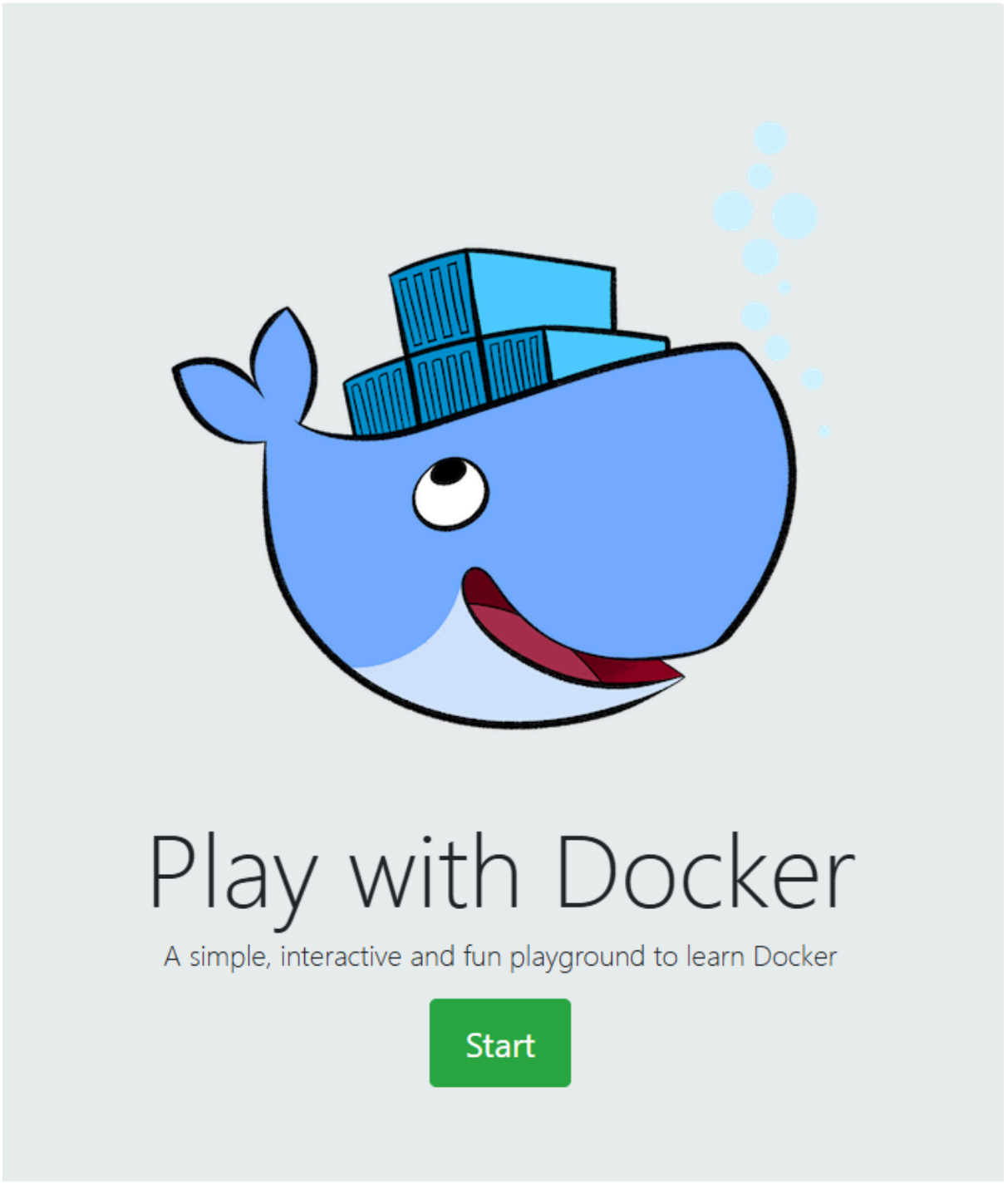
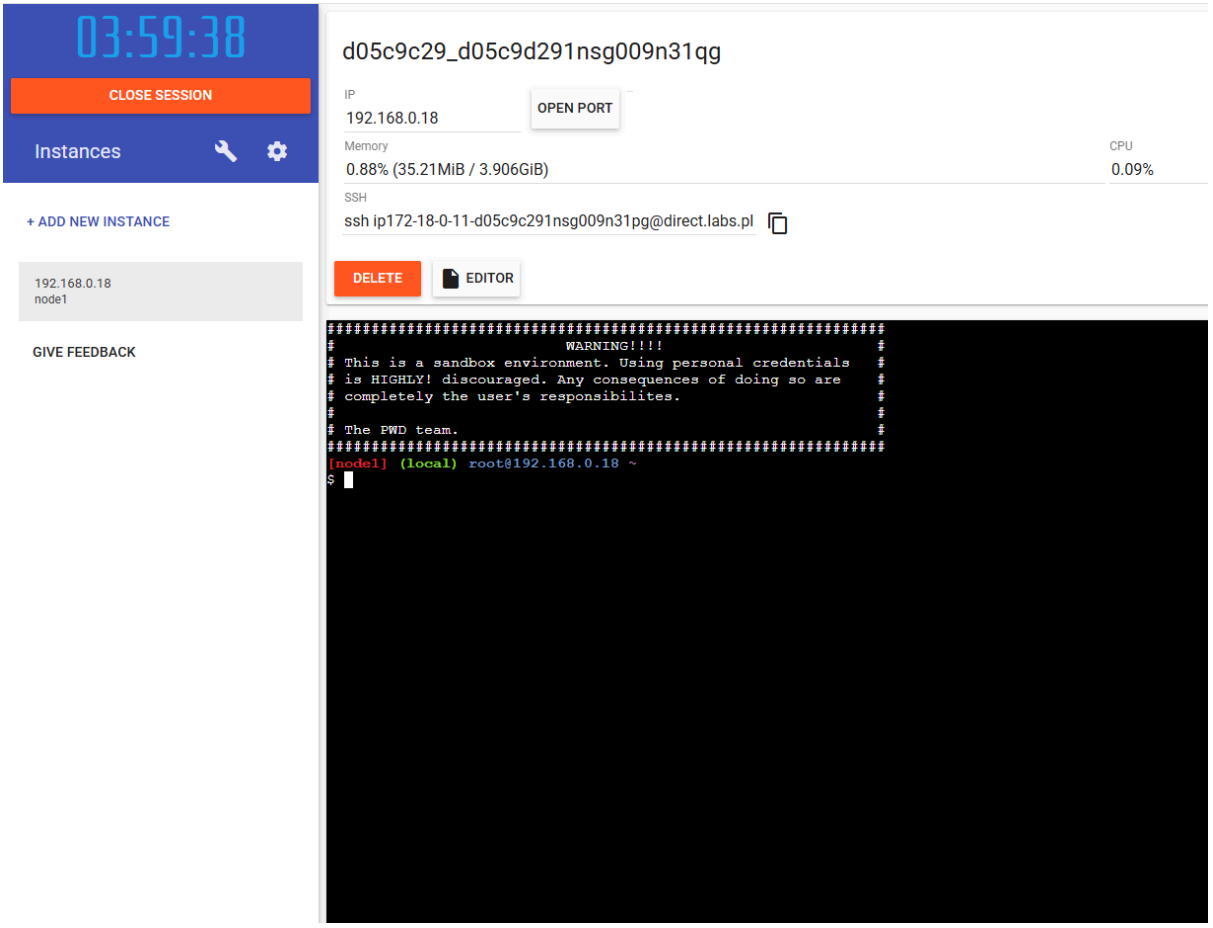
Atividade DOCKER 02

Atividade1-linux ubuntu

1-Login Play with Docker



2-Click(+ add new instance) Abre o docker



3-Rodando HELLO WORLD no docker

docker run hello world

```
$ docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
e6590344b1a5: Pull complete
Digest: sha256:c41088499908a59aae84b0a49c70e86f4731e588a737f1637e73c8c09d995654
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

4- Lista seus containers docker

```
$ docker ps -a
CONTAINER ID   IMAGE         COMMAND    CREATED          STATUS                      PORTS     NAMES
f3f3d0083322   hello-world   "/hello"   51 seconds ago   Exited (0) 50 seconds ago             loving_m
endel
```

5-Executar container Linux Ubuntu

docker run -it ubuntu bash

```
$ docker run -it ubuntu bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
2726e237d1a3: Pull complete
Digest: sha256:1e622c5f073b4f6bfad6632f2616c7f59ef256e96fe78bf6a595d1dc4376ac02
Status: Downloaded newer image for ubuntu:latest
```

6-Execute 20 comandos linux

ls

```
root@8ccb588ee297:/# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
```

mkdir

```
root@8ccb588ee297:/# mkdir luizao
```

ls -l

```
root@8ccb588ee297:/# ls -l
total 0
lrwxrwxrwx    1 root root    7 Apr 22  2024 bin -> usr/bin
drwxr-xr-x    2 root root    6 Apr 22  2024 boot
drwxr-xr-x    5 root root  360 Apr 24 23:12 dev
drwxr-xr-x    1 root root   66 Apr 24 23:12 etc
drwxr-xr-x    3 root root   20 Apr  4 02:09 home
lrwxrwxrwx    1 root root    7 Apr 22  2024 lib -> usr/lib
lrwxrwxrwx    1 root root    9 Apr 22  2024 lib64 -> usr/lib64
drwxr-xr-x    2 root root    6 Apr 24 23:16 luizao
drwxr-xr-x    2 root root    6 Apr  4 02:03 media
drwxr-xr-x    2 root root    6 Apr  4 02:03 mnt
drwxr-xr-x    2 root root    6 Apr  4 02:03 opt
dr-xr-xr-x 1284 root root    0 Apr 24 23:12 proc
drwx------    2 root root   37 Apr  4 02:09 root
drwxr-xr-x    4 root root   33 Apr  4 02:09 run
lrwxrwxrwx    1 root root    8 Apr 22  2024 sbin -> usr/sbin
drwxr-xr-x    2 root root    6 Apr  4 02:03 srv
dr-xr-xr-x   13 root root    0 Apr 23 20:22 sys
drwxrwxrwt    2 root root    6 Apr  4 02:09 tmp
drwxr-xr-x   12 root root  133 Apr  4 02:03 usr
drwxr-xr-x   11 root root  139 Apr  4 02:09 var
```

top

```
top - 23:20:29 up 3 days, 17:56,  0 user,  load average: 5.91, 7.12, 6.30
Tasks:   2 total,   1 running,   1 sleeping,   0 stopped,   0 zombie
%Cpu(s): 14.9 us, 18.5 sy,  0.0 ni, 65.1 id,  0.1 wa,  0.0 hi,  1.3 si,  0.0 st
MiB Mem :  32174.8 total,   1216.2 free,  10895.1 used,  20890.1 buff/cache
MiB Swap:      0.0 total,      0.0 free,      0.0 used.  21279.6 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
    1 root      20   0    4580   3952   3356 S   0.0   0.0   0:00.04 bash
   15 root      20   0    8868   5332   3208 R   0.0   0.0   0:00.01 top
```

date

```
root@8ccb588ee297:/# date
Thu Apr 24 23:21:07 UTC 2025
```

uptime

```
root@8ccb588ee297:/# uptime
 23:21:53 up 3 days, 17:57,  0 user,  load average: 5.06, 6.58, 6.18
```

free

```
root@8ccb588ee297:/# free
               total        used        free      shared  buff/cache   available
Mem:        32946972    11215760     1085588      441300    21500436    21731212
Swap:             0           0           0
```

df

```
root@8ccb588ee297:/# df
Filesystem     1K-blocks      Used Available Use% Mounted on
overlay          4882816     83684   4799132   2% /
tmpfs              65536         0     65536   0% /dev
tmpfs           16473484         0  16473484   0% /sys/fs/cgroup
shm                65536         0     65536   0% /dev/shm
/dev/sdb        67076096  43039372  24036724  65% /etc/hosts
tmpfs           16473484         0  16473484   0% /proc/acpi
tmpfs           16473484         0  16473484   0% /proc/scsi
tmpfs           16473484         0  16473484   0% /sys/firmware
```

arch

```
root@8ccb588ee297:/# arch
x86_64
```

uname -m

```
root@8ccb588ee297:/# uname -m
x86_64
```

uname -a

```
root@8ccb588ee297:/# uname -a
Linux 8ccb588ee297 4.4.0-210-generic #242-Ubuntu SMP Fri Apr 16 09:57:56 UTC 2021 x86_64 x86_64 x86_64
GNU/Linux
```

kill

```
root@8ccb588ee297:/# kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l [sigspec]
```

ps

```
root@8ccb588ee297:/# ps
  PID TTY          TIME CMD
    1 pts/0    00:00:00 bash
   27 pts/0    00:00:00 ps
```

time

```
root@8ccb588ee297:/# time

real    0m0.000s
user    0m0.000s
sys     0m0.000s
```

ls -a

```
root@8ccb588ee297:/# ls -a
.   .dockerenv  boot  etc   lib    luizao  mnt  proc  run   srv  tmp  var
..  bin         dev   home  lib64  media   opt  root  sbin  sys  usr
```

rmdir

```
root@8ccb588ee297:/# rmdir luizao
root@8ccb588ee297:/# ls -l
total 0
lrwxrwxrwx    1 root root    7 Apr 22  2024 bin -> usr/bin
drwxr-xr-x    2 root root    6 Apr 22  2024 boot
drwxr-xr-x    5 root root  360 Apr 24 23:12 dev
drwxr-xr-x    1 root root   66 Apr 24 23:12 etc
drwxr-xr-x    3 root root   20 Apr  4 02:09 home
lrwxrwxrwx    1 root root    7 Apr 22  2024 lib -> usr/lib
lrwxrwxrwx    1 root root    9 Apr 22  2024 lib64 -> usr/lib64
drwxr-xr-x    2 root root    6 Apr  4 02:03 media
drwxr-xr-x    2 root root    6 Apr  4 02:03 mnt
drwxr-xr-x    2 root root    6 Apr  4 02:03 opt
dr-xr-xr-x 1253 root root    0 Apr 24 23:12 proc
drwx------    1 root root   21 Apr 24 23:20 root
drwxr-xr-x    4 root root   33 Apr  4 02:09 run
lrwxrwxrwx    1 root root    8 Apr 22  2024 sbin -> usr/sbin
drwxr-xr-x    2 root root    6 Apr  4 02:03 srv
dr-xr-xr-x   13 root root    0 Apr 23 20:22 sys
drwxrwxrwt    2 root root    6 Apr  4 02:09 tmp
drwxr-xr-x   12 root root  133 Apr  4 02:03 usr
drwxr-xr-x   11 root root  139 Apr  4 02:09 var
```

iconv -l

```
root@8ccb588ee297:/# iconv -l
The following list contains all the coded character sets known.  This does
not necessarily mean that all combinations of these names can be used for
the FROM and TO command line parameters.  One coded character set can be
listed with several different names (aliases).

  437, 500, 500V1, 850, 851, 852, 855, 856, 857, 858, 860, 861, 862, 863, 864,
  865, 866, 866NAV, 869, 874, 904, 1026, 1046, 1047, 8859_1, 8859_2, 8859_3,
  8859_4, 8859_5, 8859_6, 8859_7, 8859_8, 8859_9, 10646-1:1993,
  10646-1:1993/UCS4, ANSI_X3.4-1968, ANSI_X3.4-1986, ANSI_X3.4,
  ANSI_X3.110-1983, ANSI_X3.110, ARABIC, ARABIC7, ARMSCII-8, ARMSCII8, ASCII,
  ASMO-708, ASMO_449, BALTIC, BIG-5, BIG-FIVE, BIG5-HKSCS, BIG5, BIG5HKSCS,
  BIGFIVE, BRF, BS_4730, CA, CN-BIG5, CN-GB, CN, CP-AR, CP-GR, CP-HU, CP037,
  CP038, CP273, CP274, CP275, CP278, CP280, CP281, CP282, CP284, CP285, CP290,
  CP297, CP367, CP420, CP423, CP424, CP437, CP500, CP737, CP770, CP771, CP772,
  CP773, CP774, CP775, CP803, CP813, CP819, CP850, CP851, CP852, CP855, CP856,
  CP857, CP858, CP860, CP861, CP862, CP863, CP864, CP865, CP866, CP866NAV,
  CP868, CP869, CP870, CP871, CP874, CP875, CP880, CP891, CP901, CP902, CP903,
  CP904, CP905, CP912, CP915, CP916, CP918, CP920, CP921, CP922, CP930, CP932,
  CP933, CP935, CP936, CP937, CP939, CP949, CP950, CP1004, CP1008, CP1025,
  CP1026, CP1046, CP1047, CP1070, CP1079, CP1081, CP1084, CP1089, CP1097,
  CP1112, CP1122, CP1123, CP1124, CP1125, CP1129, CP1130, CP1132, CP1133,
  CP1137, CP1140, CP1141, CP1142, CP1143, CP1144, CP1145, CP1146, CP1147,
  CP1148, CP1149, CP1153, CP1154, CP1155, CP1156, CP1157, CP1158, CP1160,
  CP1161, CP1162, CP1163, CP1164, CP1166, CP1167, CP1250, CP1251, CP1252,
  CP1253, CP1254, CP1255, CP1256, CP1257, CP1258, CP1282, CP1361, CP1364,
  CP1371, CP1388, CP1390, CP1399, CP4517, CP4899, CP4909, CP4971, CP5347,
  CP9030, CP9066, CP9448, CP10007, CP12712, CP16804, CPIBM861, CSA7-1, CSA7-2,
  CSASCII, CSA_T500-1983, CSA_T500, CSA_Z243.4-1985-1, CSA_Z243.4-1985-2,
  CSA_Z243.419851, CSA_Z243.419852, CSDECMCS, CSEBCDICATDE, CSEBCDICATDEA,
  CSEBCDICCAFR, CSEBCDICDKNO, CSEBCDICDKNOA, CSEBCDICES, CSEBCDICESA,
```

df -h

```
root@8ccb588ee297:/# df -h
Filesystem      Size  Used Avail Use% Mounted on
overlay         4.7G   82M  4.6G   2% /
tmpfs            64M     0   64M   0% /dev
tmpfs            16G     0   16G   0% /sys/fs/cgroup
shm              64M     0   64M   0% /dev/shm
/dev/sdb         64G   42G   23G  65% /etc/hosts
tmpfs            16G     0   16G   0% /proc/acpi
tmpfs            16G     0   16G   0% /proc/scsi
tmpfs            16G     0   16G   0% /sys/firmware
```

uname -r

```
root@8ccb588ee297:/# uname -r
4.4.0-210-generic
```

- Saindo do container Ubuntu

```
root@8ccb588ee297:/# exit
exit
```

Atividade2-Node.js/Javascript

1-Conteiner interativo com node.js

docker run -it node bash

```
$ docker run -it node bash
Unable to find image 'node:latest' locally
latest: Pulling from library/node
23b7d26ef1d2: Pull complete
07d1b5af933d: Pull complete
1eb98adba0eb: Pull complete
b617a119f8a2: Pull complete
7069a6cd5113: Pull complete
6acb77dc5e52: Pull complete
84d83b2ec25a: Pull complete
90d6f0b6e96e: Pull complete
Digest: sha256:c5bfe90b30e795ec57bcc0040065ca6f284af84a1dafd22a207bd6b48c39ce01
Status: Downloaded newer image for node:latest
```

2-Verificar instalação do node

node –version

```
root@41b24f1c9863:/# node --version
v23.11.0
```

3-Criar um arquivo javascript

echo “console.log(“olá,mundo”);” > hello.js

- Chamar arquivo

  node hello.js

```
root@41b24f1c9863:/# echo 'console.log("ola,mundo");' >hello.js
root@41b24f1c9863:/# node hello.js
ola,mundo
```

Atividade3-

1-Utilizar a imagem ubuntu

docker run -it ubuntu bash

- Sair do container ubuntu

  exit

```
$ docker run -it ubuntu bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
2726e237d1a3: Pull complete
Digest: sha256:1e622c5f073b4f6bfad6632f2616c7f59ef256e96fe78bf6a595d1dc4376ac02
Status: Downloaded newer image for ubuntu:latest
root@c38e3c394460:/# exit
exit
```

2- Anotar ID do container

No meu caso > c38e3e394460

```
$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED         STATUS                      PORTS     NAMES
c38e3c394460   ubuntu    "bash"    3 minutes ago   Exited (127) 44 seconds ago           priceless_ha
wking
```

3-Voltar ao ubuntu bash e criar arquivo.txt

echo 'bem-vindo ao Docker!' > bemvindo.txt

- Verificar se o arquivo foi criado

  ls

- Execute o arquivo

  cat bemvindo.txt

- Sair do container

  exit

```
$ echo 'bem-vindo ao Docker!' > bemvindo.txt
[node1] (local) root@192.168.0.13 ~
$ ls
bemvindo.txt
[node1] (local) root@192.168.0.13 ~
$ cat bemvindo.txt
bem-vindo ao Docker!
```

```
$ exit
logout
##############################################################################
#                              WARNING!!!!                                   #
# This is a sandbox environment. Using personal credentials                  #
# is HIGHLY! discouraged. Any consequences of doing so are                   #
# completely the user's responsibilites.                                     #
#                                                                            #
# The PWD team.                                                              #
##############################################################################
```

4-Listar containers

docker ps -a

```
$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED         STATUS                      PORTS     NAMES
c38e3c394460   ubuntu    "bash"    6 minutes ago   Exited (127) 3 minutes ago            priceless_haw
king
```

5-Ativa o container

docker start (ID Container)

- Se conectar novamente ao container

  docker exec -it c38e3c394460

- Sair novamente

  exit

```
$ docker start c38e3c394460
c38e3c394460
[node1] (local) root@192.168.0.13 ~
$ docker exec -it c38e3c394460 bash
root@c38e3c394460:/# exit
exit
[node1] (local) root@192.168.0.13 ~
$
```

6-lista todos os containers (ativos ou parados)

docker ps -a

- Parar container ativo

  docker stop (ID Container)

- Remover ou excluir imagens ou containers

  docker rm (ID container)

```
$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED          STATUS              PORTS     NAMES
c38e3c394460   ubuntu    "bash"    16 minutes ago   Up About a minute             priceless_hawking
[node1] (local) root@192.168.0.13 ~
$ docker stop c38e3c394460
docker rm c38e3c394460
c38e3c394460
[node1] (local) root@192.168.0.13 ~
$ docker rm c38e3c394460
c38e3c394460
[node1] (local) root@192.168.0.13 ~
$
```