Exercise 2

Create a virtual machine with two operating systems, Windows 7 (or Windows 10) and Ubuntu 20.04 (in this order) and configure the bootloader to:

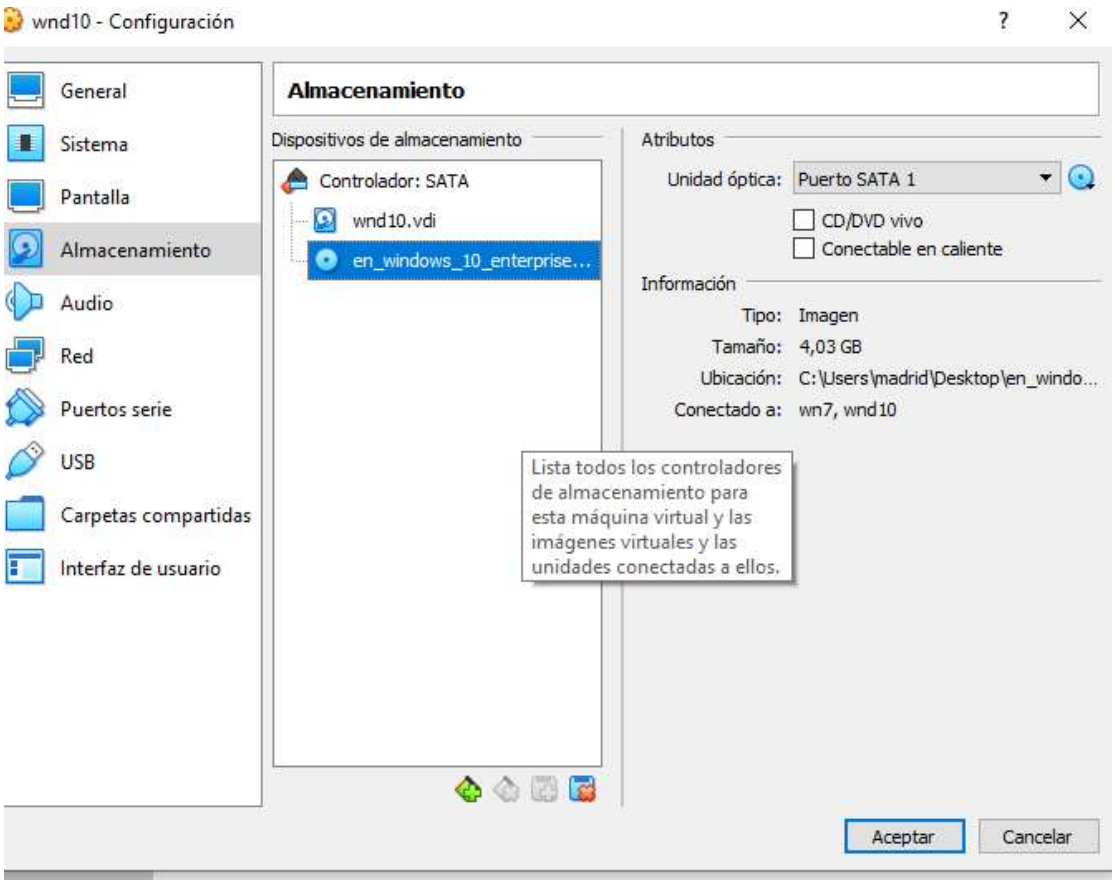
a. Set Windows as default entry and boot after 15 seconds if the user does not select another option in the menu.

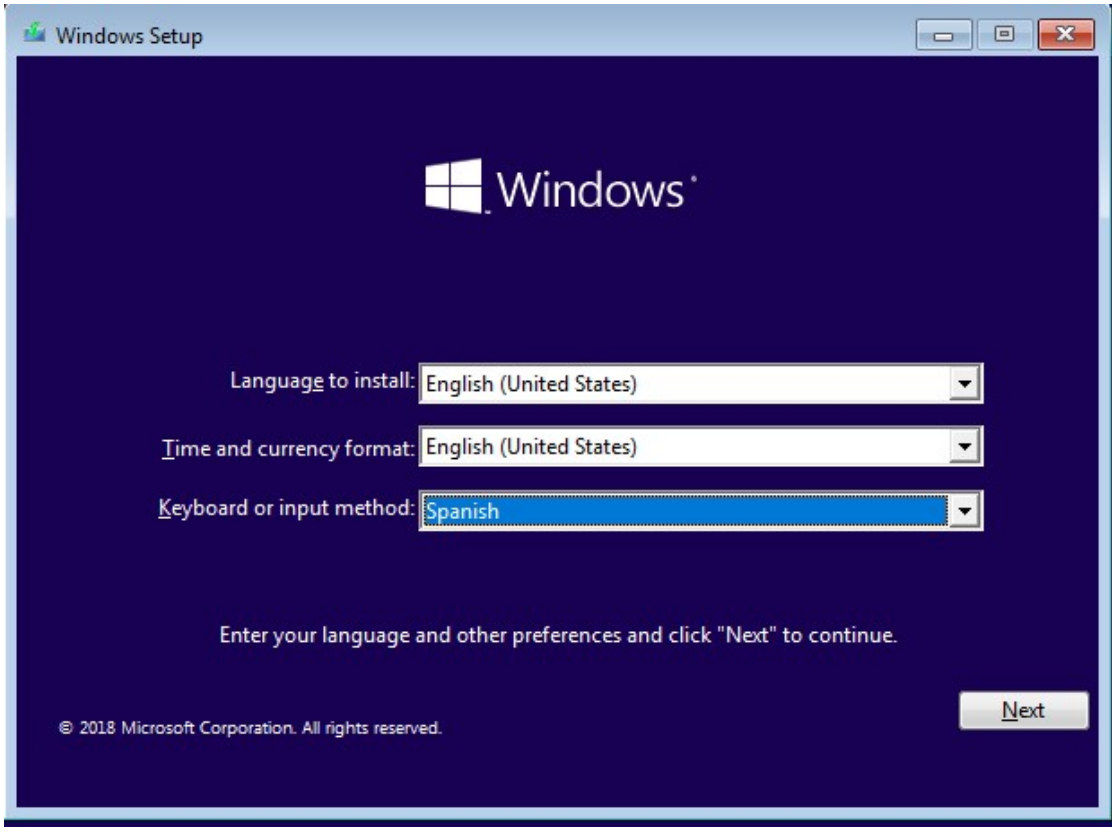
b. Boot Ubuntu without displaying the menu after showing a 10 seconds countdown.

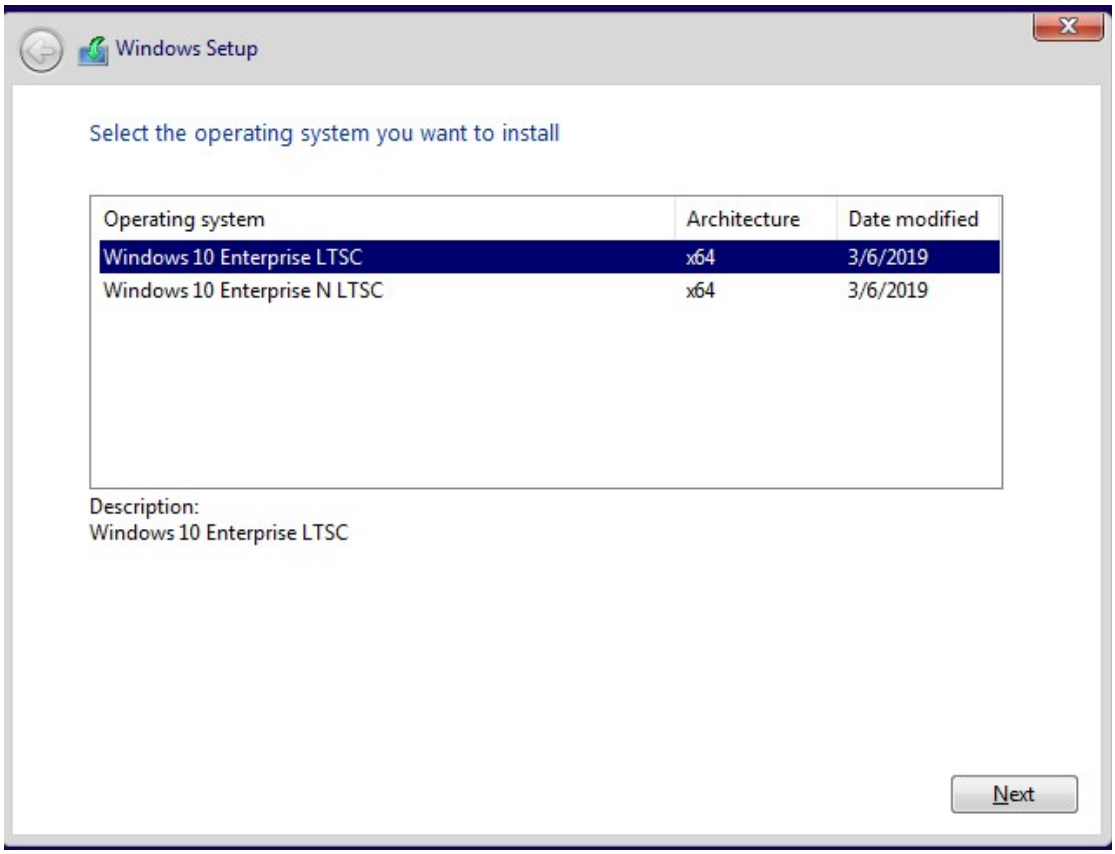
c. Boot Ubuntu without displaying the menu.

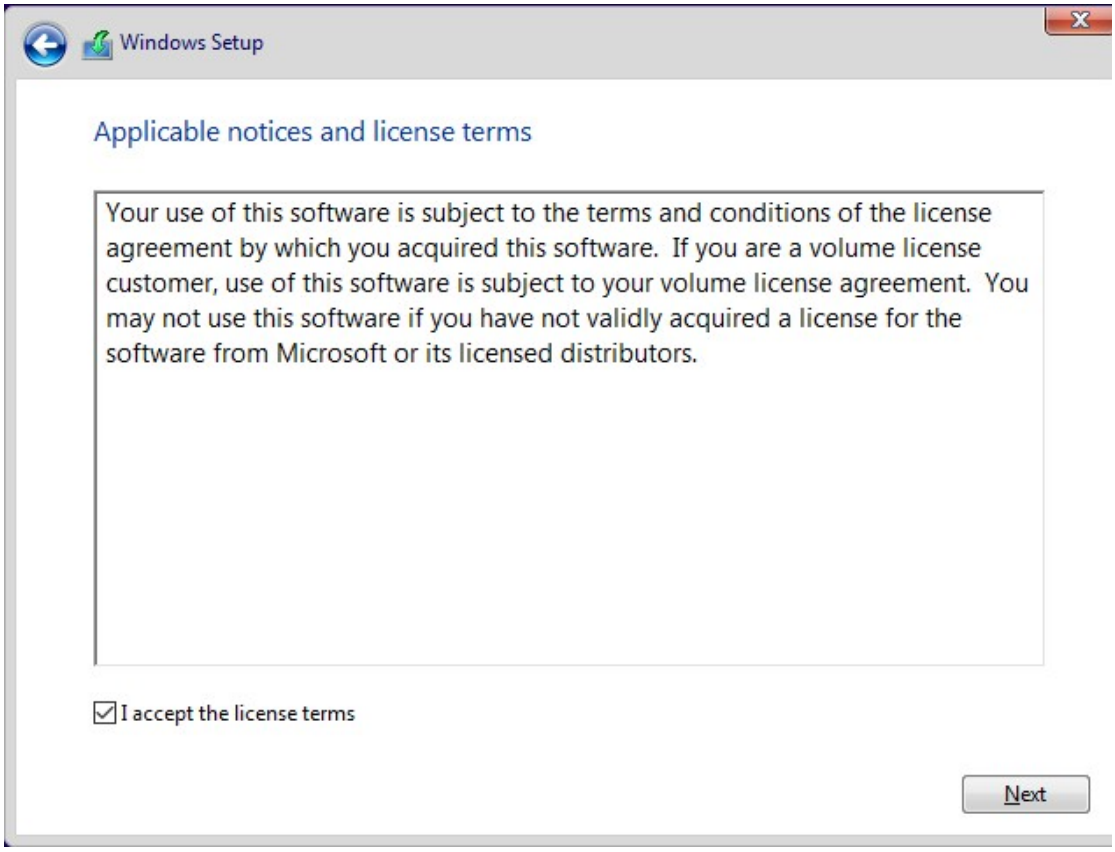
d. Boot Windows without displaying the menu.

Create a virtual machine with two operating systems, Windows 7 (or Windows 10) and Ubuntu 20.04 (in this order)

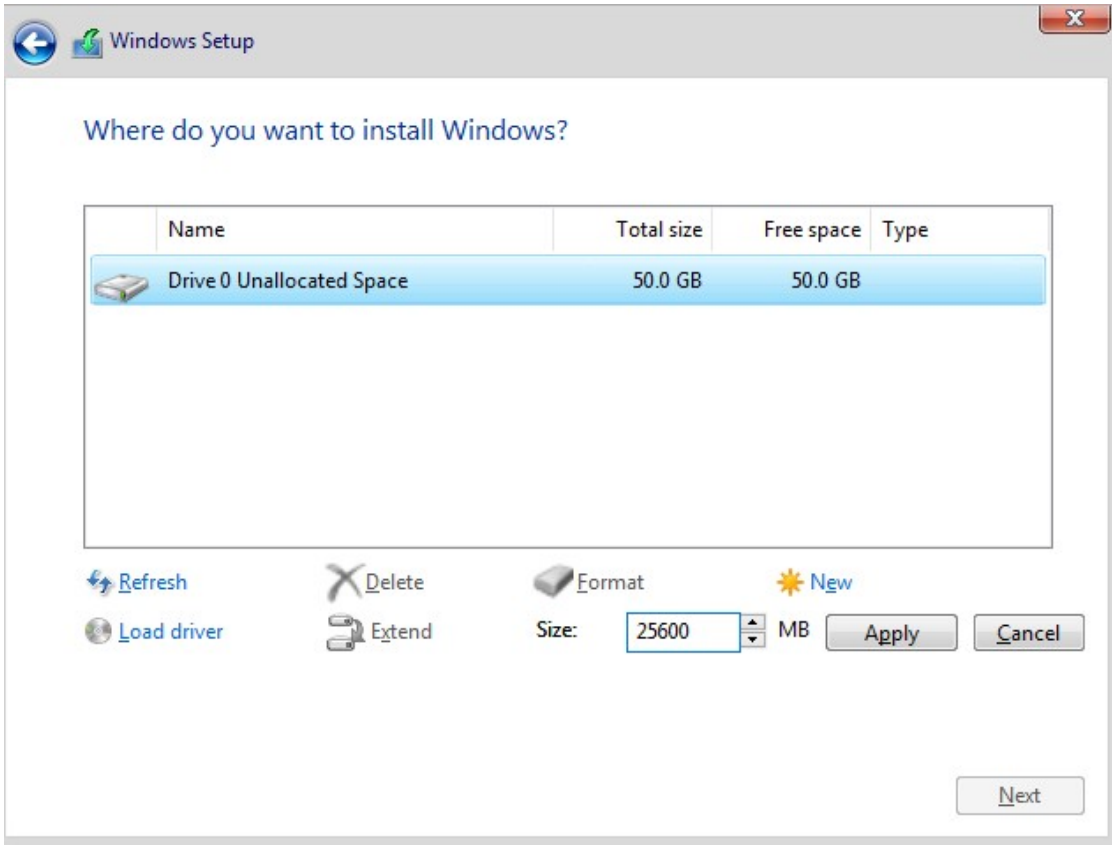


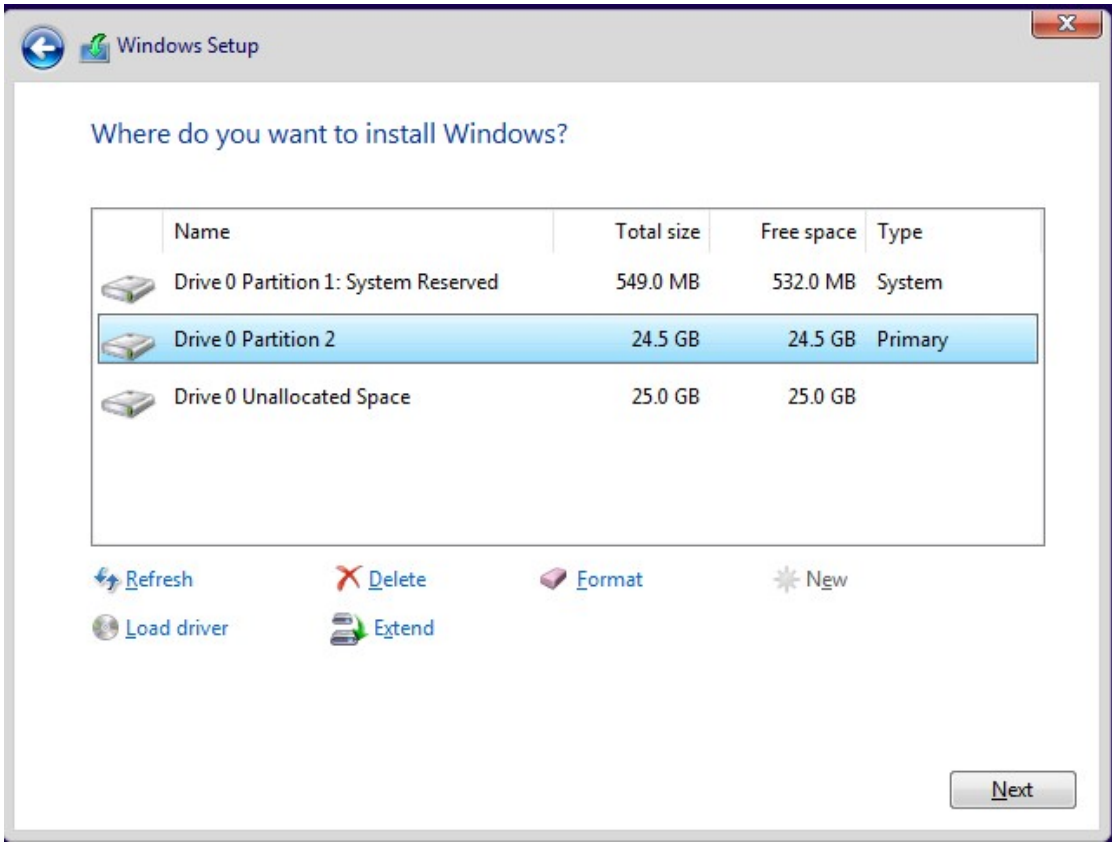

Windows Setup
Windows
Language to install: English (United States)
Time and currency format: English (United States)
Keyboard or input method: Spanish
Enter your language and other preferences and click "Next" to continue.
© 2018 Microsoft Corporation. All rights reserved.
Next

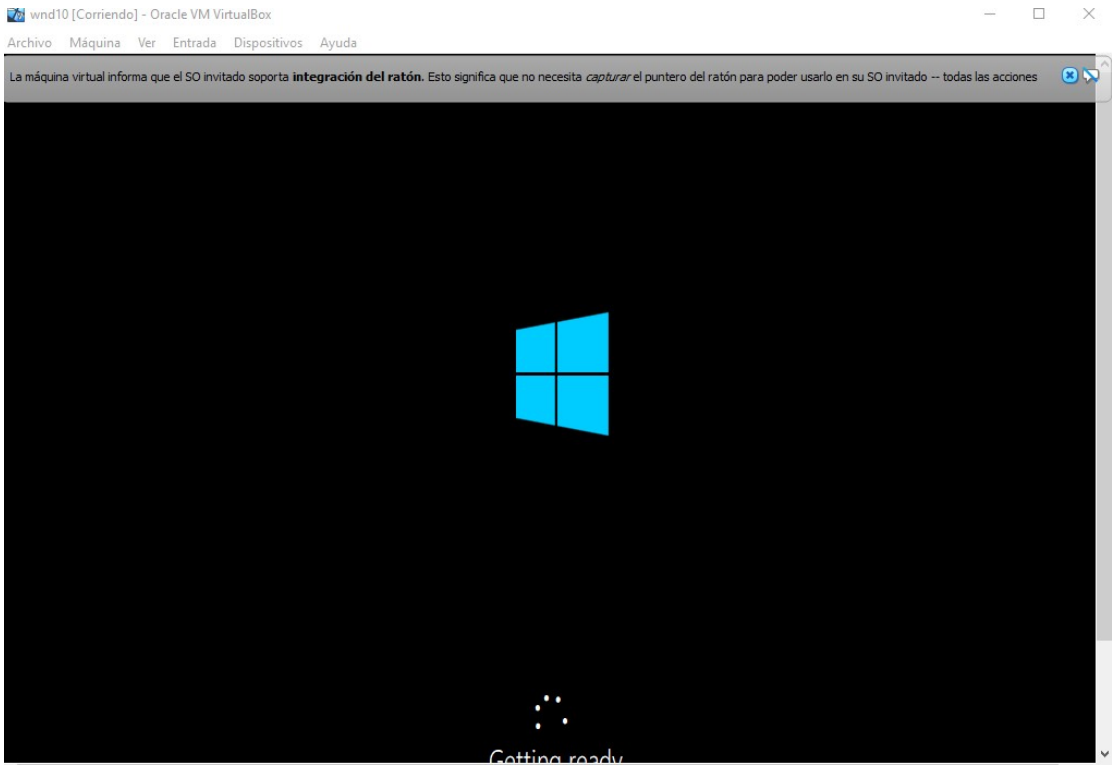

Windows Setup
Select the operating system you want to install
Operating system
Architecture
Date modified
Windows 10 Enterprise LTSC
x64
3/6/2019
Windows 10 Enterprise N LTSC
x64
3/6/2019
Description:
Windows 10 Enterprise LTSC
Next

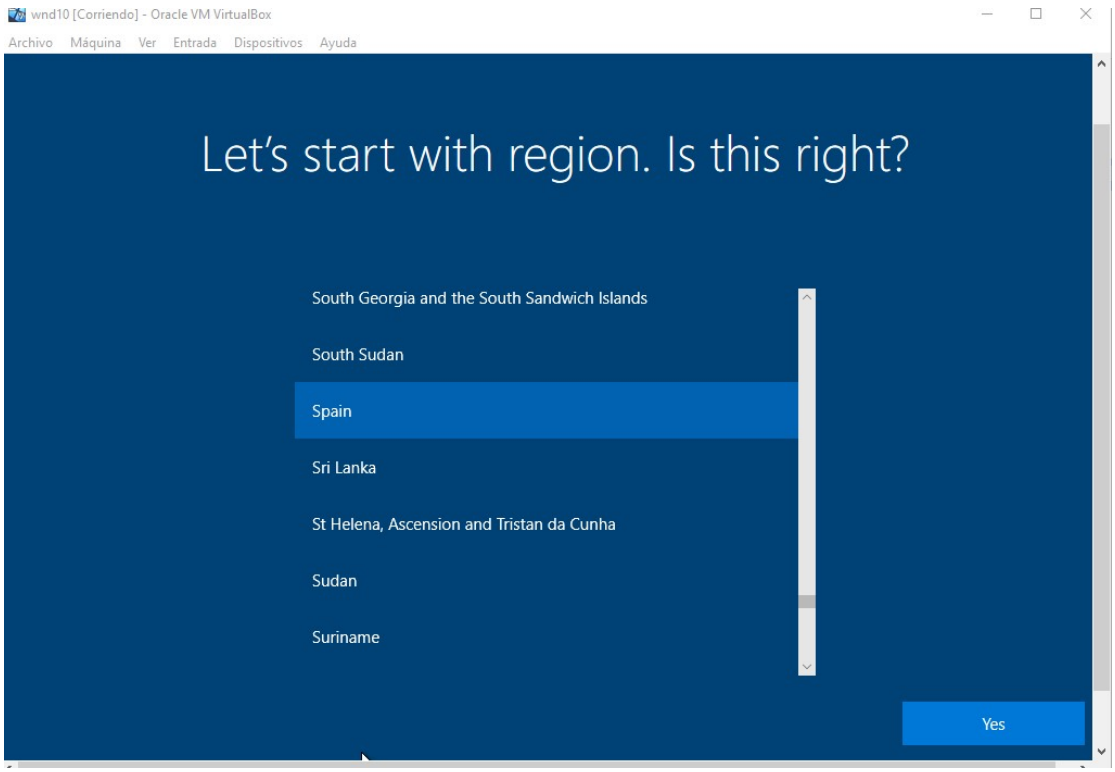


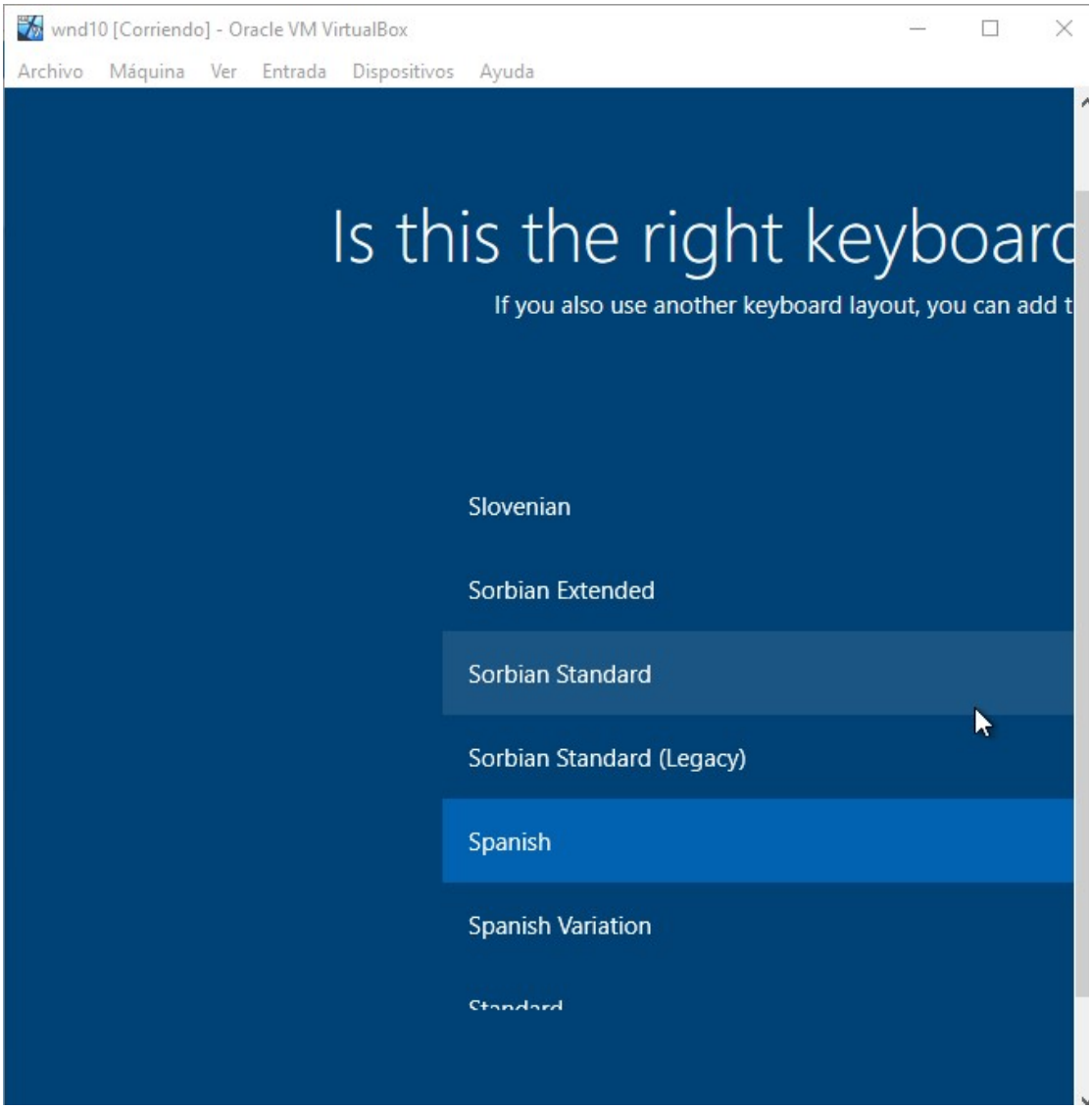
We need to create a new disk for the Ubuntu OS

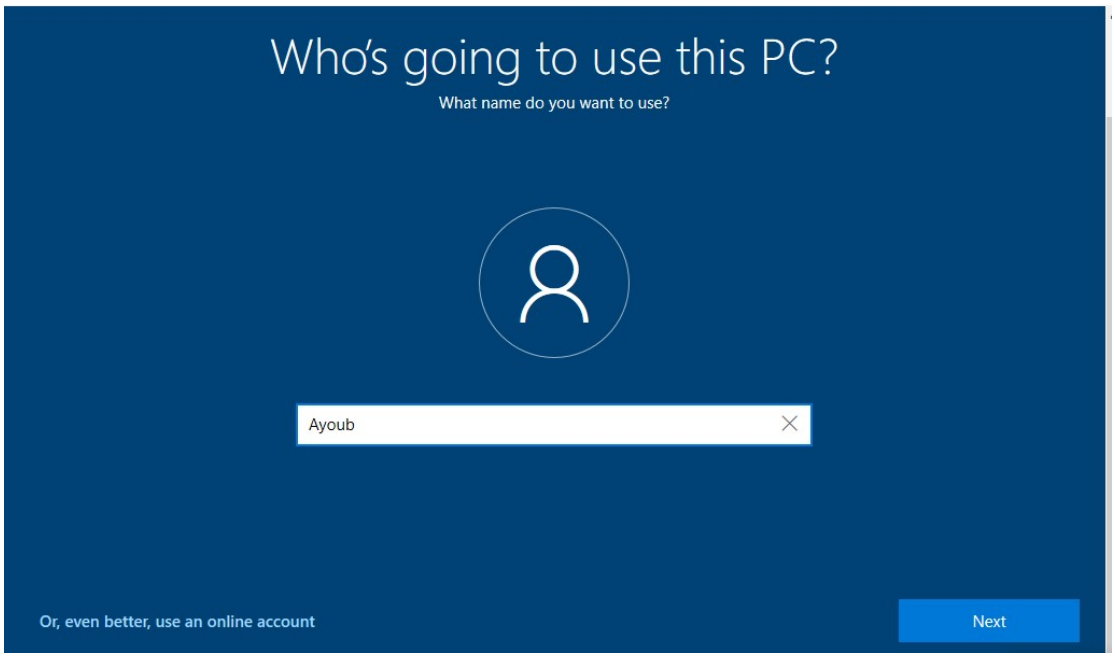

Windows Setup
Where do you want to install Windows?
Name
Total size
Free space
Type
Drive 0 Unallocated Space
50.0 GB
50.0 GB
Refresh
Delete
Format
New
Load driver
Extend
Size:
25600
MB
Apply
Cancel
Next

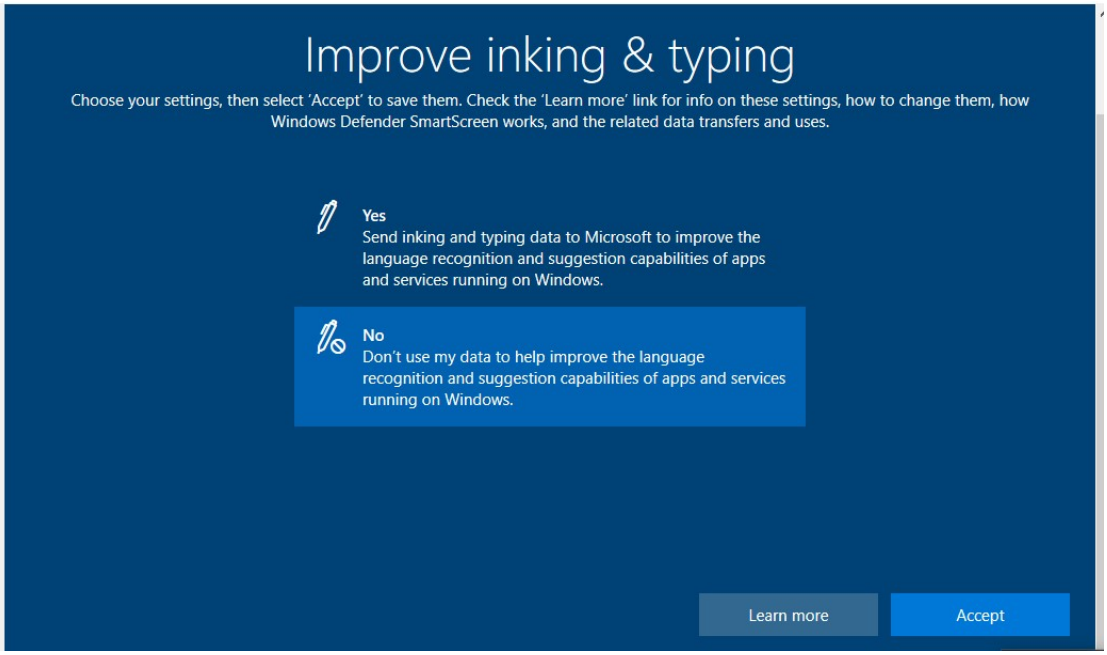

Windows Setup
Where do you want to install Windows?
Name
Total size
Free space
Type
Drive 0 Partition 1: System Reserved
549.0 MB
532.0 MB
System
Drive 0 Partition 2
24.5 GB
24.5 GB
Primary
Drive 0 Unallocated Space
25.0 GB
25.0 GB
Refresh
Delete
Format
New
Load driver
Extend
Next

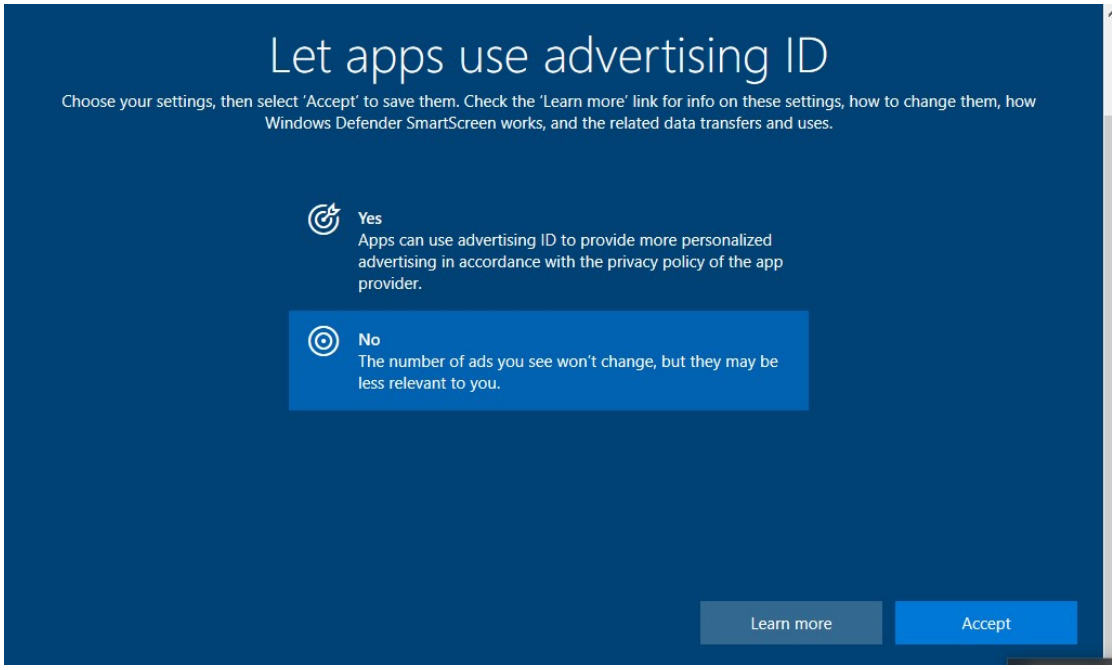

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
La máquina virtual informa que el SO invitado soporta integración del ratón. Esto significa que no necesita capturar el puntero del ratón para poder usarlo en su SO invitado -- todas las acciones
Getting ready

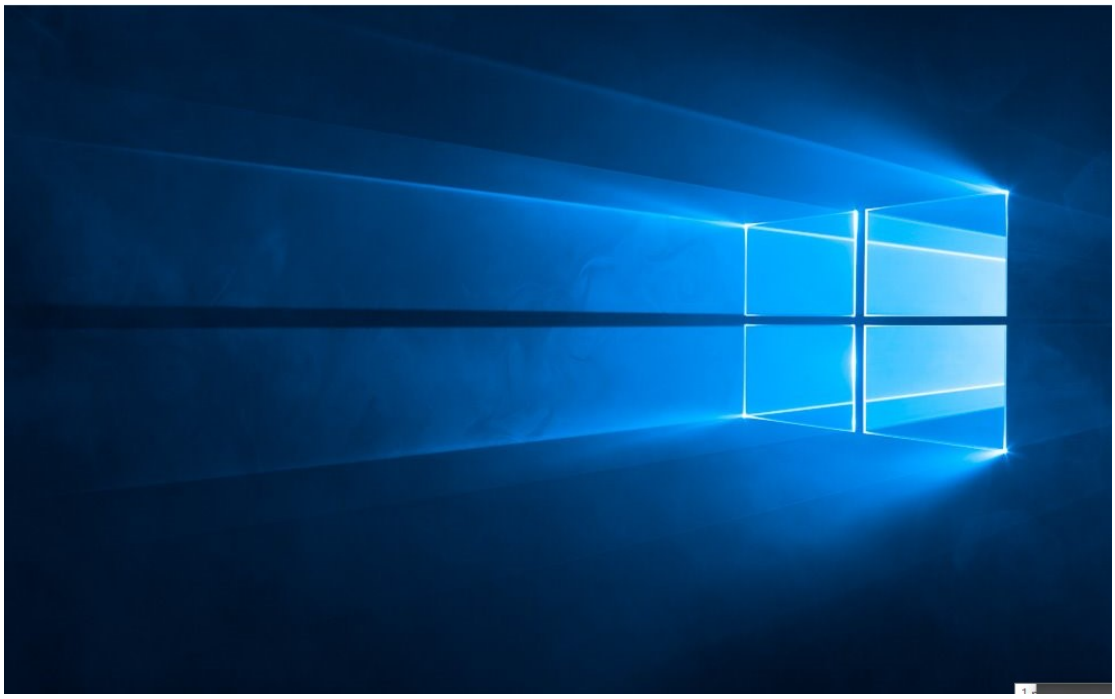

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Let's start with region. Is this right?
South Georgia and the South Sandwich Islands
South Sudan
Spain
Sri Lanka
St Helena, Ascension and Tristan da Cunha
Sudan
Suriname
Yes


wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Is this the right keyboard
If you also use another keyboard layout, you can add t
Slovenian
Sorbian Extended
Sorbian Standard
Sorbian Standard (Legacy)
Spanish
Spanish Variation

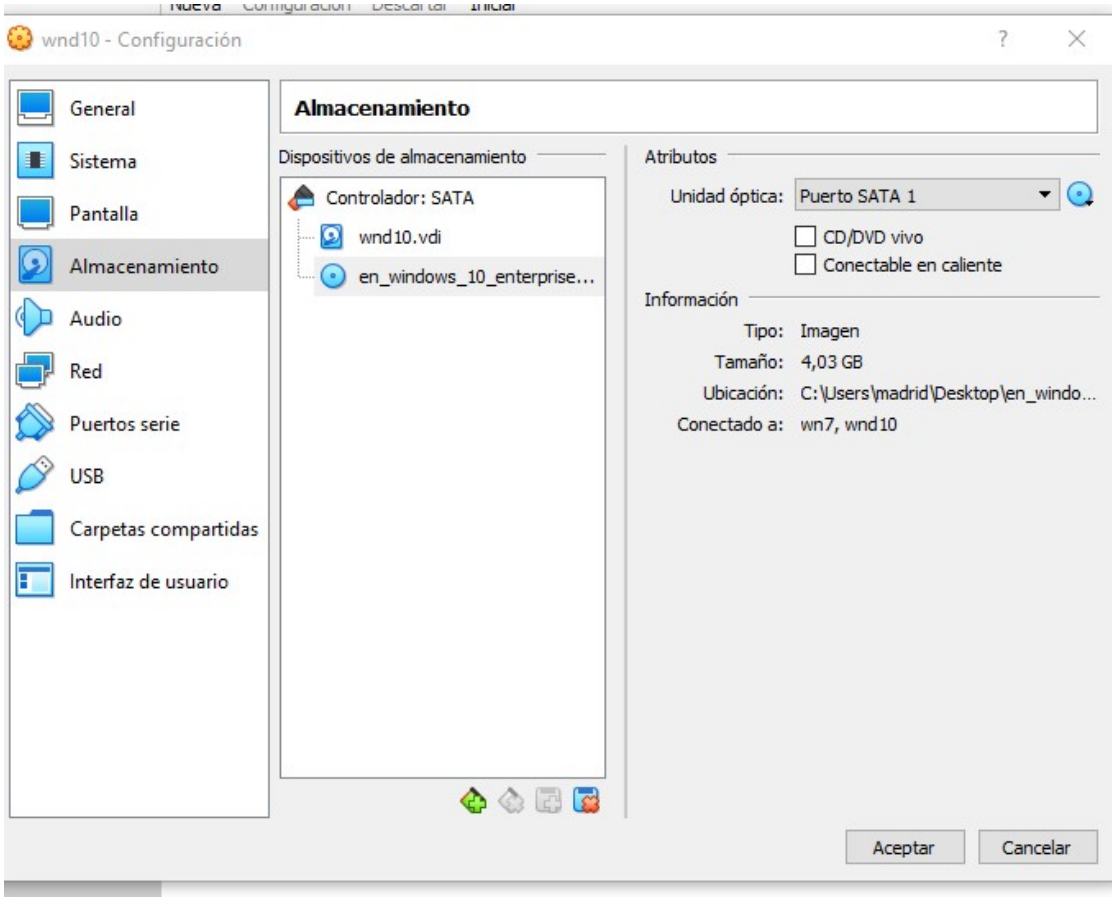

Who's going to use this PC?
What name do you want to use?
Ayoub
Or, even better, use an online account
Next

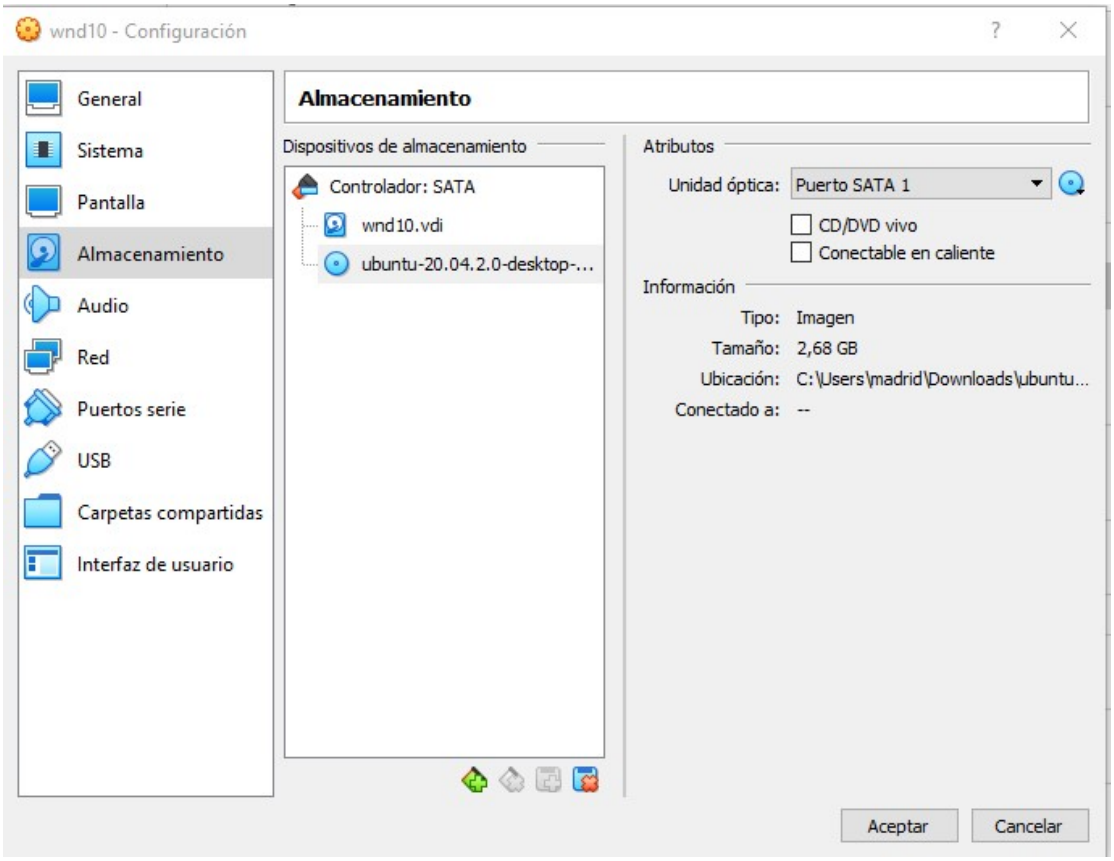

Improve inking & typing
Choose your settings, then select 'Accept' to save them. Check the 'Learn more' link for info on these settings, how to change them, how Windows Defender SmartScreen works, and the related data transfers and uses.
Yes
Send inking and typing data to Microsoft to improve the language recognition and suggestion capabilities of apps and services running on Windows.
No
Don't use my data to help improve the language recognition and suggestion capabilities of apps and services running on Windows.
Learn more
Accept

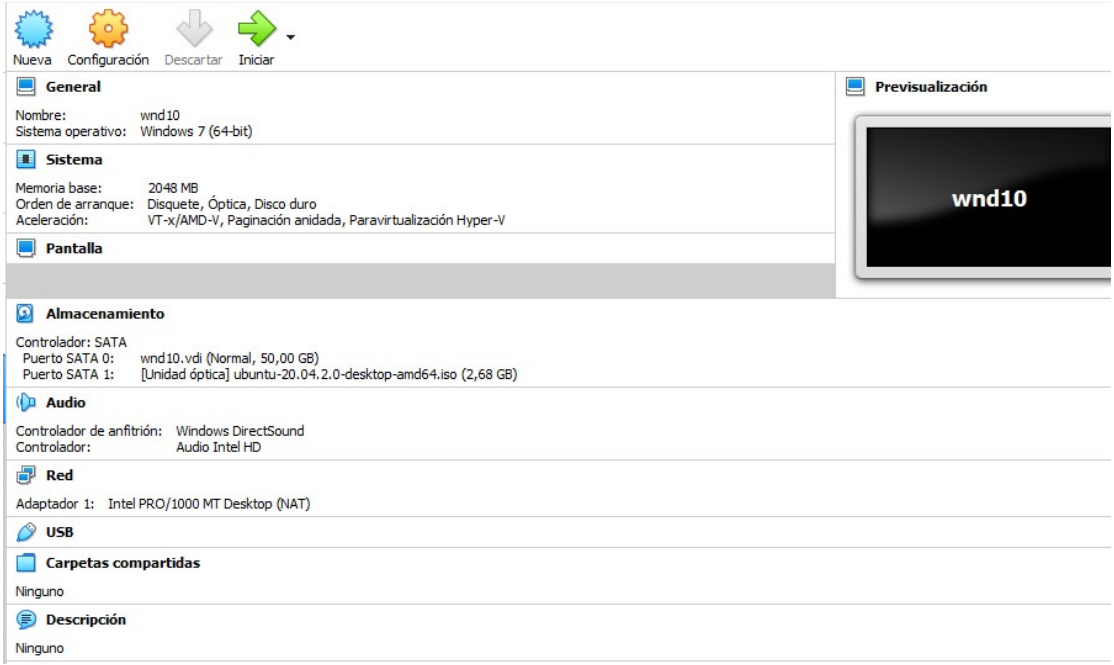




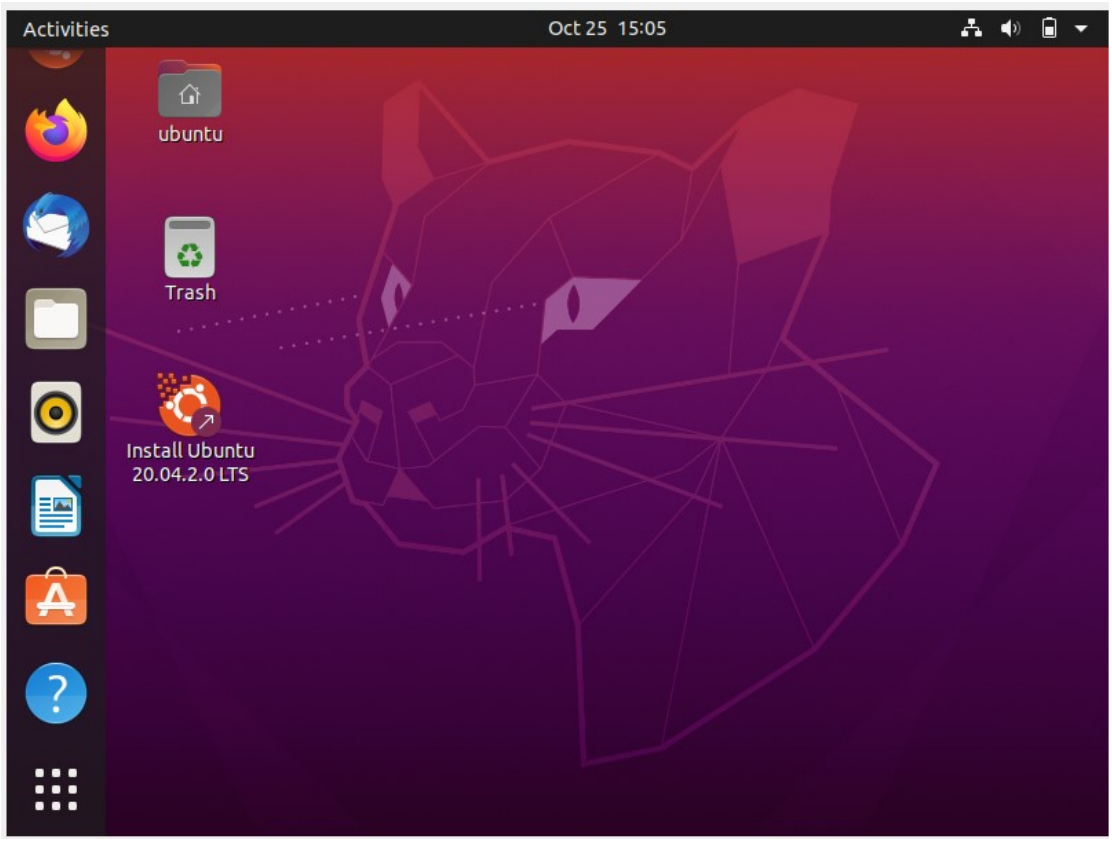
Now we are ready to install now Ubuntu


wnd10 - Configuración
General
Sistema
Pantalla
Almacenamiento
Audio
Red
Puertos serie
USB
Carpetas compartidas
Interfaz de usuario
Almacenamiento
Dispositivos de almacenamiento
Controlador: SATA
wnd10.vdi
en_windows_10_enterprise...
Atributos
Unidad óptica:
Puerto SATA 1
CD/DVD vivo
Conectable en caliente
Información
Tipo: Imagen
Tamaño: 4,03 GB
Ubicación: C:\Users\madrid\Desktop\en_windo...
Conectado a: wn7, wnd10
Aceptar
Cancelar

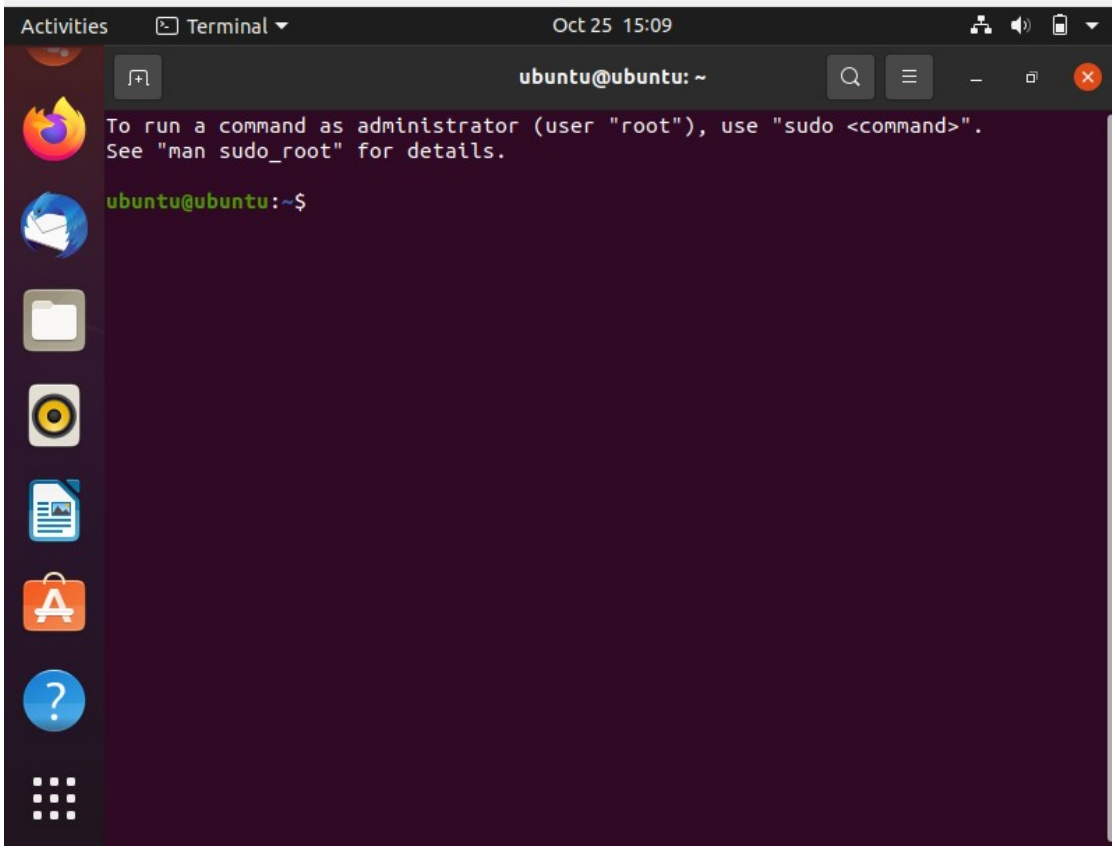

wnd10 - Configuración
General
Sistema
Pantalla
Almacenamiento
Audio
Red
Puertos serie
USB
Carpetas compartidas
Interfaz de usuario
Almacenamiento
Dispositivos de almacenamiento
Controlador: SATA
wnd10.vdi
ubuntu-20.04.2.0-desktop-...
Atributos
Unidad óptica:
Puerto SATA 1
CD/DVD vivo
Conectable en caliente
Información
Tipo: Imagen
Tamaño: 2,68 GB
Ubicación: C:\Users\madrid\Downloads\ubuntu...
Conectado a: --
Aceptar
Cancelar

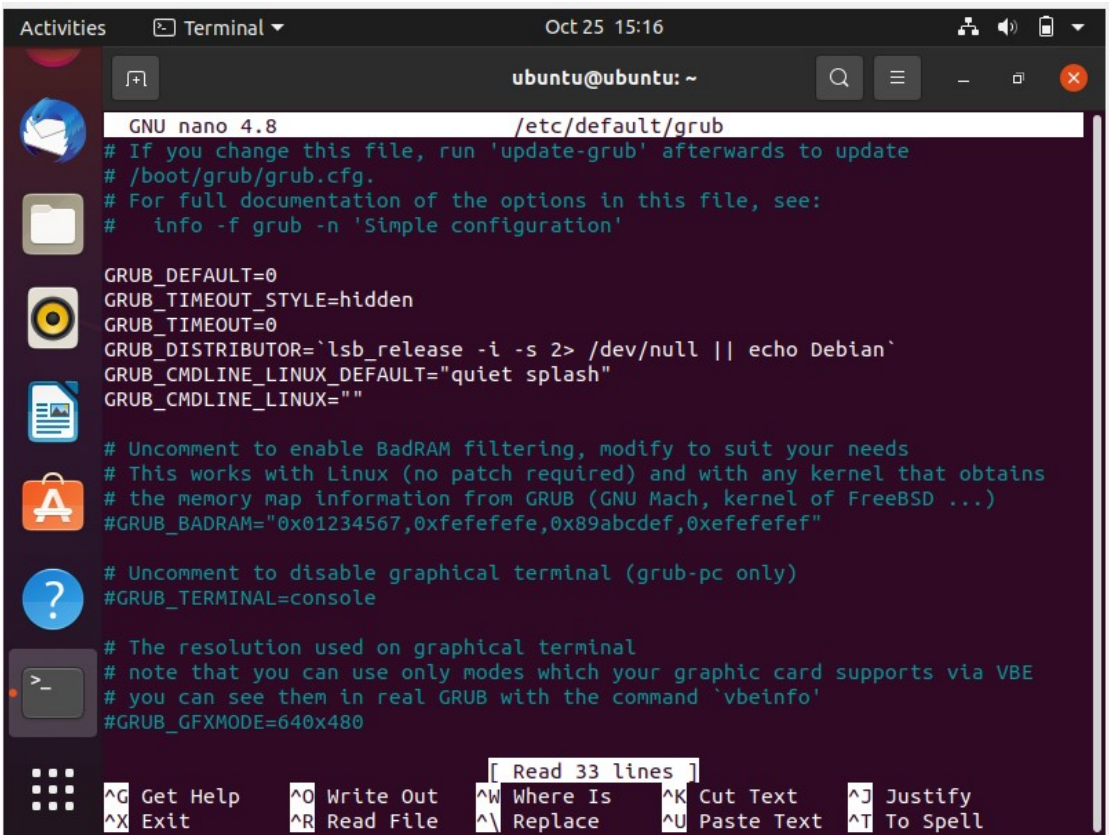

Nueva
Configuración
Descartar
Iniciar
General
Nombre: wnd10
Sistema operativo: Windows 7 (64-bit)
Sistema
Memoria base: 2048 MB
Orden de arranque: Disquete, Óptica, Disco duro
Aceleración: VT-x/AMD-V, Paginación anidada, Paravirtualización Hyper-V
Pantalla
Previsualización
wnd10
Almacenamiento
Controlador: SATA
Puerto SATA 0: wnd10.vdi (Normal, 50,00 GB)
Puerto SATA 1: [Unidad óptica] ubuntu-20.04.2.0-desktop-amd64.iso (2,68 GB)
Audio
Controlador de anfitrión: Windows DirectSound
Controlador: Audio Intel HD
Red
Adaptador 1: Intel PRO/1000 MT Desktop (NAT)
USB
Carpetas compartidas
Ninguno
Descripción
Ninguno

We check weather the bootloader works, and we continue with set Windows as default entry and boot after 15 seconds if the user does not select another option in the menu. To do that we need to go to Ubuntu's Terminal to change the Grub menu:

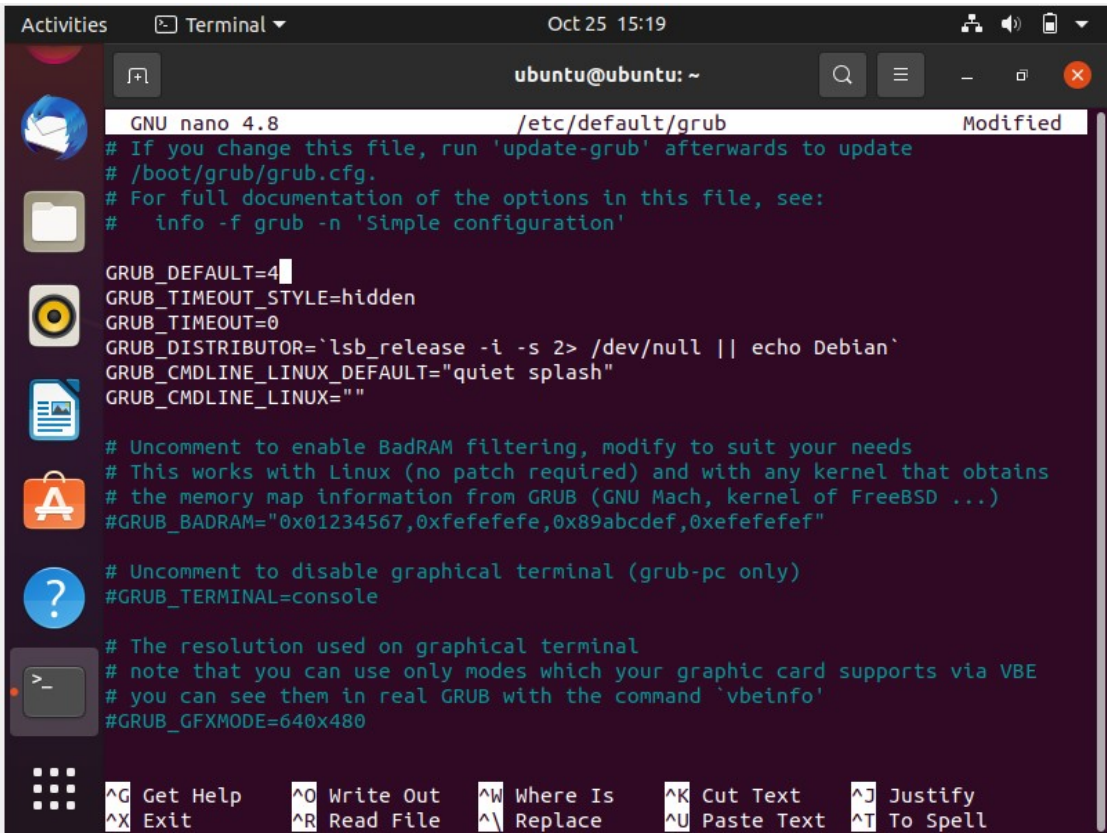


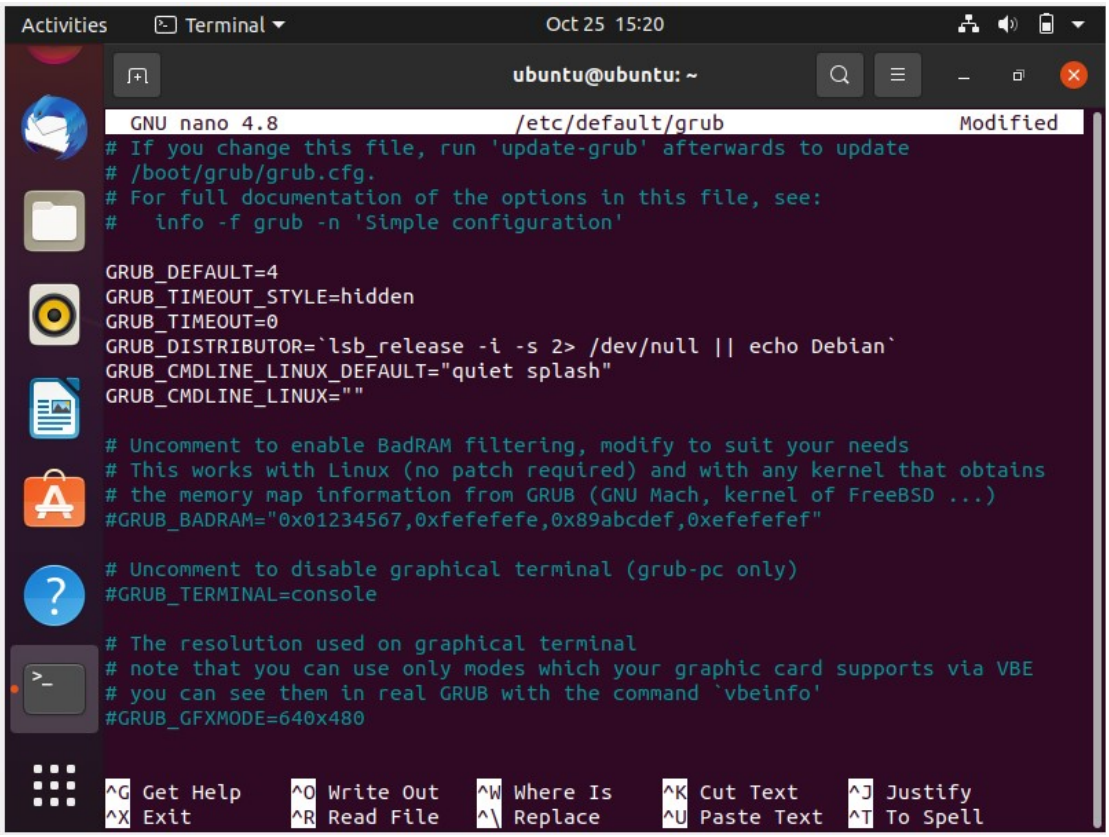
We use the sudo nano /etc/default/grub to get into the menu's code

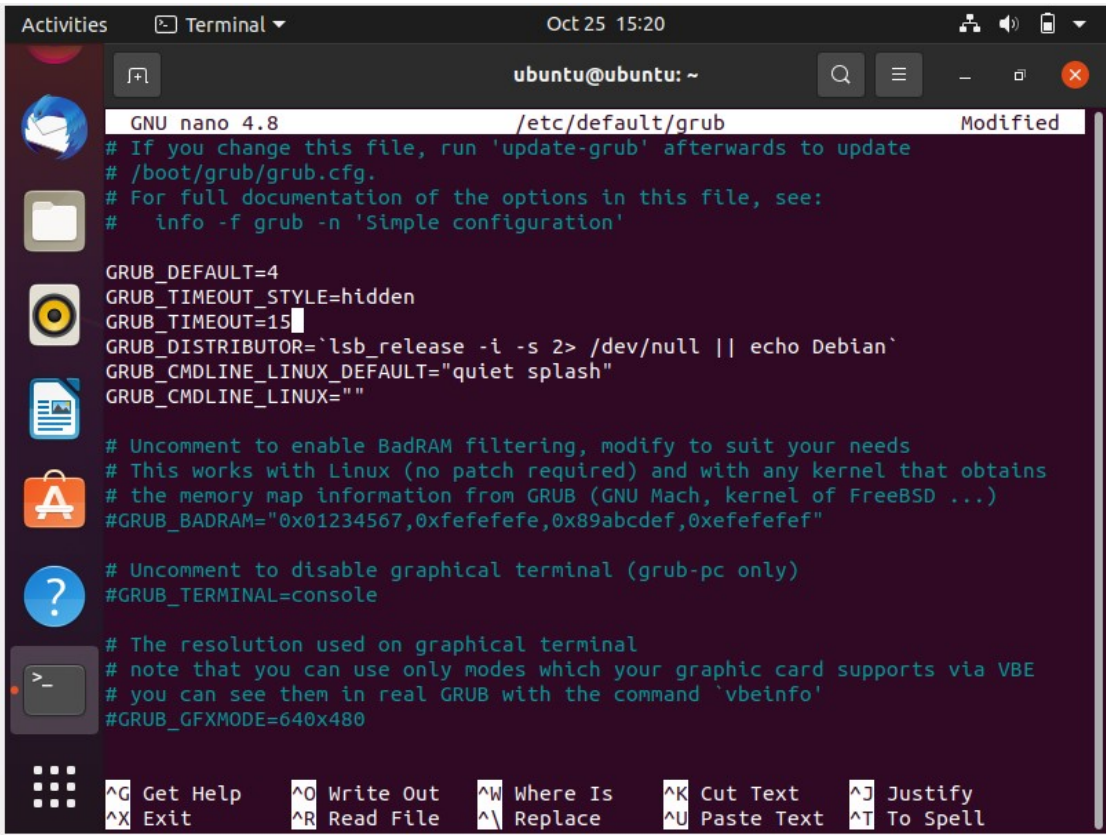




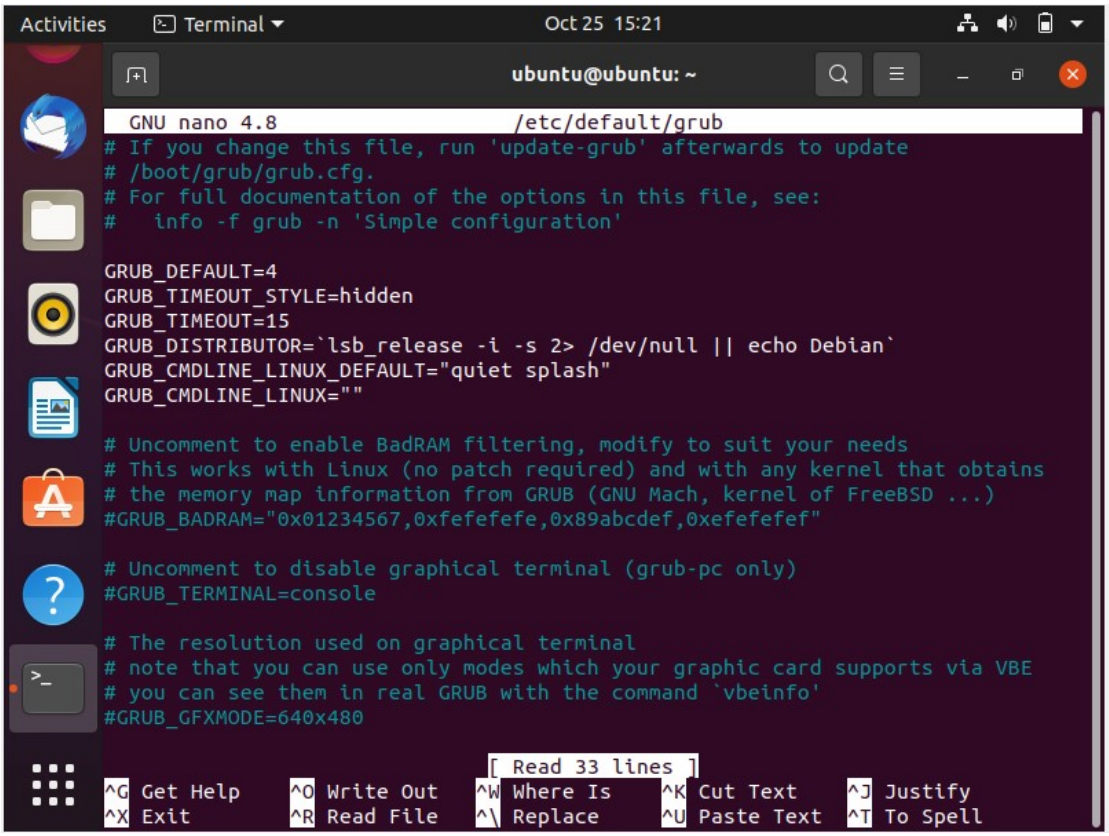
We change default=4 and timeout=15:



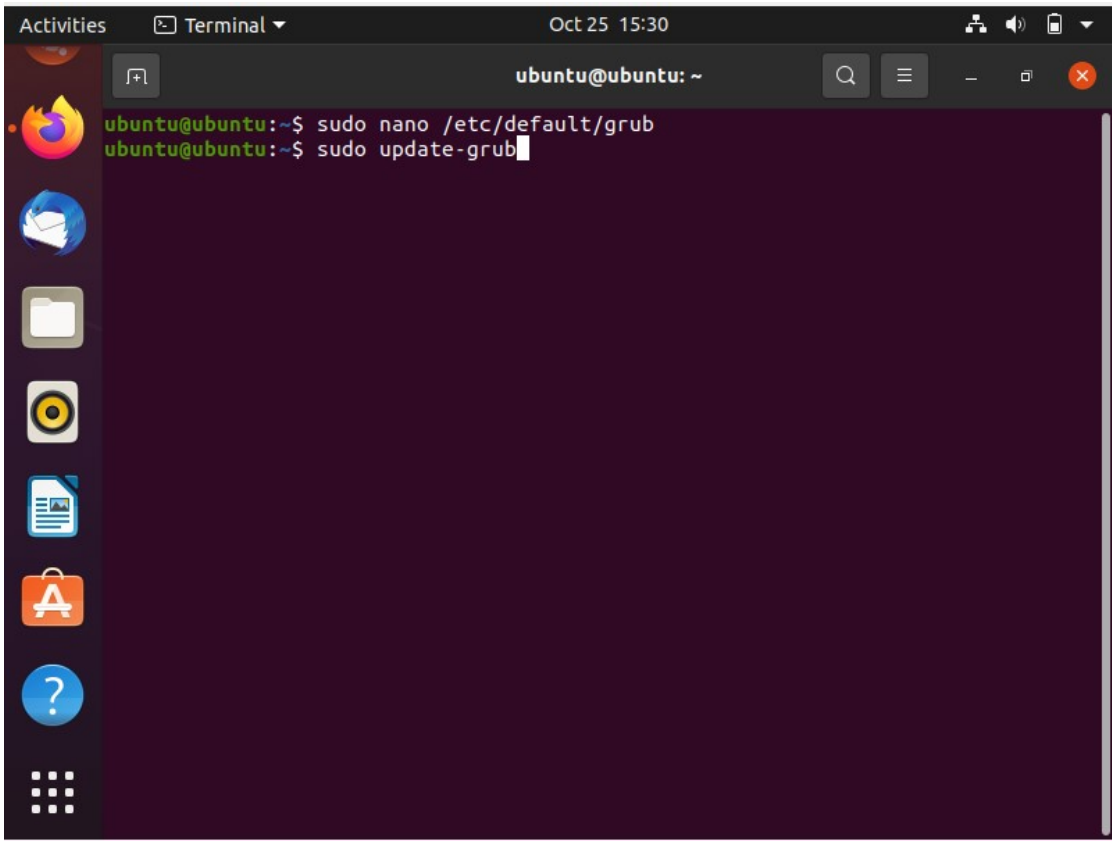




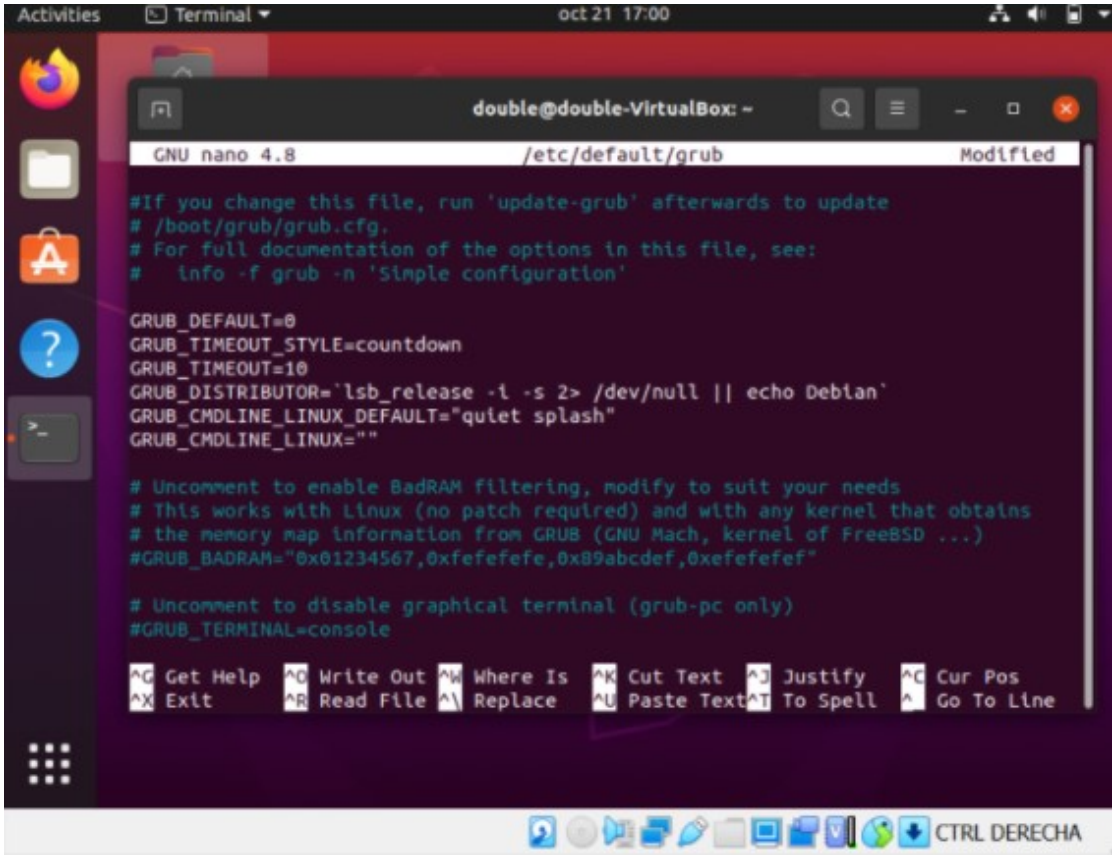
We use control+X to exit and pressing Y to save the changes.

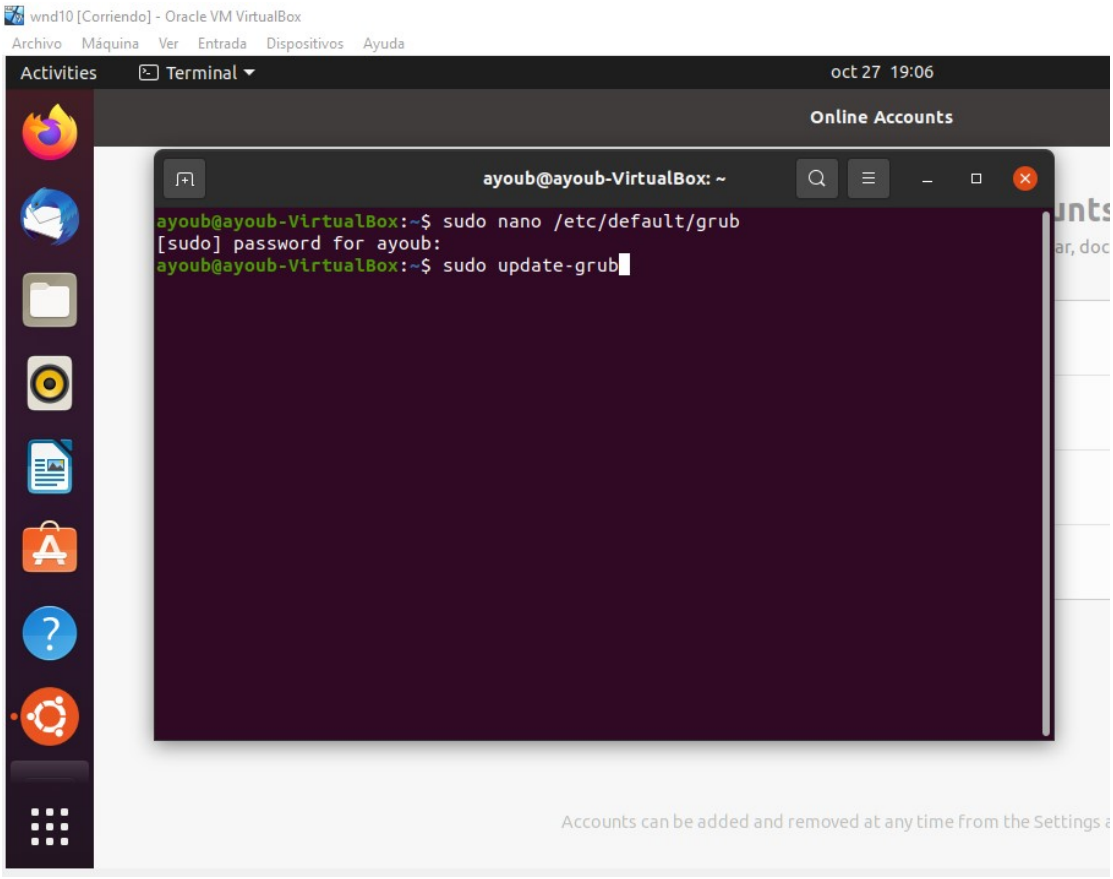


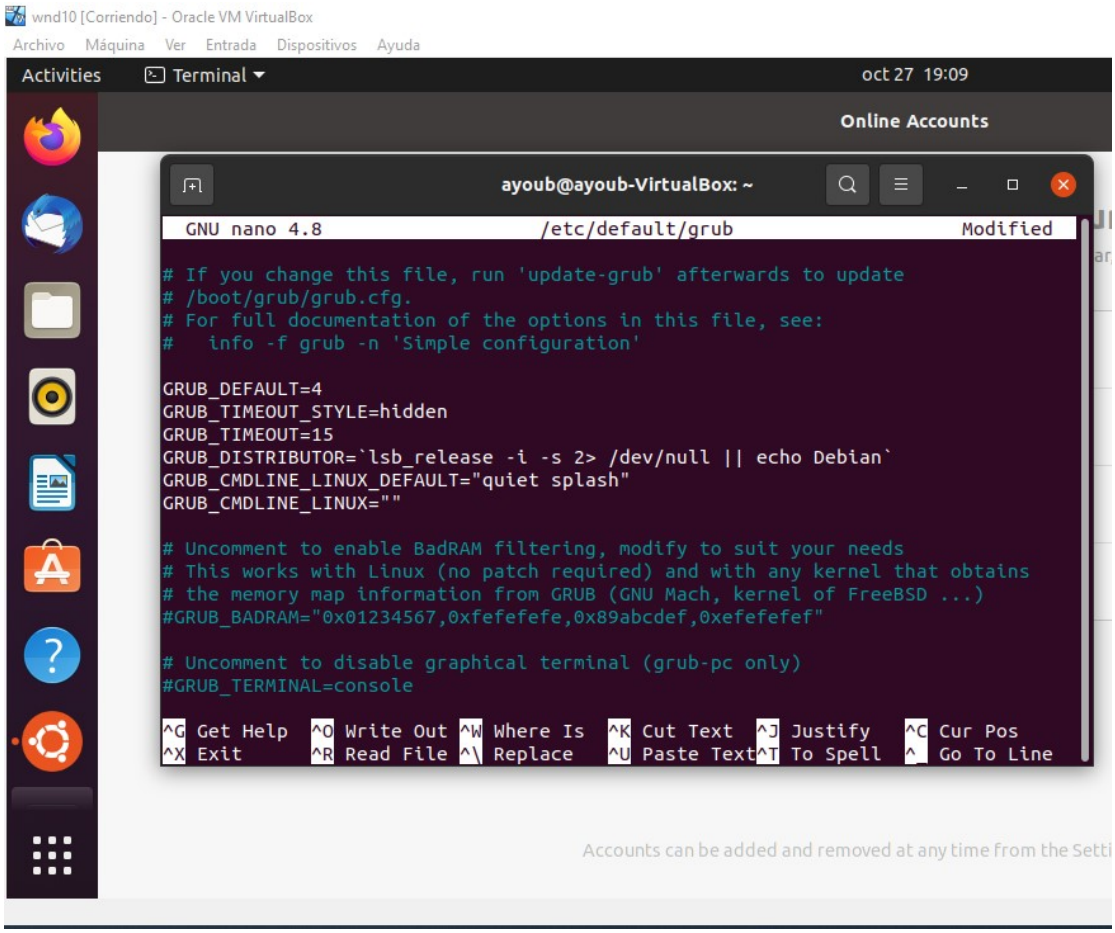
Now we need to use sudo update-grub to confirm the new file, and restart it after.

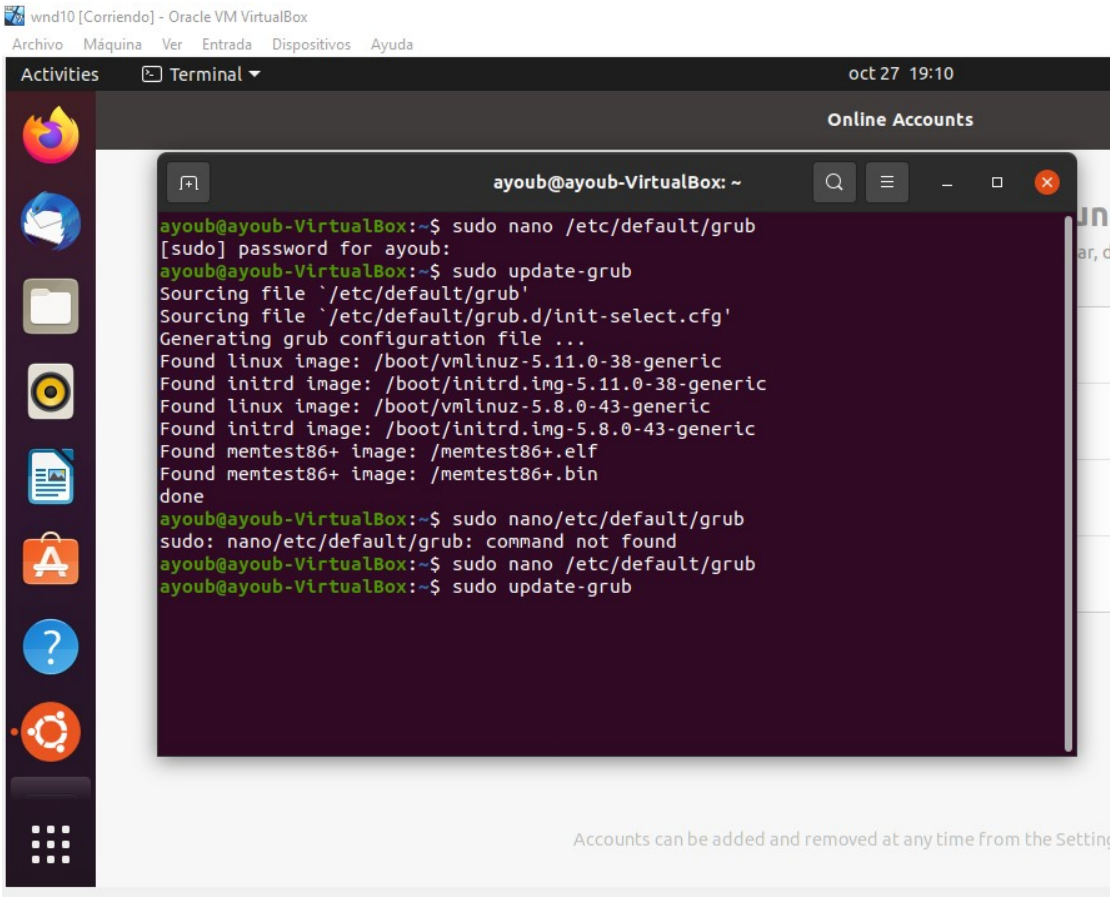


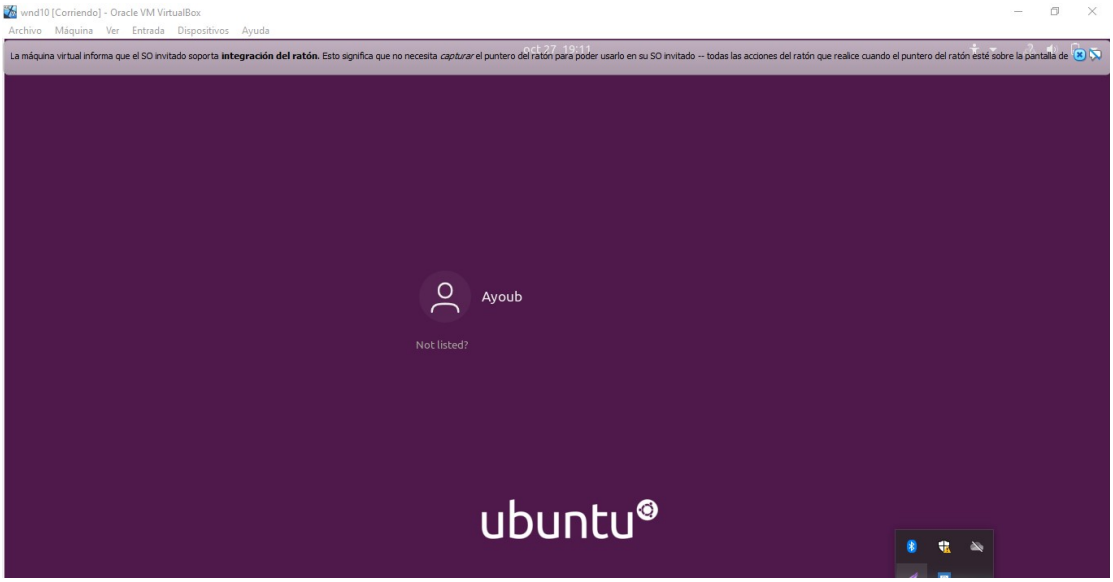
Now we proceed with the item B; Boot Ubuntu without displaying the menu after showing a 10 seconds countdown. To do that we go back to the terminal and to the Grub setting and we chnage: default=0, style=countdown and timeout=10.


Activities
Terminal
oct 21 17:00
double@double-VirtualBox: ~
GNU nano 4.8
/etc/default/grub
Modified
#If you change this file, run 'update-grub' afterwards to update
# /boot/grub/grub.cfg.
# For full documentation of the options in this file, see:
# info -f grub -n 'Simple configuration'
GRUB_DEFAULT=0
GRUB_TIMEOUT_STYLE=countdown
GRUB_TIMEOUT=10
GRUB_DISTRIBUTOR=`lsb_release -i -s 2> /dev/null || echo Debian`
GRUB_CMDLINE_LINUX_DEFAULT="quiet splash"
GRUB_CMDLINE_LINUX=""
# Uncomment to enable BadRAM filtering, modify to suit your needs
# This works with Linux (no patch required) and with any kernel that obtains
# the memory map information from GRUB (GNU Mach, kernel of FreeBSD ...)
#GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef"
Uncomment to disable graphical terminal (grub-pc only)
#GRUB_TERMINAL=console
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line
CTRL DERECHA

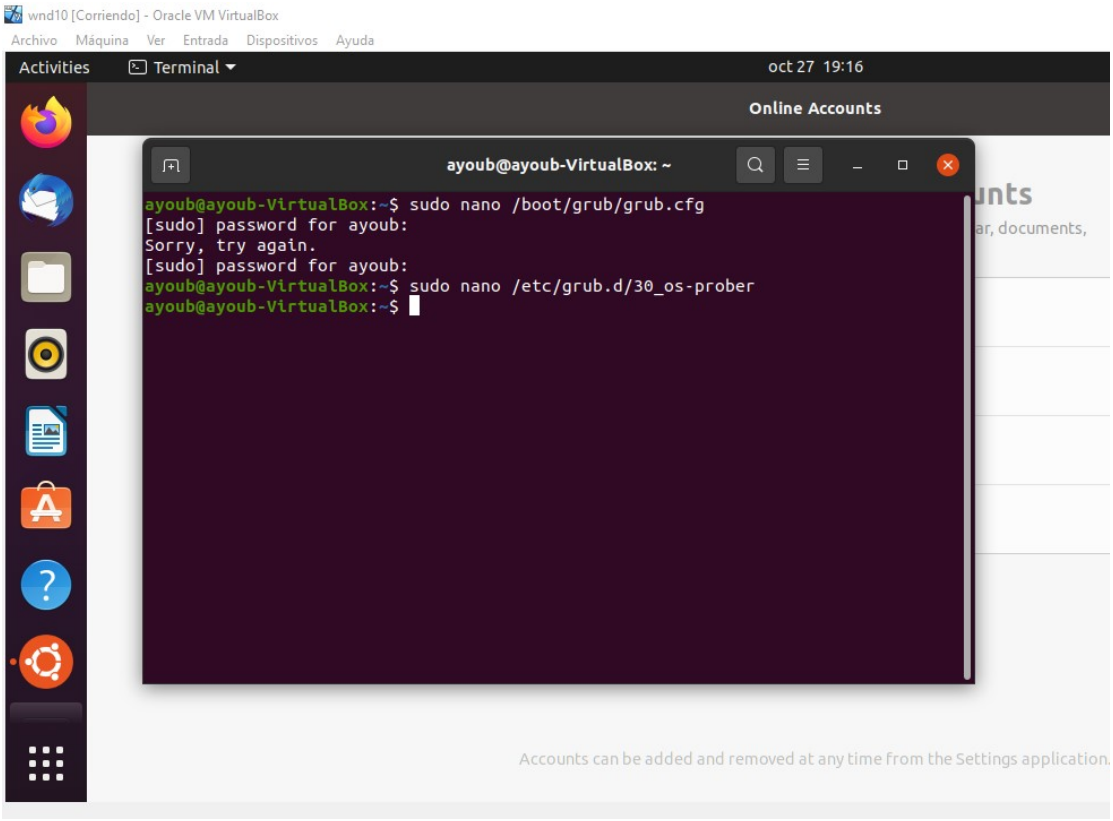

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities
Terminal
oct 27 19:06
Online Accounts
ayoub@ayoub-VirtualBox: ~
ayoub@ayoub-VirtualBox:~$ sudo nano /etc/default/grub
[sudo] password for ayoub:
ayoub@ayoub-VirtualBox:~$ sudo update-grub
Accounts can be added and removed at any time from the Settings

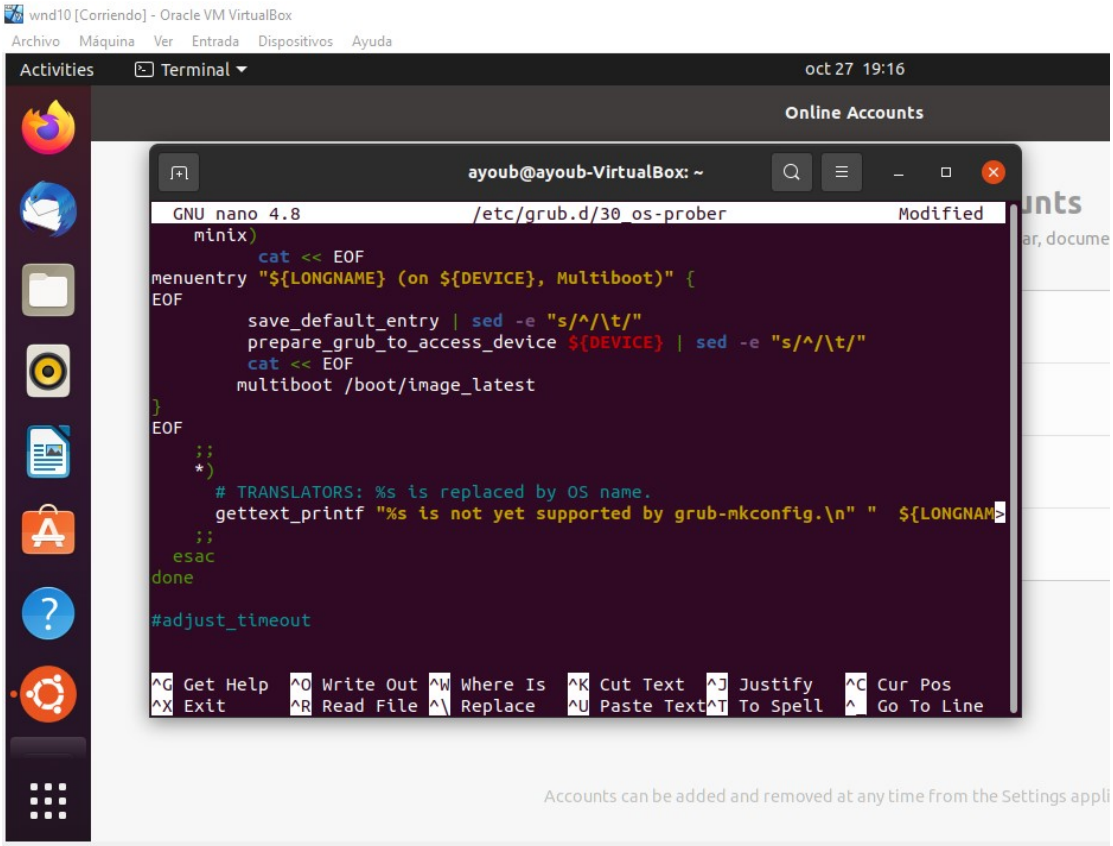

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities
Terminal
oct 27 19:09
Online Accounts
ayoub@ayoub-VirtualBox: ~
GNU nano 4.8 /etc/default/grub Modified
# If you change this file, run 'update-grub' afterwards to update
# /boot/grub/grub.cfg.
# For full documentation of the options in this file, see:
# info -f grub -n 'Simple configuration'
GRUB_DEFAULT=4
GRUB_TIMEOUT_STYLE=hidden
GRUB_TIMEOUT=15
GRUB_DISTRIBUTOR=`lsb_release -i -s 2> /dev/null || echo Debian`
GRUB_CMDLINE_LINUX_DEFAULT="quiet splash"
GRUB_CMDLINE_LINUX=""
# Uncomment to enable BadRAM filtering, modify to suit your needs
# This works with Linux (no patch required) and with any kernel that obtains
# the memory map information from GRUB (GNU Mach, kernel of FreeBSD ...)
#GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef"
Uncomment to disable graphical terminal (grub-pc only)
#GRUB_TERMINAL=console
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line
Accounts can be added and removed at any time from the Setti

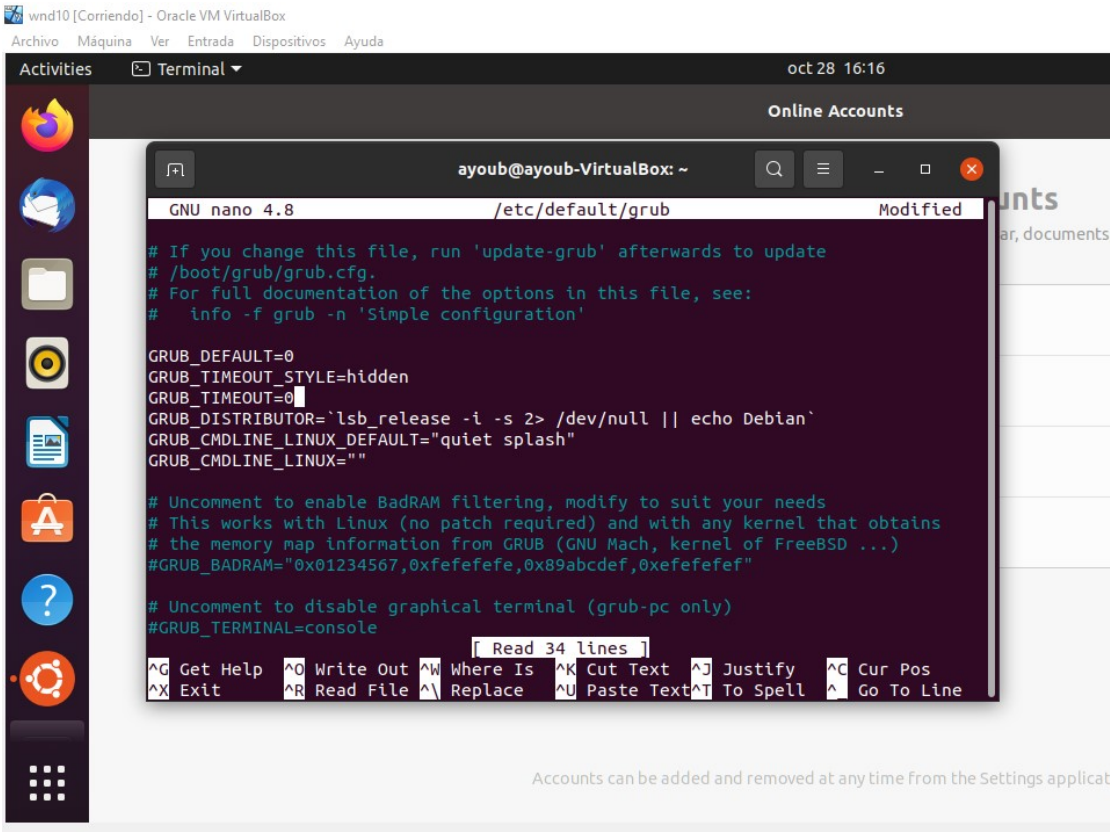


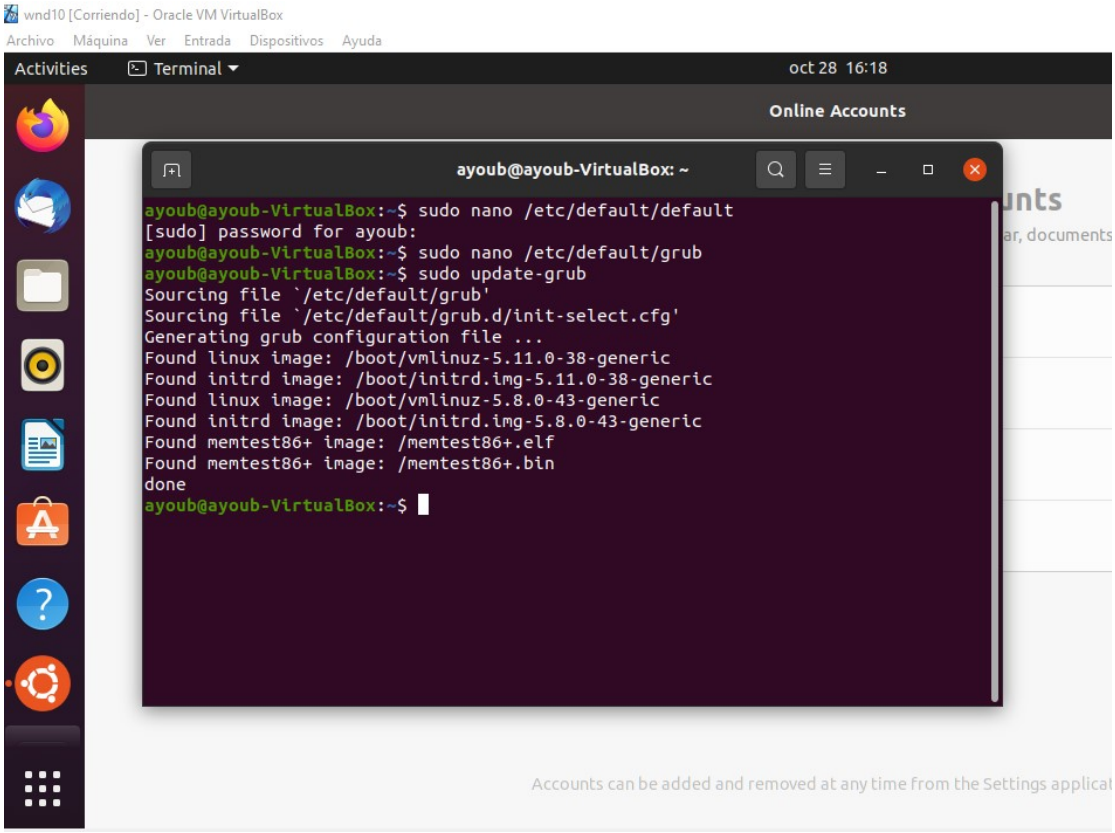


We need to use the command sudo nano/boot/grub/grub.cfg to get into this file, and in the last lines we need to put # to annule the command about set time out.

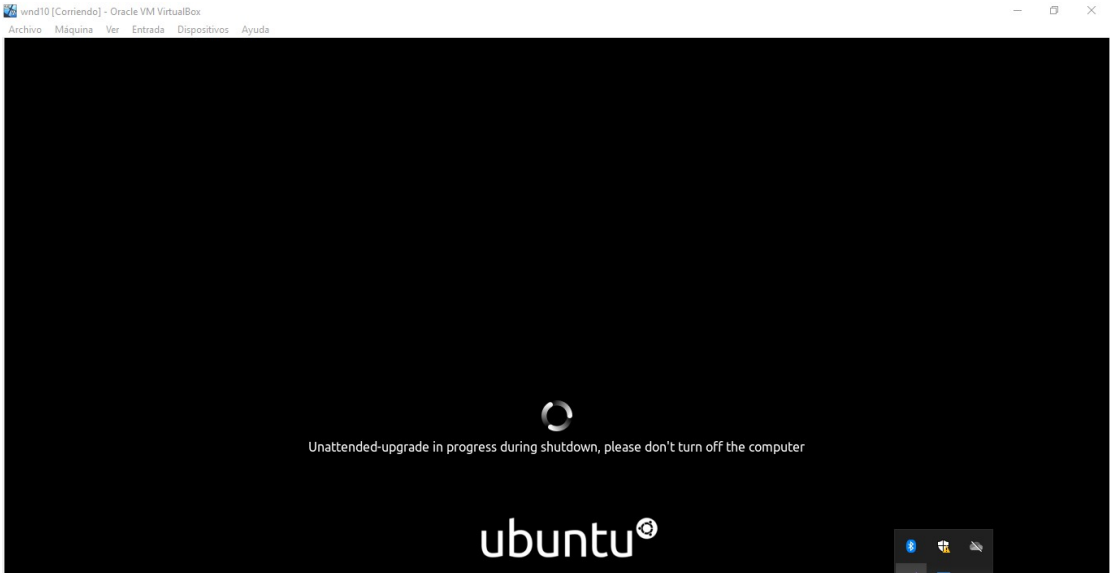

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities
Terminal
oct 27 19:16
Online Accounts
ayoub@ayoub-VirtualBox: ~
ayoub@ayoub-VirtualBox:~$ sudo nano /boot/grub/grub.cfg
[sudo] password for ayoub:
Sorry, try again.
[sudo] password for ayoub:
ayoub@ayoub-VirtualBox:~$ sudo nano /etc/grub.d/30_os-prober
ayoub@ayoub-VirtualBox:~$
Accounts can be added and removed at any time from the Settings application.

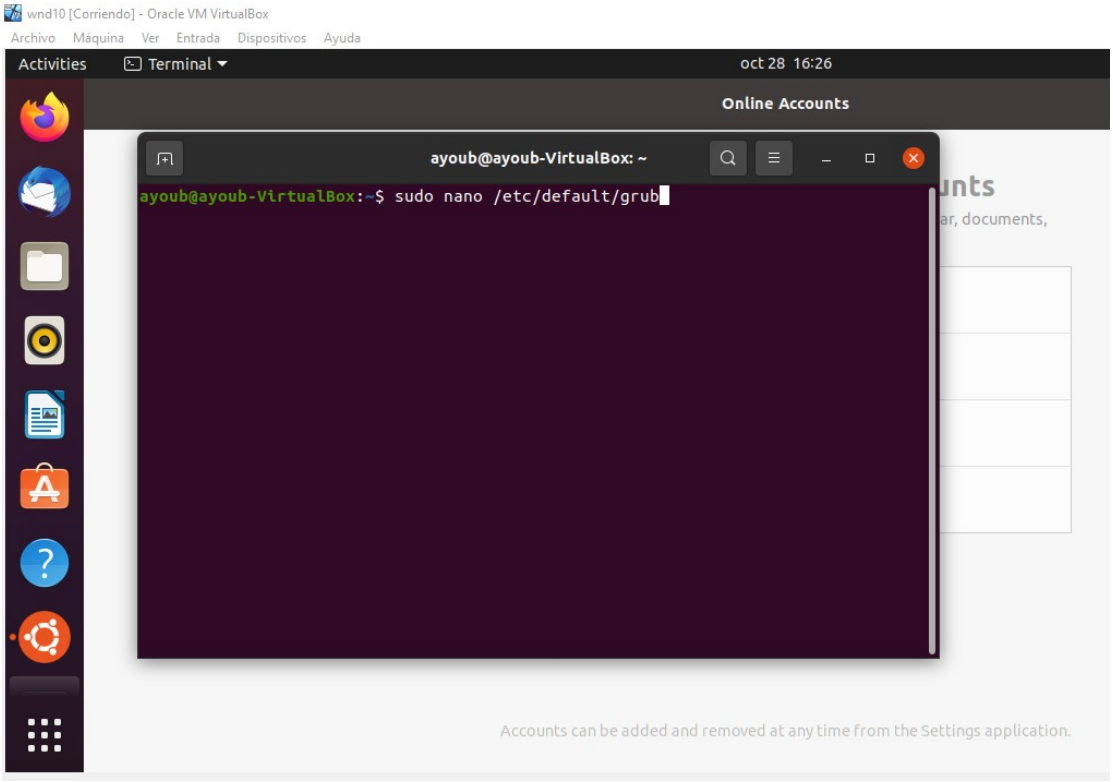

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities
Terminal
oct 27 19:16
Online Accounts
ayoub@ayoub-VirtualBox: ~
GNU nano 4.8 /etc/grub.d/30_os-prober Modified
minix)
cat << EOF
menuentry "${LONGNAME} (on ${DEVICE}, Multiboot)" {
EOF
save_default_entry | sed -e "s/^/\t/"
prepare_grub_to_access_device ${DEVICE} | sed -e "s/^/\t/"
cat << EOF
multiboot /boot/image_latest
}
EOF
;;
*)
TRANSLATORS: %s is replaced by OS name.
gettext_printf "%s is not yet supported by grub-mkconfig.\n" " ${LONGNAM
;;
esac
done
#adjust_timeout
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line
Accounts can be added and removed at any time from the Settings appli



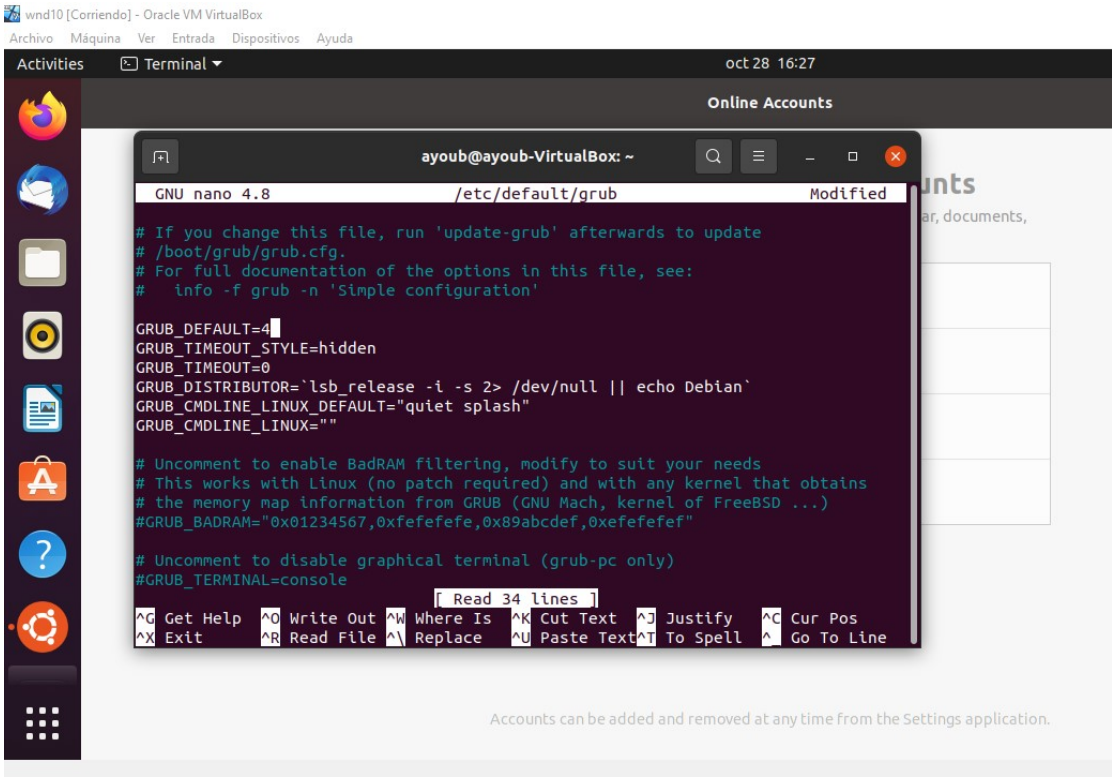


We save the changes and we try to restart:

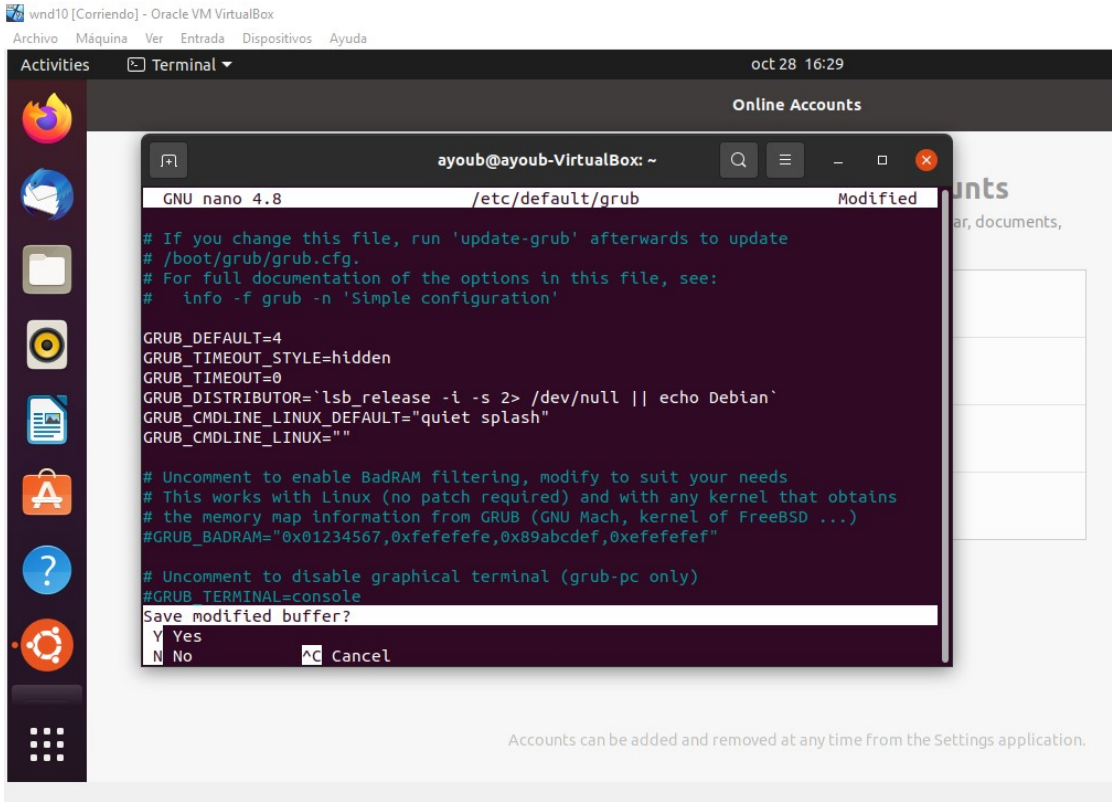




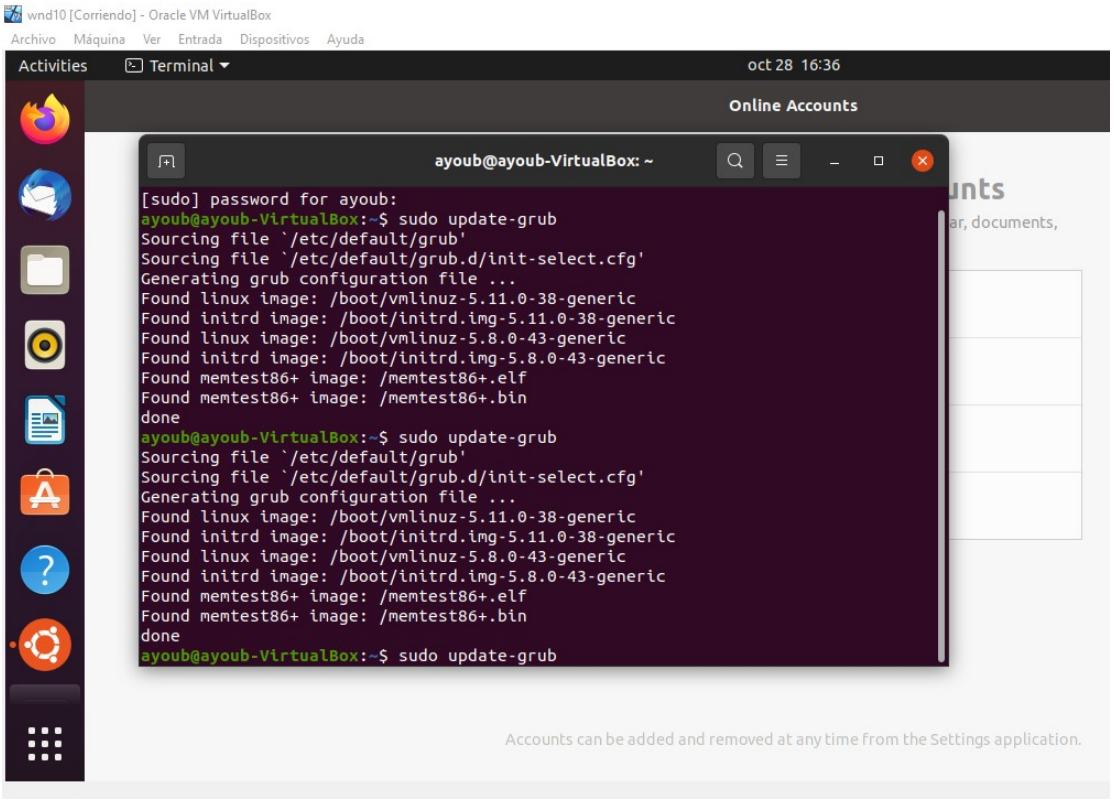
Now we need to boot Ubuntu for itme C without displaying the menu. We use the same thing we used in B item but we change the timestyle= hidden and timeout =0. We do the same thing using # to block the line inside grub.cfg.



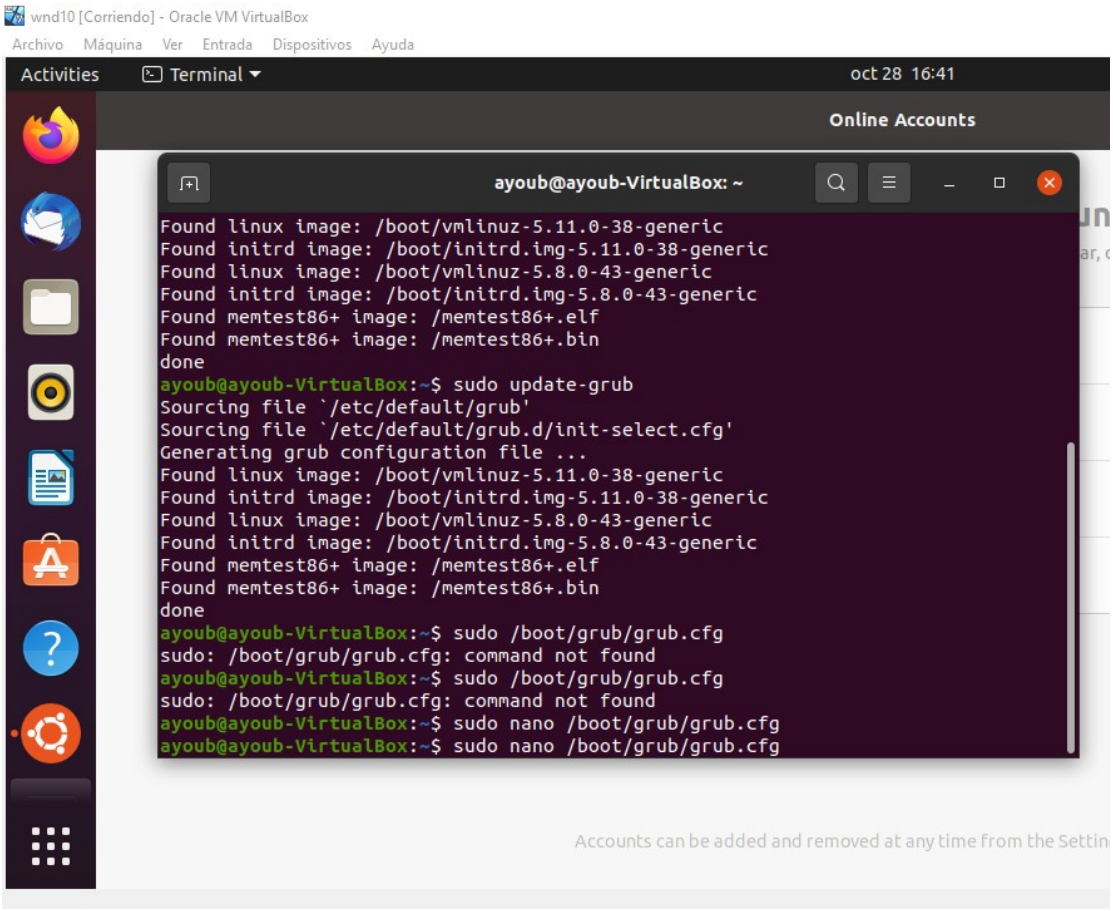
Finally the D item we need to Boot Windows without displaying the menu. To do that we do the same thing as C's item but inserting default=4

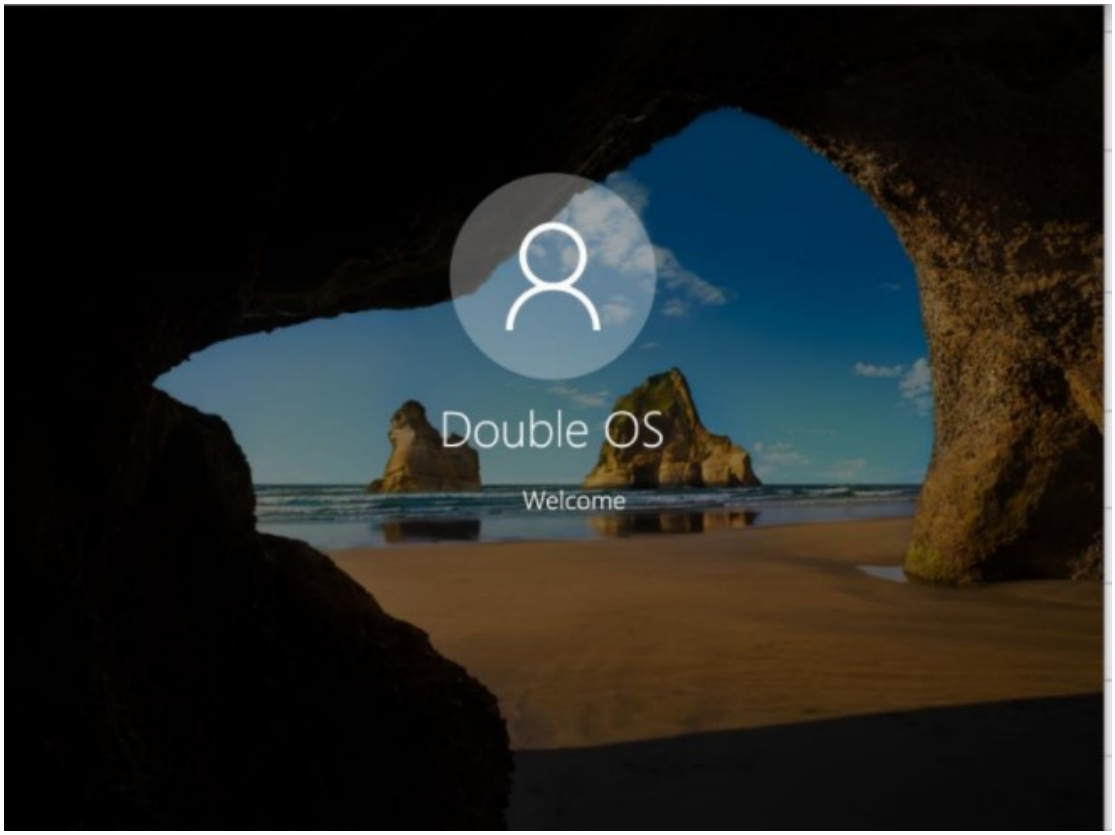


We use the sudo update-grub command

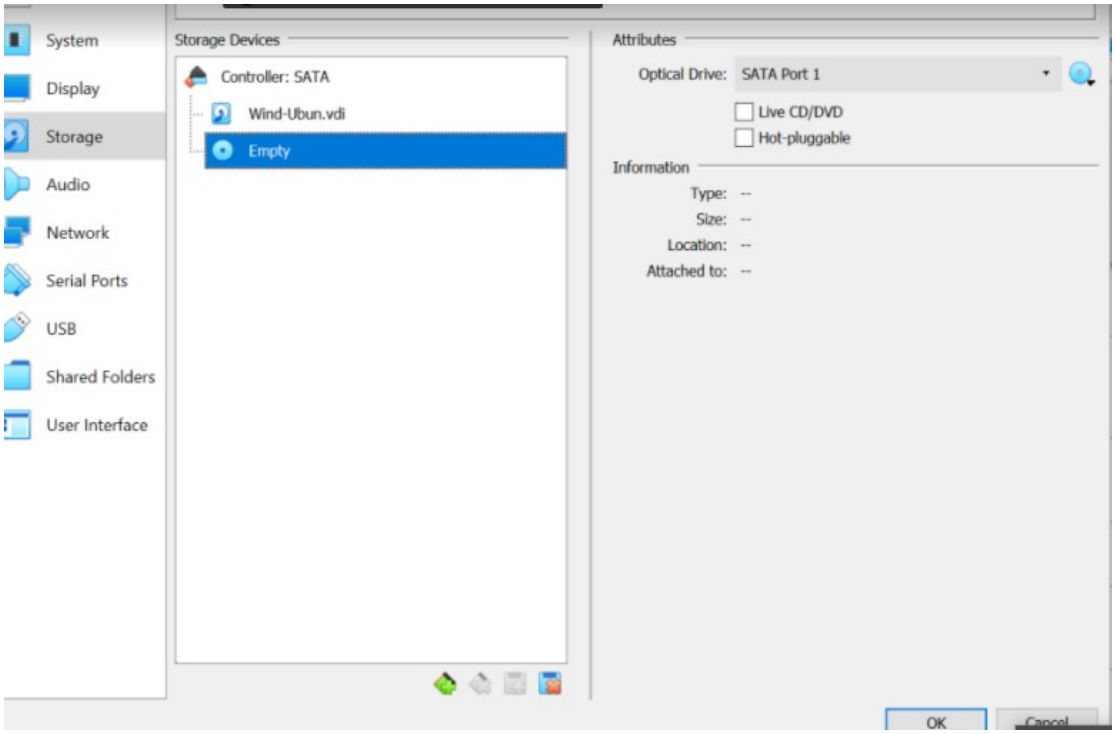


And the command sudo /boot/grub/grub.cfg to put # in the last lines where the set time it's.

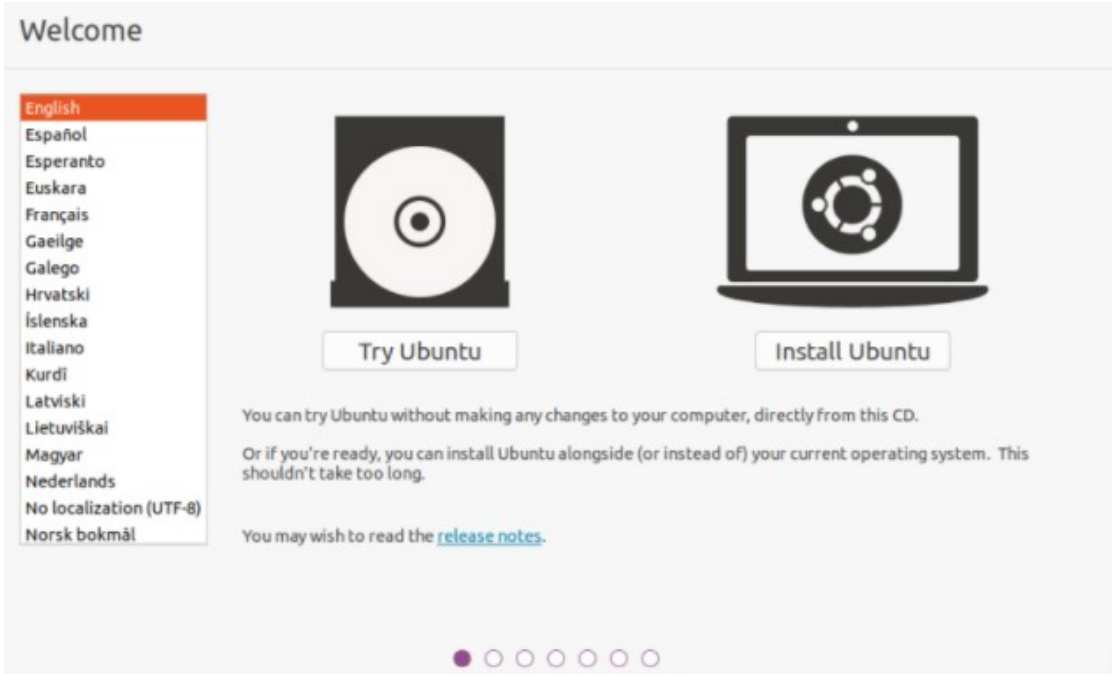

wnd10 [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Activities
Terminal
oct 28 16:41
Online Accounts
ayoub@ayoub-VirtualBox: ~
Found linux image: /boot/vmlinuz-5.11.0-38-generic
Found initrd image: /boot/initrd.img-5.11.0-38-generic
Found linux image: /boot/vmlinuz-5.8.0-43-generic
Found initrd image: /boot/initrd.img-5.8.0-43-generic
Found memtest86+ image: /memtest86+.elf
Found memtest86+ image: /memtest86+.bin
done
ayoub@ayoub-VirtualBox:~$ sudo update-grub
Sourcing file `/etc/default/grub'
Sourcing file `/etc/default/grub.d/init-select.cfg'
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-5.11.0-38-generic
Found initrd image: /boot/initrd.img-5.11.0-38-generic
Found linux image: /boot/vmlinuz-5.8.0-43-generic
Found initrd image: /boot/initrd.img-5.8.0-43-generic
Found memtest86+ image: /memtest86+.elf
Found memtest86+ image: /memtest86+.bin
done
ayoub@ayoub-VirtualBox:~$ sudo /boot/grub/grub.cfg
sudo: /boot/grub/grub.cfg: command not found
ayoub@ayoub-VirtualBox:~$ sudo /boot/grub/grub.cfg
sudo: /boot/grub/grub.cfg: command not found
ayoub@ayoub-VirtualBox:~$ sudo nano /boot/grub/grub.cfg
ayoub@ayoub-VirtualBox:~$ sudo nano /boot/grub/grub.cfg
Accounts can be added and removed at any time from the Settin

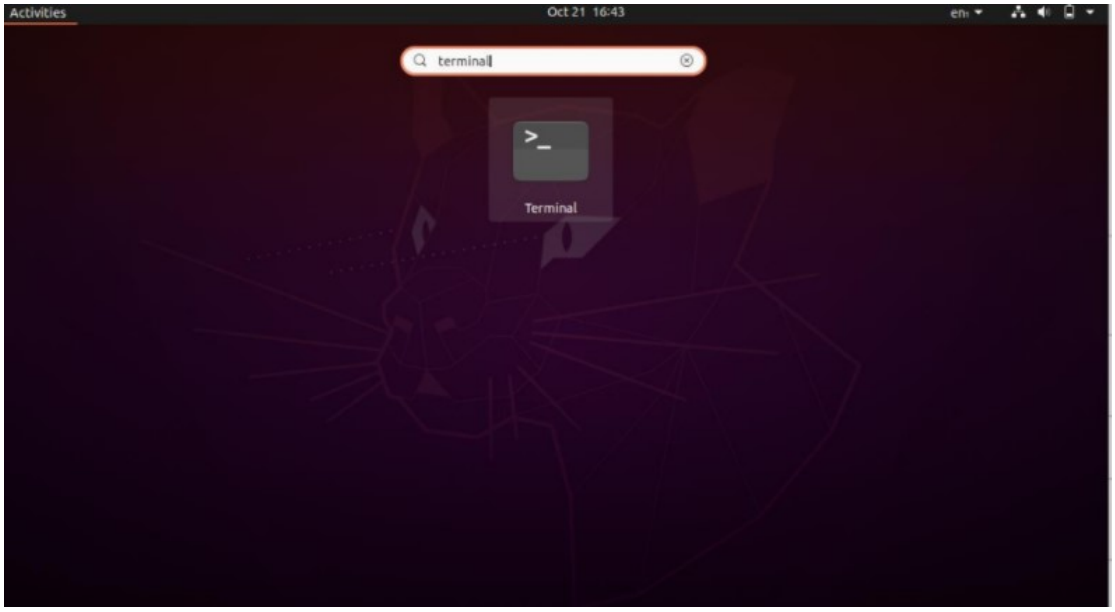


To have again the grub menu from Ubuntu we need to put the Ubuntu' Iso file again to select TRy ubuntu instead the install.

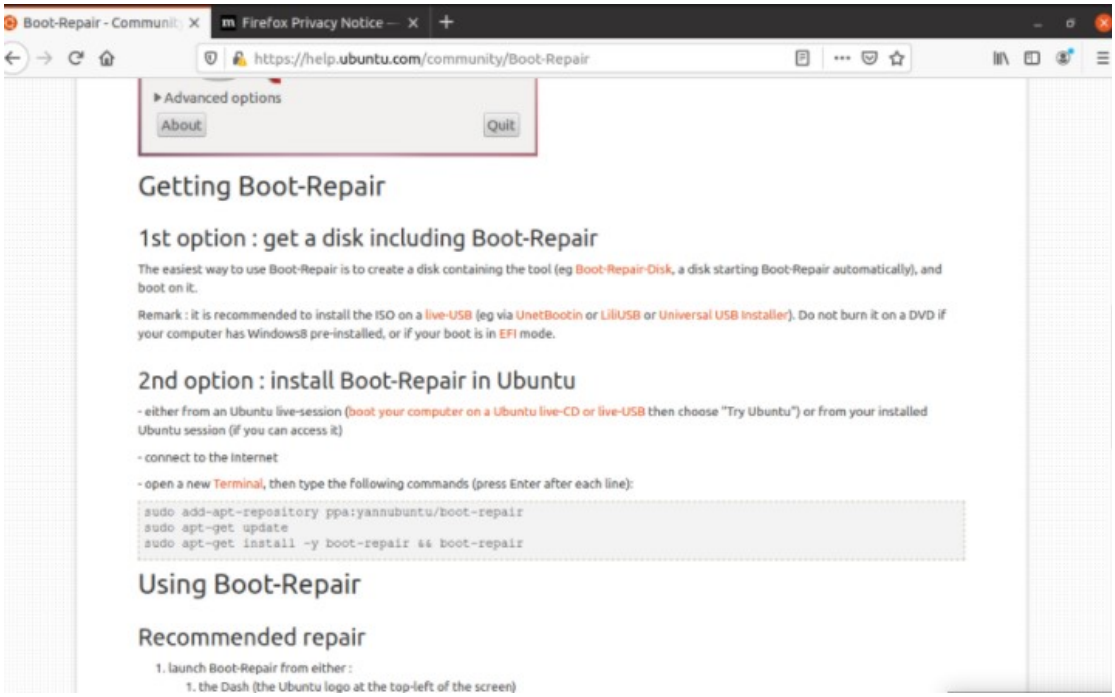


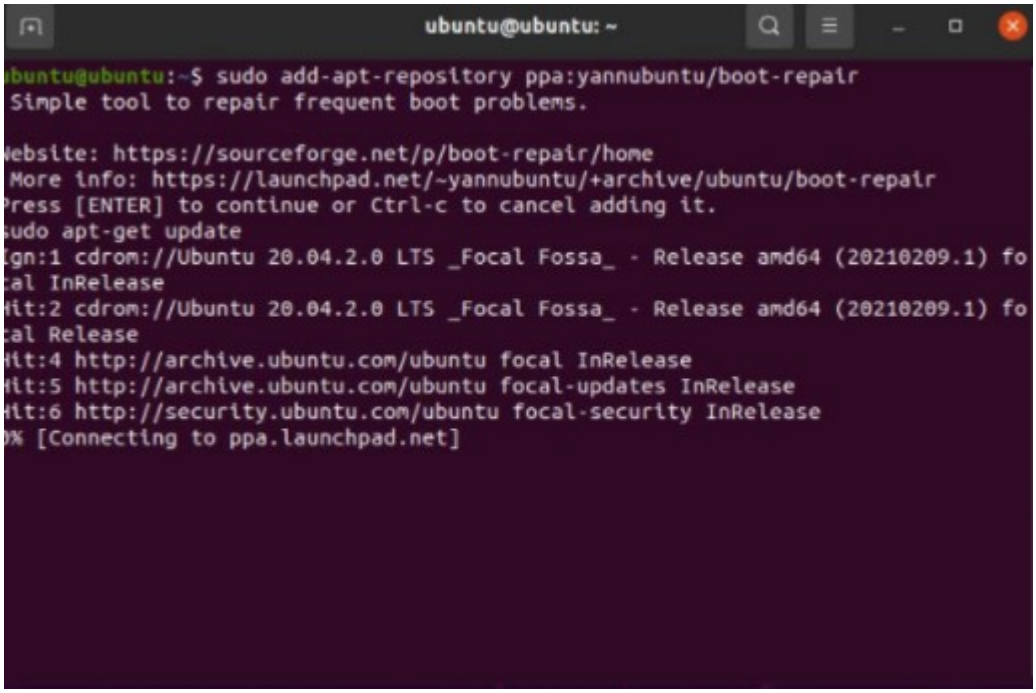
Checking disks: 7% complete
Checking ./pool/main/l/llvm-toolchain-9/libllvm9_9.0.1-12_i386.deb
Press Ctrl+C to cancel all filesystem checks in progress
ubuntu

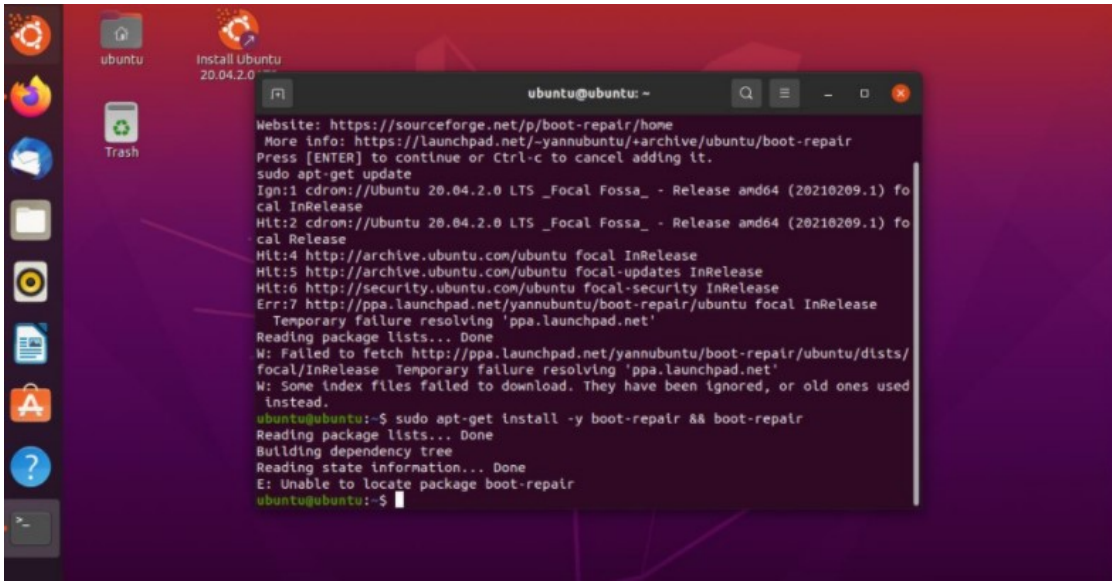

Welcome
English
Español
Esperanto
Euskara
Français
Gaeilge
Galego
Hrvatski
Íslenska
Italiano
Kurdî
Latviski
Lietuviškai
Magyar
Nederlands
No localization (UTF-8)
Norsk bokmål
Try Ubuntu
Install Ubuntu
You can try Ubuntu without making any changes to your computer, directly from this CD.
Or if you're ready, you can install Ubuntu alongside (or instead of) your current operating system. This shouldn't take too long.
You may wish to read the release notes.

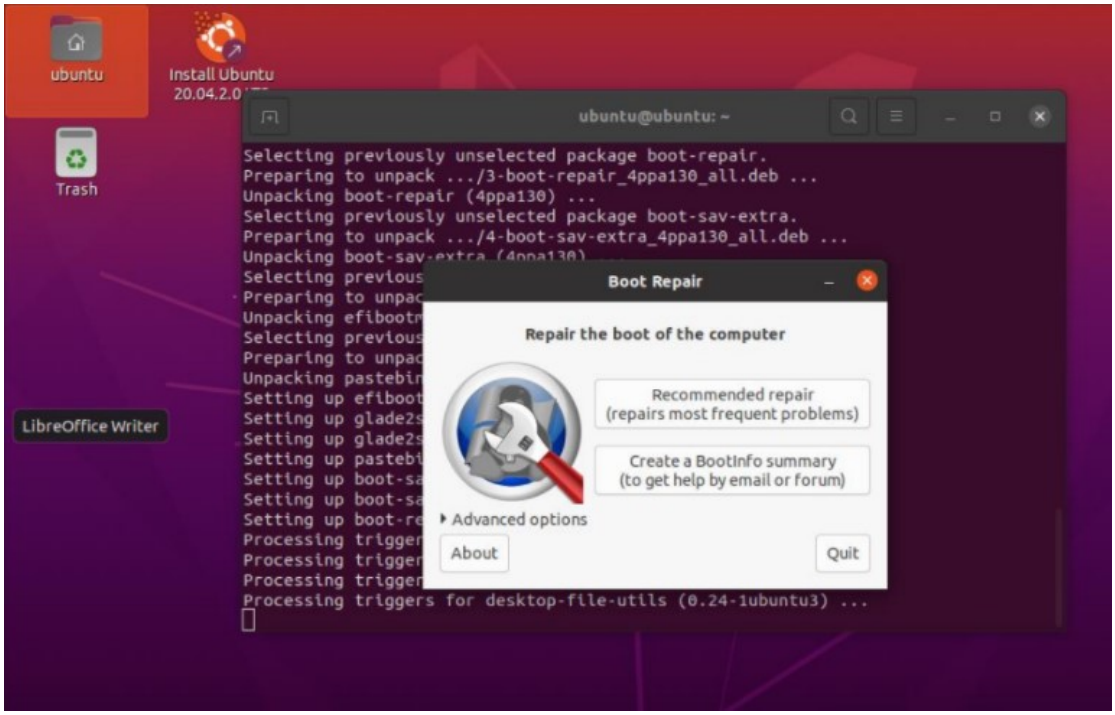


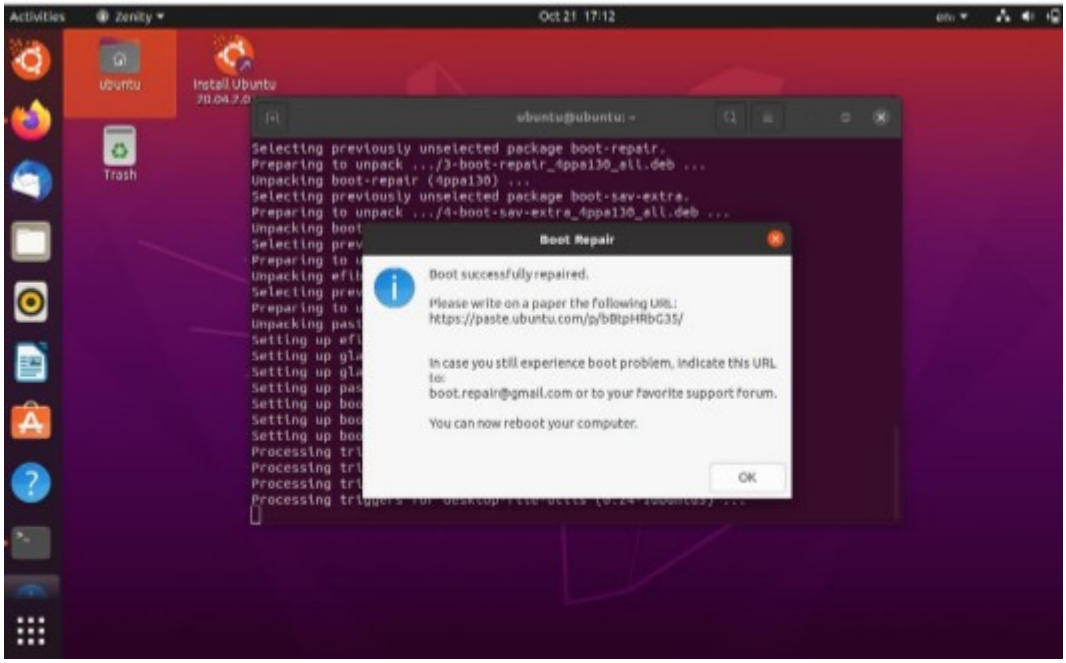
We need to put this few commandline in the terminal and press the recommended repair.



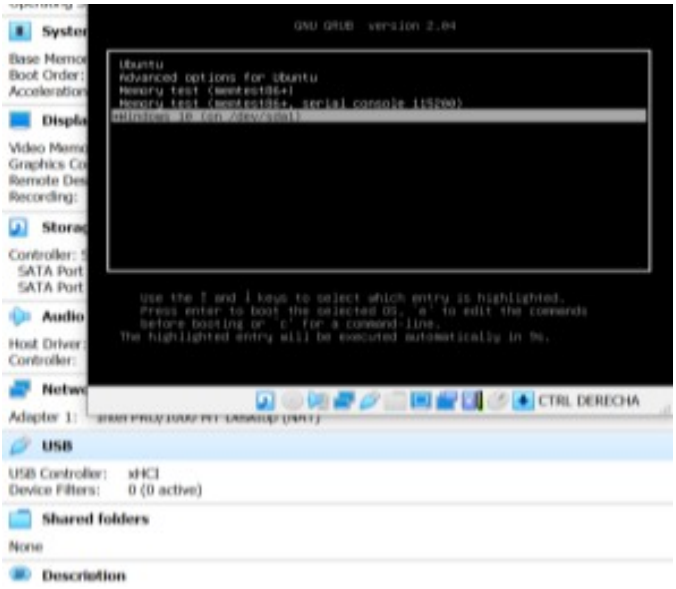

ubuntu@ubuntu: ~
ubuntu@ubuntu:~$ sudo add-apt-repository ppa:yannubuntu/boot-repair
Simple tool to repair frequent boot problems.
Website: https://sourceforge.net/p/boot-repair/home
More info: https://launchpad.net/~yannubuntu/+archive/ubuntu/boot-repair
Press [ENTER] to continue or Ctrl-c to cancel adding it.
sudo apt-get update
Ign:1 cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) fo
cal InRelease
Hit:2 cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) fo
cal Release
Hit:4 http://archive.ubuntu.com/ubuntu focal InRelease
Hit:5 http://archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:6 http://security.ubuntu.com/ubuntu focal-security InRelease
0% [Connecting to ppa.launchpad.net]


ubuntu
Install Ubuntu 20.04.2.0
Trash
ubuntu@ubuntu: ~
Website: https://sourceforge.net/p/boot-repair/home
More info: https://launchpad.net/~yannubuntu/+archive/ubuntu/boot-repair
Press [ENTER] to continue or Ctrl-c to cancel adding it.
sudo apt-get update
Ign:1 cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) fo
cal InRelease
Hit:2 cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) fo
cal Release
Hit:4 http://archive.ubuntu.com/ubuntu focal InRelease
Hit:5 http://archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:6 http://security.ubuntu.com/ubuntu focal-security InRelease
Err:7 http://ppa.launchpad.net/yannubuntu/boot-repair/ubuntu focal InRelease
Temporary failure resolving 'ppa.launchpad.net'
Reading package lists... Done
W: Failed to fetch http://ppa.launchpad.net/yannubuntu/boot-repair/ubuntu/dists/
focal/InRelease Temporary failure resolving 'ppa.launchpad.net'
W: Some index files failed to download. They have been ignored, or old ones used
instead.
ubuntu@ubuntu:~$ sudo apt-get install -y boot-repair && boot-repair
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package boot-repair
ubuntu@ubuntu:~$





We start again Ubuntu and confirm grub’menu is back.


GNU GRUB version 2.04
ubuntu
Advanced options for ubuntu
Memory test (memtest86+)
Memory test (memtest86+, serial console 115200)
Windows 10 (on /dev/sda1)
Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, `e' to edit the commands
before booting or `c' for a command-line.
The highlighted entry will be executed automatically in 9s.
CTRL DERECHA
USB
USB Controller: xHCI
Device Filters: 0 (0 active)
Shared folders
None
Description