Atividade Gerenciamento de Processos

```
ubuntu@ip-172-31-28-92:~$ sudo adduser rita_03231044
Adding user \rita_03231044' ...
Adding new group 'rita_03231044' (1002) ...
Adding new user 'rita_03231044' (1002) with group 'rita_0
3231044' ...
Creating home directory \home/rita_03231044' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for rita_03231044
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] y
```

Conectando à máquina virtual sudo adduser -> Criando novo usuário y -> Confirmando as informações

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ su root
Password:
root@ip-172-31-28-92:/home/ubuntu# sudo usermod -aG sudo
rita_03231044
root@ip-172-31-28-92:/home/ubuntu# |
```

Adicionando o usuário ao grupo de sudors

```
root@ip-172-31-28-92:/home/ubuntu# sudo apt update && sud o apt upgrade -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jamm y InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jamm y-updates InRelease [119 kB]
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jamm y-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security In Release [110 kB]
```

Instalando atualizações

```
root@ip-172-31-28-92:/home/ubuntu# su rita_03231044
To run a command as administrator (user "root"), use "sud o <command>".
See "man sudo_root" for details.

rita_03231044@ip-172-31-28-92:/home/ubuntu$
```

Mudando de usuário, de root para rita_03231044

I	top - 22:	50:38 up :	18 min,	1 user,	load	average:	0.04,
ı	Tasks: 17	2 total,	1 runni	ng, 171	sleepi	.ng, 0	stopped
	%Cpu(s):		6.2 sy,	0.0 ni,	93.8	id, 0.0	wa, 0
l	MiB Mem :	949.7	total,	104.2	free,	434.5	used,
ı	MiB Swap:	0.0	total,	0.0	free,	0.0	used.

Utilizando comando top

П	PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU
	2322	rita_03+	20	0	10548	4224	3456	R	6.2
	1	root	20	0	166668	12032	8320	S	0.0
	2	root	20	0	0	0	0	S	0.0
	3	root	0	-20	0	0	0	Ι	0.0
	4	root	0	-20	0	0	0	Ι	0.0
	5	root	0	-20	0	0	0	Ι	0.0
	6	root	0	-20	0	0	0	Ι	0.0
	8	root	0	-20	0	0	0	Ι	0.0
	10	root	0	-20	0	0	0	Ι	0.0
	11	root	20	0	0	0	0	Ι	0.0

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ sudo vi
[sudo] password for rita_03231044:
```

```
[1]+ Stopped sudo vi
rita_03231044@ip-172-31-28-92:/home/ubuntu$
```

Abrindo o editor de texto vim como administrador e suspendendo o processo com ctrl Z

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ top
top - 22:55:06 up 22 min, 2 users,
                                     load average: 0.00,
Tasks: 167 total, 1 running, 164 sleeping,
                                                2 stopped
%Cpu(s): 0.0 us, 0.3 sy, 0.0 ni, 99.7 id,
                                               0.0 wa,
             949.7 total,
                             104.0 free,
                                             425.7 used,
               0.0 total,
                                               0.0 used.
MiB Swap:
                               0.0 free,
    PID USER
                  PR NI
                            VIRT
                                     RES
                                            SHR S
                                                   %CPU
                                           8320 S
                  20
                       0
                          166668
                                   12032
                                                    0.0
      1 root
                       0
                                       0
                                              0 S
                                                    0.0
      2 root
                  20
                               0
      3 root
                   0 -20
                               0
                                       0
                                              0 I
                                                    0.0
                               0
      4 root
                   0 -20
                                       0
                                              0 I
                                                    0.0
```

```
VIM - Vi IMproved

version 8.2.1847
by Bram Moolenaar et al.
Modified by team+vim@tracker.debian.org
Vim is open source and freely distributable

Help poor children in Uganda!
type :help iccf<Enter> for information

type :q<Enter> to exit
type :help<Enter> or <F1> for on-line help
type :help version8<Enter> for version info
```

Comando top sendo usaod novamente para mostrar o gerenciamento das tarefas que é feito pelo terminal. 1 processo está rodando 164 estão parados

e 2 estão suspensos

Tentando editar o Ni inicialmente sem o sudo, onde o acesso foi negado e depois como sudo

4 users, top - 23:01:15 up 29 min, load average: 0.00, Tasks: 174 total, 1 running, 166 sleeping, 7 stopped 0.0 us, 0.3 sy, 0.0 ni, 99.7 id, %Cpu(s): 0.0 wa, 0 949.7 total, 104.0 free, 415.1 used, MiB Mem : 0.0 total, 0.0 free, 0.0 used. MiB Swap:

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU
2344	rita_03+	20	0	10648	4224	3456	R	0.3
1	root	20	0	166668	12032	8320	S	0.0
2	root	20	0	Θ	0	0	S	0.0
3	root	0	-20	Θ	0	0	Ι	0.0
4	root	0	-20	Θ	0	0	Ι	0.0
5	root	0	-20	0	0	0	Ι	0.0
6	root	0	-20	0	0	0	Ι	0.0
8	root	0	-20	Θ	0	0	Ι	0.0
10	root	0	-20	0	0	0	Ι	0.0
11	root	20	0	Θ	0	0	Ι	0.0
12	root	20	0	0	0	0	Ι	0.0
13	root	20	0	Θ	0	0	S	0.0
14	root	20	0	0	0	0	Ι	0.0
15	root	rt	0	0	0	0	S	0.0
16	root	-51	0	0	0	0	S	0.0
18	root	20	0	0	0	0	S	0.0
19	root	20	0	0	0	0	S	0.0
20	root	0	-20	0	0	0	Ι	0.0

Comndo top apresentando quantos processos estão parados e rodando + a mudança do NI para -20 e PR para 20

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ vi
[6]+ Stopped vi
```

Abrindo novamente o editor e cancelando ele

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ jobs
[1]
      Stopped
                               sudo vi
[2]
      Stopped
                               nice -n -20 vi
[3]
      Stopped
                               sudo nice -n -20 vi
[4]
      Stopped
                               sudo nice -n 20 vi
[5]-
      Stopped
                               top
[6]+
      Stopped
                               νi
rita_03231044@ip-172-31-28-92:/home/ubuntu$ jobs -l
      2327 Stopped
[2]
      2336 Stopped
                                    nice -n -20 vi
[3]
      2338 Stopped
                                     sudo nice -n -20 vi
[4]
      2341 Stopped
                                    sudo nice -n 20 vi
[5]-
      2344 Stopped (signal)
                                    top
[6]+ 2348 Stopped
                                     νi
rita_03231044@ip-172-31-28-92:/home/ubuntu$ jobs -s
[1]
      Stopped
                               sudo vi
[2]
      Stopped
                               nice -n -20 vi
[3]
      Stopped
                               sudo nice -n -20 vi
[4]
      Stopped
                               sudo nice -n 20 vi
      Stopped
[5]-
                               top
[6]+
      Stopped
                               νi
rita_03231044@ip-172-31-28-92:/home/ubuntu$ jobs -p
2327
2336
2338
2341
2344
2348
rita_03231044@ip-172-31-28-92:/home/ubuntu$
```

jobs utilizado para listar esses processos jobs -> apresenta o histórico jobs -l -> apresenta o nome + o numero jobs -s -> exibe o nome de cada processo jobs -p -> exibe o numero de cada processo

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ ps
    PID TTY
                    TIME CMD
   1304 pts/0
                00:00:00 bash
   1322 pts/0 00:00:00 bash
   2314 pts/0
                00:00:00 bash
   2336 pts/0
                00:00:00 vi
   2344 pts/0
                00:00:00 top
   2348 pts/0
                00:00:00 vi
   2632 pts/0
                00:00:00 ps
```

comando ps para exibir informações sobre os processos que estão ativos

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ ps -a
   PID TTY
                     TIME CMD
   759 tty1
                 00:00:01 Xorg
    773 tty1
                 00:00:00 dbus-run-sessio
    774 tty1
                00:00:00 dbus-daemon
    775 tty1
                00:00:00 gnome-session-b
   778 tty1
                 00:00:00 at-spi-bus-laun
   783 tty1
                 00:00:00 dbus-daemon
   795 tty1
                 00:00:02 gnome-shell
   807 tty1
                 00:00:00 xdg-permission-
   825 tty1
                 00:00:00 at-spi2-registr
   834 ttv1
                 00:00:00 gsd-color
   836 tty1
                 00:00:00 gsd-print-notif
   838 tty1
                 00:00:00 gsd-a11y-settin
                 00:00:00 gsd-power
   841 tty1
   842 tty1
                 00:00:00 gsd-media-keys
                 00:00:00 gsd-rfkill
   848 tty1
                 00:00:00 ibus-daemon
   849 tty1
                 00:00:00 gsd-keyboard
   850 tty1
   851 tty1
                 00:00:00 gsd-wacom
   854 tty1
                 00:00:00 gsd-housekeepin
    857 tty1
                00:00:00 gsd-sound
```

comando ps -a para exibir informações sobre os processos que estão ativos de outros usuários

```
-92:/home/ubuntu$ ps
USER
             PID %CPU %MEM
                                VSZ
                                                     STAT START
                                      RSS TTY
                                                                   TIME COMMAND
rita_03+
            1304
                   0.0
                        0.4
                               8724
                                     4480
                                          pts/0
                                                     S
                                                          22:38
                                                                   0:00
                                                                        bash
rita_03+
                        0.4
                               8724
                                     4480
                                                     S
                                                          22:42
            1322
                   0.0
                                           pts/0
                                                                   0:00 bash
rita_03+
            2314
                   0.0
                        0.5
                               8724
                                     5504 pts/0
                                                     S
                                                          22:49
                                                                   0:00 bash
rita_03+
            2336
                   0.0
                        1.0
                              20932 10240 pts/0
                                                          22:57
                                                                   0:00 vi
                                     4224 pts/0
            2344
                   0.0
                        0.4
                              10648
                                                     Т
                                                          23:00
rita_03+
                                                                   0:00 top
rita_03+
             2348
                   0.0
                        1.0
                              20932
                                    10496 pts/0
                                                          23:02
                                                                   0:00 vi
                              10112
                                     3456 pts/0
                                                    R+
            2640
rita_03+
                   0.0
                        0.3
                                                          23:19
                                                                   0:00 ps -u
```

comando ps -u para exibir informações sobre o nome do usuário e a data de início

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ ps -x
    PID TTY
                 STAT
                         TIME COMMAND
   1304 pts/0
                  S
                         0:00 bash
                 S
   1322 pts/0
                         0:00
                              bash
   2314 pts/0
                 S
                         0:00 bash
   2336 pts/0
                 Т
                         0:00 vi
                         0:00 top
   2344 pts/0
                 Τ
   2348 pts/0
                 Т
                         0:00 vi
   2641 pts/0
                 R+
                         0:00 ps -x
```

comando ps -x para exibir informações sobre os processos não associados ao terminal

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ ps -l
      UID
               PID
                       PPID
                             C
                               PRI
                                    NI ADDR SZ WCHAN
                                                                      TIME
                                                                            CMD
  S
                                                        pts/0
                                                                  00:00:00
4
     1002
                      1303
                                           2181 do_wai
              1304
                             0
                                80
                                      0
                                                                            bash
     1002
              1322
                       1321
                             0
                                80
                                      0
                                           2181 do_wai pts/0
                                                                  00:00:00 bash
4
  S
     1002
                             0
              2314
                       2313
                                80
                                      0 -
                                           2181 do_wai pts/0
                                                                  00:00:00 bash
                                           5233 do_sig pts/0
0
     1002
              2336
                       2314
                             0
                                80
                                      0
                                                                  00:00:00 vi
                                                                  00:00:00 top
0
     1002
              2344
                       2314
                             0
                                80
                                      0 -
                                           2662 do_sig pts/0
  Т
     1002
              2348
                       2314
                             0
                                80
                                      0
                                           5233 do_sig pts/0
                                                                  00:00:00 vi
0
  R
     1002
              2642
                       2314
                             0
                                80
                                      0
                                           2528
                                                                  00:00:00 ps
                                                        pts/0
```

comando ps -l para exibir informações mais detalhadas sobre os processos

```
rita_03231044@ip-172-31-28-92:/home/ubuntu$ ps -e
                      TIME CMD
   PID TTY
      1 ?
                 00:00:05
                          systemd
      2 ?
                 00:00:00 kthreadd
      3
       ?
                 00:00:00 rcu_gp
      4
       ?
                 00:00:00 rcu_par_gp
      5
       ?
                 00:00:00 slub_flushwq
      6
       ?
                 00:00:00 netns
        ?
                 00:00:00 kworker/0:0H-events_highpri
      8
        ?
     10
                 00:00:00 mm_percpu_wq
        ?
     11
                 00:00:00 rcu_tasks_rude_kthread
     12
        ?
                 00:00:00 rcu_tasks_trace_kthread
                 00:00:00 ksoftirqd/0
        ?
     13
     14 ?
                 00:00:00 rcu_sched
```

comando ps -e para exibir todos os processos ativos

```
2340 pts/2
              00:00:00 vi
2341 pts/0
              00:00:00 sudo
              00:00:00 sudo
2342 pts/3
2343 pts/3
              00:00:00
                       νi
2344 pts/0
              00:00:00 top
2348 pts/0
              00:00:00 vi
2352 ?
              00:00:00 kworker/u30:1-events_power_effi
              00:00:00 kworker/u30:0-events_unbound
2637 ?
2643 pts/0
              00:00:00 ps
```

```
USER
                                                     RSS
                                                                         STAT
                                                                                START
                                 1.2 166668 12032
0.0 0 0
                                                                                22:32
22:32
22:32
                                                                                                    /lib/systemd/systemd --system --deserialize 39
[kthreadd]
                          0.1
0.0
                                                                                            0:05
                                                                                            0:00
root
                                                                                            0:00
                                                                                                    [rcu_gp]
root
                                                                                22:32
22:32
22:32
22:32
22:32
                         0.0
0.0
                                 0.0
0.0
                                                                                            0:00
0:00
                                                                                                    [rcu_par_gp]
[slub_flushwq]
root
                                               0
                                                         0
                                                                         I<
root
                          0.0
0.0
                                                                                            0:00
0:00
                                                                                                    [netns]
[kworker/0:0H-events_highpri]
                                  0.0
                                               0
                                                         0
0
                                                                         Ι<
                                                                                             0:00 [mm_percpu_wq]
```

```
0:00 sudo nice -n 20
               2342
                      0.0
                                  11608
                                           2448 pts/3
                                                                   22:59
                                                                             0:00 sudo nice -n 20 vi
root
                            0.2
root
                                   20932
                                          10496 pts/3
                                                                   22:59
                                                                             0:00 vi
                           0.4
1.0
0.0
                                                                   23:00
23:02
rita_03+
               2344
                      0.0
                                   10648
                                           4224 pts/0
                                                                             0:00 top
                                  20932 10496 pts/0
                      0.0
0.0
               2348
                                                                             0:00
rita 03+
                                                                             0:00 [kworker/u30:1-events_unbound]
0:00 [kworker/u30:0-events_unbound]
               2352
                                                                   23:06
root
               2637
                            0.0
0.3
                                                                   23:17
23:23
                                                             R+
                      0.0
                                  10112
                                           3456 pts/0
rita_03+
               2646
                                                                             0:00 ps aux
```

comando ps aux para exibir uma visão geral de todos os processos

```
2) Na tela abaixo o que significa Ss e TN na coluna STAT, explique
■ root@DESKTOP-00I5LD3: ~
                                                                        X
              00:00:00 ps
 127 tty1
root@DESKTOP-00I5LD3:~# ps -aux
          PID %CPU %MEM
USER
                           VSZ
                                 RSS TTY
                                             STAT START
                                                          TIME COMMAND
root
            1 0.0
                   0.0
                          8324
                                 152 ?
                                                   14:38
                                                          0:00 /init
                                 152 tty1
                   0.0
                          8328
                                                  14:38
root
            3 0.0
                                                          0:00 /init
                                3740 tty1
urubu100
            4 0.0
                   0.0
                        15220
                                                  14:38
                                                          0:00 -bash
urubu100
           44 0.0
                   0.0
                         15160 3700 tty1
                                                  14:53
                                                          0:00 bash
urubu100
           76 0.0
                   0.0
                        24688 6148 tty1
                                                  15:20
                                                          0:00 vi
urubu100
           77
              0.0
                   0.0
                        24452
                                5652 tty1
                                                  15:21
                                                          0:00 vi
root
           81 0.0
                   0.0
                        14232
                                1844 tty1
                                                  15:22
                                                          0:00 su root
           82 0.0
                   0.0
root
                        13808 2272 tty1
                                                  15:22
                                                          0:00 bash
           92 0.0
                   0.0
                        24528 5760 tty1
root
                                                  15:22
                                                          0:00 vi
           96 0.0
                   0.0
                        24512
                                5708 tty1
root
                                                  15:27
                                                          0:00 vi
          117 0.0
                   0.0
                        24356
                                5656 tty1
                                                  16:29
root
                                                          0:00 vi
          119 0.0 0.0
                        15888 1932 tty1
                                                  16:30
root
                                                          0:00 top
          120 0.0 0.0 24512
                                5744 tty1
                                                 16:36
                                                          0:00 vi
root
                                1976 tty1
root
          121 0.1 0.0 15912
                                                  16:36
                                                          0:01 top
                                                  17:00
          128 0.0 0.0 15664 1860 tty1
root
                                                          0:00 ps -aux
root@DESKTOP-00I5LD3:~# _
```

vA coluna STAT é responsável pelo status do processo, então, Ss siginifica que o processo é uma sessão lider ou processo pai e TN que t é um processo que foi parado/interrompido e n um processo de baixa prioridade

```
3) O que significa ADDR SZ e WCHAN na tela abaixo, explique
Selecionar root@DESKTOP-00I5LD3: ~
                                                                             For more details see ps(1).
root@DESKTOP-0015LD3:~# ps -1
            PID PPID C PRI
                               NI ADDR SZ
                                           WCHAN TTY
                                                                TIME CMD
        0
                   1 0 80
                               0 -
                                     2082
                                                - tty1
                                                           00:00:00 init
        0
             81
                   44 0
                                     3558
                           80
                                                           00:00:00 su
                                                - tty1
        0
             82
                   81
                           80
                                     3452
                                                           00:00:00 bash
                                                  tty1
        0
             92
                   82
                       0
                           80
                                0
                                     6132
                                                            00:00:00
                                                                     vi
                                                  tty1
        0
             96
                    82
                       0
                           80
                                0
                                     6128
                                                  tty1
                                                            00:00:00
        0
                   82
                       0 100
            117
                               20
                                     6089
                                                           00:00:00
                                                                     vi
                                                           00:00:00 top
        0
            119
                   82
                       0
                          80
                                0
                                     3972
                                                  tty1
            120
                       0
                           61 4294967277 -
        0
                    82
                                            6128 - tty1
                                                           00:00:00 vi
        0
            121
                    82
                       0 80
                                0 -
                                     3978
                                                - tty1
                                                            00:00:01 top
            126
        0
                        0 80
                                0 -
 R
                    82
                                      3844
                                                tty1
                                                           00:00:00 ps
root@DESKTOP-00I5LD3:~#
```

ADDR SZ é o endereço de memória do processo e WCHAN é o endereço de memória do evento que o processo ta aguardando, quando nessa coluna há um - significa que o processo está em execução por isso não há endereço fixo para mostrar