

1. Instalación Oracle VM VirtualBox.

```
dev@dev-ThinkPad-T530: ~/Downloads
dev@dev-ThinkPad-T530:~/Downloads$ sudo dpkg -i virtualbox-7.0_7.0.8-156879~Ubuntu~jammy_amd64.deb

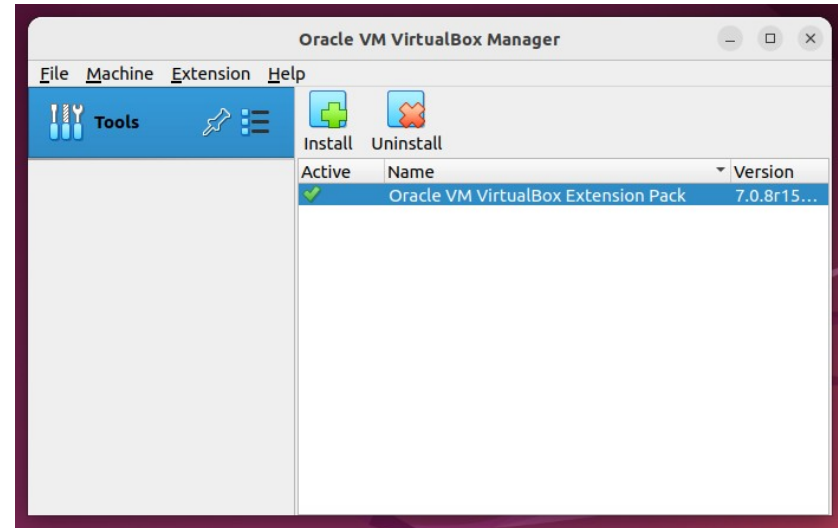
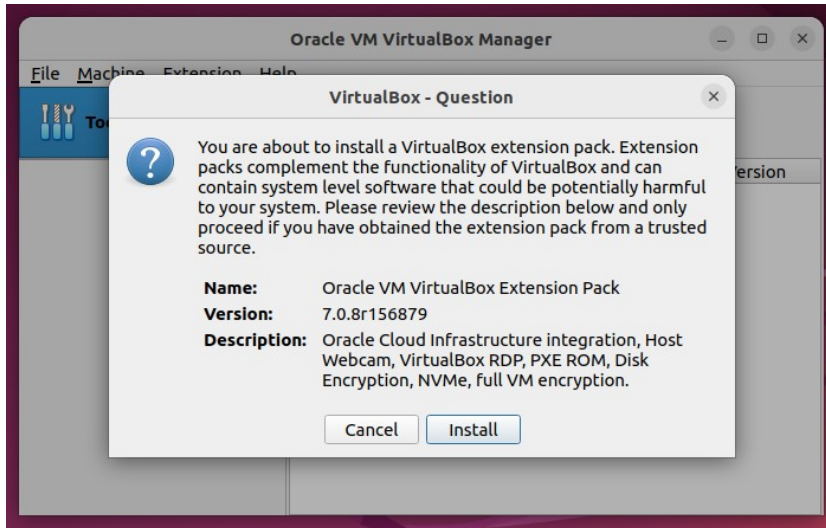
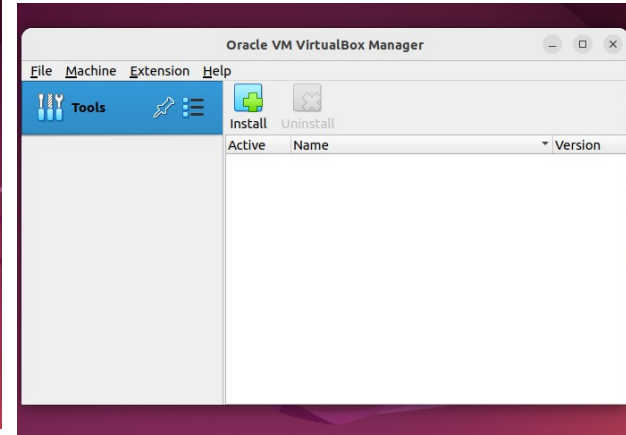
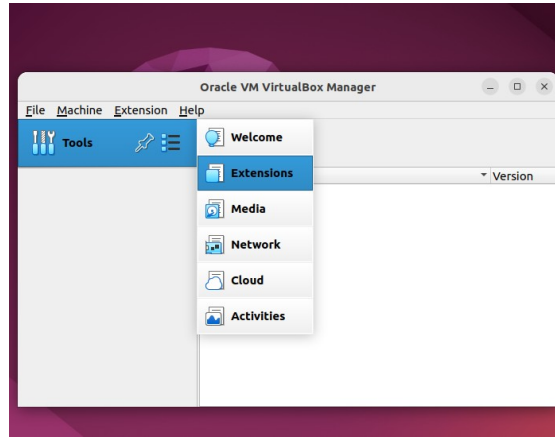
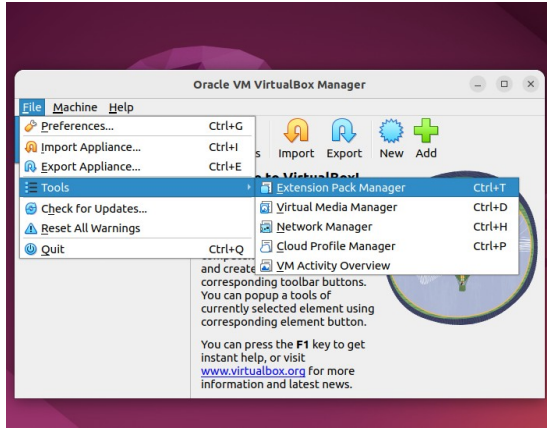
Package libqt5gui5-gles is not installed.
virtualbox-7.0 depends on libqt5help5 (>= 5.15.1); however:
Package libqt5help5 is not installed.
virtualbox-7.0 depends on libqt5opengl5 (>= 5.0.2); however:
Package libqt5opengl5 is not installed.
virtualbox-7.0 depends on libqt5sprintsupport5 (>= 5.0.2); however:
Package libqt5sprintsupport5 is not installed.
virtualbox-7.0 depends on libqt5widgets5 (>= 5.15.1); however:
Package libqt5widgets5 is not installed.
virtualbox-7.0 depends on libqt5x11extras5 (>= 5.6.0); however:
Package libqt5x11extras5 is not installed.
virtualbox-7.0 depends on libqt5xml5 (>= 5.0.2); however:
Package libqt5xml5 is not installed.

dpkg: error processing package virtualbox-7.0 (--install):
dependency problems - leaving unconfigured
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for shared-mime-info (2.1-2) ...
Errors were encountered while processing:
virtualbox-7.0
dev@dev-ThinkPad-T530:~/Downloads$
```

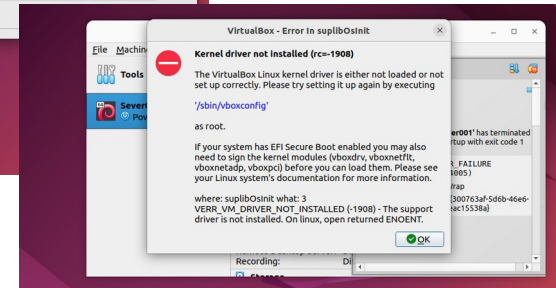
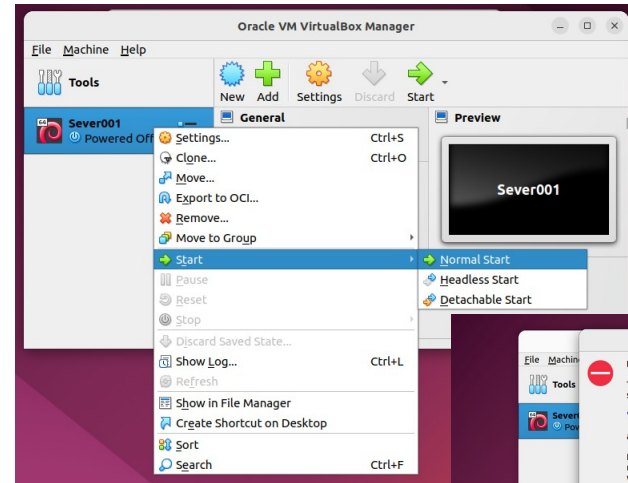
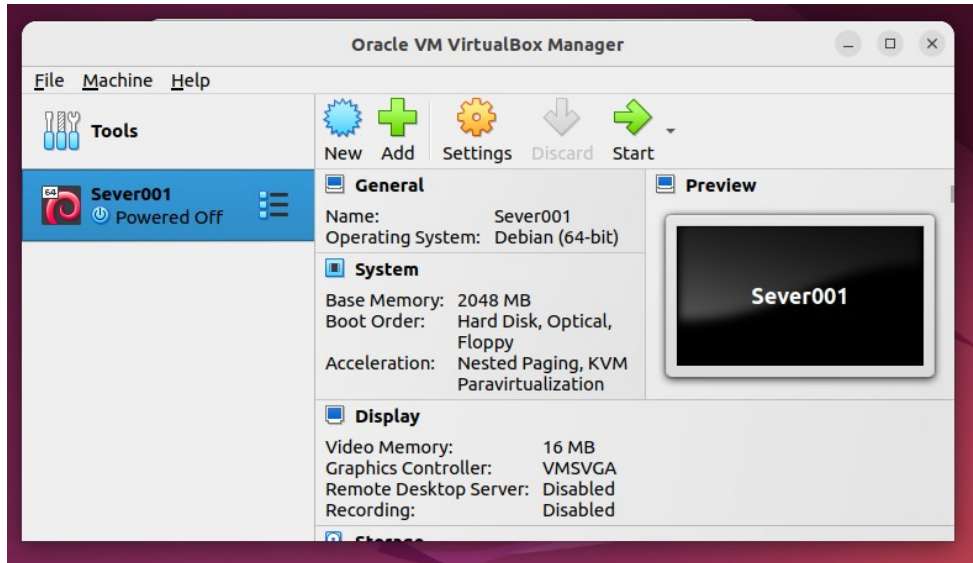
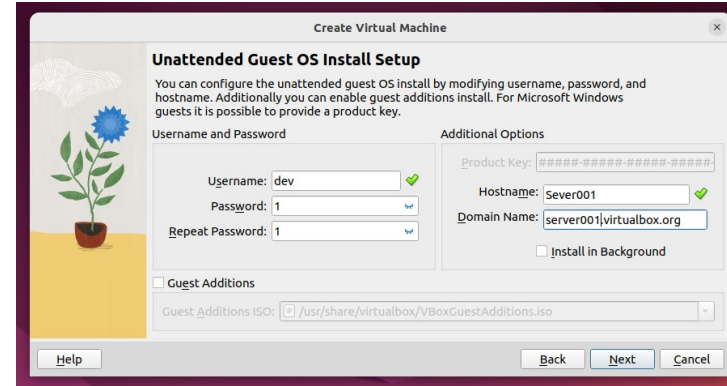
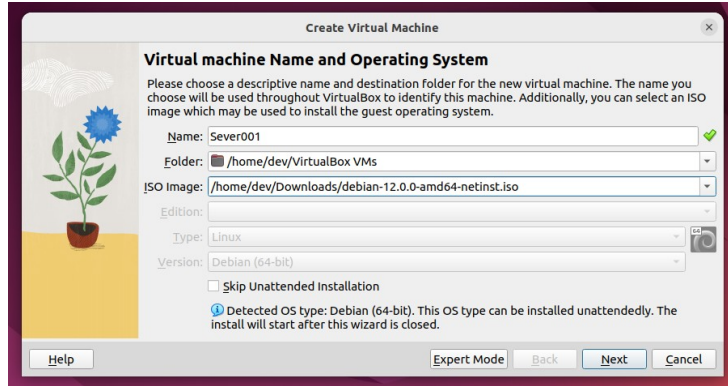
```
dev@dev-ThinkPad-T530: ~/Downloads
dev@dev-ThinkPad-T530:~/Downloads$ sudo apt-get -f install
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Correcting dependencies... Done
The following additional packages will be installed:
libdouble-conversion3 libmd4c0 libpcre2-16-0 libqt5core5a libqt5dbus5
libqt5gui5 libqt5help5 libqt5network5 libqt5opengl5 libqt5sprintsupport5
libqt5sql5 libqt5sql5-sqlite libqt5svg5 libqt5widgets5 libqt5x11extras5
libqt5xml5 libxcb-xinput0 qt5-gtk-platformtheme qttranslations5-l10n
Suggested packages:
qt5-image-formats-plugins qtwallpapers
The following NEW packages will be installed:
libdouble-conversion3 libmd4c0 libpcre2-16-0 libqt5core5a libqt5dbus5
libqt5gui5 libqt5help5 libqt5network5 libqt5opengl5 libqt5sprintsupport5
libqt5sql5 libqt5sql5-sqlite libqt5svg5 libqt5widgets5 libqt5x11extras5
libqt5xml5 libxcb-xinput0 qt5-gtk-platformtheme qttranslations5-l10n
0 upgraded, 19 newly installed, 0 to remove and 19 not upgraded.
1 not fully installed or removed.
Need to get 12,7 MB of archives.
After this operation, 51,1 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://co.archive.ubuntu.com/ubuntu jammy/universe amd64 libdouble-convers
ion3 amd64 3.1.7-4 [39,0 kB]
```



2. Instalación de Extension Pack cuya versión debe coincidir con la de VirtualBox.



3. Instalación del S.O. Linux Distro Debian.



3.1 Para solucionar el error se actualizan las cabeceras del kernel de Linux.

```
dev@dev-ThinkPad-T530:~$ uname -r
5.19.0-43-generic
dev@dev-ThinkPad-T530:~$
```

```
dev@dev-ThinkPad-T530:~$ sudo apt-get update
```

```
dev@dev-ThinkPad-T530:~$ sudo apt-get upgrade
```

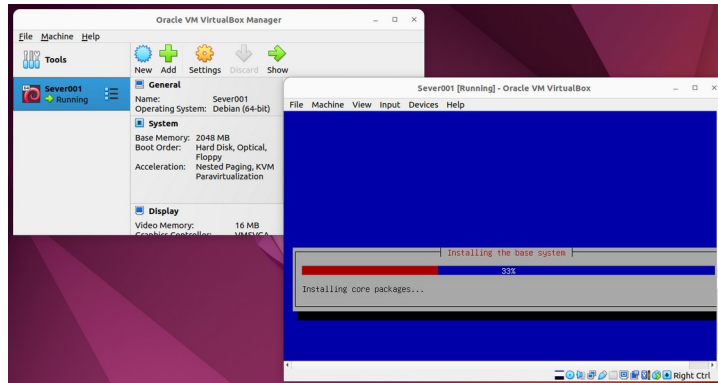
```
dev@dev-ThinkPad-T530:~$ sudo apt-get install build-essential
```

```
dev@dev-ThinkPad-T530:~$ sudo apt-get install linux-headers-$(uname -r)
```

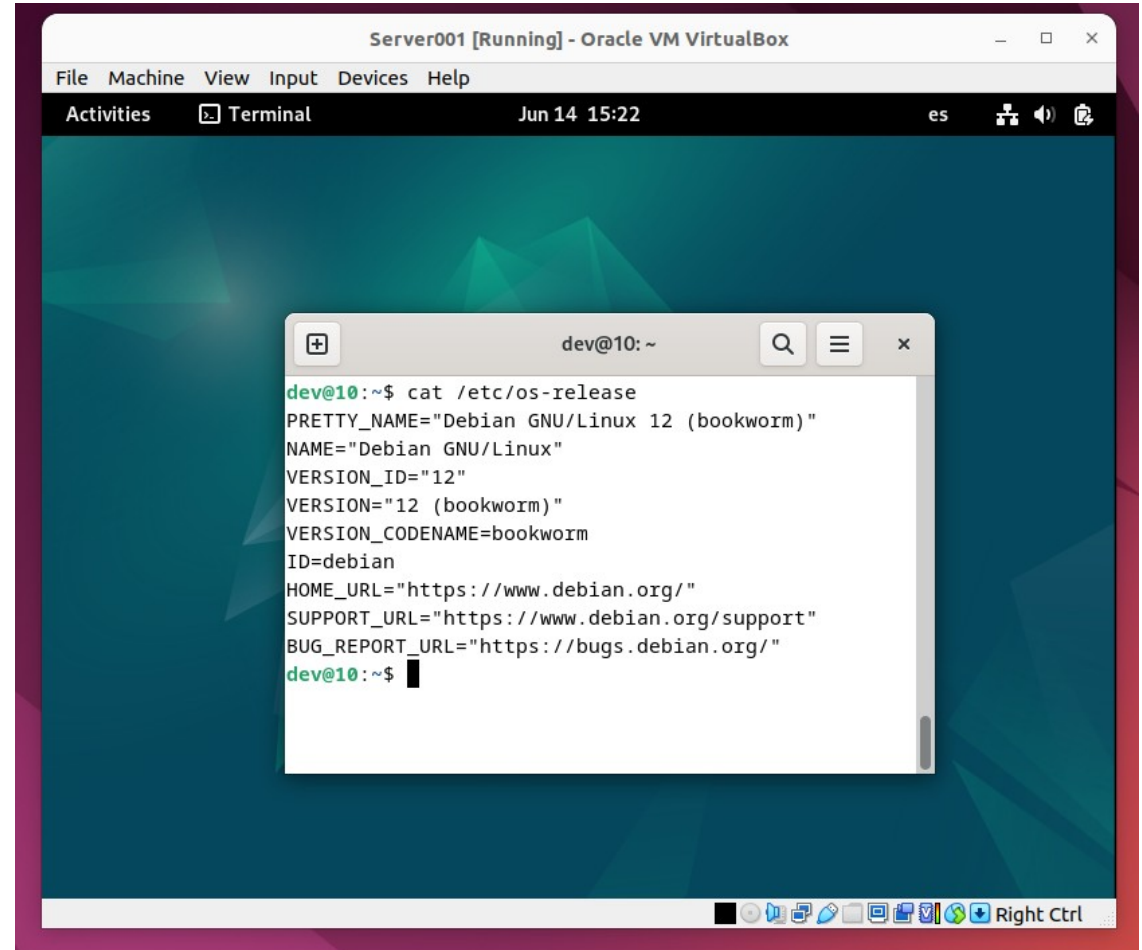
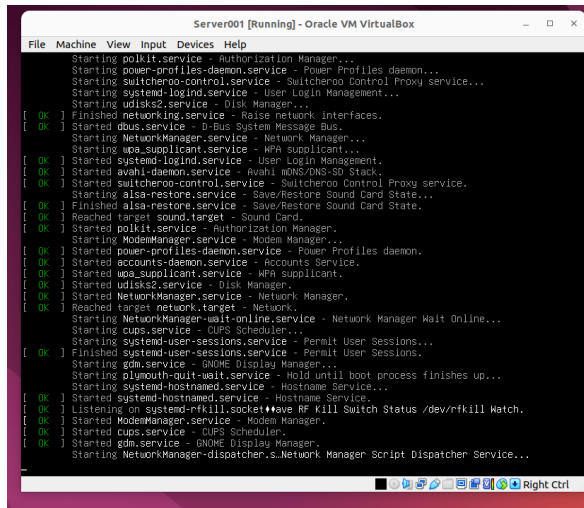
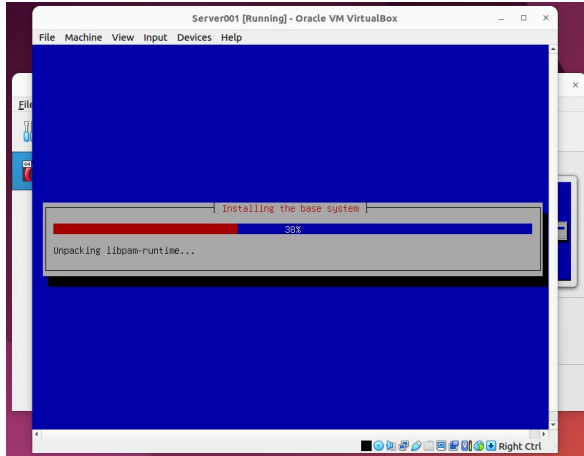
Se cierran todas las ventanas de VirtualBox y se ejecuta el siguiente comando:

```
dev@dev-ThinkPad-T530:~$ sudo /sbin/vboxconfig
```

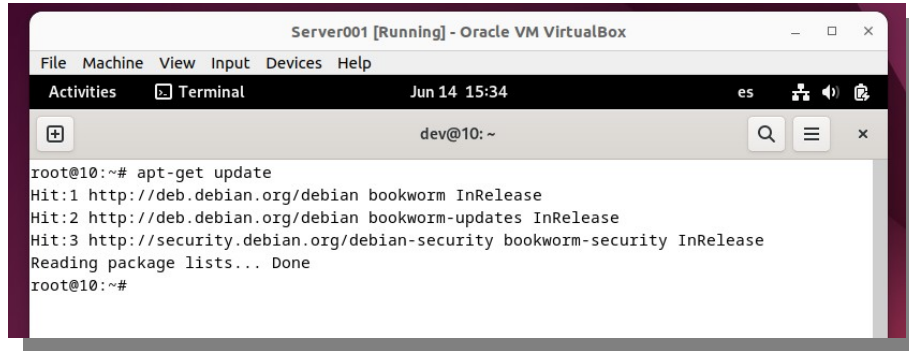
Finalmente se vuelve a iniciar o encender la máquina virtual.



3.2 Se finaliza la instalación del S.O.

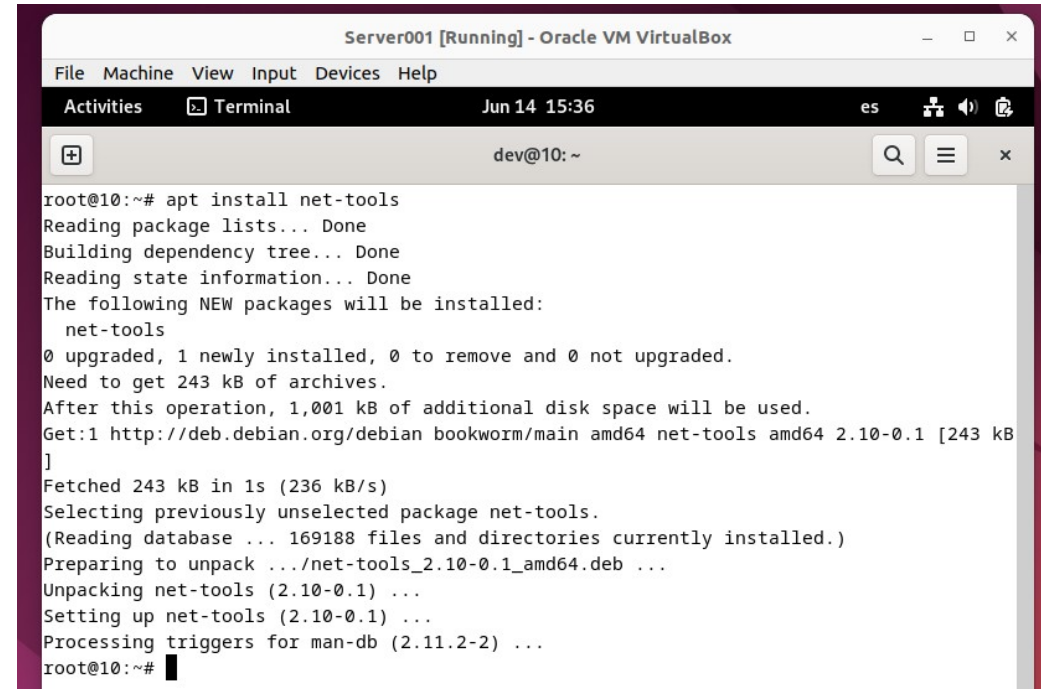


4. Se actualiza el S.O. desde la terminal.



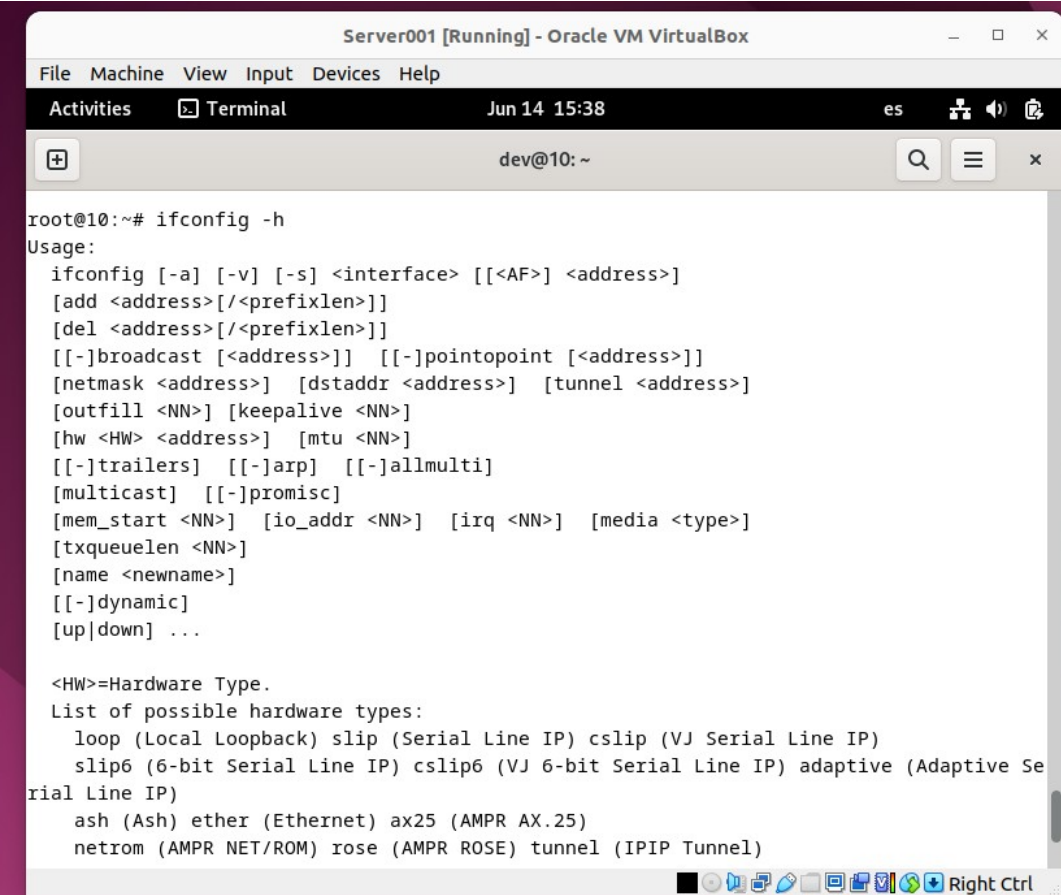
```
Server001 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Jun 14 15:34 es
dev@10: ~
root@10:~# apt-get update
Hit:1 http://deb.debian.org/debian bookworm InRelease
Hit:2 http://deb.debian.org/debian bookworm-updates InRelease
Hit:3 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
root@10:~#
```

5. Se añade la utilidad ifconfig.



```
Server001 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Jun 14 15:36 es
dev@10: ~
root@10:~# apt install net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 243 kB of archives.
After this operation, 1,001 kB of additional disk space will be used.
Get:1 http://deb.debian.org/debian bookworm/main amd64 net-tools amd64 2.10-0.1 [243 kB]
Fetched 243 kB in 1s (236 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 169188 files and directories currently installed.)
Preparing to unpack .../net-tools_2.10-0.1_amd64.deb ...
Unpacking net-tools (2.10-0.1) ...
Setting up net-tools (2.10-0.1) ...
Processing triggers for man-db (2.11.2-2) ...
root@10:~#
```

6. Se obtiene información sobre la herramienta ifconfig.

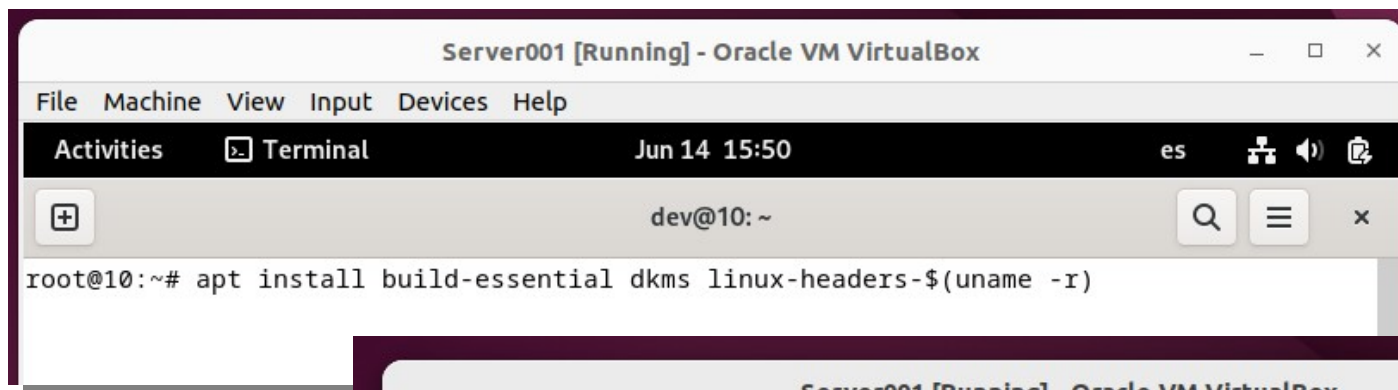


The screenshot shows a terminal window titled "Server001 [Running] - Oracle VM VirtualBox". The window has a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu bar is a status bar showing "Activities", "Terminal", "Jun 14 15:38", "es", and some system icons. The terminal itself has a title bar "dev@10: ~" and a search icon. The command "ifconfig -h" has been executed, and the output is displayed. The output shows the usage of the ifconfig command, including options for adding, deleting, and configuring network interfaces, as well as a list of possible hardware types.

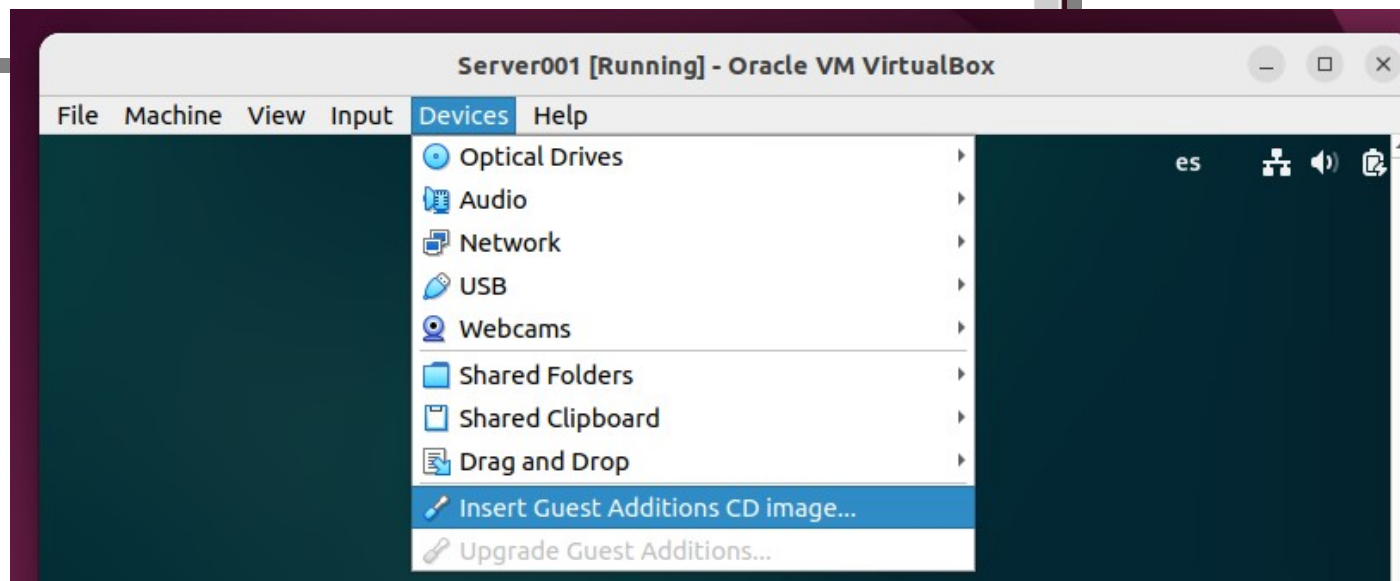
```
root@10:~# ifconfig -h
Usage:
  ifconfig [-a] [-v] [-s] <interface> [[<AF>] <address>]
  [add <address>[/<prefixlen>]]
  [del <address>[/<prefixlen>]]
  [[-]broadcast [<address>]] [[-]pointopoint [<address>]]
  [netmask <address>] [dstaddr <address>] [tunnel <address>]
  [outfill <NN>] [keepalive <NN>]
  [hw <HW> <address>] [mtu <NN>]
  [[-]trailers] [[-]arp] [[-]allmulti]
  [multicast] [[-]promisc]
  [mem_start <NN>] [io_addr <NN>] [irq <NN>] [media <type>]
  [txqueuelen <NN>]
  [name <newname>]
  [[-]dynamic]
  [up|down] ...

<HW>=Hardware Type.
List of possible hardware types:
  loop (Local Loopback) slip (Serial Line IP) cslip (VJ Serial Line IP)
  slip6 (6-bit Serial Line IP) cslip6 (VJ 6-bit Serial Line IP) adaptive (Adaptive Se
rial Line IP)
  ash (Ash) ether (Ethernet) ax25 (AMPR AX.25)
  netrom (AMPR NET/ROM) rose (AMPR ROSE) tunnel (IPIP Tunnel)
```

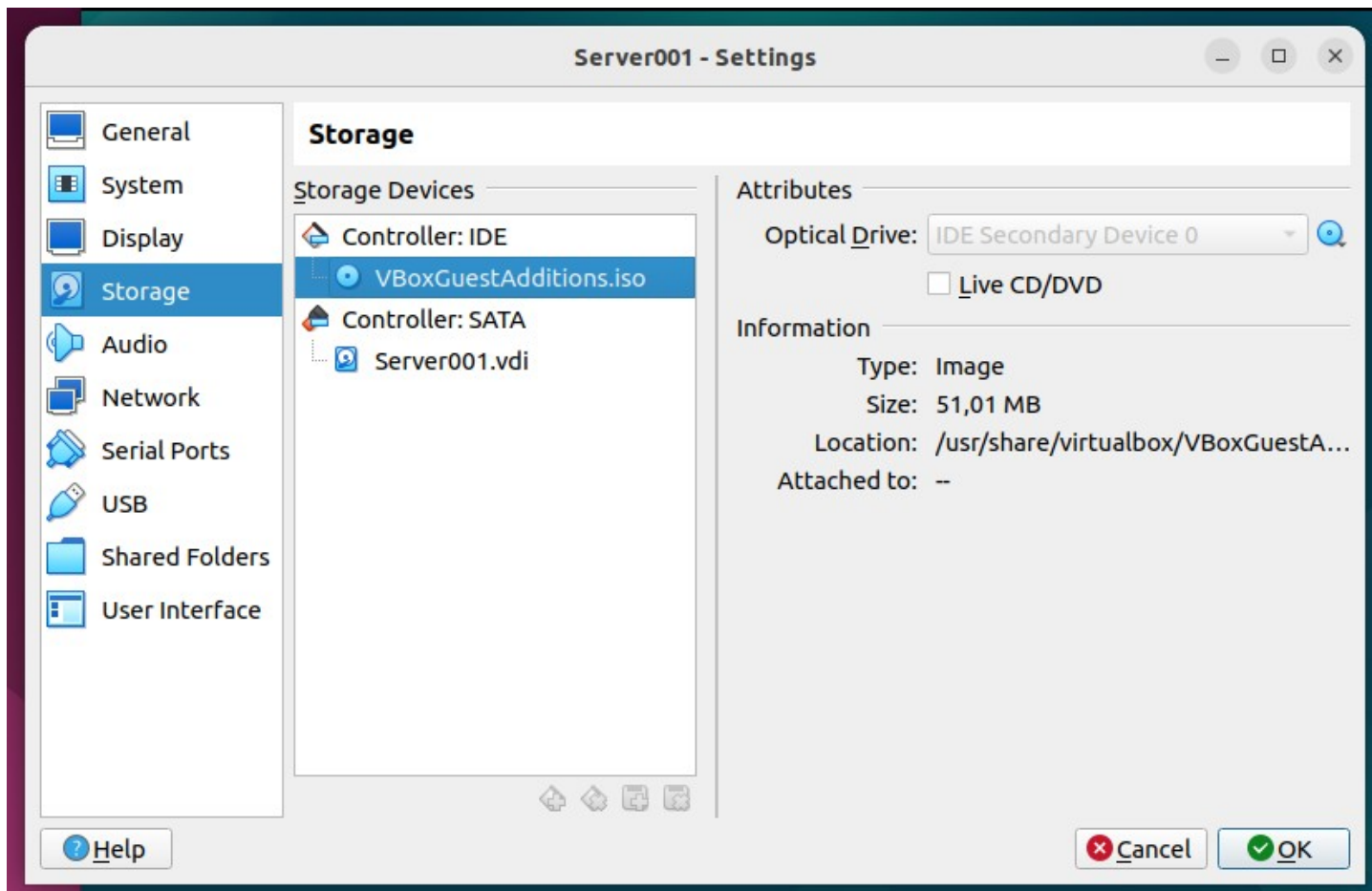
7. Se procede a instalar el plugin de Extension Pack en Debian. Para ello se instalan los paquetes para construir módulos.



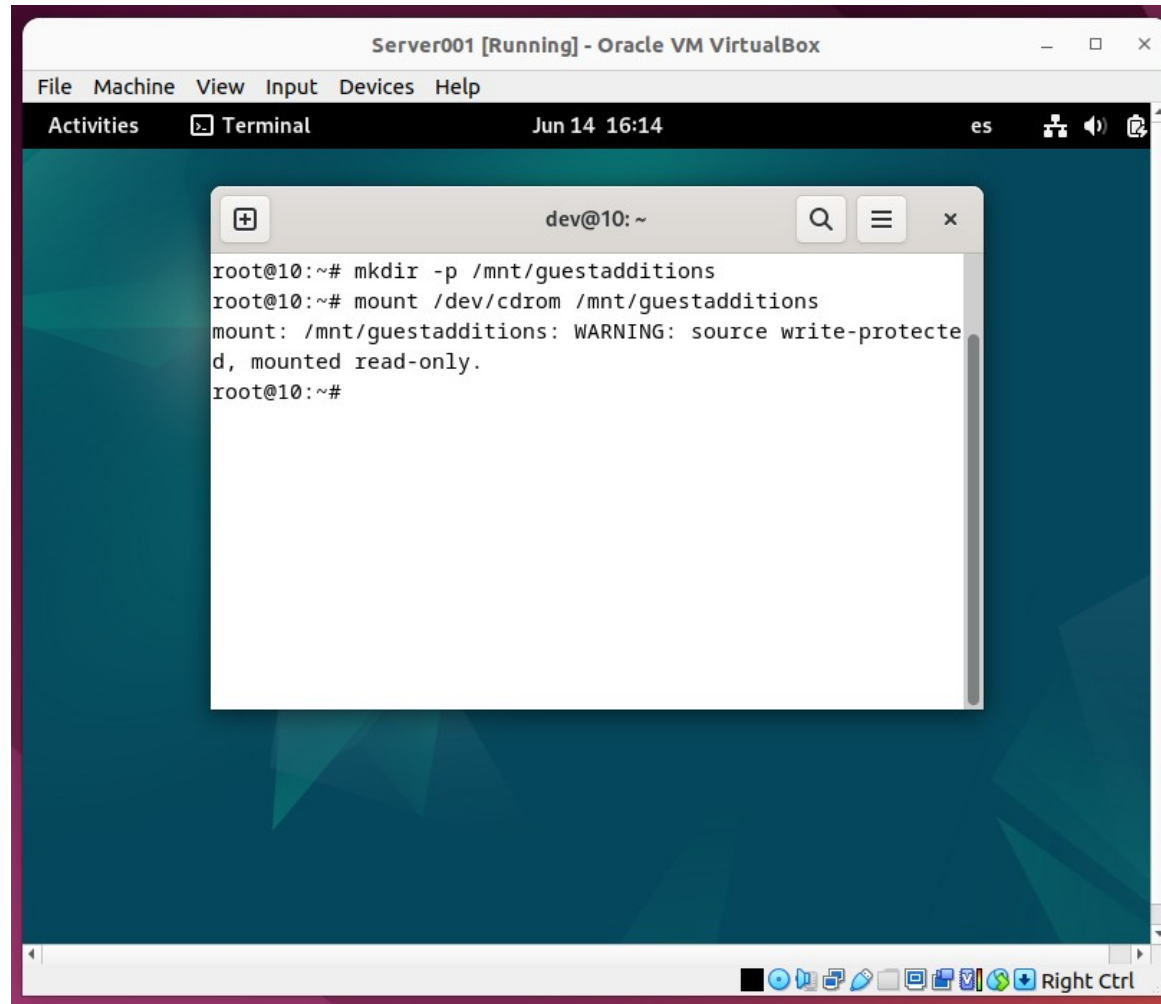
Posteriormente se selecciona la siguiente opción:



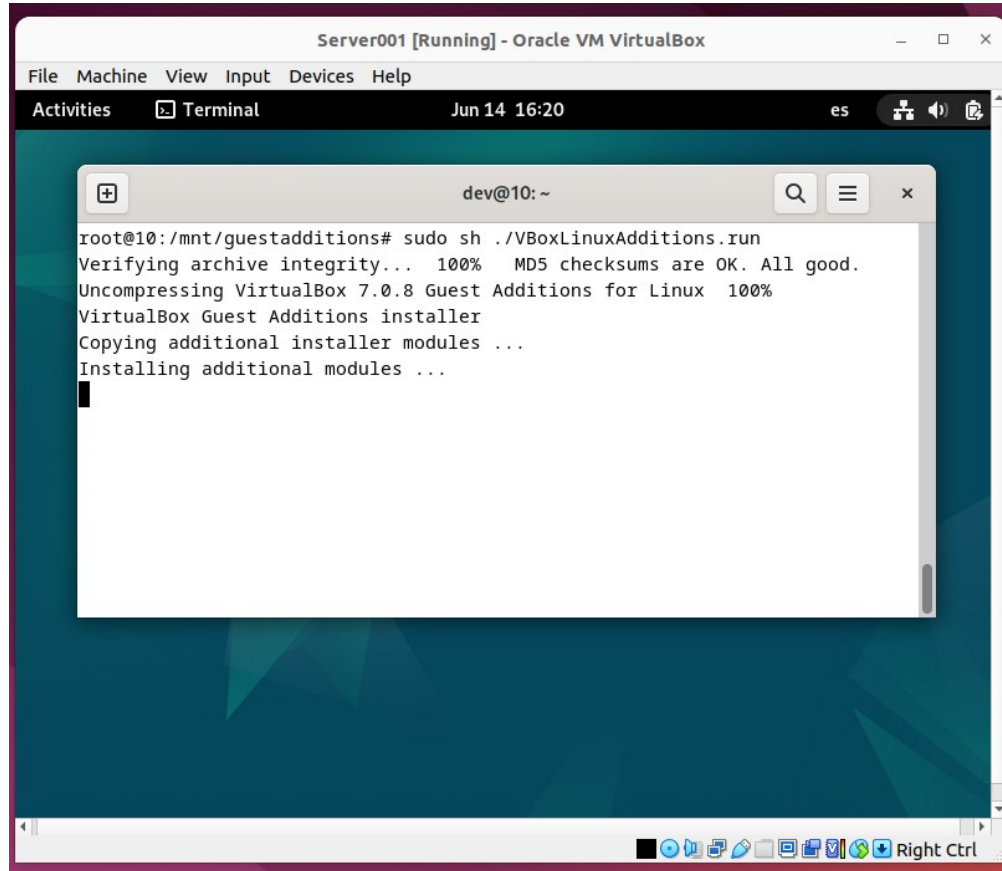
Se valida que
VboxguestAdditions.iso se haya
adjuntado a la configuración
Storage de la MV.



Se monta la imagen ISO.



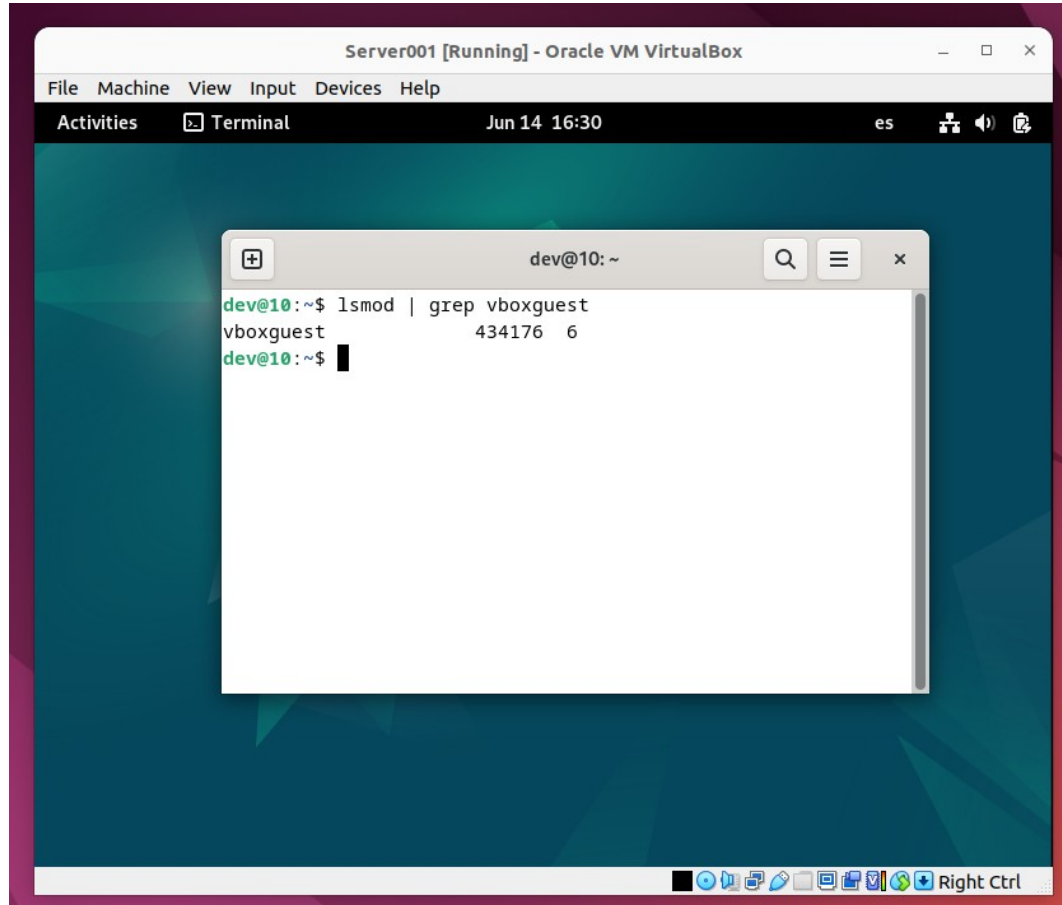
Se ejecuta el script VBoxLinuxAdditions.run para instalar Guest Additions.



The screenshot shows a VirtualBox window titled "Server001 [Running] - Oracle VM VirtualBox". Inside the window, a terminal window is open with the prompt "dev@10: ~". The terminal output shows the execution of the script `./VBoxLinuxAdditions.run` and the progress of the installation.

```
root@10:/mnt/guestadditions# sudo sh ./VBoxLinuxAdditions.run
Verifying archive integrity... 100% MD5 checksums are OK. All good.
Uncompressing VirtualBox 7.0.8 Guest Additions for Linux 100%
VirtualBox Guest Additions installer
Copying additional installer modules ...
Installing additional modules ...
```

Se reinicia la máquina virtual y luego se verifica la instalación y carga del módulo en el kernel.



The image shows a screenshot of an Oracle VM VirtualBox window titled "Server001 [Running] - Oracle VM VirtualBox". The window has a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu bar is a toolbar with "Activities", "Terminal", and a clock showing "Jun 14 16:30". The main area of the window displays a terminal window titled "dev@10: ~". The terminal shows the command `lsmod | grep vboxguest` being executed, with the output `vboxguest 434176 6`. The terminal prompt is `dev@10:~$`. The background of the VM is a dark blue and green abstract pattern. At the bottom of the VM window, there is a taskbar with various icons and a "Right Ctrl" button.

```
dev@10:~$ lsmod | grep vboxguest
vboxguest 434176 6
dev@10:~$
```