

83..PlanAuditoria_II_BIS.

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En este trabajo nos dedicaremos a explorar las herramientas de auditoría que tenemos disponibles en un entorno linux.

Primero empezaremos con la herramienta por defecto TOP y avanzaremos a herramientas que no se encuentran en las “core-utils”.

Este trabajo puede ser realizado en cualquier máquina que tengamos a mano con el SO Linux instalado.

En mi caso utilizaré una máquina Ubuntu 20.04

1.TOP

Esta es la herramienta por defecto que no s

Para ejecutar este comando ejecutamos **top** en la línea de comandos.

```
top - 20:36:39 up 2:11, 1 user, load average: 0.00, 0.00, 0.00
Tasks: 176 total, 1 ejecutar, 175 hibernar, 0 detener, 0 zombie
Cpu(s):  0.0 usuario,  6.7 sist,  0.0 adecuado, 93.3 inact,  0.0 en espera,  0.0 hardw int,  0.0 softw int,  0.0 robar tiempo
MiB Mem : 1964.1 total,  425.9 libre,  707.0 usado,  831.6 búfer/cache
MiB Intercambio: 1162.4 total,  1162.4 libre,  0.0 usado,  1089.1 dspon Mem

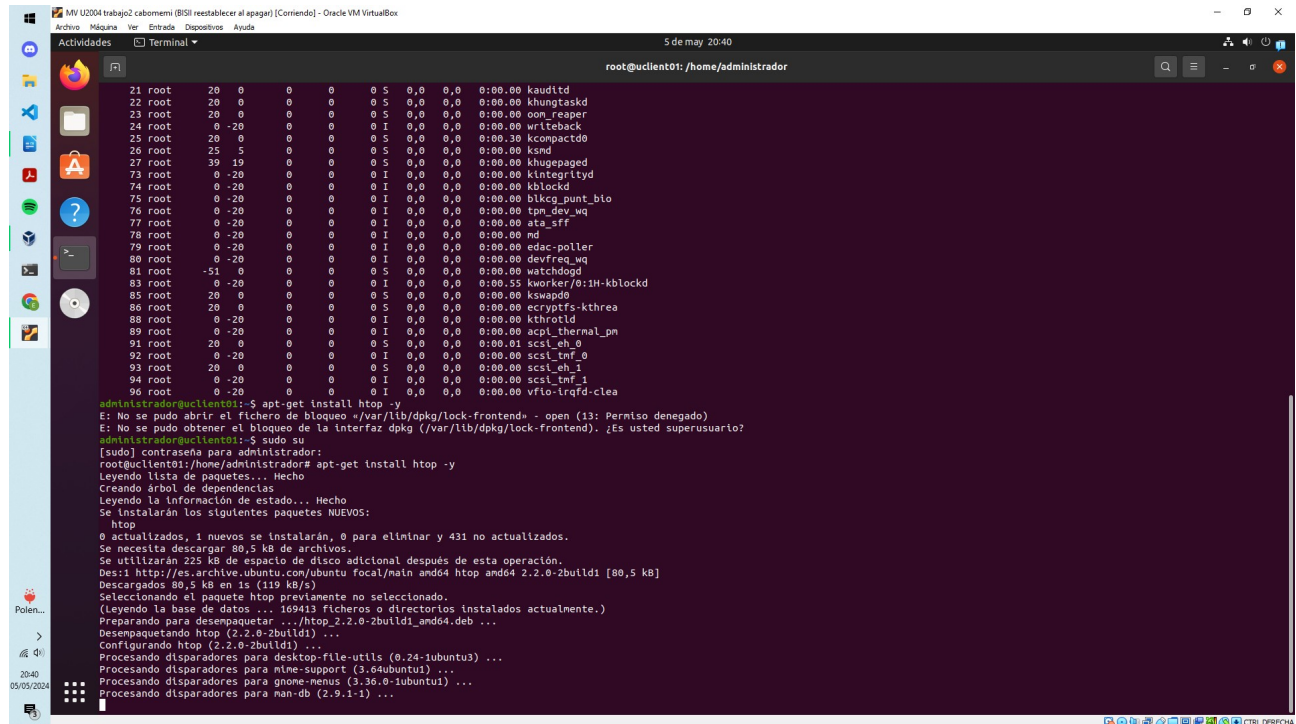
  PID  USUARIO  PR  NI  VIRT  RES  SHR  S  %CPU  %MEM  HORA+  ORDEN
1 root    20    0 167528 11424 8316 S  0.0  0.6  0:00.78 systemd
2 root    20    0      0      0  0 S  0.0  0.0  0:00.00 kthreadd
3 root    0 -20    0      0  0 I  0.0  0.0  0:00.00 rcu_gp
4 root    0 -20    0      0  0 I  0.0  0.0  0:00.00 rcu_par_gp
5 root    0 -20    0      0  0 I  0.0  0.0  0:00.00 slub_flushwq
6 root    0 -20    0      0  0 I  0.0  0.0  0:00.00 netns
8 root    0 -20    0      0  0 I  0.0  0.0  0:00.00 kworker/0:0H-events_highpri
10 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 mm_percpu_wq
11 root   20    0      0      0  0 S  0.0  0.0  0:00.00 rcu_tasks_rude
12 root   20    0      0      0  0 S  0.0  0.0  0:00.00 rcu_tasks_trace
13 root   20    0      0      0  0 S  0.0  0.0  0:00.00 ksoftirqd/0
14 root   20    0      0      0  0 I  0.0  0.0  0:00.22 rcu_sched
15 root   rt    0      0      0  0 S  0.0  0.0  0:00.10 migration/0
16 root  -51    0      0      0  0 S  0.0  0.0  0:00.00 idle_inject/0
18 root   20    0      0      0  0 S  0.0  0.0  0:00.00 cpuhp/0
19 root   20    0      0      0  0 S  0.0  0.0  0:00.00 kdevtmpfs
20 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 inet_frag_wq
21 root   20    0      0      0  0 S  0.0  0.0  0:00.00 kauditd
22 root   20    0      0      0  0 S  0.0  0.0  0:00.00 khungtaskd
23 root   20    0      0      0  0 S  0.0  0.0  0:00.00 oom_reaper
24 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 writeback
25 root   20    0      0      0  0 S  0.0  0.0  0:00.30 kcompactd0
26 root   25    5      0      0  0 S  0.0  0.0  0:00.00 ksm
27 root   39  19    0      0  0 S  0.0  0.0  0:00.00 khugepaged
73 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 kintegrityd
74 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 kblockd
75 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 blkcg_punt_blo
76 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 tpm_dev_wq
77 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 ata_sff
78 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 md
79 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 edac-poller
80 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 devfreq_wq
81 root  -51    0      0      0  0 S  0.0  0.0  0:00.00 watchdogd
83 root   0 -20    0      0  0 I  0.0  0.0  0:00.54 kworker/0:1H-kblockd
85 root   20    0      0      0  0 S  0.0  0.0  0:00.00 kswapd0
86 root   0 -20    0      0  0 S  0.0  0.0  0:00.00 ecryptfs-kthrea
88 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 kthrotld
89 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 acpi_thermal_pm
91 root   20    0      0      0  0 S  0.0  0.0  0:00.01 scsi_eh_0
92 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 scsi_tmf_0
93 root   20    0      0      0  0 S  0.0  0.0  0:00.00 scsi_eh_1
94 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 scsi_tmf_1
96 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 vfiio-irqfd-clea
98 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 mld
99 root   0 -20    0      0  0 I  0.0  0.0  0:00.00 lpv6_addrconf
```

Nos muestra información del sistema acerca del id de cada proceso y de la capacidad de memoria almacenamiento y del uso de memoria.

1.HTOP

Esta es una herramienta dinámica de monitorización del sistema.

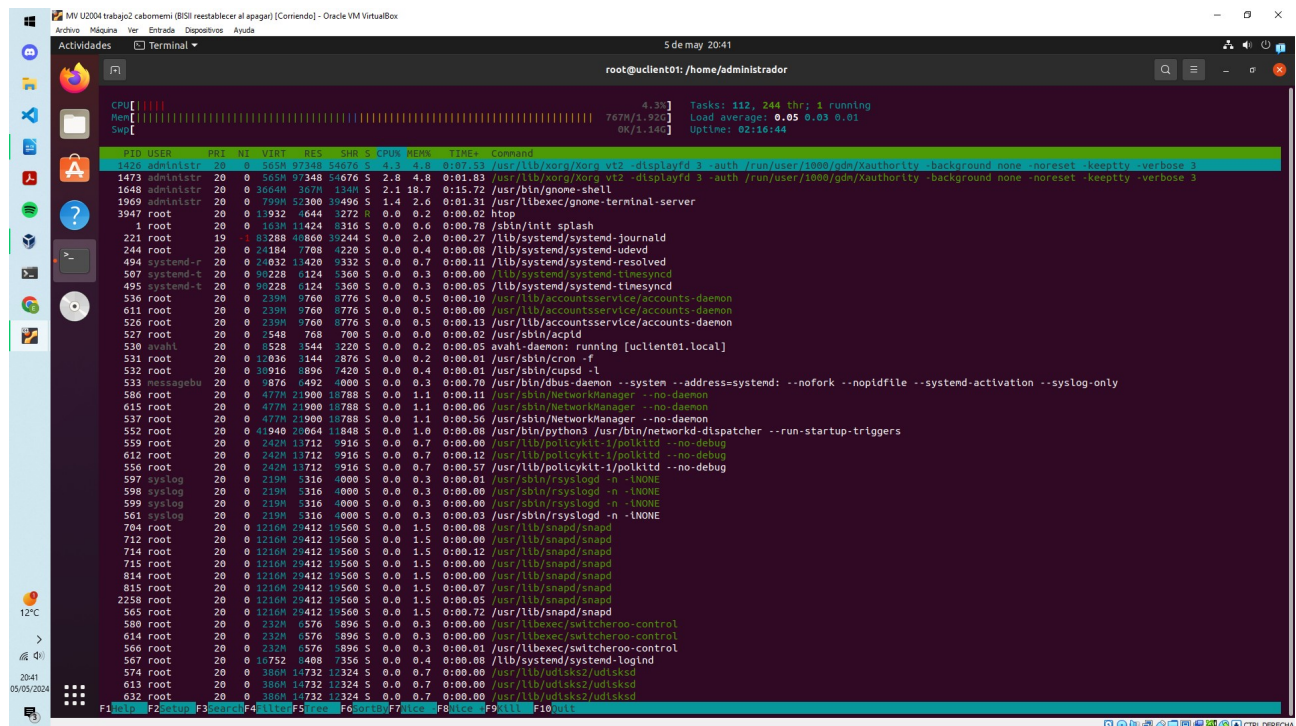
La instalamos mediante el comando. `sudo apt-get install htop -y`



```
root@uc1ent01: /home/administrador
21 root      20  0  0  0  0  0  0  0:00.00 kauditd
22 root      20  0  0  0  0  0  0  0:00.00 khungtaskd
23 root      20  0  0  0  0  0  0  0:00.00 oom_reaper
24 root      20  0  0  0  0  0  0  0:00.00 writeback
25 root      20  0  0  0  0  0  0  0:00.30 kcompactd
26 root      25  5  0  0  0  0  0  0:00.00 ksm
27 root      39  19  0  0  0  0  0  0:00.00 khugepaged
73 root      0  -20  0  0  0  0  0  0:00.00 kintegrityd
74 root      0  -20  0  0  0  0  0  0:00.00 kblockd
75 root      0  -20  0  0  0  0  0  0:00.00 blkcg_punt_blo
76 root      0  -20  0  0  0  0  0  0:00.00 tpm_dev_wq
77 root      0  -20  0  0  0  0  0  0:00.00 ata_sff
78 root      0  -20  0  0  0  0  0  0:00.00 md
79 root      0  -20  0  0  0  0  0  0:00.00 edac-poller
80 root      0  -20  0  0  0  0  0  0:00.00 devfreq_wq
81 root      -51  0  0  0  0  0  0  0:00.00 watchdogd
83 root      0  -20  0  0  0  0  0  0:00.55 kworker/0:1H-kblockd
85 root      20  0  0  0  0  0  0  0:00.00 kswapd
86 root      20  0  0  0  0  0  0  0:00.00 ecryptfs-kthrea
88 root      0  -20  0  0  0  0  0  0:00.00 kthrotld
89 root      0  -20  0  0  0  0  0  0:00.00 acpi_thermal_pm
91 root      20  0  0  0  0  0  0  0:00.01 scsi_eh_0
92 root      0  -20  0  0  0  0  0  0:00.00 scsi_tmf_0
93 root      20  0  0  0  0  0  0  0:00.00 scsi_eh_1
94 root      0  -20  0  0  0  0  0  0:00.00 scsi_tmf_1
96 root      0  -20  0  0  0  0  0  0:00.00 vfiio-trigd-clea

administrador@uc1ent01:~$ apt-get install htop -y
E: No se pudo abrir el fichero de bloqueo «/var/lib/dpkg/lock-frontends» - open (13: Permiso denegado)
E: No se pudo obtener el bloqueo de la interfaz dpkg («/var/lib/dpkg/lock-frontends»). ¿Es usted superusuario?
administrador@uc1ent01:~$ sudo su
[sudo] contraseña para administrador:
root@uc1ent01: /home/administrador# apt-get install htop -y
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias
Leyendo la información de estado... Hecho
Se instalarán los siguientes paquetes NUEVOS:
 htop
0 actualizados, 1 nuevos se instalarán, 0 para eliminar y 431 no actualizados.
Se necesita descargar 80,5 kB de archivos.
Se utilizarán 225 kB de espacio de disco adicional después de esta operación.
Des1: http://es.archive.ubuntu.com/ubuntu focal/main amd64 htop amd64 2.2.0-2build1 [80,5 kB]
Descargados 80,5 kB en 1s (119 kB/s)
Seleccionando el paquete htop previamente no seleccionado.
(Leyendo la base de datos ... 169413 ficheros o directorios instalados actualmente.)
Preparando para desempaquetar .../htop.2.2.0-2build1_amd64.deb ...
Desempaquetando htop (2.2.0-2build1) ...
Configurando htop (2.2.0-2build1) ...
Procesando disparadores para desktop-file-utils (0.24-1ubuntu3) ...
Procesando disparadores para mime-support (3.6.0-1ubuntu1) ...
Procesando disparadores para gnome-menus (3.36.0-1ubuntu1) ...
Procesando disparadores para nan-db (2.9.1-1) ...
```

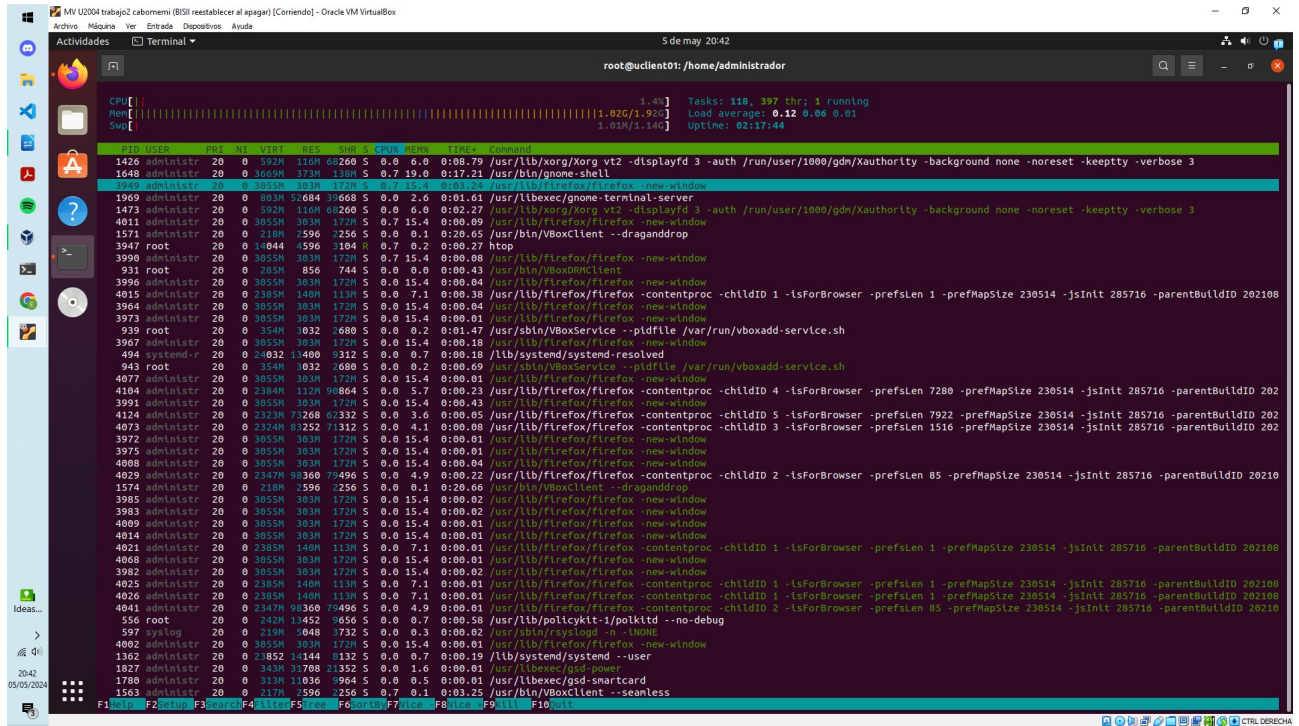
Es una herramienta mucho mas gráfica de diagnóstico del sistema interactiva en tiempo real muy usada.



```
root@uc1ent01: /home/administrador
CPU: 4.3% Tasks: 112, 244 thr: 1 running
Mem: 767M/1.92G Load average: 0.05 0.03 0.01
Swap: 0K/1.14G Uptime: 02:16:44

PID USER      PRI  NI  VIRT   RES   SHR  S  CPU% MEM%   TIME+  Command
1426 administr 20   0 565M 97348 54676 S  4.3 4.8  0:07.53 /usr/lib/xorg/xorg vt3 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1473 administr 20   0 565M 97348 54676 S  2.8 4.8  0:01.83 /usr/lib/xorg/xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1640 administr 20  3664M 3678 1348 S  2.1 10.7 0:15.72 /usr/bin/gnome-shell
1909 administr 20   0 799M 52300 30496 S  1.4 2.6  0:01.31 /usr/lib/ibxec/gnome-terminal-server
3947 root       20   0 13932 4644 3272 R  0.0 0.2  0:00.02 htop
1 root       20   0 163M 11424 3316 S  0.0 0.0  0:00.78 /sbin/init splash
221 root      19   0 8328M 46860 31244 S  0.0 2.0  0:00.27 /lib/systemd/systemd-journald
244 root      20  24184 7788 1220 S  0.0 0.4  0:00.88 /lib/systemd/systemd-udev
494 systemd-r 20  24032 13420 3332 S  0.0 0.7  0:00.11 /lib/systemd/systemd-resolved
507 systemd-t 20  90228 6124 3360 S  0.0 0.3  0:00.00 /lib/systemd/systemd-timesyncd
495 systemd-t 20  90228 6124 3360 S  0.0 0.3  0:00.05 /lib/systemd/systemd-timesyncd
536 root      20  239M 9760 8776 S  0.0 0.5  0:00.10 /usr/lib/AccountsService/accounts-daemon
611 root      20  239M 9760 8776 S  0.0 0.5  0:00.00 /usr/lib/AccountsService/accounts-daemon
526 root      20  239M 9760 8776 S  0.0 0.5  0:00.13 /usr/lib/AccountsService/accounts-daemon
527 root      20  254M 768 760 S  0.0 0.0  0:00.02 /usr/sbin/acpid
538 avahi      20   0 8528 3544 1220 S  0.0 0.2  0:00.05 avahi-daemon: running [uc1ent01.local]
531 root      20  12036 3144 876 S  0.0 0.2  0:00.01 /usr/sbin/cron -f
532 root      20  38916 8896 7420 S  0.0 0.4  0:00.01 /usr/sbin/cupsd -l
533 messagebu 20   0 9676 6492 860 S  0.0 0.3  0:00.70 /usr/bin/dbus-daemon -system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
580 root      20  477M 21900 18788 S  0.0 1.1  0:00.11 /usr/sbin/NetworkManager --no-daemon
615 root      20  477M 21900 18788 S  0.0 1.1  0:00.06 /usr/sbin/NetworkManager --no-daemon
537 root      20  477M 21900 18788 S  0.0 1.1  0:00.56 /usr/sbin/NetworkManager --no-daemon
552 root      20  41940 28004 1848 S  0.0 1.0  0:00.08 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
559 root      20  242M 13712 8916 S  0.0 0.7  0:00.00 /usr/lib/policykit-1/polkitd --no-debug
612 root      20  242M 13712 8916 S  0.0 0.7  0:00.12 /usr/lib/policykit-1/polkitd --no-debug
556 root      20  242M 13712 8916 S  0.0 0.7  0:00.57 /usr/lib/policykit-1/polkitd --no-debug
597 syslogd   20  219M 5316 4000 S  0.0 0.3  0:00.01 /usr/sbin/rsyslogd -n -lNONE
598 syslogd   20  219M 5316 4000 S  0.0 0.3  0:00.00 /usr/sbin/rsyslogd -n -lNONE
599 syslogd   20  219M 5316 4000 S  0.0 0.3  0:00.00 /usr/sbin/rsyslogd -n -lNONE
561 syslogd   20  219M 5316 4000 S  0.0 0.3  0:00.03 /usr/sbin/rsyslogd -n -lNONE
704 root      20  1216M 29412 19560 S  0.0 1.5  0:00.08 /usr/lib/NetworkManager/NetworkManager
712 root      20  1216M 29412 19560 S  0.0 1.5  0:00.00 /usr/lib/NetworkManager/NetworkManager
714 root      20  1216M 29412 19560 S  0.0 1.5  0:00.12 /usr/lib/NetworkManager/NetworkManager
715 root      20  1216M 29412 19560 S  0.0 1.5  0:00.00 /usr/lib/NetworkManager/NetworkManager
814 root      20  1216M 29412 19560 S  0.0 1.5  0:00.00 /usr/lib/NetworkManager/NetworkManager
815 root      20  1216M 29412 19560 S  0.0 1.5  0:00.07 /usr/lib/NetworkManager/NetworkManager
2258 root      20  1216M 29412 19560 S  0.0 1.5  0:00.05 /usr/lib/NetworkManager/NetworkManager
565 root      20  1216M 29412 19560 S  0.0 1.5  0:00.72 /usr/lib/NetworkManager/NetworkManager
566 root      20  232M 6576 8896 S  0.0 0.3  0:00.00 /usr/lib/NetworkManager/NetworkManager
614 root      20  232M 6576 8896 S  0.0 0.3  0:00.00 /usr/lib/NetworkManager/NetworkManager
567 root      20  232M 6576 8896 S  0.0 0.3  0:00.01 /usr/lib/NetworkManager/NetworkManager
574 root      20  10752 8408 7356 S  0.0 0.4  0:00.08 /lib/systemd/systemd-logind
574 root      20  386M 14732 1324 S  0.0 0.7  0:00.00 /usr/lib/udisks2/udisksd
614 root      20  386M 14732 1324 S  0.0 0.7  0:00.00 /usr/lib/udisks2/udisksd
632 root      20  386M 14732 1324 S  0.0 0.7  0:00.00 /usr/lib/udisks2/udisksd
```

Si abrimos firefox lo vemos

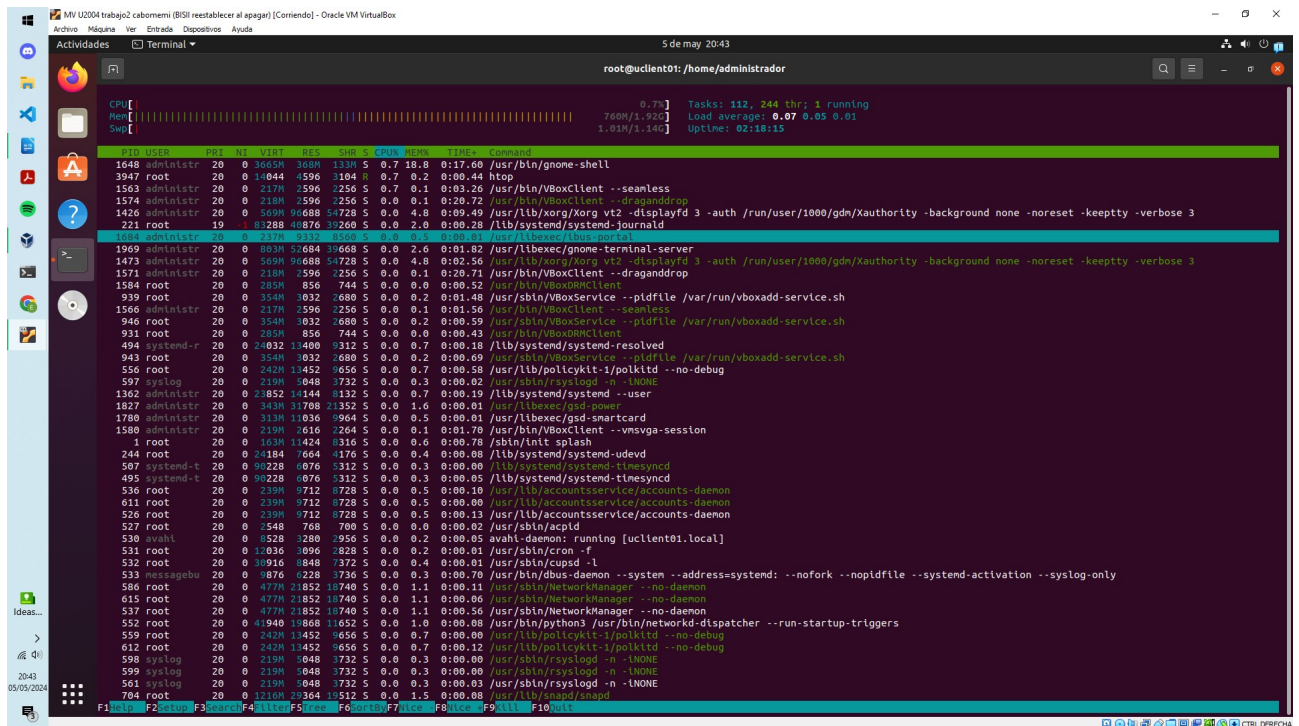


```
root@uc1ent01: /home/administrador

CPU: 1.4% Tasks: 118, 397 thr: 1 running
Mem: 11.82G/1.92G Load average: 0.12 0.06 0.01
Swap: 1.01M/1.14G Uptime: 02:17:44

PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
1426 administrr 20 0 5928 1168 61268 S 0.0 0.7 0:00.79 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1648 administrr 20 0 3609 373M 139M S 0.7 19.0 0:17.21 /usr/bin/gnome-shell
3949 administrr 20 0 3055M 303M 172M S 0.7 15.4 0:03.24 /usr/lib/firefox/firefox -new-window
1969 administrr 20 0 803M 52684 3668 S 0.0 2.6 0:01.01 /usr/libexec/gnome-terminal-server
1473 administrr 20 0 5928 1168 61268 S 0.0 0.7 0:00.22 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
4011 administrr 20 0 3055M 303M 172M S 0.7 15.4 0:00.09 /usr/lib/firefox/firefox -new-window
1571 administrr 20 0 218M 2596 1256 S 0.0 0.1 0:20.05 /usr/bin/VBoxClient --draganddrop
3947 root 20 0 14044 4596 1104 R 0.7 0.2 0:00.27 http
3999 administrr 20 0 3055M 303M 172M S 0.7 15.4 0:00.00 /usr/lib/firefox/firefox -new-window
931 root 20 0 285M 856 744 S 0.0 0.0 0:00.43 /usr/bin/VBoxDRMClient -new-window
3996 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.04 /usr/lib/firefox/firefox -new-window
4615 administrr 20 0 2385M 140M 113M S 0.0 7.1 0:00.38 /usr/lib/firefox/firefox -contentproc -childID 1 -IsForBrowser -prefsLen 1 -prefMapSize 230514 -jsInit 285716 -parentBuildID 262108
3964 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.04 /usr/lib/firefox/firefox -new-window
3973 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
939 root 20 0 354M 3032 1680 S 0.0 0.2 0:01.47 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
3967 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.18 /usr/lib/firefox/firefox -new-window
494 systemd-r 20 0 24032 13400 8312 S 0.0 0.7 0:00.18 /lib/systemd/systemd-resolved
943 root 20 0 354M 3032 1680 S 0.0 0.2 0:00.49 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
4077 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
4104 administrr 20 0 2384M 112M 9864 S 0.0 5.7 0:00.23 /usr/lib/firefox/firefox -contentproc -childID 4 -IsForBrowser -prefsLen 7280 -prefMapSize 230514 -jsInit 285716 -parentBuildID 202
3991 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.43 /usr/lib/firefox/firefox -new-window
4124 administrr 20 0 2323M 73268 6332 S 0.0 3.0 0:00.05 /usr/lib/firefox/firefox -contentproc -childID 5 -IsForBrowser -prefsLen 7922 -prefMapSize 230514 -jsInit 285716 -parentBuildID 202
4073 administrr 20 0 2324M 83252 71312 S 0.0 4.1 0:00.08 /usr/lib/firefox/firefox -contentproc -childID 3 -IsForBrowser -prefsLen 1516 -prefMapSize 230514 -jsInit 285716 -parentBuildID 202
3972 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
3975 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
4088 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.02 /usr/lib/firefox/firefox -new-window
4029 administrr 20 0 2347M 98360 79496 S 0.0 4.9 0:00.22 /usr/lib/firefox/firefox -contentproc -childID 2 -IsForBrowser -prefsLen 85 -prefMapSize 230514 -jsInit 285716 -parentBuildID 20210
1574 administrr 20 0 218M 2596 1256 S 0.0 0.1 0:20.06 /usr/bin/VBoxClient --draganddrop
3963 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.02 /usr/lib/firefox/firefox -new-window
3983 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.02 /usr/lib/firefox/firefox -new-window
4009 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
4014 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
4061 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -contentproc -childID 1 -IsForBrowser -prefsLen 1 -prefMapSize 230514 -jsInit 285716 -parentBuildID 262108
4048 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -contentproc -childID 2 -IsForBrowser -prefsLen 1 -prefMapSize 230514 -jsInit 285716 -parentBuildID 262108
3982 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.02 /usr/lib/firefox/firefox -new-window
4025 administrr 20 0 2385M 140M 113M S 0.0 7.1 0:00.01 /usr/lib/firefox/firefox -contentproc -childID 1 -IsForBrowser -prefsLen 1 -prefMapSize 230514 -jsInit 285716 -parentBuildID 262108
4026 administrr 20 0 2385M 140M 113M S 0.0 7.1 0:00.01 /usr/lib/firefox/firefox -contentproc -childID 1 -IsForBrowser -prefsLen 1 -prefMapSize 230514 -jsInit 285716 -parentBuildID 262108
4041 administrr 20 0 2347M 98360 79496 S 0.0 4.9 0:00.02 /usr/lib/firefox/firefox -contentproc -childID 2 -IsForBrowser -prefsLen 1 -prefMapSize 230514 -jsInit 285716 -parentBuildID 262108
556 root 20 0 242M 13452 6656 S 0.0 0.7 0:00.58 /usr/lib/policykit-1/polkitd --no-debug
597 syslog 20 0 219M 5048 3732 S 0.0 0.3 0:00.02 /usr/sbin/rsyslogd -n -lNONE
4002 administrr 20 0 3055M 303M 172M S 0.0 15.4 0:00.01 /usr/lib/firefox/firefox -new-window
1362 administrr 20 0 23852 14144 8132 S 0.0 0.7 0:00.19 /lib/systemd/systemd --user
1827 administrr 20 0 343M 31708 21352 S 0.0 1.6 0:00.01 /usr/libexec/gsd-power
1780 administrr 20 0 313M 11036 964 S 0.0 0.5 0:00.01 /usr/libexec/gsd-smartcard
1503 administrr 20 0 217M 2596 1256 S 0.7 0.1 0:03.25 /usr/bin/VBoxClient --seamless
```

Lo matamos mediante f9



```
root@uc1ent01: /home/administrador

CPU: 0.7% Tasks: 112, 244 thr: 1 running
Mem: 760M/1.92G Load average: 0.07 0.05 0.01
Swap: 1.01M/1.14G Uptime: 02:18:15

PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
1648 administrr 20 0 3609 368M 139M S 0.7 18.8 0:17.60 /usr/bin/gnome-shell
3947 root 20 0 217M 2596 1256 S 0.7 0.1 0:03.26 /usr/bin/VBoxClient --seamless
1574 administrr 20 0 218M 2596 1256 S 0.0 0.1 0:20.72 /usr/bin/VBoxClient --draganddrop
1426 administrr 20 0 509M 96688 5728 S 0.0 4.8 0:09.49 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
221 root 10 0 3288 46876 3260 S 0.0 2.0 0:00.28 /lib/systemd/systemd-journald
1684 administrr 20 0 257M 9113 1503 S 0.0 1.5 0:02.01 /usr/libexec/gsd-smartcard
1969 administrr 20 0 803M 52684 3668 S 0.0 2.6 0:01.82 /usr/libexec/gnome-terminal-server
1473 administrr 20 0 509M 96688 5728 S 0.0 4.8 0:02.56 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1571 administrr 20 0 218M 2596 1256 S 0.0 0.1 0:20.71 /usr/bin/VBoxClient --draganddrop
1584 root 20 0 285M 856 744 S 0.0 0.0 0:00.52 /usr/bin/VBoxDRMClient
939 root 20 0 354M 3032 1680 S 0.0 0.2 0:01.48 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
1566 administrr 20 0 217M 2596 1256 S 0.0 0.1 0:01.56 /usr/bin/VBoxClient --seamless
946 root 20 0 354M 3032 1680 S 0.0 0.2 0:00.29 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
931 root 20 0 285M 856 744 S 0.0 0.0 0:00.43 /usr/bin/VBoxDRMClient
494 systemd-r 20 0 24032 13400 8312 S 0.0 0.7 0:00.18 /lib/systemd/systemd-resolved
943 root 20 0 354M 3032 1680 S 0.0 0.2 0:00.49 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
597 syslog 20 0 219M 5048 3732 S 0.0 0.3 0:00.02 /usr/sbin/rsyslogd -n -lNONE
1362 administrr 20 0 23852 14144 8132 S 0.0 0.7 0:00.19 /lib/systemd/systemd --user
1827 administrr 20 0 343M 31708 21352 S 0.0 1.6 0:00.01 /usr/libexec/gsd-power
1780 administrr 20 0 313M 11036 964 S 0.0 0.5 0:00.01 /usr/libexec/gsd-smartcard
1580 administrr 20 0 219M 2616 1264 S 0.0 0.1 0:01.70 /usr/bin/VBoxClient --vmsvga-session
1 root 20 0 163M 11424 8316 S 0.0 0.6 0:00.78 /sbin/init splash
244 root 20 0 24184 7664 4176 S 0.0 0.4 0:00.08 /lib/systemd/systemd-udev
507 systemd-t 20 0 90228 6076 3312 S 0.0 0.3 0:00.00 /lib/systemd/systemd-lsncnd
495 systemd-t 20 0 90228 6076 3312 S 0.0 0.3 0:00.05 /lib/systemd/systemd-timesyncd
536 root 20 0 239M 9712 8728 S 0.0 0.5 0:00.10 /usr/lib/accountsservice/accounts-daemon
611 root 20 0 239M 9712 8728 S 0.0 0.5 0:00.00 /usr/lib/accountsservice/accounts-daemon
526 root 20 0 239M 9712 8728 S 0.0 0.5 0:00.13 /usr/lib/accountsservice/accounts-daemon
527 root 20 0 2548 768 700 S 0.0 0.0 0:00.02 /usr/sbin/acpid
530 avahi 20 0 8528 3280 956 S 0.0 0.2 0:00.05 avahi-daemon: running [uc1ent01.local]
531 root 20 0 12036 3096 1828 S 0.0 0.2 0:00.01 /usr/sbin/cron -f
532 root 20 0 30916 8848 3372 S 0.0 0.4 0:00.01 /usr/sbin/cupsd -l
533 messagebu 20 0 9876 6228 1736 S 0.0 0.3 0:00.70 /usr/bin/dbus-daemon -system --address=systemd: --no-fork --nolpifile --systemd-activation --syslog-only
586 root 20 0 477M 21852 18740 S 0.0 1.1 0:00.11 /usr/sbin/NetworkManager --no-daemon
615 root 20 0 477M 21852 18740 S 0.0 1.1 0:00.06 /usr/sbin/NetworkManager --no-daemon
537 root 20 0 477M 21852 18740 S 0.0 1.1 0:00.56 /usr/sbin/NetworkManager --no-daemon
552 root 20 0 41940 19868 11652 S 0.0 1.0 0:00.08 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
559 root 20 0 242M 13452 6656 S 0.0 0.7 0:00.00 /usr/lib/policykit-1/polkitd --no-debug
612 root 20 0 242M 13452 6656 S 0.0 0.7 0:00.12 /usr/lib/policykit-1/polkitd --no-debug
598 syslog 20 0 219M 5048 3732 S 0.0 0.3 0:00.00 /usr/sbin/rsyslogd -n -lNONE
599 syslog 20 0 219M 5048 3732 S 0.0 0.3 0:00.00 /usr/sbin/rsyslogd -n -lNONE
561 syslog 20 0 219M 5048 3732 S 0.0 0.3 0:00.03 /usr/sbin/rsyslogd -n -lNONE
704 root 20 0 1210M 25364 1512 S 0.0 1.5 0:00.08 /usr/lib/napd/napd
```

El niceness es una escala para darle prioridad.

Si damos a sort by niceness

```
0.7% Tasks: 112, 244 thr: 1 running
Mem[ 760M/1.92G] Load average: 0.27 0.09 0.02
Swp[ 1.01M/1.34G] Uptime: 02:18:38

  PID USER      PRI  NI  VIRT   RES   SHR  S  CPU% MEM%   TIME+  Command
 1426 administ 20    0 569M 96688 54728 S  0.0 4.8 0:09.97 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noret -keeppty -verbose
 1473 administ 20    0 569M 96688 54728 S  0.0 4.8 0:02.77 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noret -keeppty -verbose
 1969 administ 20    0 803M 52684 39668 S  0.0 2.6 0:01.97 /usr/libexec/gnome-terminal-server
 1648 administ 20    0 3665M 368M 133M S  0.0 18.8 0:17.81 /usr/bin/gnome-shell
 3947 root      20    0 1044 596 104 S  0.0 0.2 0:00.53 htop
 1571 administ 20    0 218M 2596 2256 S  0.0 0.1 0:20.77 /usr/bin/VBoxClient --draganddrop
 927 root      20    0 285M 856 744 S  0.0 0.0 0:01.72 /usr/bin/VBoxDRMClient
 1574 administ 20    0 218M 2596 2256 S  0.0 0.1 0:20.76 /usr/bin/VBoxClient --draganddrop
 1565 administ 20    0 217M 2596 2256 S  0.0 0.1 0:01.70 /usr/bin/VBoxClient --seamless
 1583 administ 20    0 219M 2616 2264 S  0.0 0.1 0:00.80 /usr/bin/VBoxClient --vmsvga-session
 1580 administ 20    0 219M 2616 2264 S  0.0 0.1 0:01.71 /usr/bin/VBoxClient --vmsvga-session
 1582 administ 20    0 219M 2616 2264 S  0.0 0.1 0:00.91 /usr/bin/VBoxClient --vmsvga-session
 1563 administ 20    0 217M 2596 2256 S  0.0 0.1 0:03.26 /usr/bin/VBoxClient --seamless
 1566 administ 20    0 217M 2596 2256 S  0.0 0.1 0:01.50 /usr/bin/VBoxClient --seamless
 1684 administ 20    0 237M 9332 8560 S  0.0 0.5 0:00.01 /usr/libexec/ibus-portal
 1584 root      20    0 285M 856 744 S  0.0 0.0 0:00.52 /usr/bin/VBoxDRMClient
 939 root      20    0 354M 3032 2680 S  0.0 0.2 0:01.48 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
 1566 administ 20    0 217M 2596 2256 S  0.0 0.1 0:01.50 /usr/bin/VBoxClient --seamless
 946 root      20    0 354M 3032 2680 S  0.0 0.2 0:00.59 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
 931 root      20    0 285M 856 744 S  0.0 0.0 0:00.43 /usr/bin/VBoxDRMClient
 494 systemd-r 20    0 24032 13400 9312 S  0.0 0.7 0:00.18 /lib/systemd/systemd-resolved
 943 root      20    0 354M 3032 2680 S  0.0 0.2 0:00.69 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
 556 root      20    0 242M 13452 9656 S  0.0 0.7 0:00.58 /usr/lib/policykit-1/polkitd --no-debug
 597 syslog    20    0 219M 5048 3732 S  0.0 0.3 0:00.02 /usr/sbin/rsyslogd -n -iNONE
 1362 administ 20    0 23852 14144 8132 S  0.0 0.7 0:00.19 /lib/systemd/systemd --user
 1827 administ 20    0 343M 31708 13352 S  0.0 1.0 0:00.01 /usr/libexec/gsd-power
 1780 administ 20    0 313M 11036 9964 S  0.0 0.5 0:00.01 /usr/libexec/gsd-smartcard
 1 root        20    0 163M 11424 8316 S  0.0 0.6 0:00.78 /sbin/init splash
 244 root      20    0 24184 7664 4176 S  0.0 0.4 0:00.08 /lib/systemd/systemd-udev
 507 systemd-t 20    0 90228 6076 3312 S  0.0 0.3 0:00.05 /lib/systemd/systemd-timesyncd
 495 systemd-t 20    0 90228 6076 3312 S  0.0 0.3 0:00.05 /lib/systemd/systemd-timesyncd
 536 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.10 /usr/lib/accounts-service/accounts-daemon
 611 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.00 /usr/lib/accounts-service/accounts-daemon
 527 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.13 /usr/lib/accounts-service/accounts-daemon
 526 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.02 /usr/sbin/acpid
 530 avahi      20    0 8528 3280 2956 S  0.0 0.2 0:00.05 avahi-daemon: running [uclnt01.local]
 531 root      20    0 12036 3096 2828 S  0.0 0.2 0:00.01 /usr/sbin/cron -f
 532 root      20    0 30916 8848 372 S  0.0 0.4 0:00.01 /usr/sbin/cupsd -l
 586 root      20    0 477M 21852 18740 S  0.0 1.1 0:00.11 /usr/sbin/NetworkManager --no-daemon
 615 root      20    0 477M 21852 18740 S  0.0 1.1 0:00.06 /usr/sbin/NetworkManager --no-daemon
 537 root      20    0 477M 21852 18740 S  0.0 1.1 0:00.56 /usr/sbin/NetworkManager --no-daemon
 552 root      20    0 41940 19868 11652 S  0.0 1.0 0:00.08 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
 559 root      20    0 242M 13452 9656 S  0.0 0.7 0:00.00 /usr/lib/policykit-1/polkitd --no-debug
 612 root      20    0 242M 13452 9656 S  0.0 0.7 0:00.12 /usr/lib/policykit-1/polkitd --no-debug
```

Ordenamos los procesos según prioridad.

```
2.0% Tasks: 112, 244 thr: 1 running
Mem[ 760M/1.92G] Load average: 0.14 0.08 0.02
Swp[ 1.01M/1.34G] Uptime: 02:19:16

  PID USER      PRI  NI  VIRT   RES   SHR  S  CPU% MEM%   TIME+  Command
 1370 administ 20    0 1450M 19768 15868 S  0.0 1.0 0:00.22 /usr/bin/pulseaudio --daemonize=no --log-target=journal
 221 root      20    0 83288 48876 3260 S  0.0 2.0 0:00.28 /lib/systemd/systemd-journald
 1426 administ 20    0 569M 96688 54728 S  0.0 4.8 0:10.51 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noret -keeppty -verbose 3
 1473 administ 20    0 569M 96688 54728 S  0.0 4.8 0:03.00 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noret -keeppty -verbose 3
 1969 administ 20    0 803M 52684 39668 S  0.0 2.6 0:02.13 /usr/libexec/gnome-terminal-server
 1648 administ 20    0 3665M 368M 133M S  0.0 18.8 0:18.10 /usr/bin/gnome-shell
 3947 root      20    0 1044 596 104 S  0.0 0.2 0:00.07 htop
 1563 administ 20    0 217M 2596 2256 S  0.0 0.1 0:03.28 /usr/bin/VBoxClient --seamless
 1574 administ 20    0 218M 2596 2256 S  0.0 0.1 0:20.86 /usr/bin/VBoxClient --draganddrop
 1571 administ 20    0 218M 2596 2256 S  0.0 0.1 0:20.86 /usr/bin/VBoxClient --draganddrop
 1566 administ 20    0 217M 2596 2256 S  0.0 0.1 0:01.57 /usr/bin/VBoxClient --seamless
 1439 administ 20    0 312M 8916 7988 S  0.0 0.4 0:00.42 /usr/libexec/gvfs-fc-volume-monitor
 946 root      20    0 354M 3032 2680 S  0.0 0.2 0:00.60 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
 533 messagebu 20    0 9876 6228 736 S  0.0 0.3 0:00.72 /usr/bin/dbus-daemon --system --address=systemd: --nofork --noplfile --systemd-activation --syslog-only
 704 root      20    0 1210M 29364 19512 S  0.0 1.5 0:00.09 /usr/lib/nautilus/nautilus
 939 root      20    0 354M 3032 2680 S  0.0 0.2 0:01.50 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
 927 root      20    0 285M 856 744 S  0.0 0.0 0:01.72 /usr/bin/VBoxDRMClient
 1565 administ 20    0 217M 2596 2256 S  0.0 0.1 0:01.70 /usr/bin/VBoxClient --seamless
 1583 administ 20    0 219M 2616 2264 S  0.0 0.1 0:00.80 /usr/bin/VBoxClient --vmsvga-session
 1580 administ 20    0 219M 2616 2264 S  0.0 0.1 0:01.71 /usr/bin/VBoxClient --vmsvga-session
 1582 administ 20    0 219M 2616 2264 S  0.0 0.1 0:00.91 /usr/bin/VBoxClient --vmsvga-session
 1684 administ 20    0 237M 9332 8560 S  0.0 0.5 0:00.01 /usr/libexec/ibus-portal
 1584 root      20    0 285M 856 744 S  0.0 0.0 0:00.52 /usr/bin/VBoxDRMClient
 931 root      20    0 285M 856 744 S  0.0 0.0 0:00.43 /usr/bin/VBoxDRMClient
 494 systemd-r 20    0 24032 13400 9312 S  0.0 0.7 0:00.18 /lib/systemd/systemd-resolved
 943 root      20    0 354M 3032 2680 S  0.0 0.2 0:00.69 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
 556 root      20    0 242M 13452 9656 S  0.0 0.7 0:00.58 /usr/lib/policykit-1/polkitd --no-debug
 597 syslog    20    0 219M 5048 3732 S  0.0 0.3 0:00.02 /usr/sbin/rsyslogd -n -iNONE
 1362 administ 20    0 23852 14144 8132 S  0.0 0.7 0:00.19 /lib/systemd/systemd --user
 1827 administ 20    0 343M 31708 13352 S  0.0 1.0 0:00.01 /usr/libexec/gsd-power
 1780 administ 20    0 313M 11036 9964 S  0.0 0.5 0:00.01 /usr/libexec/gsd-smartcard
 1 root        20    0 163M 11424 8316 S  0.0 0.6 0:00.78 /sbin/init splash
 244 root      20    0 24184 7664 4176 S  0.0 0.4 0:00.08 /lib/systemd/systemd-udev
 507 systemd-t 20    0 90228 6076 3312 S  0.0 0.3 0:00.05 /lib/systemd/systemd-timesyncd
 495 systemd-t 20    0 90228 6076 3312 S  0.0 0.3 0:00.05 /lib/systemd/systemd-timesyncd
 536 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.10 /usr/lib/accounts-service/accounts-daemon
 611 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.00 /usr/lib/accounts-service/accounts-daemon
 526 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.13 /usr/lib/accounts-service/accounts-daemon
 527 root      20    0 239M 9712 8728 S  0.0 0.5 0:00.02 /usr/sbin/acpid
 530 avahi      20    0 8528 3280 2956 S  0.0 0.2 0:00.05 avahi-daemon: running [uclnt01.local]
 531 root      20    0 12036 3096 2828 S  0.0 0.2 0:00.01 /usr/sbin/cron -f
 532 root      20    0 30916 8848 372 S  0.0 0.4 0:00.01 /usr/sbin/cupsd -l
 586 root      20    0 477M 21852 18740 S  0.0 1.1 0:00.11 /usr/sbin/NetworkManager --no-daemon
 615 root      20    0 477M 21852 18740 S  0.0 1.1 0:00.06 /usr/sbin/NetworkManager --no-daemon
 537 root      20    0 477M 21852 18740 S  0.0 1.1 0:00.56 /usr/sbin/NetworkManager --no-daemon
```

La escala de niceeness va de +20 (menos prioridad) a (+20 mas prioridad)

Este es el proceso mas prioritario.

```

CPU[ ] 2.0% Tasks: 112, 244 thr; 1 running
Mem[ ] 760M/1.92G Load average: 0.14 0.08 0.02
Swap[ ] 1.0M/1.24G Uptime: 02:19:10

PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
111 root 20 0 11528 11528 11528 0 0 0.0 0.0 0:00.28 /lib/systemd/systemd-journald
1426 administ 20 0 509M 96688 5728 5 6.1 4.8 0:10.51 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1473 administ 20 0 509M 96688 5728 5 3.1 4.8 0:03.00 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1509 administ 20 0 893M 52684 3968 5 1.0 2.0 0:02.13 /usr/libexec/gnome-terminal-server
1648 administ 20 0 366M 368M 13M 0 2.0 18.8 0:10.10 /usr/bin/gnome-shell
3947 root 20 0 14044 4596 3184 0 0.0 0.2 0:00.07 htop
1563 administ 20 0 217M 2596 2256 5 0.0 0.1 0:03.28 /usr/bin/VBoxClient --seamless
1574 administ 20 0 218M 2596 2256 5 0.0 0.1 0:20.86 /usr/bin/VBoxClient --draganddrop
1571 administ 20 0 218M 2596 2256 5 0.5 0.1 0:20.86 /usr/bin/VBoxClient --draganddrop
1566 administ 20 0 217M 2596 2256 5 0.0 0.1 0:01.57 /usr/bin/VBoxClient --seamless
1439 administ 20 0 312M 8916 7908 5 0.0 0.4 0:00.42 /usr/libexec/gvfs-afc-volume-monitor
946 root 20 0 354M 3032 2680 5 0.0 0.2 0:00.60 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
1571 administ 20 0 217M 2596 2256 5 0.0 0.1 0:00.72 /usr/bin/dbus-daemon --system --address=systemd: --nofork --noplayfd --systemd-activation --syslog-only
704 root 20 0 1216M 29364 19512 5 0.0 1.5 0:00.09 /usr/lib/swap/swapd
939 root 20 0 354M 3032 2680 5 0.5 0.2 0:01.50 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
927 root 20 0 285M 856 744 5 0.0 0.0 0:01.72 /usr/bin/VBoxDRMClient
1565 administ 20 0 217M 2596 2256 5 0.0 0.1 0:01.70 /usr/bin/VBoxClient --seamless
1583 administ 20 0 219M 2616 2264 5 0.0 0.1 0:00.80 /usr/bin/VBoxClient --vmsvga-session
1580 administ 20 0 219M 2616 2264 5 0.0 0.1 0:01.71 /usr/bin/VBoxClient --vmsvga-session
1582 administ 20 0 219M 2616 2264 5 0.0 0.1 0:00.91 /usr/bin/VBoxClient --vmsvga-session
1684 administ 20 0 237M 9332 560 5 0.0 0.5 0:00.01 /usr/libexec/ibus-panel
1584 root 20 0 285M 856 744 5 0.0 0.0 0:00.52 /usr/bin/VBoxDRMClient
931 root 20 0 285M 856 744 5 0.0 0.0 0:00.43 /usr/bin/VBoxDRMClient
494 systemd-r 20 0 24032 13400 3312 5 0.0 0.7 0:00.18 /lib/systemd/systemd-resolved
943 root 20 0 242M 13452 656 5 0.0 0.7 0:00.69 /usr/sbin/VBoxService --pidfile /var/run/vboxadd-service.sh
556 root 20 0 242M 13452 656 5 0.0 0.7 0:00.58 /usr/lib/policykit-1/polkitd --no-debug
597 syslog 20 0 219M 9048 3732 5 0.0 0.3 0:00.02 /usr/sbin/rsyslogd -n -lNONE
1362 administ 20 0 23852 14144 4132 5 0.0 0.7 0:00.19 /lib/systemd/systemd --user
1627 administ 20 0 347M 31708 1352 5 0.0 1.0 0:00.01 /usr/libexec/gsd-panel
1780 administ 20 0 313M 11036 1964 5 0.0 0.5 0:00.01 /usr/libexec/gsd-smartcard
1 root 20 0 163M 11424 8316 5 0.0 0.6 0:00.78 /sbin/init splash
244 root 20 0 24184 7664 1776 5 0.0 0.4 0:00.08 /lib/systemd/systemd-udev
507 systemd-t 20 0 90228 6076 3312 5 0.0 0.3 0:00.00 /lib/systemd/systemd-timesyncd
495 systemd-t 20 0 90228 6076 3312 5 0.0 0.3 0:00.05 /lib/systemd/systemd-timesyncd
536 root 20 0 239M 9712 8728 5 0.0 0.5 0:00.10 /usr/lib/accountsservice/accounts-daemon
611 root 20 0 239M 9712 8728 5 0.0 0.5 0:00.00 /usr/lib/accountsservice/accounts-daemon
526 root 20 0 239M 9712 8728 5 0.0 0.5 0:00.13 /usr/lib/accountsservice/accounts-daemon
527 root 20 0 2548 768 760 5 0.0 0.0 0:00.02 /usr/sbin/acpid
530 avahi 20 0 8528 3280 1956 5 0.0 0.2 0:00.05 avahi-daemon: running [uclnt01.local]
531 root 20 0 12036 3096 1828 5 0.0 0.2 0:00.01 /usr/sbin/cron -f
532 root 20 0 30916 8840 372 5 0.0 0.4 0:00.01 /usr/sbin/cupsd -l
586 root 20 0 477M 21852 10740 5 0.0 1.1 0:00.11 /usr/sbin/NetworkManager --no-daemon
615 root 20 0 477M 21852 10740 5 0.0 1.1 0:00.06 /usr/sbin/NetworkManager --no-daemon
537 root 20 0 477M 21852 10740 5 0.0 1.1 0:00.56 /usr/sbin/NetworkManager --no-daemon
F1:Ctrl F2:Ctrl F3:Ctrl F4:Ctrl F5:Ctrl F6:Ctrl F7:Ctrl F8:Ctrl F9:Ctrl F10:Ctrl
```

Salimos mediante q

```

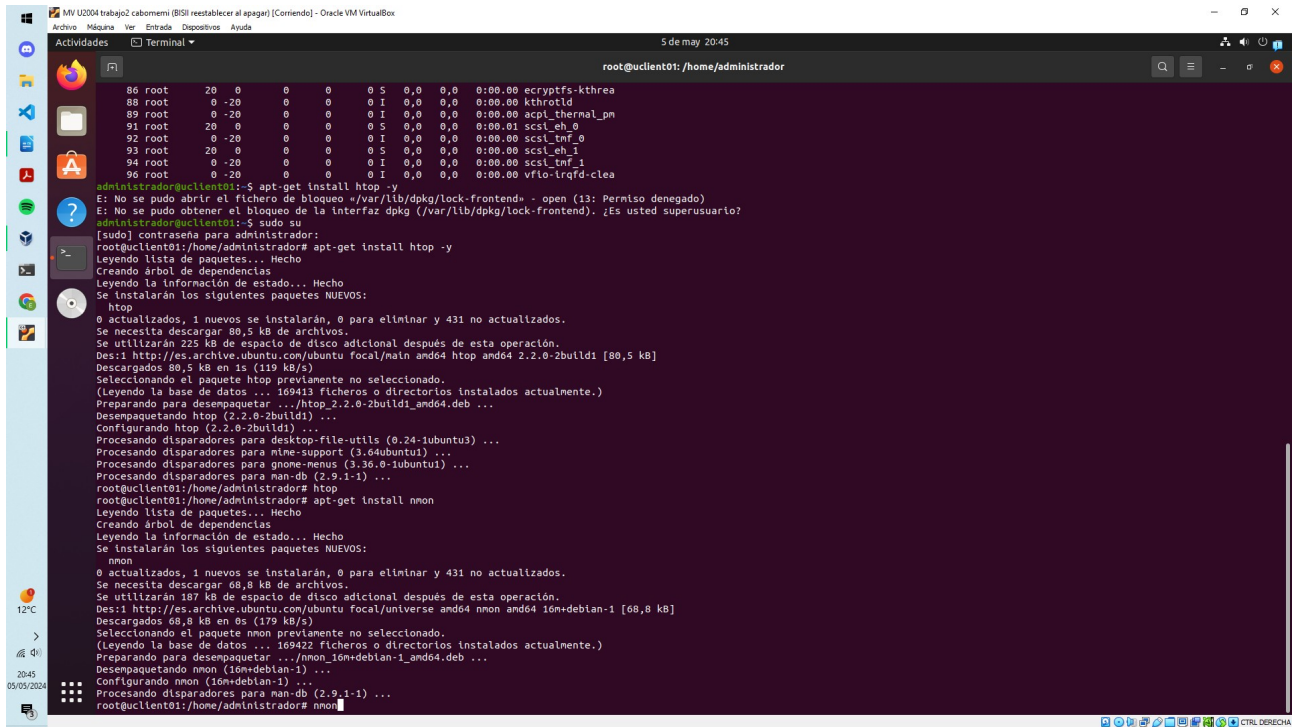
root@uclnt01: /home/administrador

22 root 20 0 0 0 0 0 0.0 0.0 0:00.00 khungtaskd
23 root 20 0 0 0 0 0 0.0 0.0 0:00.00 oon_reaper
24 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 writeback
25 root 20 0 0 0 0 0 0.0 0.0 0:00.30 kcompactd0
26 root 25 5 0 0 0 0 0.0 0.0 0:00.00 ksmd
27 root 39 19 0 0 0 0 0.0 0.0 0:00.00 khugepaged
73 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 kintegrityd
74 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 kblockd
75 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 blkcg_punt_bio
76 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 tpm_dev_wq
77 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 ata_sff
78 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 md
79 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 edac-poller
80 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 devfreq_wq
81 root -51 0 0 0 0 0 0.0 0.0 0:00.00 watchdogd
83 root 0 -20 0 0 0 0 0.0 0.0 0:00.55 kworker/0:1H-kblockd
85 root 20 0 0 0 0 0 0.0 0.0 0:00.00 kswapd0
86 root 20 0 0 0 0 0 0.0 0.0 0:00.00 ecryptfs-kthrea
88 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 kthrotld
89 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 acpi_thermal_pm
91 root 20 0 0 0 0 0 0.0 0.0 0:00.01 scsi_eh_0
92 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 scsi_tmf_0
93 root 20 0 0 0 0 0 0.0 0.0 0:00.00 scsi_eh_1
94 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 scsi_tmf_1
96 root 0 -20 0 0 0 0 0.0 0.0 0:00.00 vfio-irqfd-clea

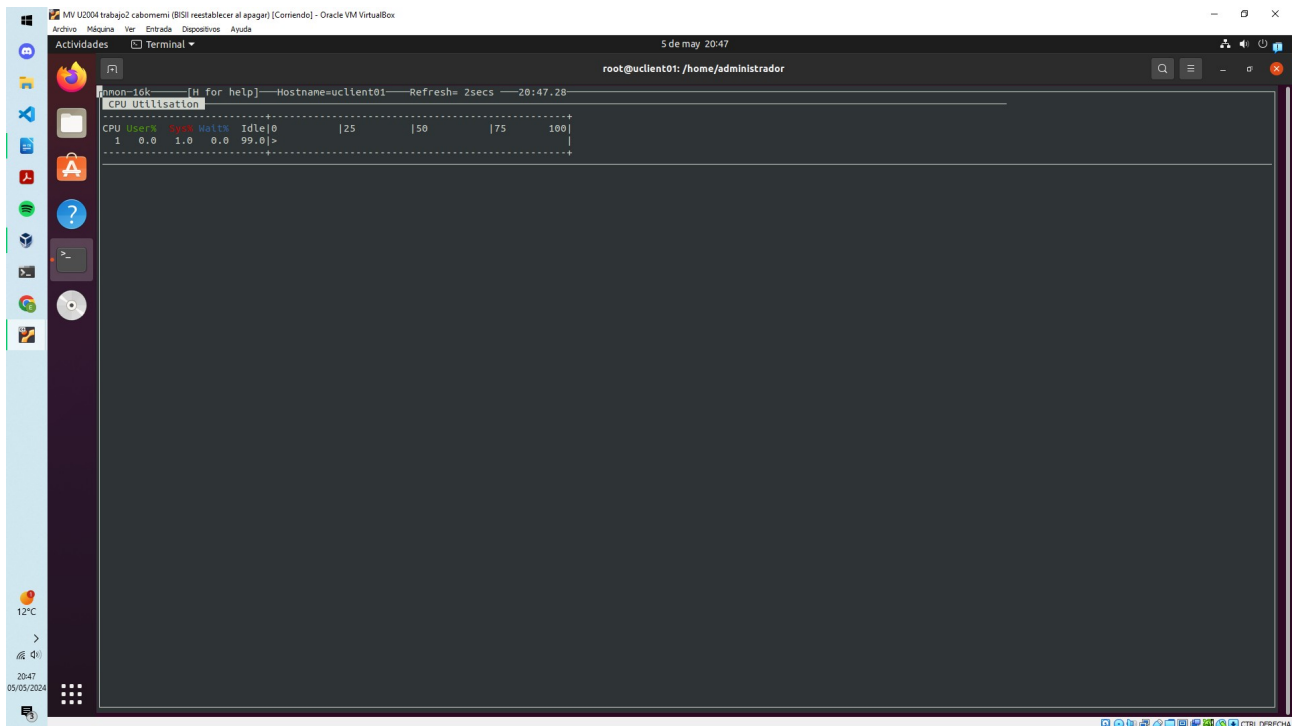
administrador@uclnt01:~$ apt-get install http -y
E: No se pudo abrir el fichero de bloqueo '/var/lib/dpkg/lock-frontent' - open (13: Permiso denegado)
E: No se pudo obtener el bloqueo de la interfaz dpkg (/var/lib/dpkg/lock-frontent). ¿Es usted superusuario?
administrador@uclnt01:~$ sudo su
[sudo] contraseña para administrador:
root@uclnt01:/home/administrador# apt-get install http -y
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias
Leyendo la información de estado... Hecho
Se instalarán los siguientes paquetes NUEVOS:
http
0 actualizados, 1 nuevos se instalarán, 0 para eliminar y 431 no actualizados.
Se necesita descargar 80,5 kB de archivos.
Se utilizarán 225 kB de espacio de disco adicional después de esta operación.
Des: http://es.archive.ubuntu.com/ubuntu focal/main amd64 http amd64 2.2.0-2build1 [80,5 kB]
Descargados 80,5 kB en 1s (119 kB/s)
Seleccionando el paquete http previamente no seleccionado.
(Leyendo la base de datos ... 169413 ficheros o directorios instalados actualmente.)
Preparando para desempaquetar.../http 2.2.0-2build1,amd64.deb ...
Desempaquetando http (2.2.0-2build1) ...
Configurando http (2.2.0-2build1) ...
Procesando disparadores para desktop-file-utils (0.24-1ubuntu3) ...
Procesando disparadores para mne-support (3.64ubuntu1) ...
Procesando disparadores para gnome-menus (3.36.0-1ubuntu1) ...
Procesando disparadores para man-db (2.9.1-1) ...
root@uclnt01:/home/administrador# http
root@uclnt01:/home/administrador#
```

2. NMON

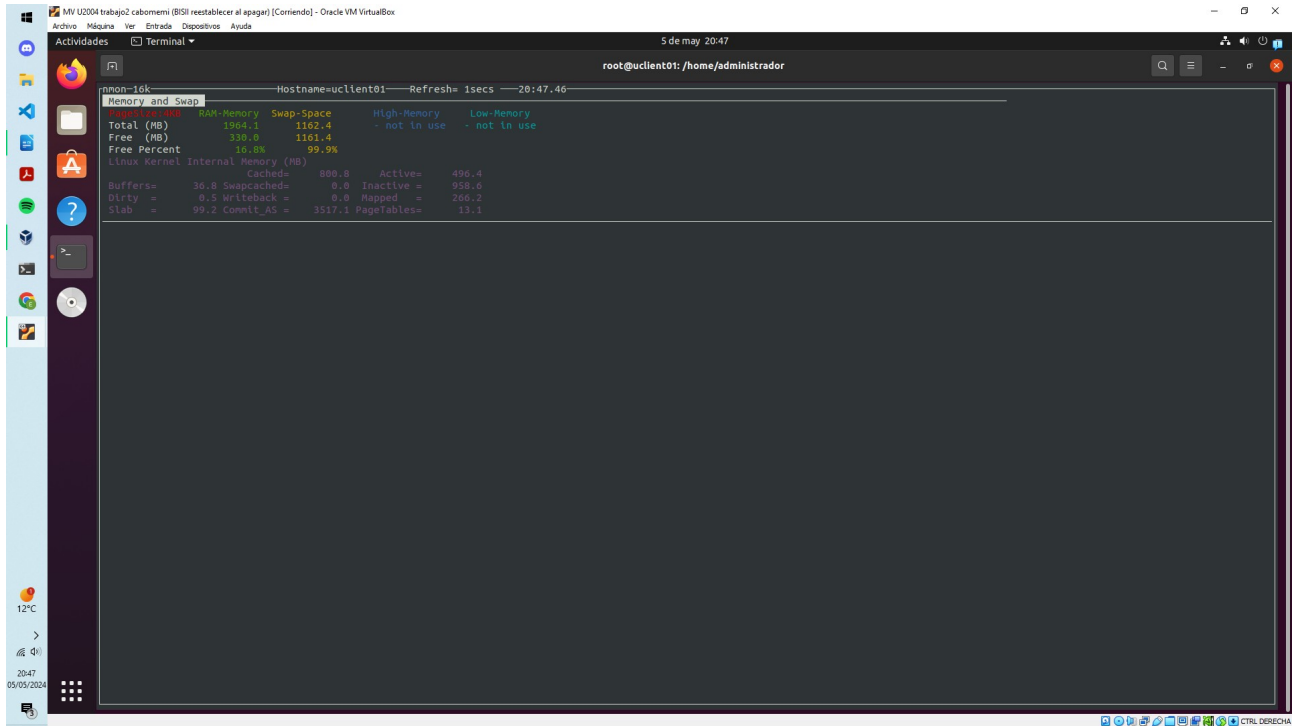
Instalamos la herramienta mediante el comando **apt-get install NMON**



Si ponemos nmon c abrimos uso cpu



Si ponemos nmon m abrimos uso memoria



The screenshot shows a terminal window titled "Terminal" with the prompt "root@uc1ent01: /home/administrador". The terminal displays the output of the command "nmon-16k", which shows memory usage statistics. The output is as follows:

```
nmon-16k Hostname=uc1ent01 Refresh= 1secs 20:47.46
Memory and Swap
-----
Total (MB) 1964.1 1162.4 High-Memory Low-Memory
Free (MB) 330.0 1161.4 - not in use - not in use
Free Percent 16.8% 99.9%
Linux Kernel Internal Memory (MB)
-----
Cached= 890.8 Active= 496.4
Buffers= 36.8 Swapcached= 0.0 Inactive= 958.6
Dirty = 0.5 Writeback = 0.0 Mapped = 266.2
Slab = 99.2 Committed_AS = 3517.2 PageTables= 13.1
```

f
sd
f
sdf