

24.Shell avanzada, procesos e fios

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Comandos de gestión de procesos.

Ps aux | more → Nos muestra todos los pcesos del sistema, uso de memoria y procesador.

```
root@ubase: /home/administrador
admin@trador@ubase:~$ sudo su
[sudo] contraseña para admin@trador:
root@ubase: /home/administrador# ps aux | more
USER      PID  CPU  MEM  VSZ  RSS  TTY  STAT  START  TIME  COMMAND
root      1    0.0  0.0 168812 12820 ?    Ss   10:01  0:00 /sbin/init splash
root      2    0.0  0.0  0      0 ?    S    10:01  0:00 [kthreadd]
root      3    0.0  0.0  0      0 ?    I-   10:01  0:00 [rcu_gp]
root      4    0.0  0.0  0      0 ?    I-   10:01  0:00 [rcu_par_gp]
root      5    0.0  0.0  0      0 ?    I-   10:01  0:00 [slub_flushwq]
root      6    0.0  0.0  0      0 ?    I-   10:01  0:00 [netns]
root      8    0.0  0.0  0      0 ?    I-   10:01  0:00 [kworker/0:0H-events_highpri]
root     10    0.0  0.0  0      0 ?    I-   10:01  0:00 [mm_percpu_wq]
root     11    0.0  0.0  0      0 ?    S    10:01  0:00 [rcu_tasks_rude_]
root     12    0.0  0.0  0      0 ?    S    10:01  0:00 [rcu_tasks_trace]
root     13    0.0  0.0  0      0 ?    S    10:01  0:00 [ksoftirqd/0]
root     14    0.0  0.0  0      0 ?    I    10:01  0:00 [rcu_sched]
root     15    0.0  0.0  0      0 ?    S    10:01  0:00 [migration/0]
root     16    0.0  0.0  0      0 ?    S    10:01  0:00 [idle_inject/0]
root     17    0.0  0.0  0      0 ?    I    10:01  0:00 [kworker/0:1-cgroup_destroy]
root     18    0.0  0.0  0      0 ?    S    10:01  0:00 [cpuhp/0]
root     19    0.0  0.0  0      0 ?    S    10:01  0:00 [kdevtmpfs]
root     20    0.0  0.0  0      0 ?    I-   10:01  0:00 [inet_frag_wq]
root     21    0.0  0.0  0      0 ?    S    10:01  0:00 [kauditd]
root     22    0.0  0.0  0      0 ?    S    10:01  0:00 [khungtaskd]
root     23    0.0  0.0  0      0 ?    S    10:01  0:00 [oom_reaper]
root     24    0.0  0.0  0      0 ?    S    10:01  0:00 [writeback]
root     25    0.0  0.0  0      0 ?    S    10:01  0:00 [kcompactd0]
root     26    0.0  0.0  0      0 ?    SN   10:01  0:00 [ksmd]
root     27    0.0  0.0  0      0 ?    SN   10:01  0:00 [khugepaged]
root     73    0.0  0.0  0      0 ?    I-   10:01  0:00 [kintegrityd]
root     74    0.0  0.0  0      0 ?    I-   10:01  0:00 [kblockd]
root     75    0.0  0.0  0      0 ?    I-   10:01  0:00 [blkcg_punt_bio]
root     76    0.0  0.0  0      0 ?    I-   10:01  0:00 [tpm_dev_wq]
root     77    0.0  0.0  0      0 ?    I-   10:01  0:00 [ata_sff]
root     78    0.0  0.0  0      0 ?    I-   10:01  0:00 [md]
root     79    0.0  0.0  0      0 ?    I-   10:01  0:00 [edac-poller]
root     80    0.0  0.0  0      0 ?    I-   10:01  0:00 [devfreq_wq]
root     81    0.0  0.0  0      0 ?    S    10:01  0:00 [watchdogd]
root     83    0.0  0.0  0      0 ?    I-   10:01  0:00 [kworker/0:1H-kblockd]
root     85    0.0  0.0  0      0 ?    S    10:01  0:00 [kswapd0]
root     86    0.0  0.0  0      0 ?    S    10:01  0:00 [ecryptfs-kthrea]
root     88    0.0  0.0  0      0 ?    I-   10:01  0:00 [kthrottld]
root     89    0.0  0.0  0      0 ?    I-   10:01  0:00 [acpi_thermal_pm]
root     91    0.0  0.0  0      0 ?    S    10:01  0:00 [scsi_eh_0]
root     92    0.0  0.0  0      0 ?    I-   10:01  0:00 [scsi_eh_1]
root     93    0.0  0.0  0      0 ?    I-   10:01  0:00 [scsi_eh_2]
root     94    0.0  0.0  0      0 ?    I-   10:01  0:00 [vfiio-lrqed-clea]
root     96    0.0  0.0  0      0 ?    I-   10:01  0:00 [nld]
root     99    0.0  0.0  0      0 ?    I-   10:01  0:00 [ipw6_addrconf]
```

Mediante el comando ps auxj | more → Vemos el árbol jerárquico de procesos abiertos que tenemos.

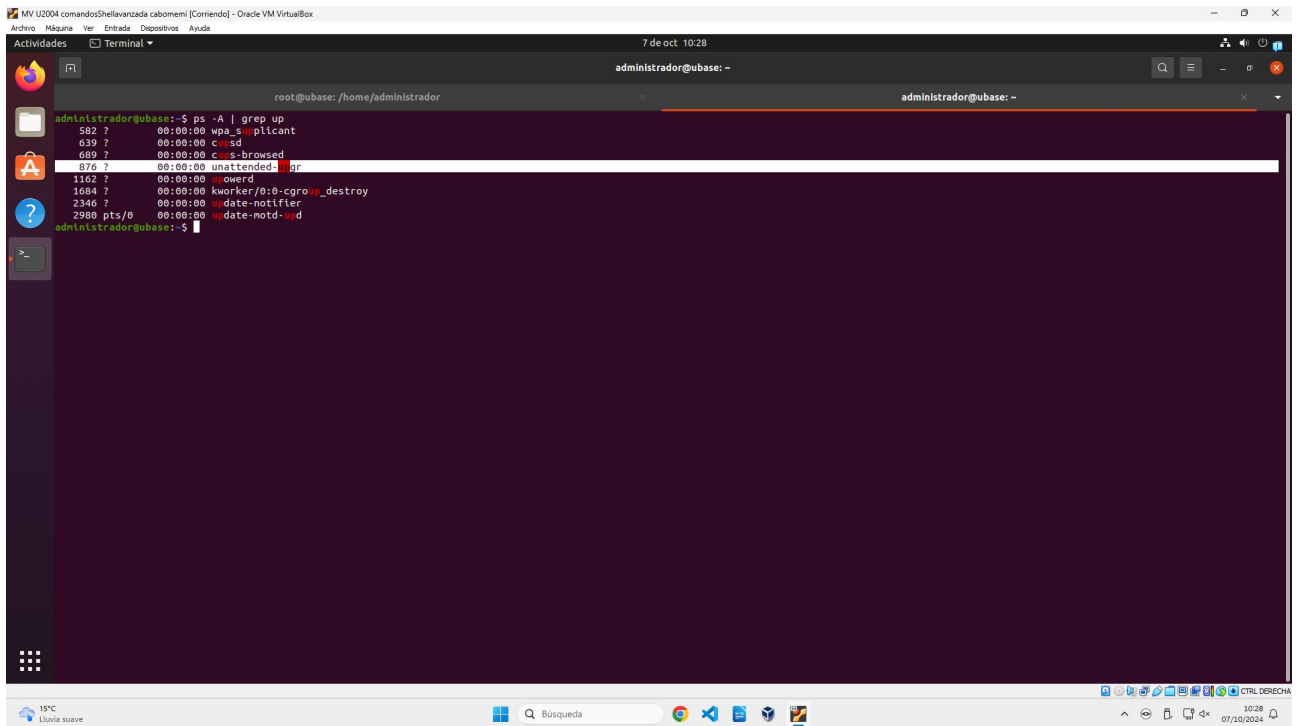
```
root@ubase: /home/administrador
root@ubase:~$ ps auxj | more
PPID  PID  PGID  SID  TTY  TPCID  STAT  UID  TIME  COMMAND
0     2    0     0    0 ?      -1 S    0    0:00 [kthreadd]
2     3    0     0    0 ?      -1 I-   0    0:00 \ [rcu_gp]
2     4    0     0    0 ?      -1 I-   0    0:00 \ [rcu_par_gp]
2     5    0     0    0 ?      -1 I-   0    0:00 \ [slub_flushwq]
2     6    0     0    0 ?      -1 I-   0    0:00 \ [netns]
2     8    0     0    0 ?      -1 I-   0    0:00 \ [kworker/0:0H-events_highpri]
2    10    0     0    0 ?      -1 I-   0    0:00 \ [mm_percpu_wq]
2    11    0     0    0 ?      -1 S    0    0:00 \ [rcu_tasks_rude_]
2    12    0     0    0 ?      -1 S    0    0:00 \ [rcu_tasks_trace]
2    13    0     0    0 ?      -1 S    0    0:00 \ [ksoftirqd/0]
2    14    0     0    0 ?      -1 I    0    0:00 \ [rcu_sched]
2    15    0     0    0 ?      -1 S    0    0:00 \ [migration/0]
2    16    0     0    0 ?      -1 S    0    0:00 \ [idle_inject/0]
2    17    0     0    0 ?      -1 I    0    0:00 \ [kworker/0:1-cgroup_destroy]
2    18    0     0    0 ?      -1 S    0    0:00 \ [cpuhp/0]
2    19    0     0    0 ?      -1 S    0    0:00 \ [kdevtmpfs]
2    20    0     0    0 ?      -1 I-   0    0:00 \ [inet_frag_wq]
2    21    0     0    0 ?      -1 S    0    0:00 \ [kauditd]
2    22    0     0    0 ?      -1 S    0    0:00 \ [khungtaskd]
2    23    0     0    0 ?      -1 S    0    0:00 \ [oom_reaper]
2    24    0     0    0 ?      -1 I-   0    0:00 \ [writeback]
2    25    0     0    0 ?      -1 S    0    0:00 \ [kcompactd0]
2    26    0     0    0 ?      -1 SN    0    0:00 \ [ksmd]
2    27    0     0    0 ?      -1 SN    0    0:00 \ [khugepaged]
2    73    0     0    0 ?      -1 I-   0    0:00 \ [kintegrityd]
2    74    0     0    0 ?      -1 I-   0    0:00 \ [kblockd]
2    75    0     0    0 ?      -1 I-   0    0:00 \ [blkcg_punt_bio]
2    76    0     0    0 ?      -1 I-   0    0:00 \ [tpm_dev_wq]
2    77    0     0    0 ?      -1 I-   0    0:00 \ [ata_sff]
2    78    0     0    0 ?      -1 I-   0    0:00 \ [md]
2    79    0     0    0 ?      -1 I-   0    0:00 \ [edac-poller]
2    80    0     0    0 ?      -1 I-   0    0:00 \ [devfreq_wq]
2    81    0     0    0 ?      -1 S    0    0:00 \ [watchdogd]
2    83    0     0    0 ?      -1 I-   0    0:00 \ [kworker/0:1H-kblockd]
2    85    0     0    0 ?      -1 S    0    0:00 \ [kswapd0]
2    86    0     0    0 ?      -1 S    0    0:00 \ [ecryptfs-kthrea]
2    88    0     0    0 ?      -1 I-   0    0:00 \ [kthrottld]
2    89    0     0    0 ?      -1 I-   0    0:00 \ [acpi_thermal_pm]
2    91    0     0    0 ?      -1 S    0    0:00 \ [scsi_eh_0]
2    92    0     0    0 ?      -1 I-   0    0:00 \ [scsi_eh_1]
2    93    0     0    0 ?      -1 S    0    0:00 \ [scsi_eh_2]
2    94    0     0    0 ?      -1 I-   0    0:00 \ [scsi_tmf_1]
2    96    0     0    0 ?      -1 I-   0    0:00 \ [vfiio-lrqed-clea]
2    99    0     0    0 ?      -1 I-   0    0:00 \ [nld]
2   100    0     0    0 ?      -1 I-   0    0:00 \ [ipw6_addrconf]
2   110    0     0    0 ?      -1 I-   0    0:00 \ [kstrp]
2   113    0     0    0 ?      -1 I-   0    0:00 \ [zswap-shrink]
```

Matar procesos de update.

Es posible que las actualizaciones automáticas de ubuntu nos bloqueen el administrador de paquetes.

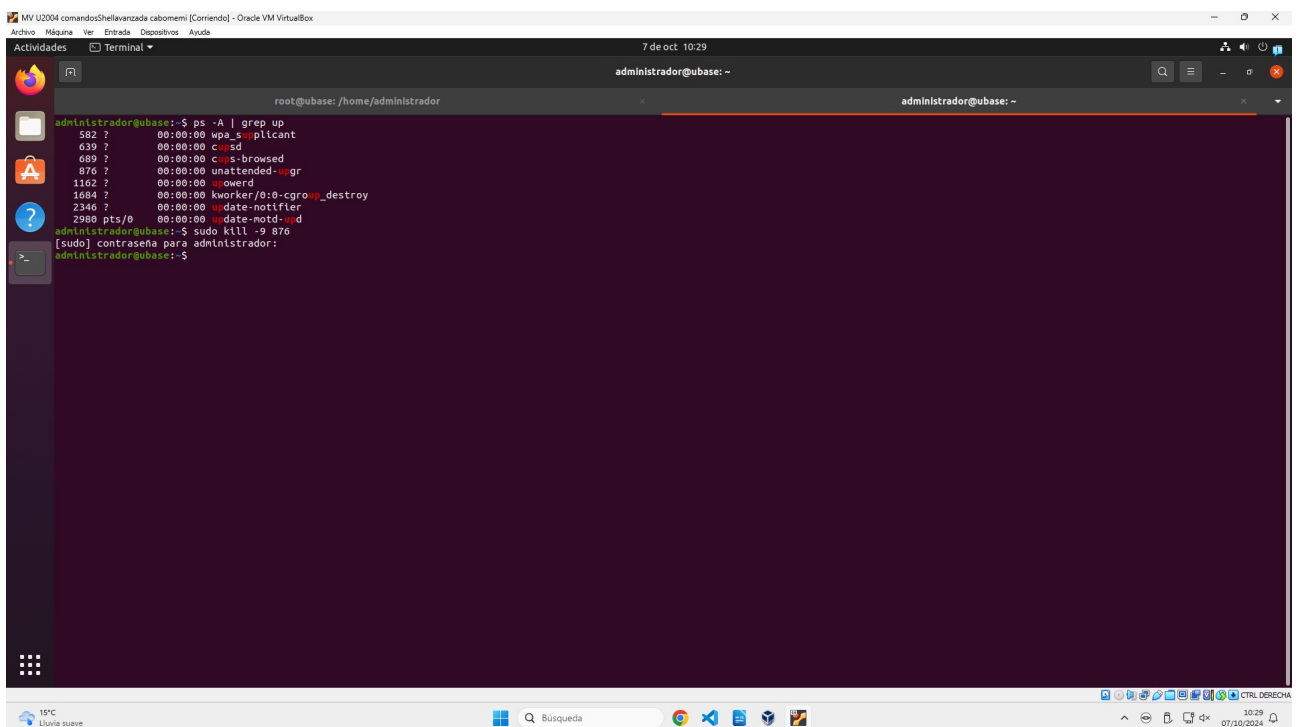
Buscar el proceso que está bloqueando. **Ps -A | grep upg**

Kill -9 <processid>



```
admin@strador@ubase:~$ ps -A | grep up
592 ?        00:00:00 wpa_supplicant
639 ?        00:00:00 cifs
689 ?        00:00:00 cifs-browsed
876 ?        00:00:00 unattended-upgr
1162 ?       00:00:00 powershell
1684 ?       00:00:00 kworker/0:0-cgroup_destroy
2346 ?       00:00:00 update-notifier
2988 pts/0    00:00:00 update-notd-upd
admin@strador@ubase:~$
```

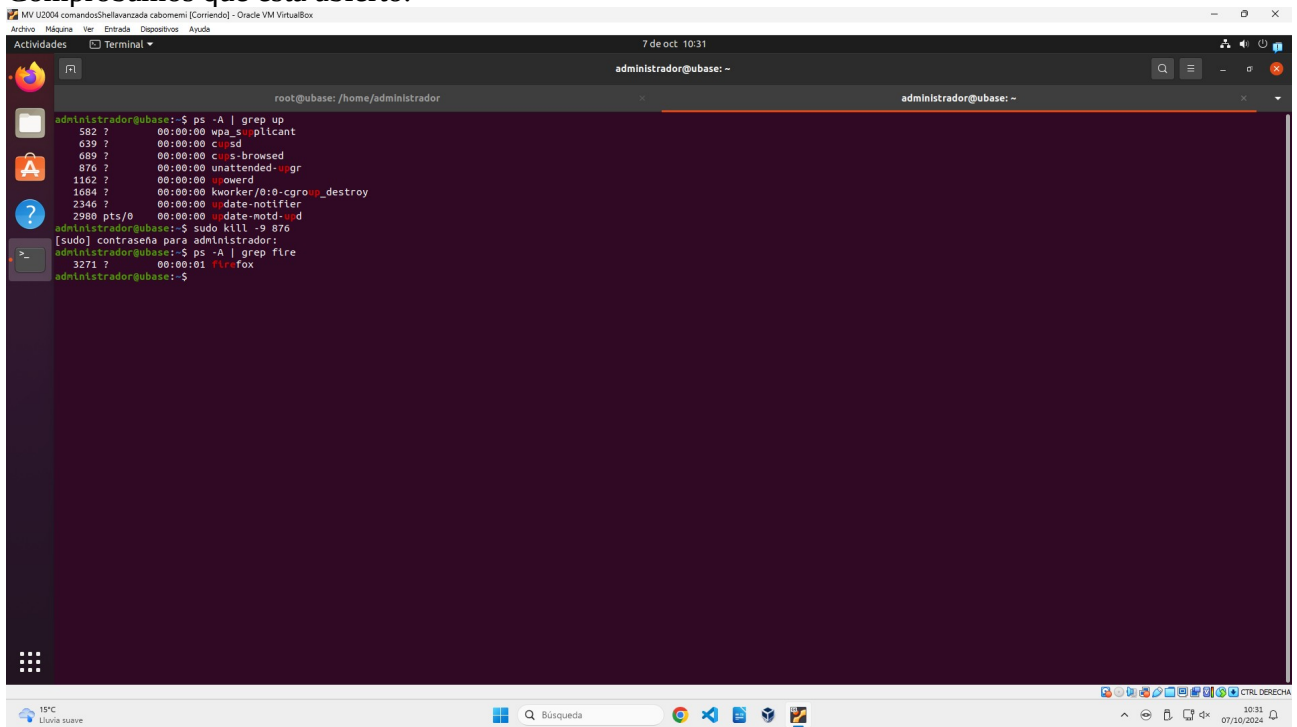
Lo matamos.



```
admin@strador@ubase:~$ ps -A | grep up
592 ?        00:00:00 wpa_supplicant
639 ?        00:00:00 cifs
689 ?        00:00:00 cifs-browsed
876 ?        00:00:00 unattended-upgr
1162 ?       00:00:00 powershell
1684 ?       00:00:00 kworker/0:0-cgroup_destroy
2346 ?       00:00:00 update-notifier
2988 pts/0    00:00:00 update-notd-upd
admin@strador@ubase:~$ sudo kill -9 876
[sudo] contraseña para administrador:
admin@strador@ubase:~$
```

KILL

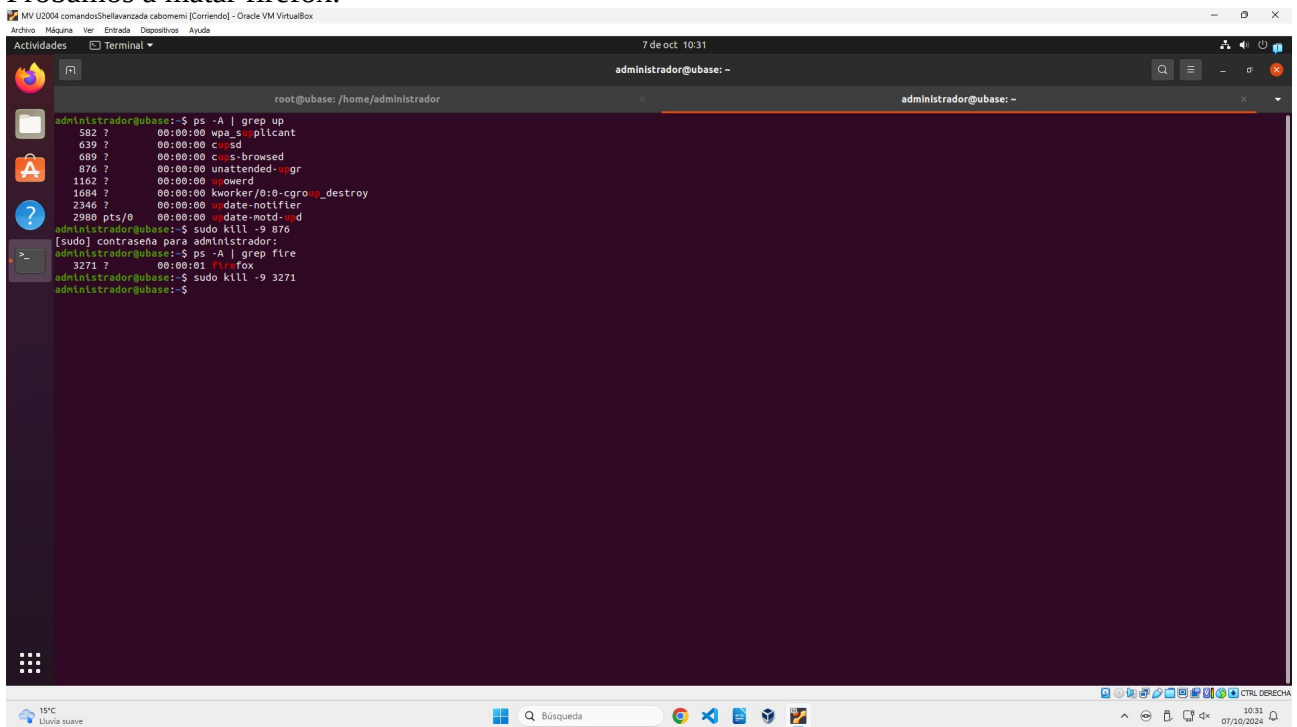
Ya demostramos que podemos matar procesos. Ahora vamos a verlo de una manera más clara. Comprobamos que está abierto.



A terminal window titled 'administrador@ubase: ~' showing the following commands and output:

```
administrador@ubase:~$ ps -A | grep up
582 ?        00:00:00 wpa_supplicant
639 ?        00:00:00 c=sd
689 ?        00:00:00 c=us-browsed
876 ?        00:00:00 unattended-upgr
1162 ?       00:00:00 p=owerd
1684 ?       00:00:00 kworker/0:0-cgroup_destroy
2346 ?       00:00:00 update-notifier
2980 pts/0    00:00:00 update-notd-nd
administrador@ubase:~$ sudo kill -9 876
[sudo] contraseña para administrador:
administrador@ubase:~$ ps -A | grep fire
3271 ?        00:00:01 firefox
administrador@ubase:~$
```

Probamos a matar firefox.

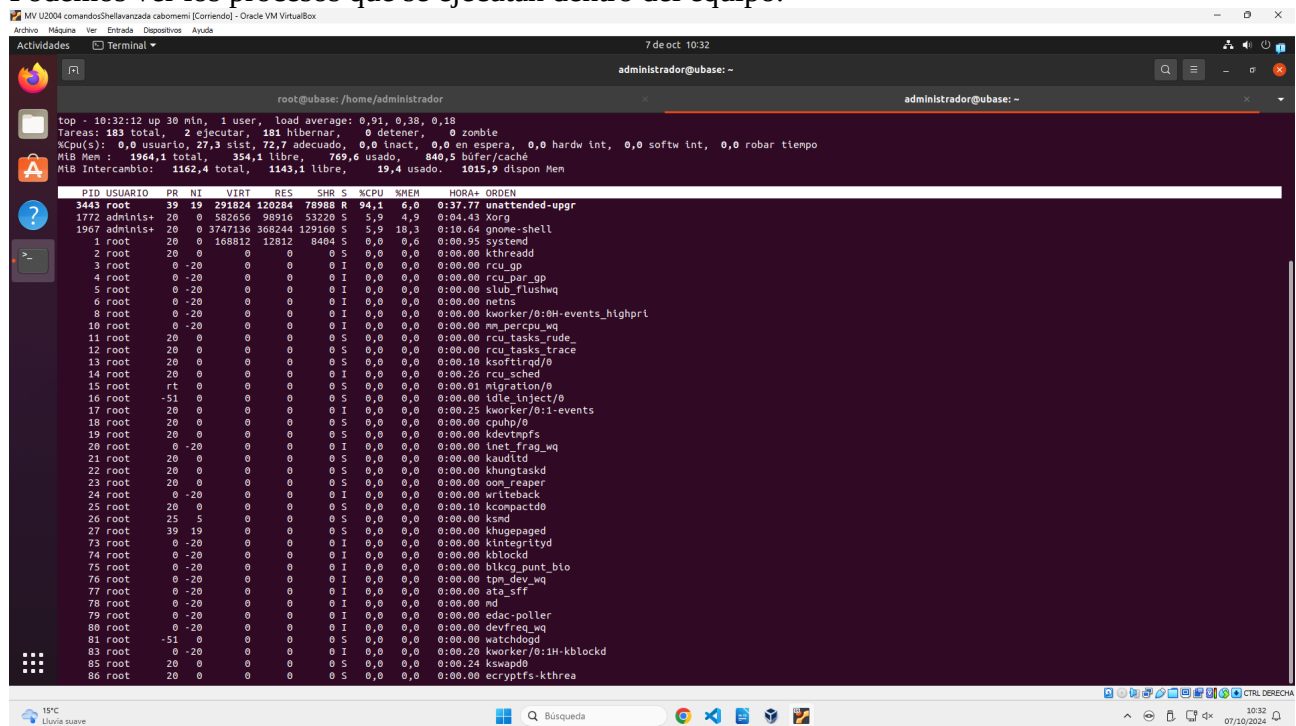


A terminal window titled 'administrador@ubase: ~' showing the following commands and output:

```
administrador@ubase:~$ ps -A | grep up
582 ?        00:00:00 wpa_supplicant
639 ?        00:00:00 c=sd
689 ?        00:00:00 c=us-browsed
876 ?        00:00:00 unattended-upgr
1162 ?       00:00:00 p=owerd
1684 ?       00:00:00 kworker/0:0-cgroup_destroy
2346 ?       00:00:00 update-notifier
2980 pts/0    00:00:00 update-notd-nd
administrador@ubase:~$ sudo kill -9 876
[sudo] contraseña para administrador:
administrador@ubase:~$ ps -A | grep fire
3271 ?        00:00:01 firefox
administrador@ubase:~$ sudo kill -9 3271
administrador@ubase:~$
```

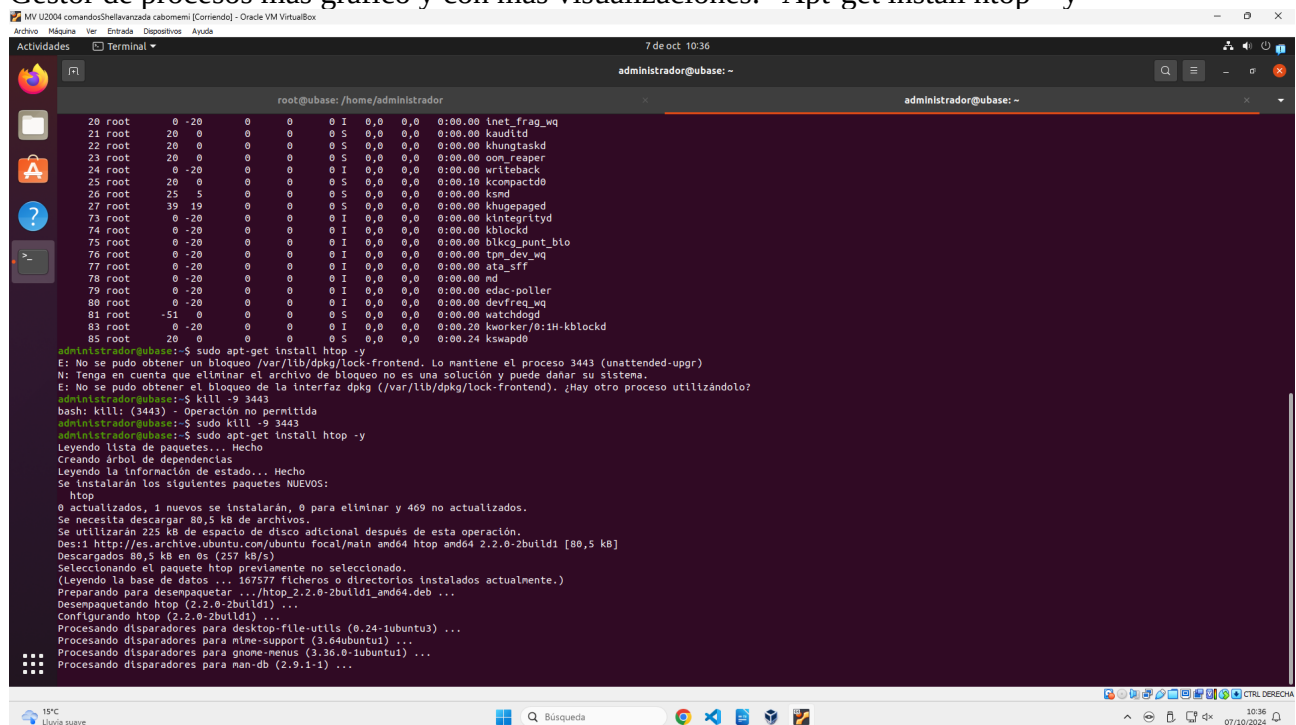
Gestor de procesos TOP

Podemos ver los procesos que se ejecutan dentro del equipo.



Gestor de procesos HTOP

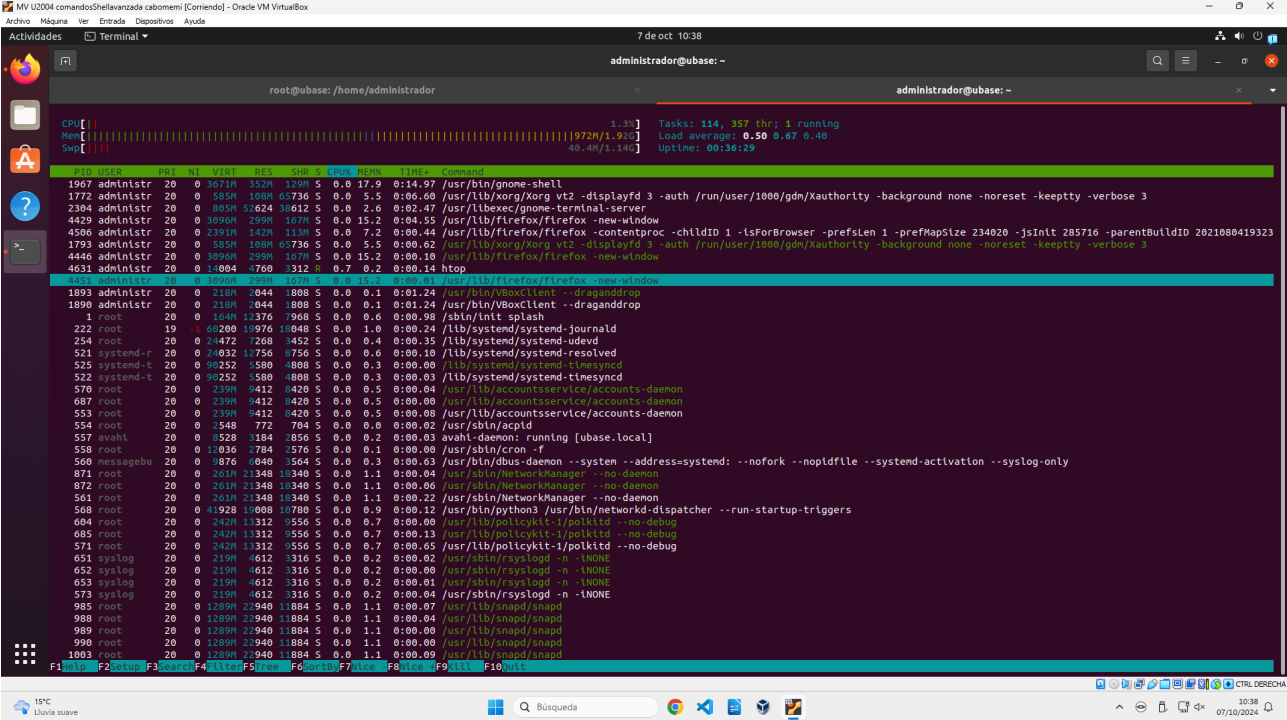
Gestor de procesos más gráfico y con mas visualizaciones. “Apt-get install htop –y”



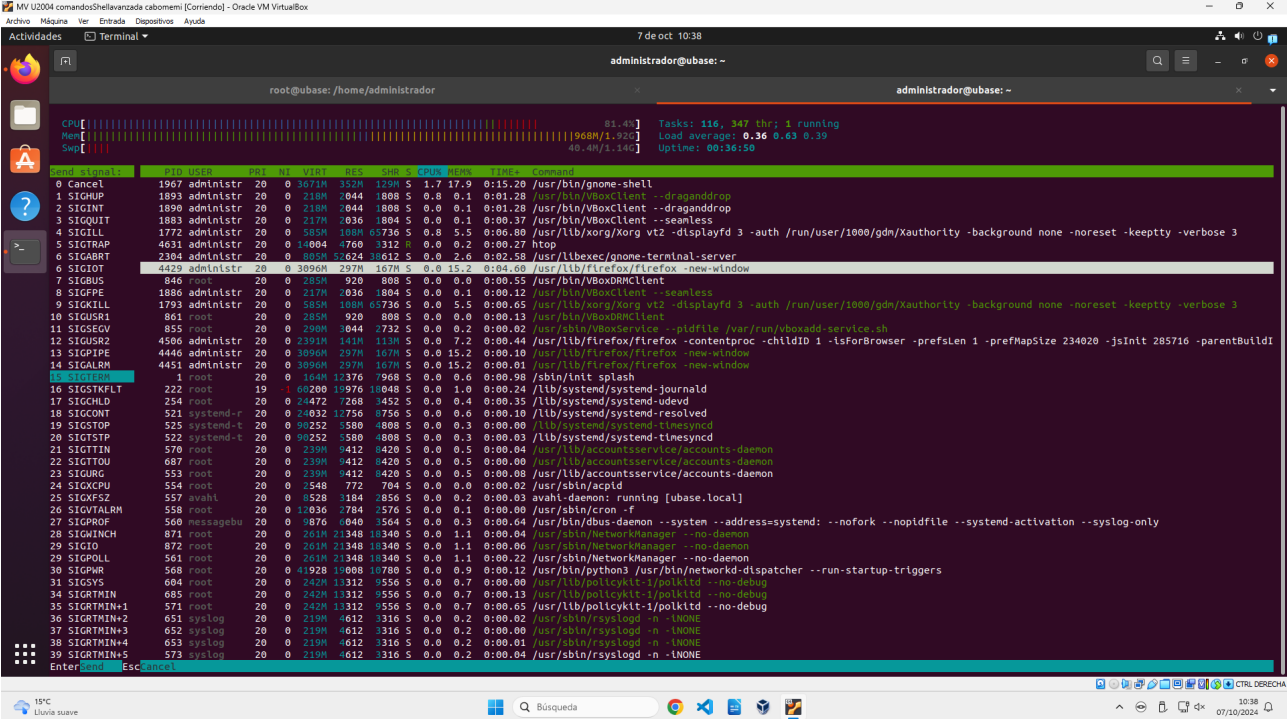
En esta misma captura podemos ver cómo la instalación se ve interrumpida por otro proceso y lo matamos.

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

Si abrimos firefox lo vemos



Lo matamos mediante f9



7 de oct 10:38

administrador@ubase: ~

root@ubase: /home/administrador

administrador@ubase: ~

CPU: [|||||] 3.3%

Mem: [|||||] 483M/1.92G

Swp: [|||||] 40.4M/1.14G

Tasks: 110, 240 thr; 3 running

Load average: 0.38 0.62 0.39

Uptime: 00:37:06

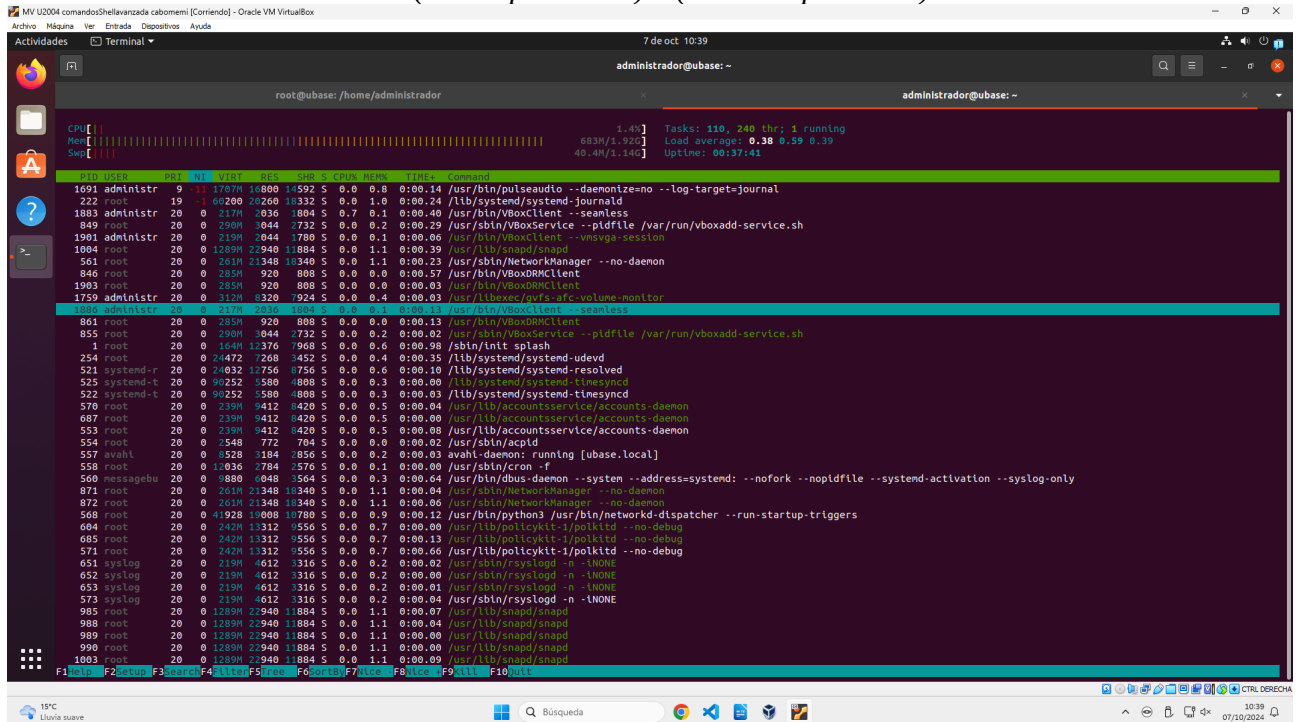
```

1907 administr 20 0.3671M 352M 129M S 2.0 17.9 0.15.52 /usr/bin/gnome-shell
1772 administr 20 0.577M 1060 57452 S 0.7 5.1 0.06.89 /usr/lib/xorg/xorg v2t -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noret -keeppty -verbose 3
4631 administr 20 0.14004 4760 3312 R 0.7 0.2 0.00.37 http
2394 administr 20 0.805M 5624 86412 S 0.0 2.6 0.02.61 /usr/libexec/gnome-terminal-server
1913 administr 20 0.217M 2036 1804 S 0.0 0.1 0.00.38 /usr/bin/VBoxClient --seamless
1793 administr 20 0.577M 1060 57452 S 0.0 5.1 0.06.89 /usr/lib/xorg/xorg v2t -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noret -keeppty -verbose 3
1899 administr 20 0.218M 2044 1808 R 0.0 0.1 0.01.30 /usr/bin/VBoxClient --draganddrop
1890 administr 20 0.218M 2044 1808 S 0.0 0.1 0.01.30 /usr/bin/VBoxClient -ddaganddrop
103 administr 20 0.205M 920 800 S 0.0 0.0 0.00.03 /usr/bin/VBoxClient
1750 administr 20 0.312M 3320 924 S 0.0 0.4 0.00.03 /usr/libexec/pdfto-afc-volume-monitor
1840 root 20 0.285M 920 800 S 0.0 0.0 0.00.55 /usr/bin/VBoxClient
1880 administr 20 0.217M 2036 1804 S 0.0 0.1 0.00.12 /usr/bin/VBoxClient --seamless
861 root 20 0.285M 920 800 S 0.0 0.0 0.00.13 /usr/bin/VBoxClient
850 root 20 0.290M 904 732 S 0.0 0.2 0.00.02 /usr/sbin/vboxservice --pidfile /var/run/vboxadd-service.sh
1 root 20 0.164M 12376 7968 S 0.0 0.6 0.00.98 /sbin/init splash
222 root 19 60200 20260 10332 S 0.0 1.0 0.00.24 /lib/systemd/systemd-journald
254 root 20 0.24472 7268 1452 S 0.0 0.4 0.00.35 /lib/systemd/systemd-udev
521 systemd-r 20 0.24032 1746 726 S 0.0 0.6 0.00.10 /lib/systemd/systemd-resolved
525 systemd-t 20 0.90252 1580 4808 R 0.0 0.3 0.00.00 /lib/systemd/systemd-timesyncd
525 systemd-t 20 0.90252 1580 4808 S 0.0 0.3 0.00.03 /lib/systemd/systemd-timesyncd
570 root 20 0.239M 4412 8420 S 0.0 0.5 0.00.04 /usr/lib/accounts-service/accounts-daemon
687 root 20 0.239M 4412 8420 S 0.0 0.5 0.00.04 /usr/lib/accounts-service/accounts-daemon
553 root 20 0.239M 4412 8420 S 0.0 0.5 0.00.08 /usr/lib/accounts-service/accounts-daemon
554 root 20 0.254M 772 704 S 0.0 0.0 0.00.02 /usr/sbin/acpid
557 avahi 20 0.852M 3184 2856 S 0.0 0.2 0.00.03 avahi-daemon: running [ubase.local]
558 root 20 0.1256M 784 256 S 0.0 0.1 0.00.00 /usr/sbin/cron -f
560 messagebu 20 0.880 4048 1564 S 0.0 0.3 0.00.04 /usr/sbin/cron -f --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
871 root 20 0.261M 21348 10340 S 0.0 1.1 0.00.04 /usr/sbin/NetworkManager --no-daemon
872 root 20 0.261M 21348 10340 S 0.0 1.1 0.00.06 /usr/sbin/NetworkManager --no-daemon
561 root 20 0.261M 21348 10340 S 0.0 1.1 0.00.22 /usr/sbin/NetworkManager --no-daemon
560 root 20 0.41920 10000 10700 S 0.0 0.9 0.00.12 /usr/bin/networkd-dispatcher --run-startup-triggers
604 root 20 0.242M 13312 9556 S 0.0 0.7 0.00.00 /usr/lib/policykit-1/polkitd --no-debug
685 root 20 0.242M 13312 9556 S 0.0 0.7 0.00.13 /usr/lib/policykit-1/polkitd --no-debug
571 root 20 0.242M 13312 9556 S 0.0 0.7 0.00.66 /usr/lib/policykit-1/polkitd --no-debug
651 syslog 20 0.219M 4612 3316 S 0.0 0.2 0.00.02 /usr/sbin/rsyslogd -n -INONE
652 syslog 20 0.219M 4612 3316 S 0.0 0.2 0.00.00 /usr/sbin/rsyslogd -n -INONE
653 syslog 20 0.219M 4612 3316 S 0.0 0.2 0.00.01 /usr/sbin/rsyslogd -n -INONE
573 syslog 20 0.219M 4612 3316 S 0.0 0.2 0.00.04 /usr/sbin/rsyslogd -n -INONE
985 root 20 0.1309M 2940 1884 S 0.0 1.1 0.00.07 /usr/lib/napd/napd
988 root 20 0.1309M 2940 1884 S 0.0 1.1 0.00.04 /usr/lib/napd/napd

```

F1 Help F2 Setup F3 Start F4 Edit F5 Run F6 Print F7 Edit F8 Edit F9 Kill F10 Quit

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

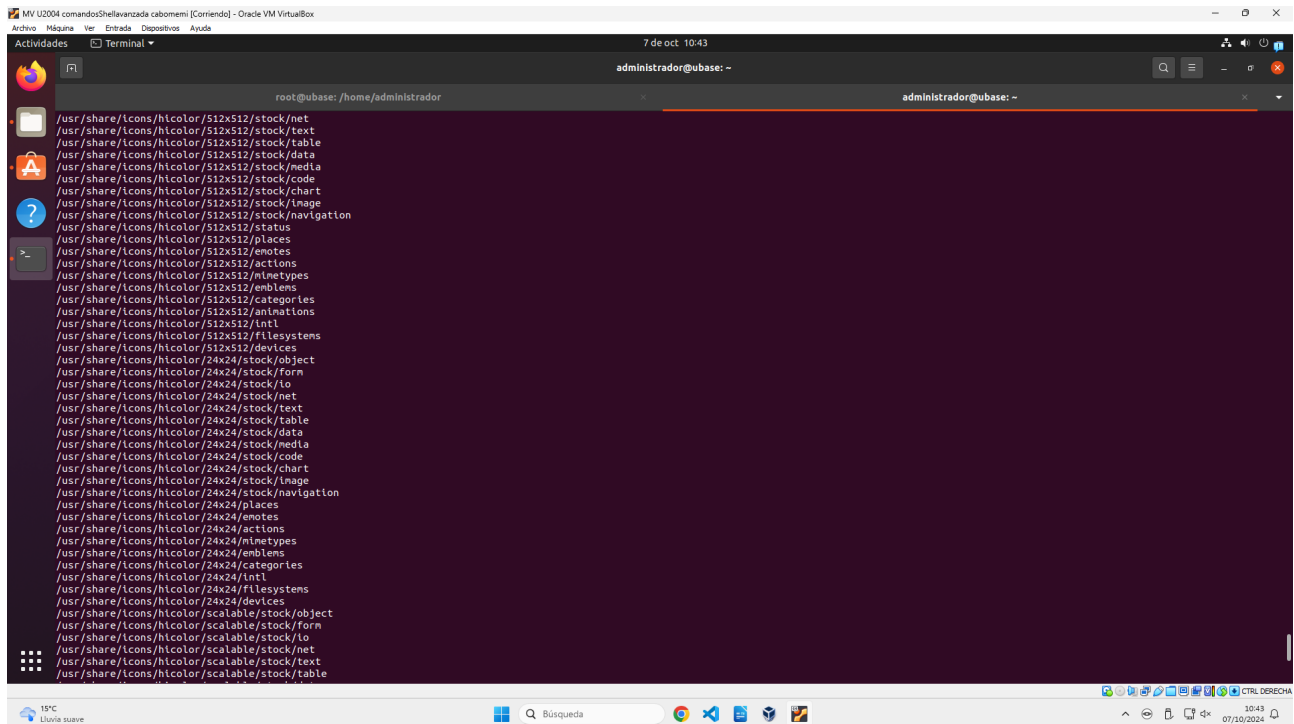


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Find

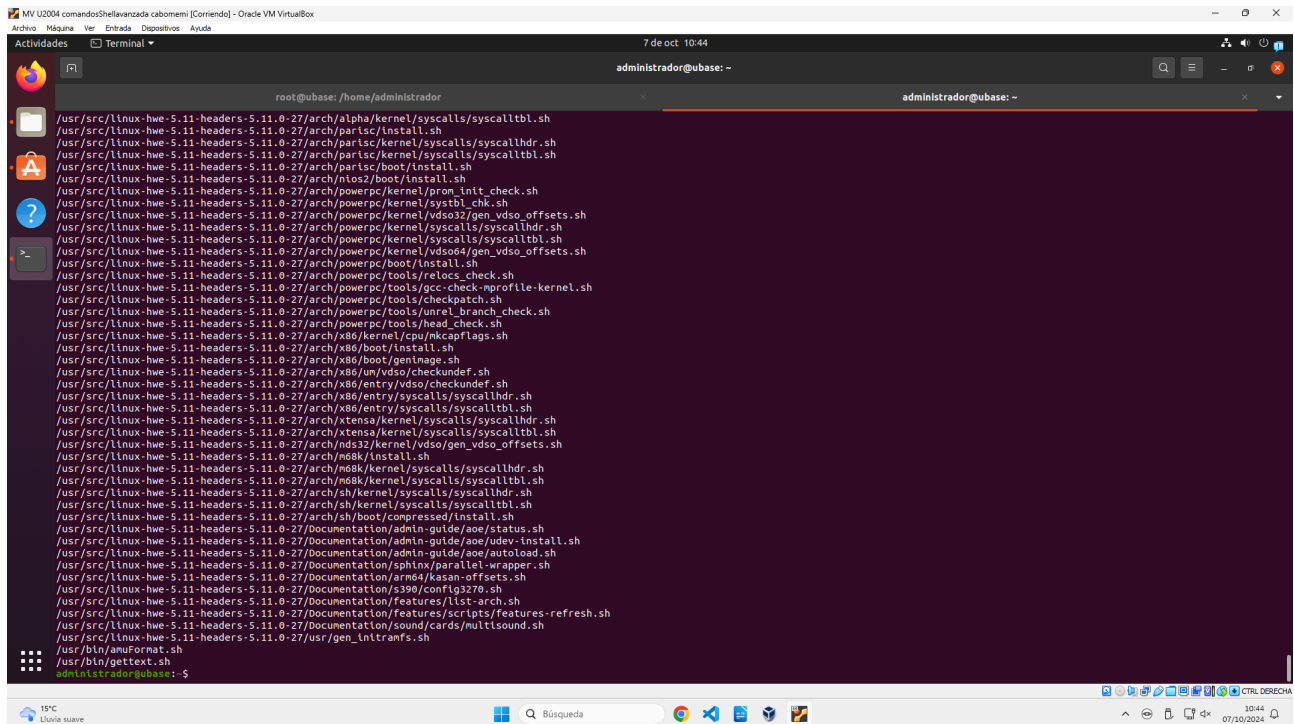
Cómo emplear el comando find.

Buscar directorios vacíos con find. → **find / -type d -empty**



```
root@ubase: /home/administrador
find / -type d -empty
/usr/share/icons/hicolor/512x512/stock/net
/usr/share/icons/hicolor/512x512/stock/text
/usr/share/icons/hicolor/512x512/stock/table
/usr/share/icons/hicolor/512x512/stock/data
/usr/share/icons/hicolor/512x512/stock/media
/usr/share/icons/hicolor/512x512/stock/code
/usr/share/icons/hicolor/512x512/stock/chart
/usr/share/icons/hicolor/512x512/stock/image
/usr/share/icons/hicolor/512x512/stock/navigation
/usr/share/icons/hicolor/512x512/status
/usr/share/icons/hicolor/512x512/places
/usr/share/icons/hicolor/512x512/enotes
/usr/share/icons/hicolor/512x512/actions
/usr/share/icons/hicolor/512x512/mimetypes
/usr/share/icons/hicolor/512x512/emblems
/usr/share/icons/hicolor/512x512/categories
/usr/share/icons/hicolor/512x512/animations
/usr/share/icons/hicolor/512x512/intl
/usr/share/icons/hicolor/512x512/filesystems
/usr/share/icons/hicolor/24x24/stock/object
/usr/share/icons/hicolor/24x24/stock/form
/usr/share/icons/hicolor/24x24/stock/io
/usr/share/icons/hicolor/24x24/stock/net
/usr/share/icons/hicolor/24x24/stock/text
/usr/share/icons/hicolor/24x24/stock/table
/usr/share/icons/hicolor/24x24/stock/data
/usr/share/icons/hicolor/24x24/stock/media
/usr/share/icons/hicolor/24x24/stock/code
/usr/share/icons/hicolor/24x24/stock/chart
/usr/share/icons/hicolor/24x24/stock/image
/usr/share/icons/hicolor/24x24/stock/navigation
/usr/share/icons/hicolor/24x24/places
/usr/share/icons/hicolor/24x24/enotes
/usr/share/icons/hicolor/24x24/actions
/usr/share/icons/hicolor/24x24/mimetypes
/usr/share/icons/hicolor/24x24/emblems
/usr/share/icons/hicolor/24x24/categories
/usr/share/icons/hicolor/24x24/intl
/usr/share/icons/hicolor/24x24/filesystems
/usr/share/icons/hicolor/24x24/devices
/usr/share/icons/hicolor/scalable/stock/object
/usr/share/icons/hicolor/scalable/stock/form
/usr/share/icons/hicolor/scalable/stock/io
/usr/share/icons/hicolor/scalable/stock/net
/usr/share/icons/hicolor/scalable/stock/text
/usr/share/icons/hicolor/scalable/stock/table
```

Buscar shellscripts. **find / -type f -name *.sh**

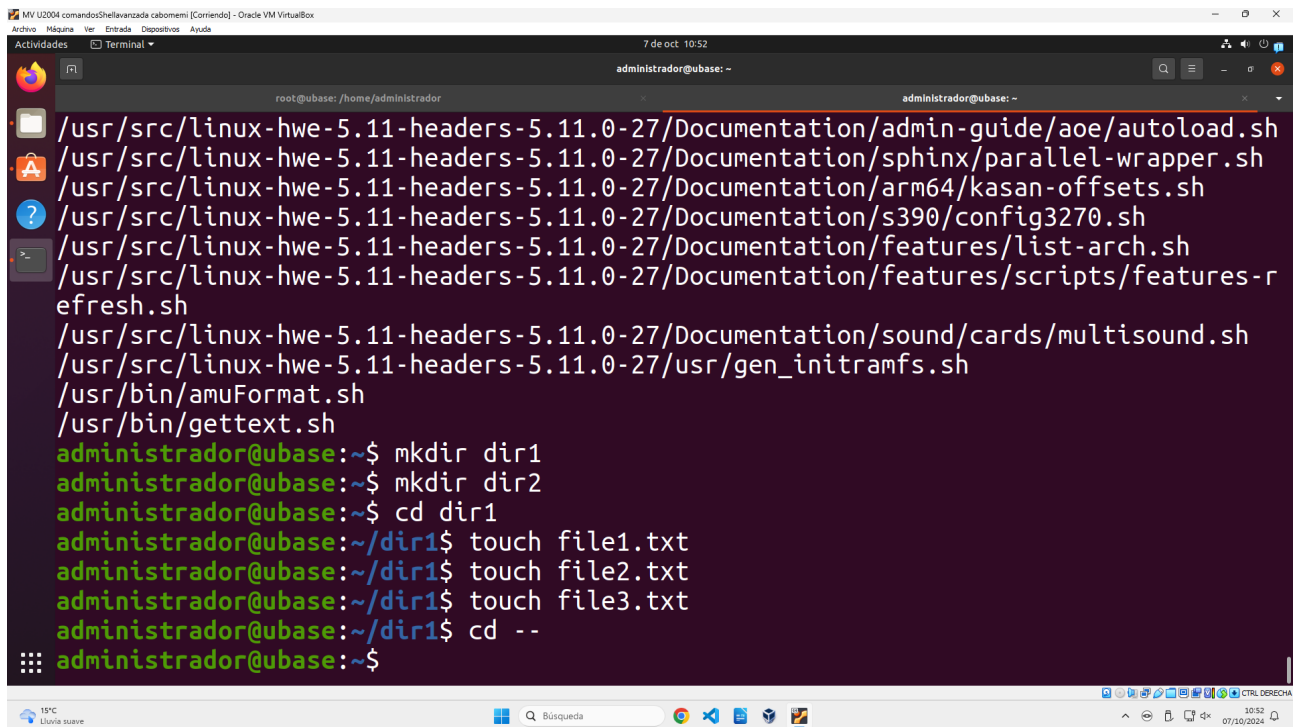


```
root@ubase: /home/administrador
find / -type f -name *.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/alpha/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/parisc/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/parisc/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/parisc/boot/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/ntos2/boot/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/kernel/prom_init_check.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/kernel/systbl_chk.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/kernel/vdso32/gen_vdso_offsets.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/kernel/vdso64/gen_vdso_offsets.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/boot/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/tools/relocs_check.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/tools/gcc-check-nprofile-kernel.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/tools/unrel_branch_check.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/powerpc/tools/head_branch_check.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/x86/kernel/cpu/mkcapflags.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/x86/boot/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/x86/boot/genimage.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/x86/un/vdso/checkundef.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/x86/entry/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/x86/entry/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/xtensa/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/xtensa/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/nd32/kernel/vdso/gen_vdso_offsets.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/m68k/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/m68k/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/m68k/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/sh/kernel/syscalls/syscalltbl.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/arch/sh/boot/compressed/install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/admin-guide/aoe/status.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/admin-guide/aoe/udev-install.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/admin-guide/aoe/autoload.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/sphinx/parallel-wrapper.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/arm64/kasan-offsets.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/s390/config3270.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/features/list-arch.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/features/scripts/features-refresh.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/sound/cards/multisound.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/usr/gen_initramfs.sh
/usr/bin/amfFormat.sh
/usr/bin/gettext.sh
```

rsync

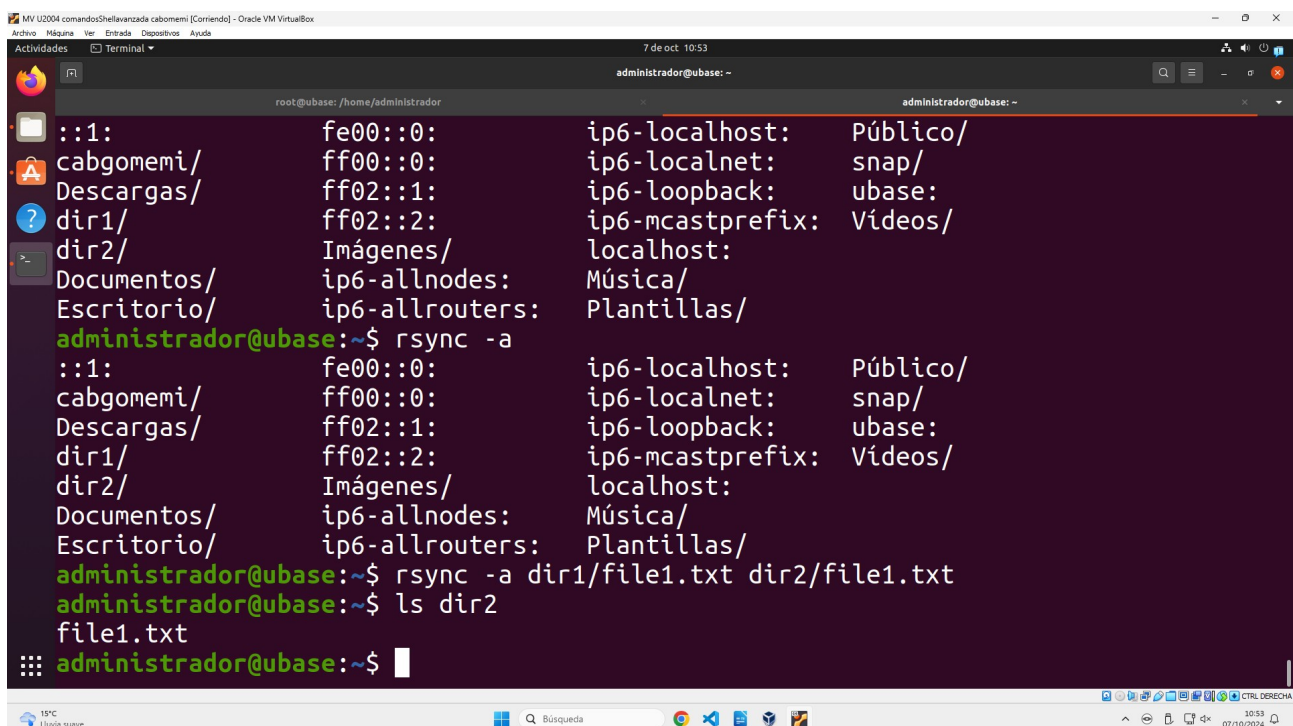
Es una herramienta muy útil para sincronizar archivos y directorios entre diferentes ubicaciones.

Creamos los archivo y los directorios.



```
root@ubase: /home/administrador
administrador@ubase: ~
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/admin-guide/aoe/autoload.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/sphinx/parallel-wrapper.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/arm64/kasan-offsets.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/s390/config3270.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/features/list-arch.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/features/scripts/features-r
efresh.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/Documentation/sound/cards/multisound.sh
/usr/src/linux-hwe-5.11-headers-5.11.0-27/usr/gen_initramfs.sh
/usr/bin/amuFormat.sh
/usr/bin/gettext.sh
administrador@ubase:~$ mkdir dir1
administrador@ubase:~$ mkdir dir2
administrador@ubase:~$ cd dir1
administrador@ubase:~/dir1$ touch file1.txt
administrador@ubase:~/dir1$ touch file2.txt
administrador@ubase:~/dir1$ touch file3.txt
administrador@ubase:~/dir1$ cd --
administrador@ubase:~$
```

Copiado de un archivo localmente → `rsync -a /ruta/origen/archivo.txt /ruta/destino/`



```
root@ubase: /home/administrador
administrador@ubase: ~
::1: fe00::0: ip6-localhost: Público/
cabgomemi/ ff00::0: ip6-localnet: snap/
Descargas/ ff02::1: ip6-loopback: ubase:
dir1/ ff02::2: ip6-mcastprefix: Videos/
dir2/ Imágenes/ localhost:
Documentos/ ip6-allnodes: Música/
Escritorio/ ip6-allrouters: Plantillas/
administrador@ubase:~$ rsync -a
::1: fe00::0: ip6-localhost: Público/
cabgomemi/ ff00::0: ip6-localnet: snap/
Descargas/ ff02::1: ip6-loopback: ubase:
dir1/ ff02::2: ip6-mcastprefix: Videos/
dir2/ Imágenes/ localhost:
Documentos/ ip6-allnodes: Música/
Escritorio/ ip6-allrouters: Plantillas/
administrador@ubase:~$ rsync -a dir1/file1.txt dir2/file1.txt
administrador@ubase:~$ ls dir2
file1.txt
administrador@ubase:~$
```

Sincronizado de un directorio localmente → **rsync -av /path/to/source/ /path/to/destination/**

```

root@ubase: /home/administrador
administrador@ubase: ~
::1: fe00::0: ip6-localhost: Público/
cabgomemi/ ff00::0: ip6-localnet: snap/
Descargas/ ff02::1: ip6-loopback: ubase:
dir1/ ff02::2: ip6-mcastprefix: Vídeos/
dir2/ Imágenes/ localhost:
Documentos/ ip6-allnodes: Música/
Escritorio/ ip6-allrouters: Plantillas/
administrador@ubase:~$ rsync -a dir1/file1.txt dir2/file1.txt
administrador@ubase:~$ ls dir2
file1.txt
administrador@ubase:~$ rsync -av dir1/ dir2/
sending incremental file list
./
file2.txt
file3.txt

sent 218 bytes received 57 bytes 550.00 bytes/sec
total size is 0 speedup is 0.00
administrador@ubase:~$
```

Eliminar archivos en el destino que no están en el origen

rsync -av --delete /ruta/origen/ /ruta/destino/

```

file2.txt
sent 179 bytes received 47 bytes 452.00 bytes/sec
total size is 0 speedup is 0.00
administrador@ubase:~$ ls dir2/
file1.txt file2.txt file3.txt
administrador@ubase:~$ ls dir1
file1.txt file2.txt file3.txt
administrador@ubase:~$ rm dir1/file2.txt
administrador@ubase:~$ rsync -av --delete dir1/ dir2/
sending incremental file list
deleting file2.txt
./

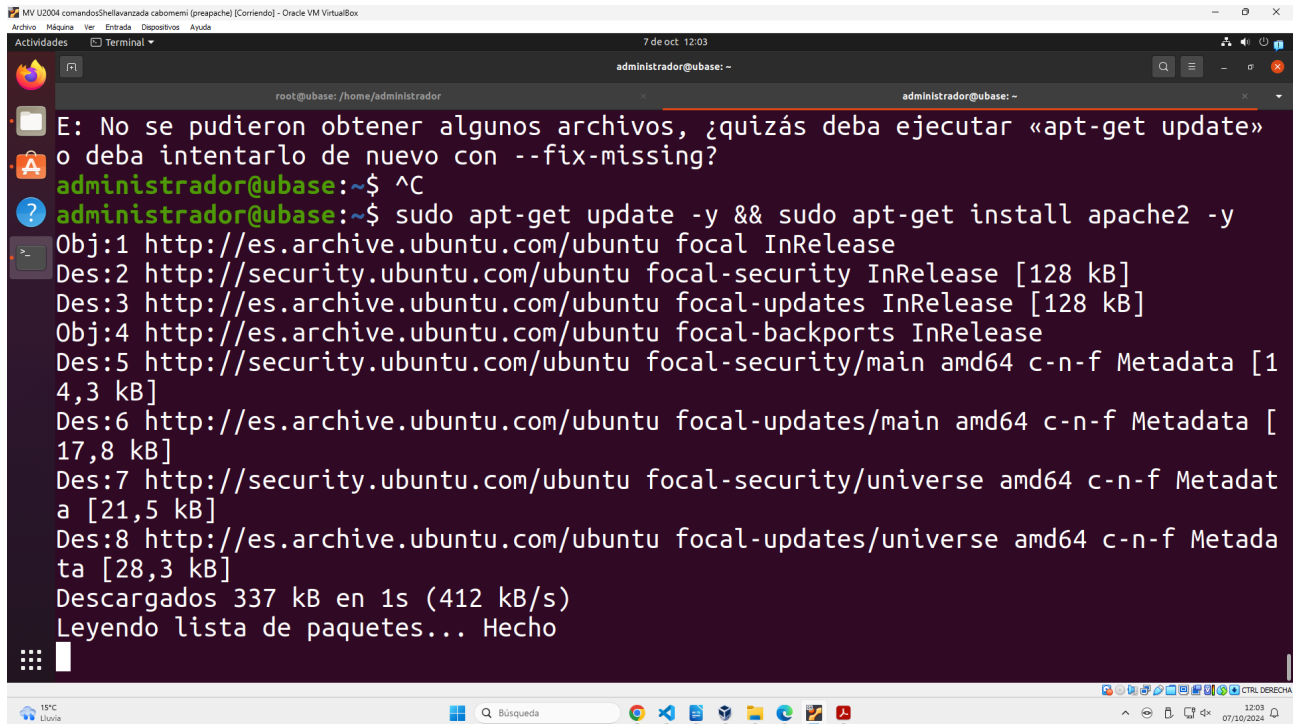
sent 124 bytes received 32 bytes 312.00 bytes/sec
total size is 0 speedup is 0.00
administrador@ubase:~$ ls dir2/
file1.txt file3.txt
administrador@ubase:~$
```

Sincronizado de un directorio remotamente

`rsync -avzP /path/to/source/ user@remote:/path/to/destination/`
Este comando además nos muestra el progreso de la sincronización.

Iptables

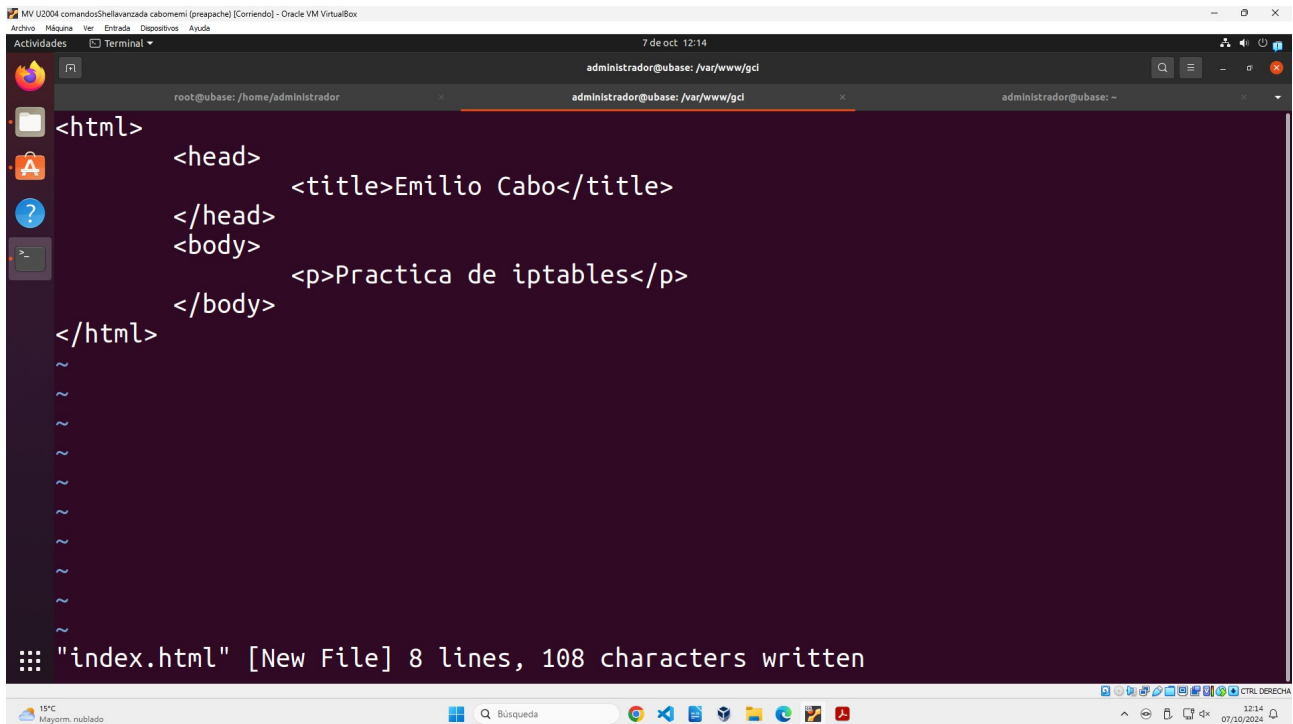
Instalamos apache



```

E: No se pudieron obtener algunos archivos, ¿quizás deba ejecutar «apt-get update»
o deba intentarlo de nuevo con --fix-missing?
administrador@ubase:~$ ^C
administrador@ubase:~$ sudo apt-get update -y && sudo apt-get install apache2 -y
Obj:1 http://es.archive.ubuntu.com/ubuntu focal InRelease
Des:2 http://security.ubuntu.com/ubuntu focal-security InRelease [128 kB]
Des:3 http://es.archive.ubuntu.com/ubuntu focal-updates InRelease [128 kB]
Obj:4 http://es.archive.ubuntu.com/ubuntu focal-backports InRelease
Des:5 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [1
4,3 kB]
Des:6 http://es.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [
17,8 kB]
Des:7 http://security.ubuntu.com/ubuntu focal-security/universe amd64 c-n-f Metadat
a [21,5 kB]
Des:8 http://es.archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metada
ta [28,3 kB]
Descargados 337 kB en 1s (412 kB/s)
Leyendo lista de paquetes... Hecho
```

Configuramos nuestra página web.



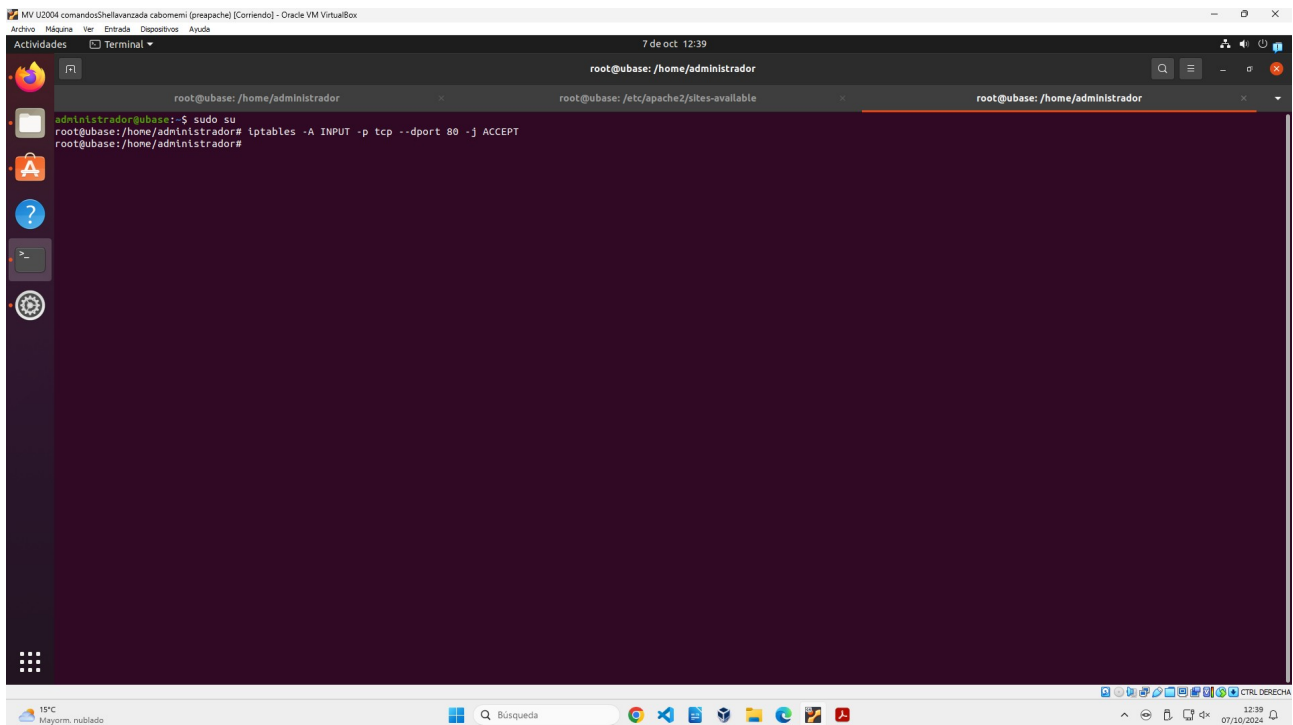
The screenshot shows a terminal window with a dark purple background. The prompt is `administrador@ubase: /var/www/gcl`. The user has created a new file named `index.html` with the following content:

```
<html>
  <head>
    <title>Emilio Cabo</title>
  </head>
  <body>
    <p>Practica de iptables</p>
  </body>
</html>
```

At the bottom of the terminal, a status message reads: `''' "index.html" [New File] 8 lines, 108 characters written`. The terminal window is part of a desktop environment with a taskbar at the bottom showing various application icons and system status information.

Configuramos iptables para que acepten peticiones de http que so por el puerto 80 mediante este comando.

iptables -A INPUT -p tcp --dport 80 -j ACCEPT



The screenshot shows a terminal window with a dark purple background. The prompt is `root@ubase: /home/administrador`. The user has executed the following command:

```
administrador@ubase:~$ sudo su
root@ubase:/home/administrador# iptables -A INPUT -p tcp --dport 80 -j ACCEPT
root@ubase:/home/administrador#
```

The terminal window is part of a desktop environment with a taskbar at the bottom showing various application icons and system status information.

Comprobamos que podemos acceder a el servicio HTTP

The screenshot shows a Linux terminal window with the following commands and output:

```
Syntax OK
root@ubase: /etc/apache2/sites-available# cat /etc/apache2/sites-available/gci.conf
<VirtualHost *:80>
    # The ServerName directive sets the request scheme, hostname and port that
    # the server uses to identify itself. This is used when creating
    # redirection URLs. In the context of virtual hosts, the ServerName
    # specifies what hostname must appear in the request's Host: header to
    # match this virtual host. For the default virtual host (this file) this
    # value is not decisive as it is used as a last resort host regardless.
    # However, you must set it for any further virtual host explicitly.
    ServerName gci.example.com

    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/gci/

    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined

    # For most configuration files from conf-available/, which are
    # enabled or disabled at a global level, it is possible to
    # include a line for only one particular virtual host. For example the
    # following line enables the CGI configuration for this host only
    # after it has been globally disabled with "a2disconf".
    #Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
root@ubase: /etc/apache2/sites-available# vi /etc/apache2/sites-available/gci.conf
root@ubase: /etc/apache2/sites-available# a2ensite gci.conf
Site gci already enabled
root@ubase: /etc/apache2/sites-available# systemctl reload apache2
root@ubase: /etc/apache2/sites-available#
```

The web browser window shows the address bar with "localhost" and the page title "Practica de iptables".

Netplan

Se emplea para configurar la red de una manera centralizada y simplificada.

Se emplean los ficheros de configuración .yaml

Comprobamos la configuración realizada mediante networkManager

```
root@ubuntu:~# sudo su
root@ubuntu:/home/administrador# iptables -A INPUT -p tcp --dport 80 -j ACCEPT
root@ubuntu:/home/administrador# cat /etc/
Display all 227 possibilities (y or n)
root@ubuntu:/home/administrador# cat /etc/ne
netplan/      network/      networkd-dispatcher/ networks      newt/
root@ubuntu:/home/administrador# cat /etc/ne
netplan/      network/      networkd-dispatcher/ networks      newt/
root@ubuntu:/home/administrador# cat /etc/netplan/01-network-manager-all.yaml
bash_history
.bash_logout
.bashrc
cobogonent/
.coche/
.config/
Descargas/
dirs/
root@ubuntu:/home/administrador# cat /etc/netplan/01-network-manager-all.yaml
# Let NetworkManager manage all devices on this system
network:
  version: 2
  renderer: NetworkManager
root@ubuntu:/home/administrador#
```

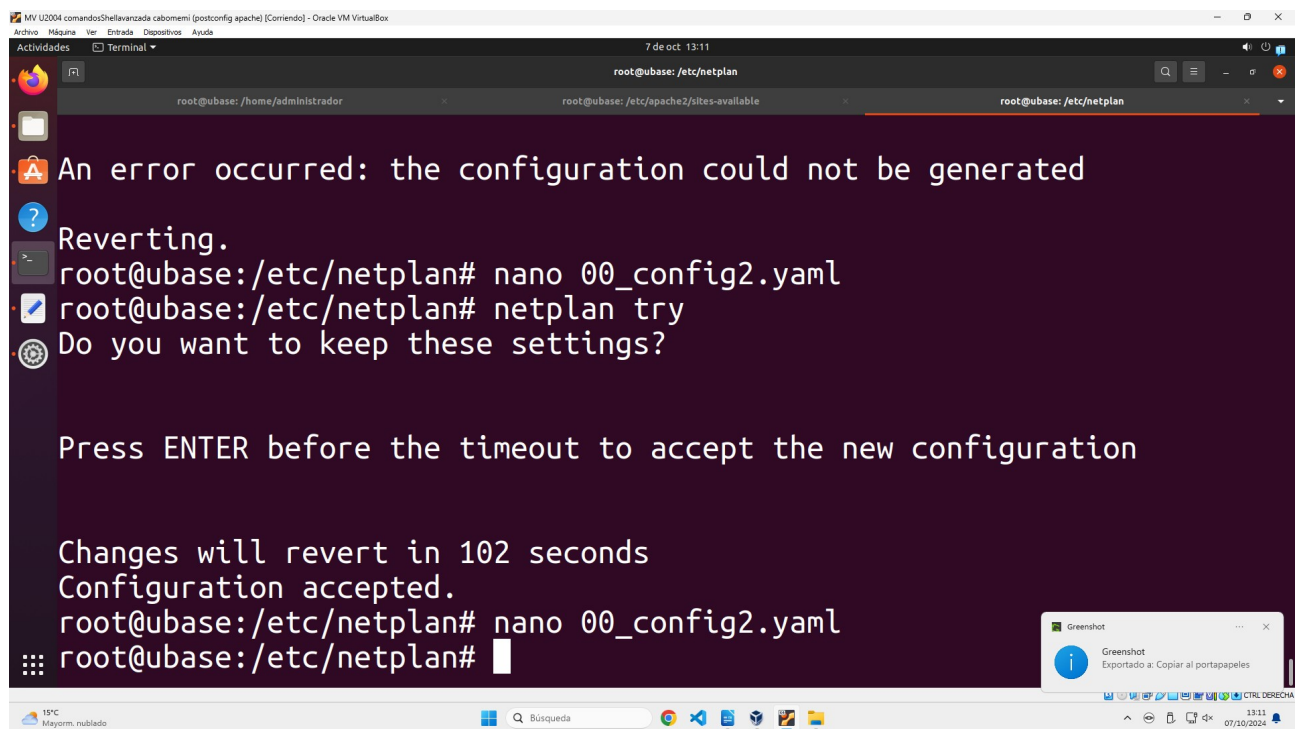
Modificamos la configuración mediante un archivo custom.

```
root@ubuntu:/etc/netplan# nano 01-config2.yaml
01-config2.yaml
version: 2
renderer: networkd
ethernets:
  enp0s3:
    addresses:
      - 172.30.0.10/24
    gateway4: 172.30.0.1
    nameservers:
      addresses: [8.8.8.8, 8.8.4.4]
```

Copiamos el archivo al directorio /etc/netplan

Para probar la configuración de red aplicamos la siguiente configuración.

Sudo netplan try



The screenshot shows a terminal window titled "7 de oct 13:11" with the prompt "root@ubase: /etc/netplan". The terminal output is as follows:

```
An error occurred: the configuration could not be generated
Reverting.
root@ubase:/etc/netplan# nano 00_config2.yaml
root@ubase:/etc/netplan# netplan try
Do you want to keep these settings?

Press ENTER before the timeout to accept the new configuration

Changes will revert in 102 seconds
Configuration accepted.
root@ubase:/etc/netplan# nano 00_config2.yaml
root@ubase:/etc/netplan#
```

The terminal window is part of a desktop environment with a sidebar on the left showing icons for applications like Firefox, Files, and Settings. The top of the window shows the date and time. The bottom of the window shows a taskbar with various application icons and a system tray on the right displaying the date and time.

Bibliografía

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[rsync command in Linux with Examples - GeeksforGeeks](#)

linuxSize

[Rsync Command in Linux with Examples | Linuxize](#)

PhoenixApp

[rsync Command in Linux: Syntax, Options, Examples \(phoenixnap.com\)](#)

Ubuntu Documentation

<https://ubuntu.com/tutorials/install-and-configure-apache#4-setting-up-the-virtualhost-configuration-file>