    PID TTY          TIME CMD
    16 pts/0    00:00:00 bash
   1017 pts/0    00:00:00 ps

erick@Desktop-Erick:~$ ps -aef -r | head -5
    PID TTY          STAT       TIME COMMAND
   1018 pts/0    R+         0:00 ps -aef -r SHELL=/bin/bash WSL_DISTRO_NAME=Ubuntu HISTSIZE=100 NAME=Desktop-Erick PWD=/home/erick LOGNAME=erick MOTD_SHOWN=update-
motd HOME=/home/erick LANG=en_US.UTF-8 WSL_INTEROP=/run/WSL/15_interop LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:bd=40;33:01:cd=40;33
;01:or=40;31;01:mi=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:
*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lzo=01;31:*.lzo
=01;31:*.xz=01;31:*.zst=01;31:*.tzt=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.t2=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=0
1;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;
31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=
01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.w
ebp=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.a
vi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=0
0;36:*.flac=00;36:*.m4a=00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.ra=00;36:*.wav=00;36:*.oga=00;36:*.opus=00;36:*.spx=
00;36:*.xspf=00;36: LESSCLOSE=/usr/bin/lesspipe %s %s TERM=xterm-256color LESSOPEN=| /usr/bin/lesspipe %s USER=erick SHLVL=0 WSLLENV= XDG_DATA_DIRS=/usr/local
/share:/usr/share:/var/lib/snapd/desktop PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/wnsl/lib:/mnt/
c/Program Files/WindowsApps/CanonicalGroupLimited.Ubuntu.2204.1.6.0_x64_79rhkpfndgsc:/mnt/c/Python310/Scripts:/mnt/c/Python310:/mnt/c/Windows/system32:/m
nt/c/Windows:/mnt/c/Windows/System32/Wbem:/mnt/c/Windows/System32/WindowsPowerShell/v1.0:/mnt/c/Windows/System32/OpenSSH:/mnt/c/Program Files/nodejs:/mnt/
c/ProgramData/chocolatey/bin:/mnt/c/Program Files/dotnet:/mnt/c/Program Files/Git/cmd:/mnt/c/Program Files/Docker/Docker/resources/bin:/mnt/c/ProgramData/Dock
erDesktop/version-bin:/mnt/c/Program Files/Terraform:/mnt/c/Users/erick/AppData/Local/Microsoft/WindowsApps:/mnt/c/Users/erick/AppData/Local/Programs/Micro
soft VS Code/bin:/mnt/c/Users/erick/AppData/Roaming/npm:/mnt/c/Users/erick/AppData/Local/Google/Cloud SDK/google-cloud-sdk/bin:/snap/bin HOSTTYPE=x86_64 OLDP
WD=/home - /usr/bin/ps

erick@Desktop-Erick:~$ ps -aef -m | head -5
    PID    PPID  C   TIME TTY          TIME CMD
root         1        0  04:01 -        00:00:00 -
root         -        -  04:01 -        00:00:00 -
root         -        -  04:01 -        00:00:00 -
root         14         1  04:01 ?        00:00:00 /init
```

Top

```
erick@Desktop-Erick:~$ top
top - 12:27:43 up 12:31, 0 users, load average: 0.00, 0.00, 0.00
Tasks: 5 total, 1 running, 4 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.2 sy, 0.0 ni, 99.8 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 12691.3 total, 6001.7 free, 729.1 used, 5960.5 buff/cache
MiB Swap: 4096.0 total, 4096.0 free, 0.0 used. 11647.8 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 1023 erick     20   0   12940   3840   3232 R   0.3   0.0   0:00.01 top
    1 root       20   0     916     540     468 S   0.0   0.0   0:00.00 init
   14 root       20   0    1264     372      20 S   0.0   0.0   0:00.00 init
   15 root       20   0    1264     372      20 S   0.0   0.0   0:01.90 init
   16 erick     20   0   12276   6600   3852 S   0.0   0.1   0:08.34 bash
```


Pstree

```
erick@Desktop-Erick:~$ pstree
init--init--init--bash--pstree
    |--{init}
```

Listando Kill

```
erick@Desktop-Erick:~$ kill -l
1) SIGHUP      2) SIGINT      3) SIGQUIT     4) SIGILL      5) SIGTRAP
6) SIGABRT     7) SIGBUS      8) SIGFPE      9) SIGKILL     10) SIGUSR1
11) SIGSEGV    12) SIGUSR2    13) SIGPIPE     14) SIGALRM     15) SIGTERM
16) SIGSTKFLT  17) SIGCHLD    18) SIGCONT     19) SIGSTOP     20) SIGTSTP
21) SIGTTIN    22) SIGTTOU    23) SIGURG      24) SIGXCPU     25) SIGXFSZ
26) SIGVTALRM  27) SIGPROF    28) SIGWINCH    29) SIGIO        30) SIGPWR
31) SIGSYS     34) SIGRTMIN    35) SIGRTMIN+1  36) SIGRTMIN+2  37) SIGRTMIN+3
38) SIGRTMIN+4 39) SIGRTMIN+5  40) SIGRTMIN+6  41) SIGRTMIN+7  42) SIGRTMIN+8
43) SIGRTMIN+9 44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8  57) SIGRTMAX-7
58) SIGRTMAX-6 59) SIGRTMAX-5 60) SIGRTMAX-4 61) SIGRTMAX-3 62) SIGRTMAX-2
63) SIGRTMAX-1 64) SIGRTMAX
```

Usando Kill

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ top &
[1] 1027
erick@Desktop-Erick:~$ jobs -l
[1]+ 1027 Stopped (signal)          top
erick@Desktop-Erick:~$ kill -9 1027
erick@Desktop-Erick:~$ jobs -l
[1]+ 1027 Killed                    top
```

Forest

```
erick@Desktop-Erick:~$ ps x --forest
PID TTY      STAT   TIME COMMAND
  16 pts/0    Ss     0:08 -bash
 1028 pts/0    R+     0:00 \_ ps x --forest
```

```

erick@Desktop-Erick:~$ gcc -o teste teste.o
erick@Desktop-Erick:~$ cp teste teste1
erick@Desktop-Erick:~$ ./teste &
[1] 1642
erick@Desktop-Erick:~$ ./teste1 &
[2] 1643
erick@Desktop-Erick:~$ ps
  PID TTY          TIME CMD
   16 pts/0      00:00:08 bash
  1642 pts/0      00:00:17 teste
  1643 pts/0      00:00:04 teste1
  1644 pts/0      00:00:00 ps
erick@Desktop-Erick:~$ ps -l
 F S  UID      PID  PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
 4 S   1000     16    15   0  80   0 -  3069 do_wai pts/0      00:00:08 bash
 0 R   1000    1642    16  97  80   0 -   659 -      pts/0      00:00:28 teste
 0 R   1000    1643    16  97  80   0 -   659 -      pts/0      00:00:15 teste1
 0 R   1000    1645    16   0  80   0 -  3166 -      pts/0      00:00:00 ps
erick@Desktop-Erick:~$ ps
  PID TTY          TIME CMD
   16 pts/0      00:00:08 bash
  1642 pts/0      00:00:51 teste
  1643 pts/0      00:00:38 teste1
  1646 pts/0      00:00:00 ps
erick@Desktop-Erick:~$ kill -9 1642
erick@Desktop-Erick:~$ kill -9 1643
[1]-  Killed                  ./teste
erick@Desktop-Erick:~$ ps
  PID TTY          TIME CMD
   16 pts/0      00:00:08 bash
  1647 pts/0      00:00:00 ps
[2]+  Killed                  ./teste1

```

Listando todos os usuários do sistema

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ cut -d: -f1 /etc/passwd | head -10
root
daemon
bin
sys
sync
games
man
lp
mail
news

```

Listando Grupos

```
erick@Desktop-Erick:~$ cat /etc/group | head -10
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,erick
tty:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
```

Adicionando Usuários

```
erick@Desktop-Erick:~$ sudo adduser aluno
Adding user `aluno' ...
Adding new group `aluno' (1001) ...
Adding new user `aluno' (1001) with group `aluno' ...
Creating home directory `/home/aluno' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for aluno
Enter the new value, or press ENTER for the default
    Full Name []: Arthur
    Room Number []: 1
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
```

Apagando usuários

```
erick@Desktop-Erick:~$ sudo userdel aluno
erick@Desktop-Erick:~$ userdel -r aluno
userdel: user 'aluno' does not exist
```

Manipulação de Grupos e Usuários

```

erick@Desktop-Erick:~$ sudo usermod -e 2015-11-25 aluno
erick@Desktop-Erick:~$ sudo groupadd professores
erick@Desktop-Erick:~$ sudo groupdel professores
erick@Desktop-Erick:~$ sudo groupadd professores
erick@Desktop-Erick:~$ sudo groupmod -n professores funcionarios
groupmod: group 'funcionarios' does not exist
erick@Desktop-Erick:~$ sudo groupadd funcionarios
erick@Desktop-Erick:~$ sudo groupmod -n professores funcionarios
groupmod: group 'professores' already exists
erick@Desktop-Erick:~$ sudo groupdel professores
erick@Desktop-Erick:~$ sudo groupmod -n professores funcionarios
erick@Desktop-Erick:~$ █

```

Instalando net-tools

```

erick@Desktop-Erick:~$ sudo apt install net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 55 not upgraded.
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 1s (153 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 38921 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning processor microcode...
Scanning linux images...

Failed to retrieve available kernel versions.

Failed to check for processor microcode upgrades.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
erick@Desktop-Erick:~$ █

```

Hostname & arp & ifconfig

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ hostname
Desktop-Erick
erick@Desktop-Erick:~$ cat /etc/hosts
# This file was automatically generated by WSL. To stop automatic generation of this file, add the following entry to /etc/wsl.conf:
# [network]
# generateHosts = false
127.0.0.1      localhost
127.0.1.1      Desktop-Erick.localdomain      Desktop-Erick

10.14.114.128  host.docker.internal
10.14.114.128  gateway.docker.internal
127.0.0.1      kubernetes.docker.internal

# The following lines are desirable for IPv6 capable hosts
::1          ip6-localhost ip6-loopback
fe80::0      ip6-localnet
ff00::0      ip6-mcastprefix
ff02::1      ip6-allnodes
ff02::2      ip6-allrouters
erick@Desktop-Erick:~$ arp -a
Desktop-Erick.mshome.net (172.29.128.1) at 00:15:5d:1c:a3:04 [ether] on eth0
erick@Desktop-Erick:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 172.29.140.146  netmask 255.255.240.0  broadcast 172.29.143.255
    inet6 fe80::215:5dff:fe21:636b  prefixlen 64  scopeid 0x20<link>
    ether 00:15:5d:21:63:6b  txqueuelen 1000  (Ethernet)
    RX packets 66831  bytes 89958038 (89.9 MB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 11026  bytes 832089 (832.0 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 0  bytes 0 (0.0 B)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 0  bytes 0 (0.0 B)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

```

Ping

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ ping 10.1.212.1
PING 10.1.212.1 (10.1.212.1) 56(84) bytes of data.
^C
--- 10.1.212.1 ping statistics ---
34 packets transmitted, 0 received, 100% packet loss, time 34343ms

erick@Desktop-Erick:~$ ping 34.98.65.87
PING 34.98.65.87 (34.98.65.87) 56(84) bytes of data.
64 bytes from 34.98.65.87: icmp_seq=1 ttl=114 time=17.9 ms
64 bytes from 34.98.65.87: icmp_seq=2 ttl=114 time=17.8 ms
64 bytes from 34.98.65.87: icmp_seq=3 ttl=114 time=17.7 ms
64 bytes from 34.98.65.87: icmp_seq=4 ttl=114 time=17.9 ms
64 bytes from 34.98.65.87: icmp_seq=5 ttl=114 time=17.4 ms
64 bytes from 34.98.65.87: icmp_seq=6 ttl=114 time=17.8 ms
64 bytes from 34.98.65.87: icmp_seq=7 ttl=114 time=18.1 ms
64 bytes from 34.98.65.87: icmp_seq=8 ttl=114 time=17.2 ms
64 bytes from 34.98.65.87: icmp_seq=9 ttl=114 time=17.4 ms
64 bytes from 34.98.65.87: icmp_seq=10 ttl=114 time=18.6 ms
64 bytes from 34.98.65.87: icmp_seq=11 ttl=114 time=17.2 ms
64 bytes from 34.98.65.87: icmp_seq=12 ttl=114 time=18.0 ms
64 bytes from 34.98.65.87: icmp_seq=13 ttl=114 time=16.7 ms
64 bytes from 34.98.65.87: icmp_seq=14 ttl=114 time=28.0 ms
64 bytes from 34.98.65.87: icmp_seq=15 ttl=114 time=17.5 ms
64 bytes from 34.98.65.87: icmp_seq=16 ttl=114 time=24.5 ms
64 bytes from 34.98.65.87: icmp_seq=17 ttl=114 time=31.3 ms
^C
--- 34.98.65.87 ping statistics ---
17 packets transmitted, 17 received, 0% packet loss, time 16025ms
rtt min/avg/max/mdev = 16.725/19.454/31.284/4.102 ms

erick@Desktop-Erick:~$ ping www.ufu.br
PING www.ufu.br (200.19.145.55) 56(84) bytes of data.
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=1 ttl=52 time=30.1 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=2 ttl=52 time=31.5 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=3 ttl=52 time=30.1 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=4 ttl=52 time=31.7 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=5 ttl=52 time=32.5 ms
^C
--- www.ufu.br ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4007ms
rtt min/avg/max/mdev = 30.142/31.185/32.462/0.910 ms

erick@Desktop-Erick:~$ ping -c 10 www.ufu.br
PING www.ufu.br (200.19.145.55) 56(84) bytes of data.
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=1 ttl=52 time=29.9 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=2 ttl=52 time=30.7 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=3 ttl=52 time=31.2 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=4 ttl=52 time=32.3 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=5 ttl=52 time=31.5 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=6 ttl=52 time=31.1 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=7 ttl=52 time=31.9 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=8 ttl=52 time=31.3 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=9 ttl=52 time=30.6 ms
64 bytes from bulma.dr.ufu.br (200.19.145.55): icmp_seq=10 ttl=52 time=31.7 ms

--- www.ufu.br ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9015ms
rtt min/avg/max/mdev = 29.932/31.218/32.307/0.665 ms

```

Host

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ host www.google.com
www.google.com has address 172.217.28.4
www.google.com has IPv6 address 2800:3f0:4001:810::2004

```

Dig

```

erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ sudo apt install dnsutils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  dnsutils
0 upgraded, 1 newly installed, 0 to remove and 55 not upgraded.
Need to get 3,924 B of archives.
After this operation, 57.3 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 dnsutils all 1:9.18.1-1ubuntu1.2 [3,924 B]
Fetched 3,924 B in 0s (11.6 kB/s)
Selecting previously unselected package dnsutils.
(Reading database ... 38970 files and directories currently installed.)
Preparing to unpack .../dnsutils_1%3a9.18.1-1ubuntu1.2_all.deb ...
Unpacking dnsutils (1:9.18.1-1ubuntu1.2) ...
Setting up dnsutils (1:9.18.1-1ubuntu1.2) ...
Scanning processes...
Scanning processor microcode...
Scanning linux images...

Failed to retrieve available kernel versions.
Failed to check for processor microcode upgrades.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
erick@Desktop-Erick:~$ dig www.google.com

;<<>> DiG 9.18.1-1ubuntu1.1-Ubuntu <<>> www.google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 52634
;; flags: qr rd ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0
;; WARNING: recursion requested but not available

;; QUESTION SECTION:
;www.google.com.                IN      A

;; ANSWER SECTION:
www.google.com.                0      IN      A      172.217.28.4

;; Query time: 0 msec
;; SERVER: 172.29.128.1#53(172.29.128.1) (UDP)
;; WHEN: Sun Oct 09 12:53:00 -03 2022
;; MSG SIZE rcvd: 62

```

Nslookup

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ nslookup www.google.com  
Server:          172.29.128.1  
Address:         172.29.128.1#53  
  
Non-authoritative answer:  
Name:   www.google.com  
Address: 172.217.28.4  
Name:   www.google.com  
Address: 2800:3f0:4001:810::2004
```

```
erick@Desktop-Erick:~$ sudo apt install traceroute  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following NEW packages will be installed:  
  traceroute  
0 upgraded, 1 newly installed, 0 to remove and 55 not upgraded.  
Need to get 45.4 kB of archives.  
After this operation, 152 kB of additional disk space will be used.  
Get:1 http://archive.ubuntu.com/ubuntu jammy/universe amd64 traceroute amd64 1:2.1.0-2 [45.4 kB]  
Fetched 45.4 kB in 1s (43.7 kB/s)  
Selecting previously unselected package traceroute.  
(Reading database ... 38974 files and directories currently installed.)  
Preparing to unpack .../traceroute_1%3a2.1.0-2_amd64.deb ...  
Unpacking traceroute (1:2.1.0-2) ...  
Setting up traceroute (1:2.1.0-2) ...  
update-alternatives: using /usr/bin/traceroute.db to provide /usr/bin/traceroute (traceroute) in auto mode  
update-alternatives: using /usr/bin/traceroute6.db to provide /usr/bin/traceroute6 (traceroute6) in auto mode  
update-alternatives: using /usr/bin/lft.db to provide /usr/bin/lft (lft) in auto mode  
update-alternatives: using /usr/bin/traceproto.db to provide /usr/bin/traceproto (traceproto) in auto mode  
update-alternatives: using /usr/sbin/tcptraceroute.db to provide /usr/sbin/tcptraceroute (tcptraceroute) in auto mode  
Processing triggers for man-db (2.10.2-1) ...  
Scanning processes...  
Scanning processor microcode...  
Scanning linux images...  
  
Failed to retrieve available kernel versions.  
  
Failed to check for processor microcode upgrades.  
  
No services need to be restarted.  
  
No containers need to be restarted.  
  
No user sessions are running outdated binaries.  
  
No VM guests are running outdated hypervisor (qemu) binaries on this host.
```

Traceroute


```

erick@Desktop-Erick: ~$ traceroute www.google.com
traceroute to www.google.com (172.217.28.4), 30 hops max, 60 byte packets
 1 Desktop-Erick.mshome.net (172.29.128.1) 0.745 ms 0.692 ms 0.659 ms
 2 192.168.12.1 (192.168.12.1) 4.276 ms 4.123 ms 4.217 ms
 3 192.168.100.1 (192.168.100.1) 4.338 ms 4.618 ms 4.588 ms
 4 terra-200-225-254-190.dynamic.idial.com.br (200.225.254.190) 6.352 ms 27.971 ms 27.926 ms
 5 187-032-212-099.static.ctbctelecom.com.br (187.32.212.99) 7.024 ms 6.515 ms 7.601 ms
 6 187-032-212-097.static.ctbctelecom.com.br (187.32.212.97) 28.251 ms 25.974 ms 25.921 ms
 7 100.126.1.226 (100.126.1.226) 18.164 ms 430.266 ms 16.893 ms
 8 100.127.6.98 (100.127.6.98) 430.212 ms 22.298 ms 22.223 ms
 9 et-4-0-0-0.core-a.fac001.algartelem.com.br (168.197.21.97) 18.514 ms 22.152 ms 22.103 ms
10 72.14.197.232 (72.14.197.232) 21.965 ms 142.250.167.64 (142.250.167.64) 22.092 ms 72.14.197.232 (72.14.197.232) 18.125 ms
11 74.125.243.1 (74.125.243.1) 21.794 ms 74.125.243.65 (74.125.243.65) 22.105 ms *
12 216.239.48.123 (216.239.48.123) 21.752 ms 142.251.76.124 (142.251.76.124) 21.542 ms 216.239.50.111 (216.239.50.111) 20.189 ms
13 108.170.245.141 (108.170.245.141) 19.766 ms 216.239.48.123 (216.239.48.123) 19.988 ms eze03s15-in-f4.1e100.net (172.217.28.4) 17.904 ms
erick@Desktop-Erick:~$ traceroute www.ufmg.br
traceroute to www.ufmg.br (150.164.250.1), 30 hops max, 60 byte packets
 1 Desktop-Erick.mshome.net (172.29.128.1) 1.346 ms 1.301 ms 1.281 ms
 2 192.168.12.1 (192.168.12.1) 2.381 ms 5.240 ms 4.236 ms
 3 192.168.100.1 (192.168.100.1) 4.211 ms 4.187 ms 5.767 ms
 4 terra-200-225-254-190.dynamic.idial.com.br (200.225.254.190) 7.448 ms 7.419 ms 7.582 ms
 5 187-032-212-099.static.ctbctelecom.com.br (187.32.212.99) 7.203 ms 8.589 ms 6.549 ms
 6 187-032-212-097.static.ctbctelecom.com.br (187.32.212.97) 8.712 ms 6.172 ms 6.634 ms
 7 100.126.1.226 (100.126.1.226) 18.425 ms 22.515 ms 18.519 ms
 8 100.127.6.98 (100.127.6.98) 19.237 ms 19.202 ms 19.165 ms
 9 et-4-0-0-0.core-a.fac001.algartelem.com.br (168.197.21.97) 21.408 ms 21.365 ms 21.308 ms
10 as1916.sp.ix.equinix.net (64.191.232.2) 21.236 ms 24.851 ms 18.998 ms
11 csp2-mxsp2.bkb.rnp.br (200.143.252.232) 21.077 ms 20.906 ms 20.843 ms
12 170.79.213.152 (170.79.213.152) 22.436 ms 22.375 ms 22.122 ms
13 mxmg-cmg1.bkb.rnp.br (200.143.252.245) 20.320 ms 20.633 ms 20.513 ms
14 lanmg-mg.bkb.rnp.br (200.143.253.162) 20.467 ms 20.146 ms 22.119 ms
15 ptp-tutu-couve.pop-mg.rnp.br (200.131.0.135) 22.383 ms 21.909 ms 21.649 ms
16 ufmg-20g-2.pop-mg.rnp.br (200.19.158.3) 22.271 ms * *
17 * * *
18 * * enlace-cecomgw-dti-164199.rede.ufmg.br (150.164.164.199) 21.500 ms
19 www.ufmg.br (150.164.250.1) 21.318 ms !X 20.737 ms !X 21.242 ms !X
erick@Desktop-Erick:~$ tracepath www.ufmg.br
1?: [LOCALHOST] pmtu 1500
 1: Desktop-Erick.mshome.net 0.322ms
 1: Desktop-Erick.mshome.net 0.422ms
 2: 192.168.12.1 3.176ms
 3: 192.168.12.1 3.325ms pmtu 1490
 3: 192.168.100.1 3.614ms
 4: terra-200-225-254-190.dynamic.idial.com.br 14.999ms
 5: 187-032-212-099.static.ctbctelecom.com.br 5.443ms
 6: 187-032-212-097.static.ctbctelecom.com.br 6.394ms asymm 5
 7: 100.126.1.226 18.725ms asymm 8
 8: 100.127.6.98 17.753ms asymm 7
 9: et-4-0-0-0.core-a.fac001.algartelem.com.br 17.462ms asymm 6
10: as1916.sp.ix.equinix.net 21.225ms asymm 8
11: csp2-mxsp2.bkb.rnp.br 18.194ms asymm 8
12: 170.79.213.152 20.816ms asymm 8
13: mxmg-cmg1.bkb.rnp.br 20.612ms asymm 7
14: lanmg-mg.bkb.rnp.br 20.614ms asymm 8
15: ptp-tutu-couve.pop-mg.rnp.br 21.010ms asymm 9
16: ufmg-20g-2.pop-mg.rnp.br 21.836ms asymm 10
17: enlace-dti-ufmgbr-164113.rede.ufmg.br 22.016ms asymm 11
18: enlace-cecomgw-dti-164199.rede.ufmg.br 21.327ms asymm 12
19: www.ufmg.br 21.834ms !H
Resume: pmtu 1490

```

Netstat

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ netstat -s  
Ip:  
  Forwarding: 1  
  21245 total packets received  
  0 forwarded  
  0 incoming packets discarded  
  18971 incoming packets delivered  
  11362 requests sent out  
Icmp:  
  164 ICMP messages received  
  3 input ICMP message failed  
  ICMP input histogram:  
    destination unreachable: 20  
    timeout in transit: 107  
    echo replies: 37  
  138 ICMP messages sent  
  0 ICMP messages failed  
  ICMP output histogram:  
    destination unreachable: 67  
    echo requests: 71  
IcmpMsg:  
  InType0: 37  
  InType3: 20  
  InType11: 107  
  OutType3: 67  
  OutType8: 71  
Tcp:  
  11 active connection openings  
  0 passive connection openings  
  0 failed connection attempts  
  0 connection resets received  
  0 connections established  
  18296 segments received  
  10960 segments sent out  
  0 segments retransmitted  
  0 bad segments received  
  2 resets sent  
Udp:  
  127 packets received  
  175 packets to unknown port received  
  0 packet receive errors  
  266 packets sent  
  0 receive buffer errors
```

```
erick@Desktop-Erick:~$ netstat -rn  
Kernel IP routing table  
Destination      Gateway          Genmask         Flags   MSS Window  irtt Iface  
0.0.0.0          172.29.128.1    0.0.0.0         UG      0 0        0 eth0  
172.29.128.0     0.0.0.0         255.255.240.0   U       0 0        0 eth0
```

Nmap

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ nmap www.ufmg.br  
Starting Nmap 7.80 ( https://nmap.org ) at 2022-10-09 14:31 -03  
Nmap scan report for www.ufmg.br (150.164.250.1)  
Host is up (0.034s latency).  
Not shown: 991 filtered ports  
PORT      STATE SERVICE  
80/tcp    open  http  
443/tcp    open  https  
40911/tcp  closed unknown  
41511/tcp  closed unknown  
42510/tcp  closed caerpc  
44176/tcp  closed unknown  
44442/tcp  closed coldfusion-auth  
44443/tcp  closed coldfusion-auth  
44501/tcp  closed unknown  
  
Nmap done: 1 IP address (1 host up) scanned in 10.11 seconds  
erick@Desktop-Erick:~$ nmap -v localhost  
Starting Nmap 7.80 ( https://nmap.org ) at 2022-10-09 14:32 -03  
Initiating Ping Scan at 14:32  
Scanning localhost (127.0.0.1) [2 ports]  
Completed Ping Scan at 14:32, 0.00s elapsed (1 total hosts)  
Initiating Connect Scan at 14:32  
Scanning localhost (127.0.0.1) [1000 ports]  
Completed Connect Scan at 14:32, 0.03s elapsed (1000 total ports)  
Nmap scan report for localhost (127.0.0.1)  
Host is up (0.00016s latency).  
All 1000 scanned ports on localhost (127.0.0.1) are closed  
  
Read data files from: /usr/bin/../../share/nmap  
Nmap done: 1 IP address (1 host up) scanned in 0.08 seconds
```

```

erick@Desktop-Erick:~$ nmap www.google.com www.facebook.com
Starting Nmap 7.80 ( https://nmap.org ) at 2022-10-09 14:32 -03
Nmap scan report for www.google.com (172.217.28.4)
Host is up (0.018s latency).
Other addresses for www.google.com (not scanned): 2800:3f0:4001:810::2004
rDNS record for 172.217.28.4: eze03s15-in-f4.1e100.net
Not shown: 998 filtered ports
PORT      STATE SERVICE
80/tcp    open  http
443/tcp   open  https

Nmap scan report for www.facebook.com (31.13.74.35)
Host is up (0.026s latency).
Other addresses for www.facebook.com (not scanned): 2a03:2880:f133:83:face:b00c:0:25de
rDNS record for 31.13.74.35: edge-star-mini-shv-01-gig2.facebook.com
Not shown: 997 filtered ports
PORT      STATE SERVICE
80/tcp    open  http
443/tcp   open  https
5222/tcp  closed xmpp-client

Nmap done: 2 IP addresses (2 hosts up) scanned in 119.74 seconds

```

route

```

erick@Desktop-Erick:~$ route
Kernel IP routing table
Destination    Gateway         Genmask         Flags Metric Ref    Use Iface
default        Desktop-Erick.m 0.0.0.0         UG    0      0      0 eth0
172.29.128.0   0.0.0.0         255.255.240.0   U     0      0      0 eth0

```

Lynx

```
erick@Desktop-Erick: ~  
  
Pesquisa Imagens Maps Play YouTube Notícias Gmail Drive Mais »  
Histórico da Web | Configurações | Fazer login  
  
Google  
  
Pesquisa Google Estou com sorte Pesquisa avançada  
  
Disponibilizado pelo Google em: English  
  
Soluções de publicidade Soluções empresariais Sobre o Google Google.com.br  
  
© 2022 - Privacidade - Termos  
  
www.google.com.br cookie: 1P_JAR=2022-10-09-17 Allow? (Y/N/Always/neVer).  
Arrow keys: Up and Down to move. Right to follow a link; Left to go back.  
H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list
```

Atualizando pacotes

```
erick@Desktop-Erick: ~  
  
erick@Desktop-Erick:~$ apt update  
Reading package lists... Done  
E: Could not open lock file /var/lib/apt/lists/lock - open (13: Permission denied)  
E: Unable to lock directory /var/lib/apt/lists/  
W: Problem unlinking the file /var/cache/apt/pkgcache.bin - RemoveCaches (13: Permission denied)  
W: Problem unlinking the file /var/cache/apt/srcpkgcache.bin - RemoveCaches (13: Permission denied)  
erick@Desktop-Erick:~$ sudo apt update  
E: Invalid operation aptupdate  
erick@Desktop-Erick:~$ sudo apt update  
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]  
Hit:2 http://archive.ubuntu.com/ubuntu jammy InRelease  
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [114 kB]  
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]  
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [612 kB]  
Get:6 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [427 kB]  
Fetched 1,363 kB in 4s (342 kB/s)  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
55 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

Instalando pacotes

```
erick@Desktop-Erick:~$ sudo apt install vim
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
vim is already the newest version (2:8.2.3995-1ubuntu2.1).
0 upgraded, 0 newly installed, 0 to remove and 55 not upgraded.
```

Removendo pacotes

```
erick@Desktop-Erick:~$ sudo apt remove vim
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libpython3.10 libsodium23 vim-runtime
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
  ubuntu-server ubuntu-wsl vim
0 upgraded, 0 newly installed, 3 to remove and 55 not upgraded.
After this operation, 4,120 kB disk space will be freed.
Do you want to continue? [Y/n] y
(Reading database ... 40040 files and directories currently installed.)
Removing ubuntu-server (1.481) ...
Removing ubuntu-wsl (1.481) ...
Removing vim (2:8.2.3995-1ubuntu2.1) ...
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/vi (vi) in auto mode
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/view (view) in auto mode
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/ex (ex) in auto mode
update-alternatives: using /usr/bin/vim.tiny to provide /usr/bin/rview (rview) in auto mode
```

Uname

```
erick@Desktop-Erick: ~
erick@Desktop-Erick:~$ uname -a
Linux Desktop-Erick 5.10.16.3-microsoft-standard-WSL2 #1 SMP Fri Apr 2 22:23:49 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
```

```
erick@Desktop-Erick:~$ uname -s
Linux
erick@Desktop-Erick:~$ uname -n
Desktop-Erick
erick@Desktop-Erick:~$ uname -r
5.10.16.3-microsoft-standard-WSL2
erick@Desktop-Erick:~$ uname -v
#1 SMP Fri Apr 2 22:23:49 UTC 2021
```

Verificando Distribuição

```
erick@Desktop-Erick:~$ head -n1 /etc/issue
Ubuntu 22.04.1 LTS \n \l
```

Lscpu

```
erick@Desktop-Erick:~$ lscpu
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          36 bits physical, 48 bits virtual
Byte Order:             Little Endian
CPU(s):                 4
  On-line CPU(s) list:  0-3
Vendor ID:              GenuineIntel
Model name:             Intel(R) Core(TM) i5-3230M CPU @ 2.60GHz
CPU family:             6
Model:                  58
Thread(s) per core:     2
Core(s) per socket:     2
Socket(s):              1
Stepping:               9
BogoMIPS:               5188.20
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ss ht syscall nx rdtscp lm constan
                        t_tsc rep_good nopl xtopology cpuid pni pclmulqdq ssse3 cx16 pcid sse4_1 sse4_2 popcnt aes xsave avx f16c rdrand hypervisor lahf_lm
                        pti ssbd ibrs ibpb stibp fsgsbase smep erms xsaveopt flush_l1d arch_capabilities

Virtualization features:
Hypervisor vendor:     Microsoft
Virtualization type:   full
Caches (sum of all):
  L1d:                  64 KiB (2 instances)
  L1i:                  64 KiB (2 instances)
  L2:                   512 KiB (2 instances)
  L3:                   3 MiB (1 instance)

Vulnerabilities:
Itlb multihit:          KVM: Mitigation: VMX unsupported
Mitigation: PTE Inversion
L1tf:                   Mitigation; Clear CPU buffers attempted, no microcode; SMT Host state unknown
Mds:                   Vulnerable; Clear CPU buffers attempted, no microcode; SMT Host state unknown
Meltdown:               Mitigation; PTI
Spec store bypass:      Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Spectre v1:             Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Spectre v2:             Mitigation; Full generic retpoline, IBPB conditional, IBRS_FW, STIBP conditional, RSB filling
Srbds:                 Unknown: Dependent on hypervisor status
Tsx async abort:        Not affected
```

Lsblk

```
erick@Desktop-Erick:~$ lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0  7:0    0 358.4M  1 loop /mnt/wsl/docker-desktop/cli-tools
loop1  7:1    0 185.5M  1 loop
sda     8:0    0 256G   0 disk
sdb     8:16   0 256G   0 disk /mnt/wsl/docker-desktop/docker-desktop-user-distro
sdc     8:32   0 256G   0 disk /mnt/wsl/docker-desktop-data/isocache
sdd     8:48   0 256G   0 disk /
```

Verificando partições

```
erick@Desktop-Erick:~$ cat /proc/partitions
major minor  #blocks  name
```

1	0	65536	ram0
1	1	65536	ram1
1	2	65536	ram2
1	3	65536	ram3
1	4	65536	ram4
1	5	65536	ram5
1	6	65536	ram6
1	7	65536	ram7
1	8	65536	ram8
1	9	65536	ram9
1	10	65536	ram10
1	11	65536	ram11
1	12	65536	ram12
1	13	65536	ram13
1	14	65536	ram14
1	15	65536	ram15
7	0	366990	loop0
7	1	189960	loop1
8	0	268435456	sda
8	16	268435456	sdb
8	32	268435456	sdc
8	48	268435456	sdd


```
erick@Desktop-Erick:~$ sudo fdisk -l
Disk /dev/ram0: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram1: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram2: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram3: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram4: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram5: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
```

Informações da Memória

```
erick@Desktop-Erick: ~  
erick@Desktop-Erick:~$ cat /proc/meminfo  
MemTotal:      12995888 kB  
MemFree:       5865540 kB  
MemAvailable:  11925016 kB  
Buffers:       1128112 kB  
Cached:        3512964 kB  
SwapCached:    0 kB  
Active:        2620264 kB  
Inactive:      2605964 kB  
Active(anon):   1328 kB  
Inactive(anon): 585432 kB  
Active(file):   2618936 kB  
Inactive(file): 2020532 kB  
Unevictable:    0 kB  
Mlocked:       0 kB  
SwapTotal:     4194304 kB  
SwapFree:      4194304 kB  
Dirty:         16 kB  
Writeback:     0 kB
```

```
erick@Desktop-Erick:~$ vmstat -s  
12995888 K total memory  
750160 K used memory  
2620264 K active memory  
2605920 K inactive memory  
5864312 K free memory  
1128112 K buffer memory  
5253304 K swap cache  
4194304 K total swap  
0 K used swap  
4194304 K free swap  
173619 non-nice user cpu ticks  
9002 nice user cpu ticks  
825366 system cpu ticks  
19453489 idle cpu ticks  
27720 IO-wait cpu ticks  
0 IRQ cpu ticks  
133238 softirq cpu ticks  
0 stolen cpu ticks  
2898094 pages paged in  
13316176 pages paged out  
0 pages swapped in  
0 pages swapped out  
51025800 interrupts  
181954151 CPU context switches  
1665286839 boot time  
104026 forks
```

```
erick@Desktop-Erick:~$ lsmem
RANGE                                SIZE  STATE  REMOVABLE  BLOCK
0x0000000000000000-0x00000000f7ffffff 3.9G  online        yes    0-30
0x00000000100000000-0x00000000337ffffff 8.9G  online        yes   32-102

Memory block size:      128M
Total online memory:    12.8G
Total offline memory:    0B
```

```
erick@Desktop-Erick: ~
0[ 0.0%] Tasks: 5, 1 thr; 1 running
1[ 0.0%] Load average: 0.00 0.00 0.00
2[ 0.0%] Uptime: 14:19:16
3[ 0.0%]
Mem[|||||] 734M/12.4G
Swp[ ] 0K/4.00G

PID USER      PRI  NI  VIRT   RES   SHR S CPU% MEM%   TIME+  Command
  1 root         20   0   916    540    468 S  0.0  0.0  0:00.00 /init
  6 root         20   0   916    540    468 S  0.0  0.0  0:00.00 /init
 14 root         20   0  1264    372    20 S  0.0  0.0  0:00.00 /init
 15 root         20   0  1264    372    20 S  0.0  0.0  0:02.99 /init
 16 erick        20   0 12276   6600   3852 S  0.0  0.1  0:09.09 -bash
3497 erick        20   0 11184   4804   3540 R  0.0  0.0  0:00.01 htop
```