

## Taller 2\_U2

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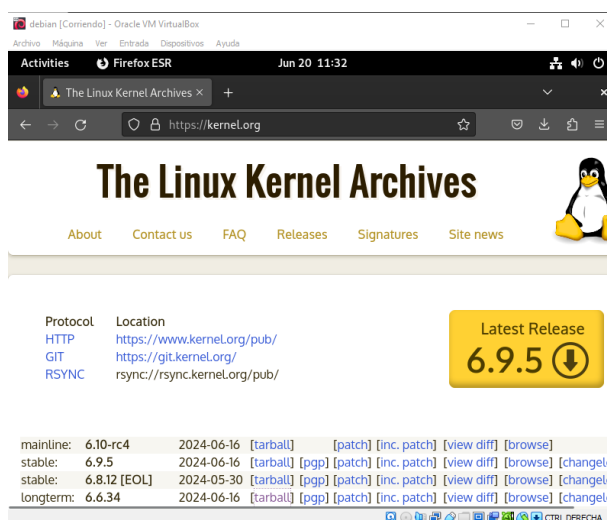
Primero realizamos la compilación del kernel:



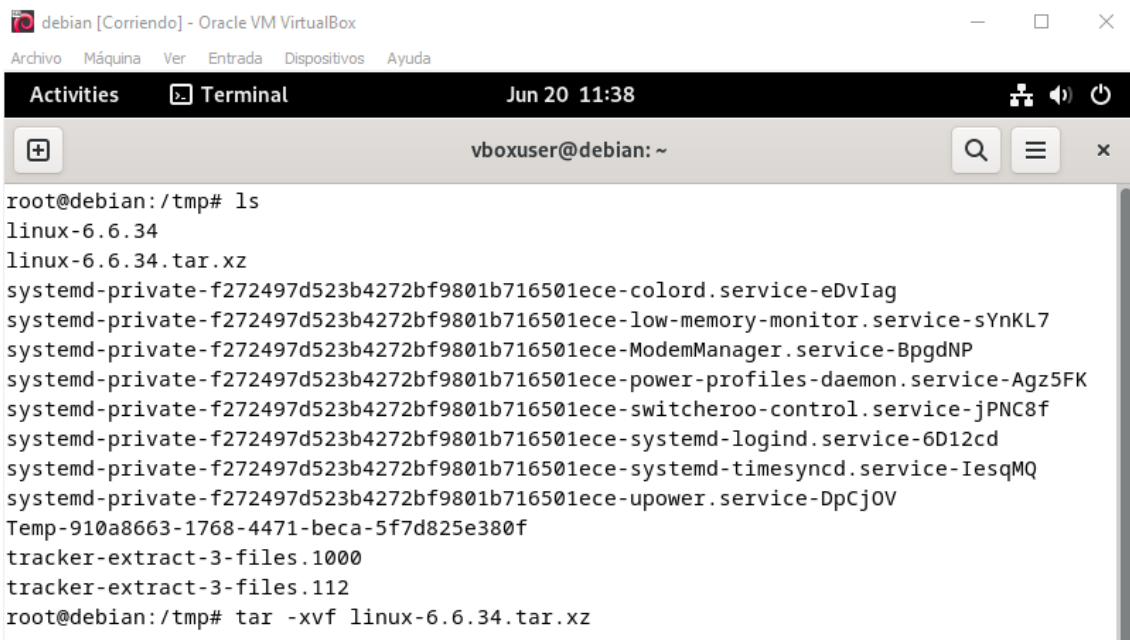
```
root@debian: /tmp# wget https://cdn.kernel.org/pub/linux/kernel/v6.x/linux-6.6.34.tar.xz
bash: wget: command not found
root@debian: /tmp# wget https://cdn.kernel.org/pub/linux/kernel/v6.x/linux-6.6.34.tar.xz
--2024-06-20 11:29:57-- https://cdn.kernel.org/pub/linux/kernel/v6.x/linux-6.6.34.tar.xz
Resolving cdn.kernel.org (cdn.kernel.org)... 199.232.49.176, 2a04:4e42:49::432
Connecting to cdn.kernel.org (cdn.kernel.org)|199.232.49.176|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 140238292 (134M) [application/x-xz]
Saving to: 'linux-6.6.34.tar.xz'

linux-6.6.34.tar.xz  11%[=>] 15.64M  2.10MB/s  eta 97s
```

Abrimos el terminal en primer lugar y con el comando “su root” para ingresar en modo administrador y nos vamos al tmp con el comando “cd /tmp” y hay descargamos el kernel que queremos en este caso con el comando “wget (link de descarga del kernel)” para comenzar con la descarga.



El link del kernel lo sacamos de la página web “kernel.org” y le damos click derecho al que queramos en la parte de “tarball”, e copiamos el link para luego usarlo con el comando wget.



```
debian [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities Terminal Jun 20 11:38
vboxuser@debian: ~
root@debian:/tmp# ls
linux-6.6.34
linux-6.6.34.tar.xz
systemd-private-f272497d523b4272bf9801b716501ece-colord.service-eDvIag
systemd-private-f272497d523b4272bf9801b716501ece-low-memory-monitor.service-sYnKL7
systemd-private-f272497d523b4272bf9801b716501ece-ModemManager.service-BpgdNP
systemd-private-f272497d523b4272bf9801b716501ece-power-profiles-daemon.service-Agz5FK
systemd-private-f272497d523b4272bf9801b716501ece-switcheroo-control.service-jPNC8f
systemd-private-f272497d523b4272bf9801b716501ece-systemd-logind.service-6D12cd
systemd-private-f272497d523b4272bf9801b716501ece-systemd-timesyncd.service-IesqMQ
systemd-private-f272497d523b4272bf9801b716501ece-upower.service-DpCjOV
Temp-910a8663-1768-4471-beca-5f7d825e380f
tracker-extract-3-files.1000
tracker-extract-3-files.112
root@debian:/tmp# tar -xvf linux-6.6.34.tar.xz
```

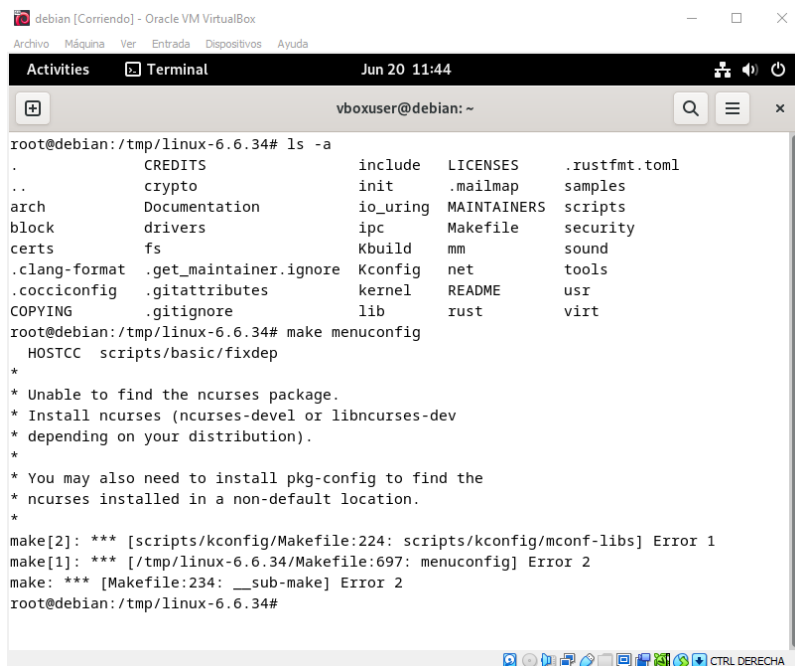
Usamos el comando “ls” en la carpeta donde descargamos en este caso se usó el “cd /tmp” que se recomendó en el video de la descarga.

Vizualisamos que el archivo del kernel este hay y seguimos con la extracción que se realiza con el comando “tar -xvf (nombre del kernel insatalado)”



```
debian [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities Terminal Jun 20 11:38
vboxuser@debian: ~
root@debian:/tmp# cd linux-6.6.34
root@debian:/tmp/linux-6.6.34# ls -a
.          CREDITS          include          LICENSES         .rustfmt.toml
..         crypto          init            .mailmap         samples
arch       Documentation    io_uring        MAINTAINERS      scripts
block      drivers         ipc            Makefile         security
certs      fs              Kbuild         mm               sound
.clang-format .get_maintainer.ignore Kconfig         net              tools
.cocciconfig .gitattributes  kernel         README           usr
COPYING    .gitignore      lib            rust             virt
root@debian:/tmp/linux-6.6.34#
```

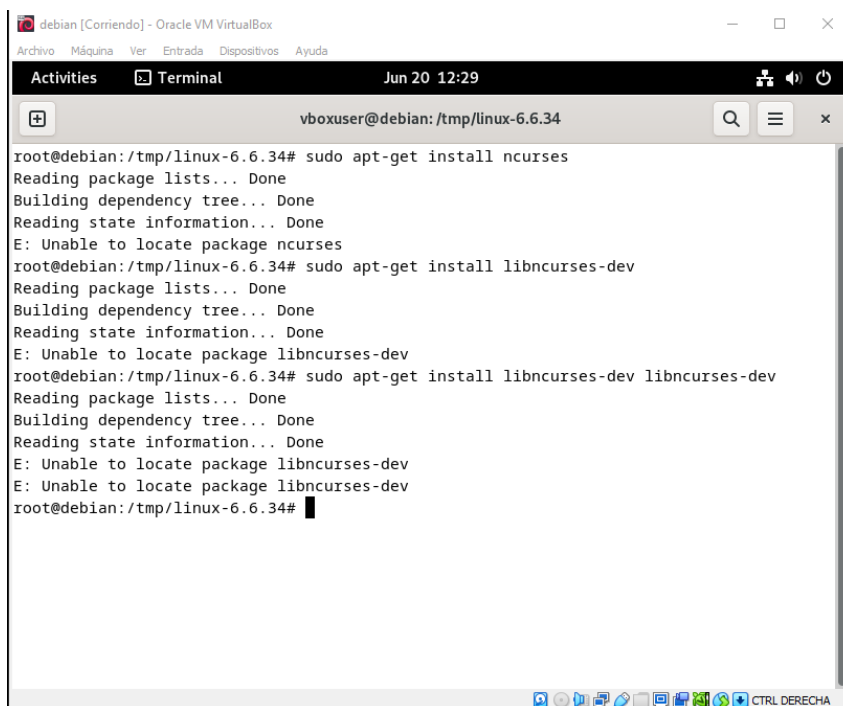
Y procedemos a entrar a la carpeta que se extrajo en la capeta tmp que tiene el nombre del kernel instalado y vemos con el comando “ls -a” que muestra todos los archivos que estén dentro incluso los ocultos.



```
root@debian:/tmp/linux-6.6.34# ls -la
.          CREDITS          include  LICENSES  .rustfmt.toml
..         crypto          init     .mailmap  samples
arch       Documentation    io_uring MAINTAINERS scripts
block      drivers          ipc      Makefile  security
certs      fs              Kbuild   mm         sound
.clang-format .get_maintainer.ignore Kconfig  net        tools
.cocciconfig .gitattributes  kernel  README    usr
COPYING    .gitignore      lib      rust       virt
root@debian:/tmp/linux-6.6.34# make menuconfig
HOSTCC  scripts/basic/fixdep
*
* Unable to find the ncurses package.
* Install ncurses (ncurses-devel or libncurses-dev
* depending on your distribution).
*
* You may also need to install pkg-config to find the
* ncurses installed in a non-default location.
*
make[2]: *** [scripts/kconfig/Makefile:224: scripts/kconfig/mconf-libs] Error 1
make[1]: *** [/tmp/linux-6.6.34/Makefile:697: menuconfig] Error 2
make: *** [Makefile:234: __sub-make] Error 2
root@debian:/tmp/linux-6.6.34#
```

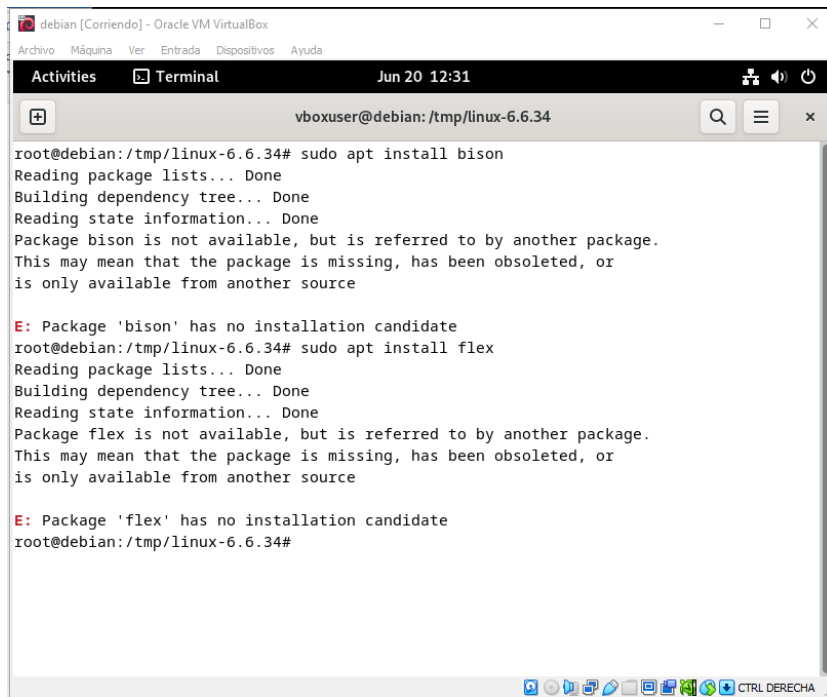
Se usa el comando “make menuconfig” para inicializar un menú para configurar parte del sistema operativo.

Como se visualiza se puede ver que no genera el menuconfig por el motivo de que no tiene el “ncurses-devel o el libncurses-dev”.



```
root@debian:/tmp/linux-6.6.34# sudo apt-get install ncurses
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package ncurses
root@debian:/tmp/linux-6.6.34# sudo apt-get install libncurses-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package libncurses-dev
root@debian:/tmp/linux-6.6.34# sudo apt-get install libncurses-dev libncurses-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package libncurses-dev
E: Unable to locate package libncurses-dev
root@debian:/tmp/linux-6.6.34#
```

Al comento de usar el comando “sudo apt-get intall libncurses-dev” este dice que no se encuentra un paquete con ese nombre por ende pasamos a buscar otra manera de descargarlo.



The screenshot shows a terminal window titled "debian [Corriendo] - Oracle VM VirtualBox". The window has a menu bar with "Archivo", "Máquina", "Ver", "Entrada", "Dispositivos", and "Ayuda". Below the menu bar is a status bar showing "Activities", "Terminal", and the date/time "Jun 20 12:31". The terminal prompt is "vboxuser@debian:/tmp/linux-6.6.34". The user has entered the command "sudo apt install bison". The output shows the package lists being read, the dependency tree being built, and the state information being read. It then states that the package "bison" is not available but is referred to by another package. This may mean that the package is missing, has been obsoleted, or is only available from another source. The error message "E: Package 'bison' has no installation candidate" is displayed. The user then enters the command "sudo apt install flex". The output shows the package lists being read, the dependency tree being built, and the state information being read. It then states that the package "flex" is not available but is referred to by another package. This may mean that the package is missing, has been obsoleted, or is only available from another source. The error message "E: Package 'flex' has no installation candidate" is displayed. The terminal prompt is now "root@debian:/tmp/linux-6.6.34#".

```
root@debian:/tmp/linux-6.6.34# sudo apt install bison
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package bison is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E: Package 'bison' has no installation candidate
root@debian:/tmp/linux-6.6.34# sudo apt install flex
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package flex is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E: Package 'flex' has no installation candidate
root@debian:/tmp/linux-6.6.34#
```

Y al momento de usar los comandos “sudo apt install bison / flex” este nos dice que no está habilitado para la instalación o que el paquete está perdido, obsoleto o esta habilitado para otro punto.