

Universidad Mariano Gálvez de Guatemala

Ingeniería en Sistemas

Seminario

Ing. Edgar Civil

Sección A



Documento de Instalaciones

Henry Estuardo Altún Vargas

5390-17-308

Fecha, Julio 2024

## ÍNDICE

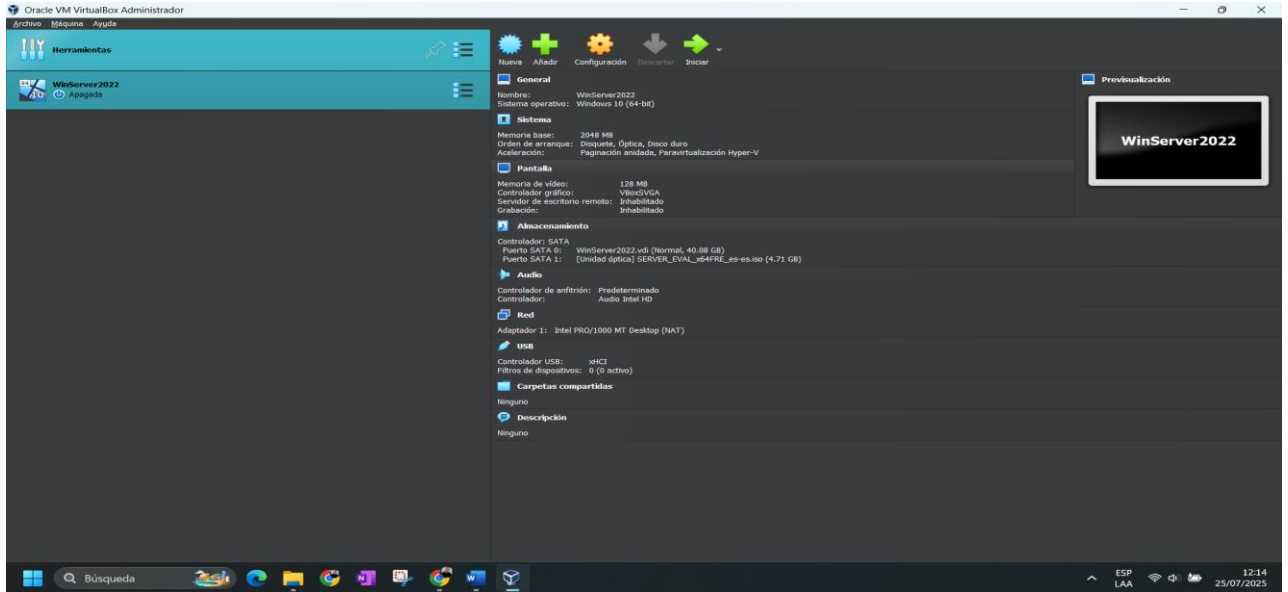
Introducción	3
Documentos de instalación	
Linux > Debian 12 Server (Consola)	4 - 15
Unix > FreeBSD 13 Server (Consola)	16 - 25
Unix > NetBSD 9 Server (Consola)	26 - 35
Conclusión	36

## **Introducción**

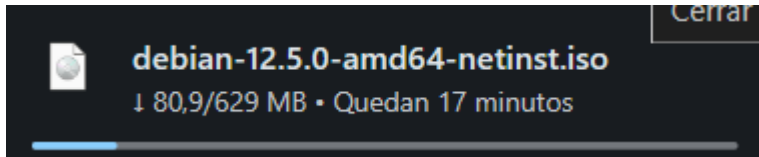
La información descrita a continuación tiene fines educativos, lo que conlleva a tener una amplia serie de instrucciones sobre cómo se hacen las instalaciones de cada imagen .iso en consola para que sea una forma más cómoda y sencilla de utilizar, además que la instalación de este tipo hará que se ocupe menos espacio en la memoria de la computadora.

## Linux > Debian 12 Server (Consola)

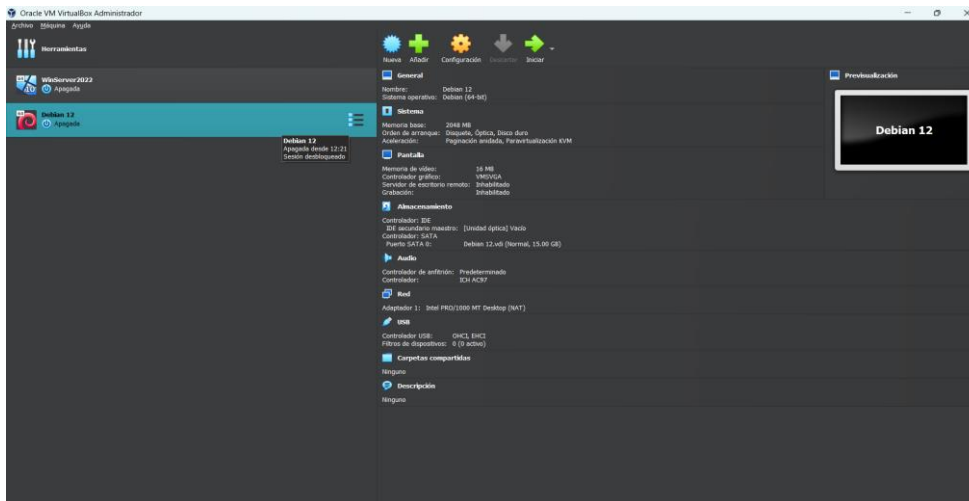
Abrir Virtual Box



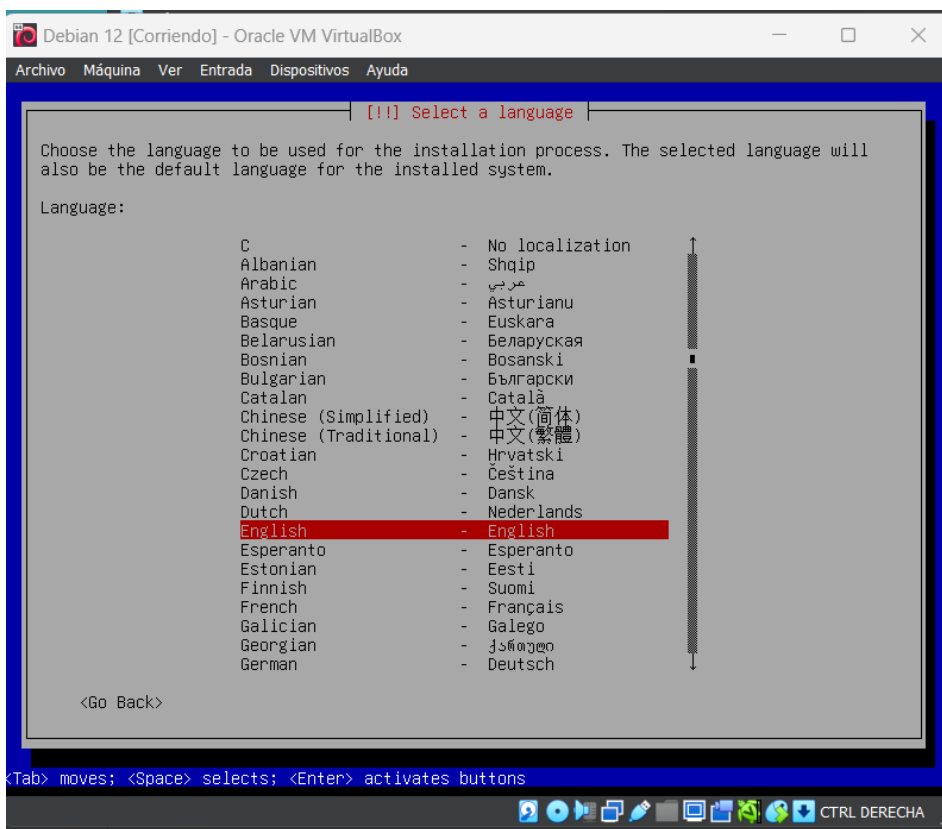
Descargar la .iso de Debian 12



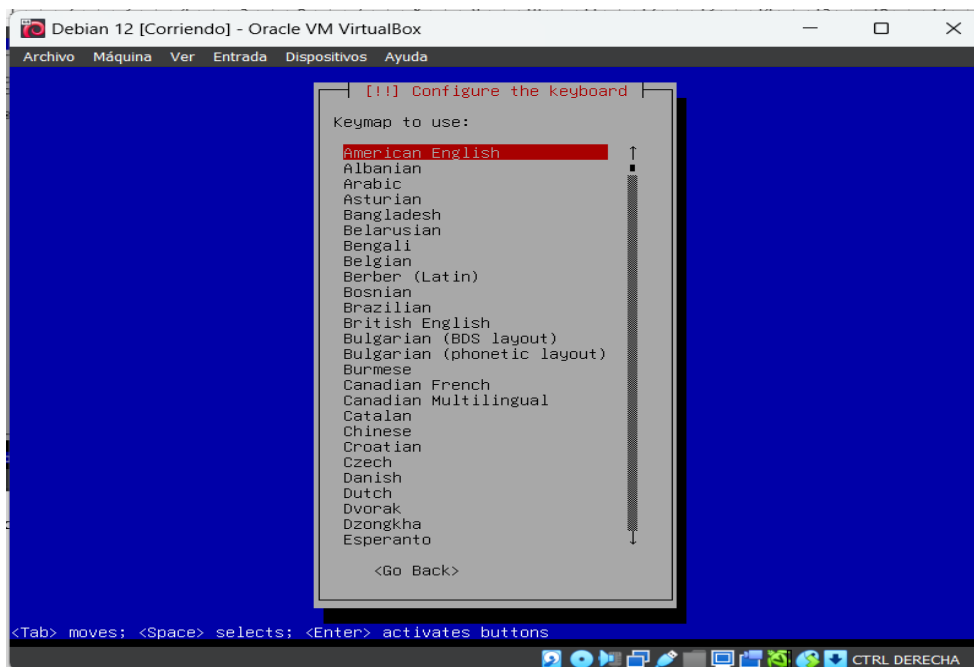
Crear la máquina virtual



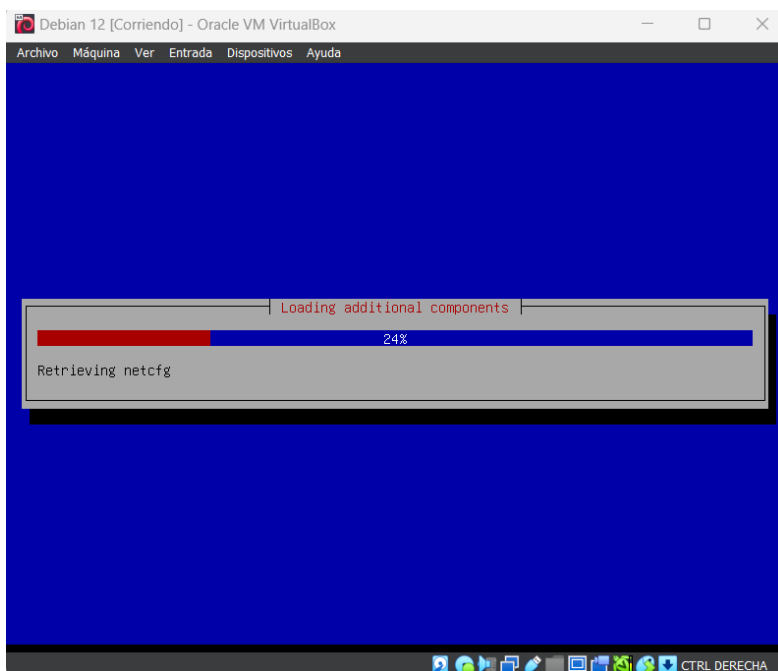
## Seleccionar el idioma install



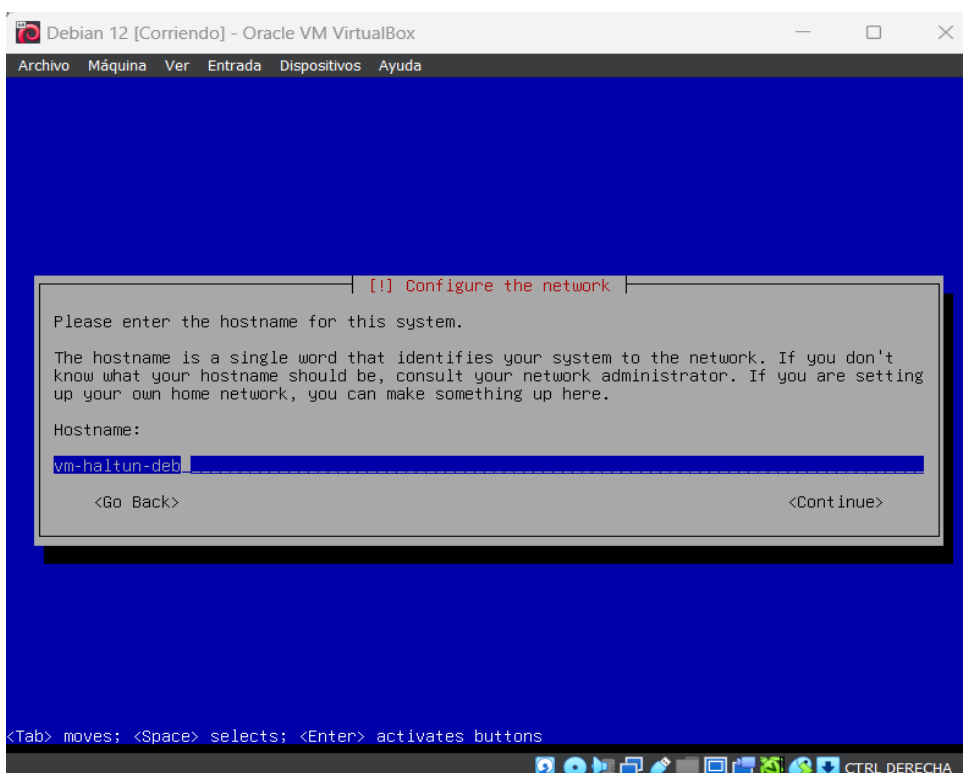
## Seleccionar el tipo de teclado



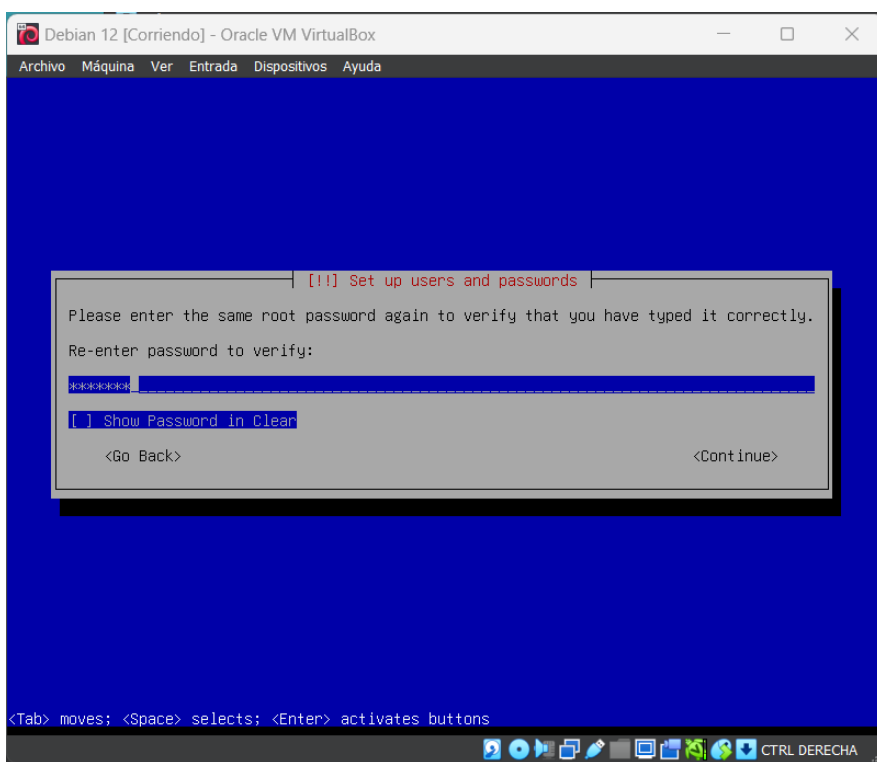
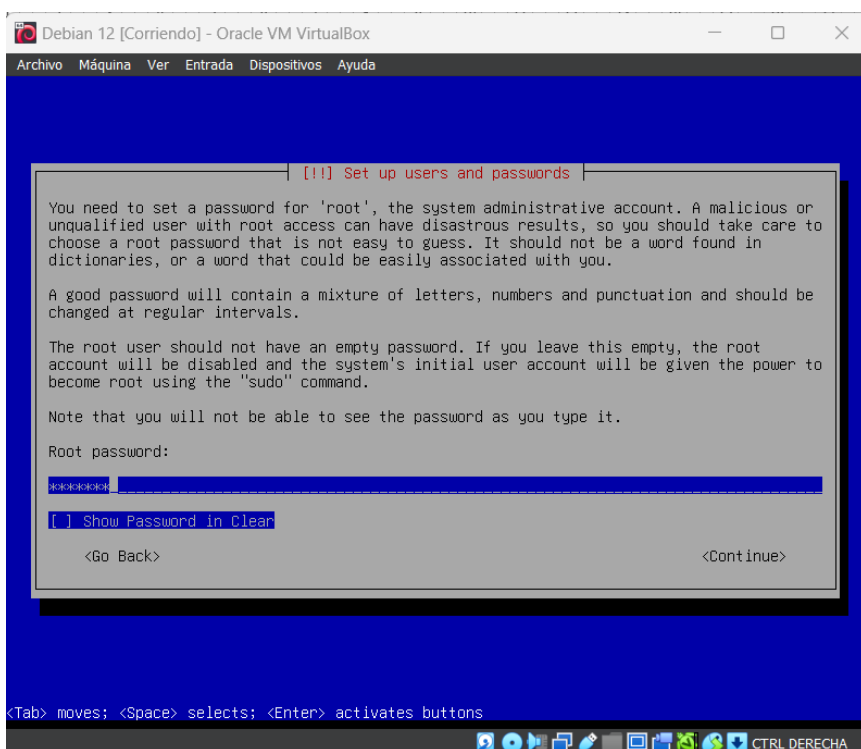
Realizar las descargas correspondientes



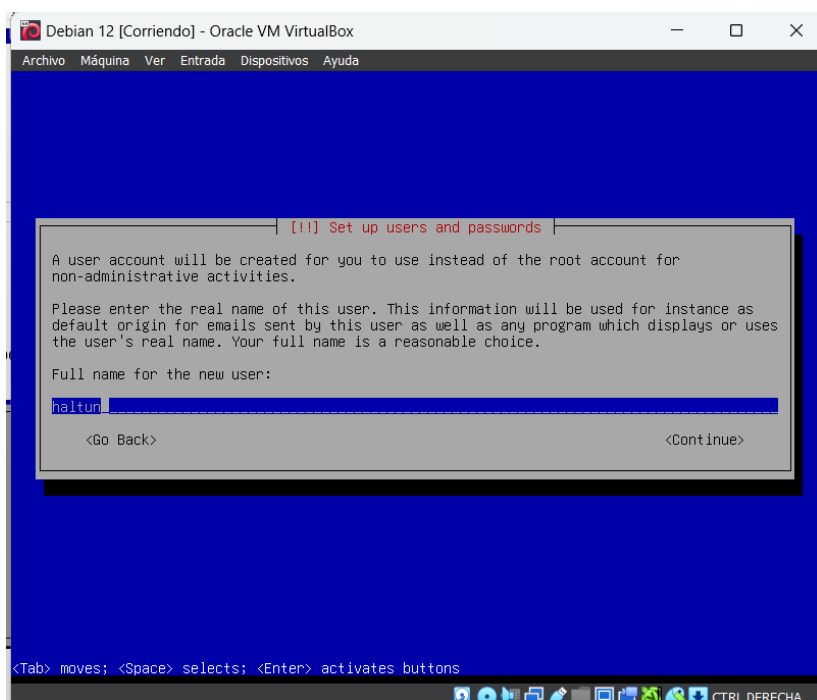
Colocar el hostname vm-haltun-deb



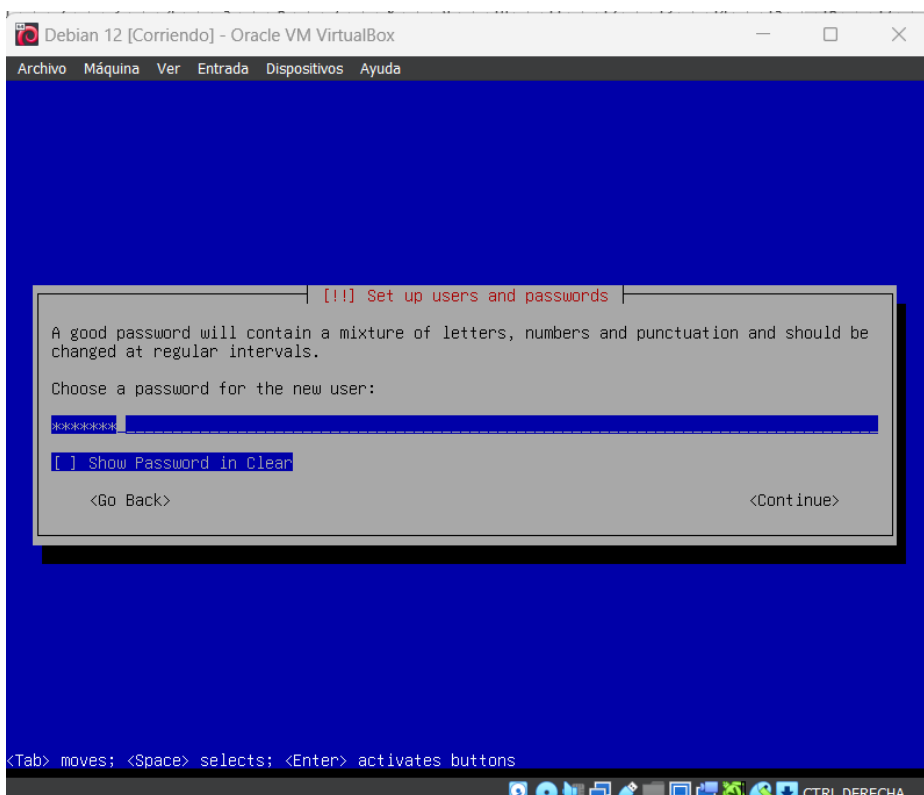
## Ingreso de contraseña



## Colocar nombre de usuario haltun

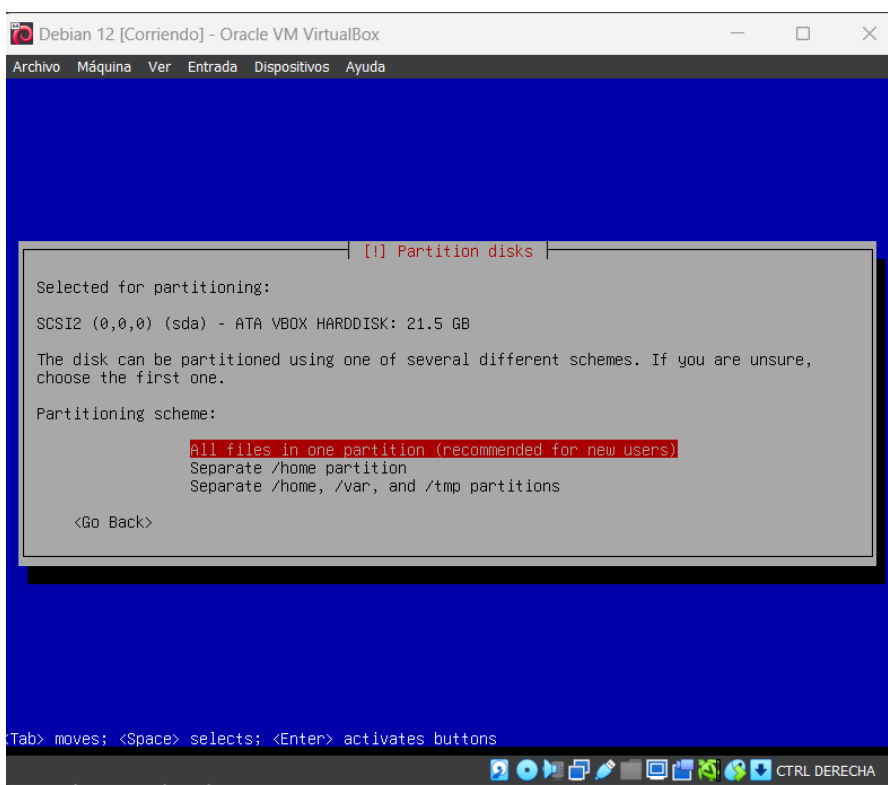
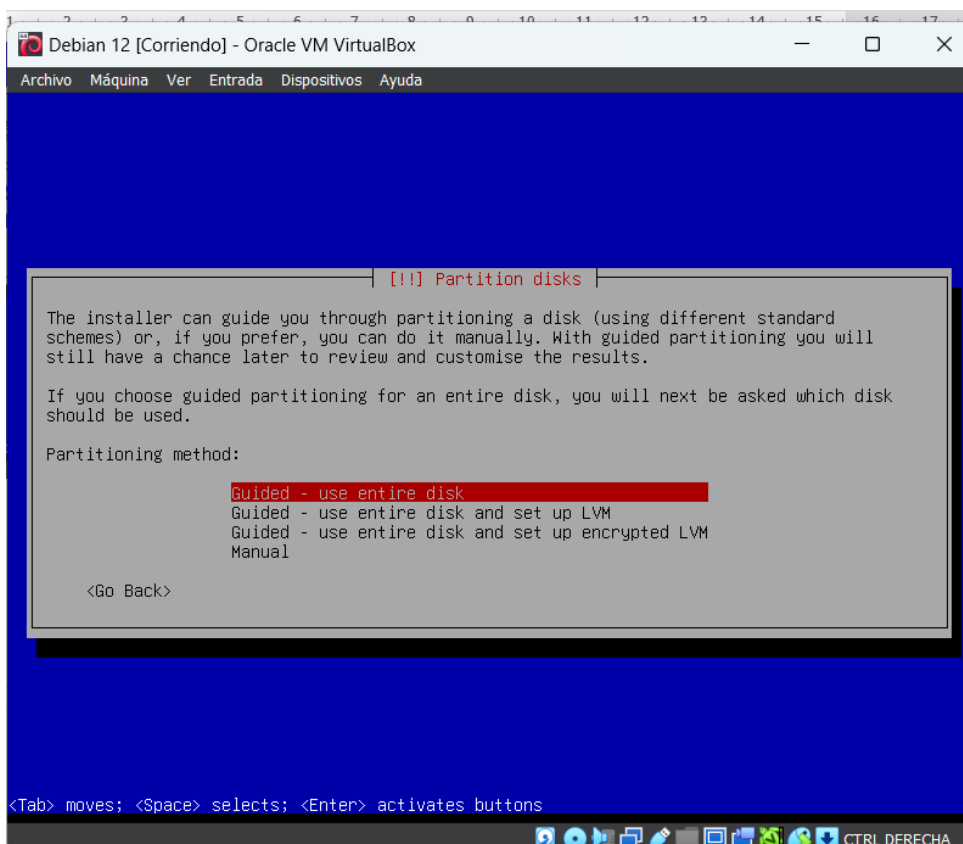


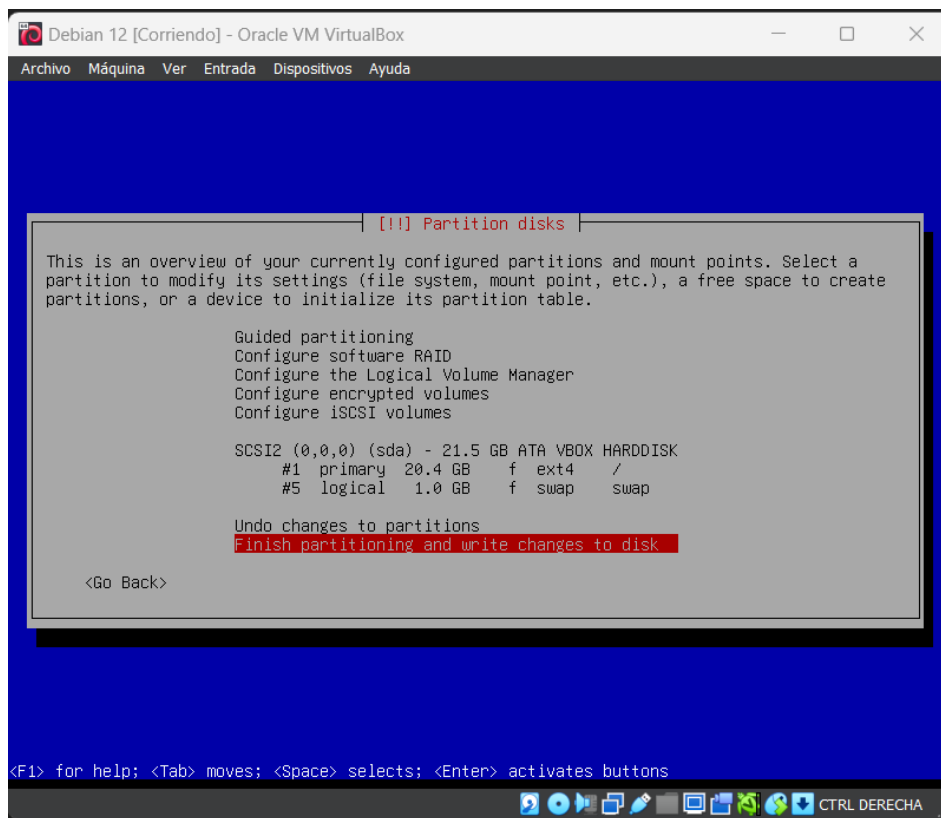
## Ingresa contraseña



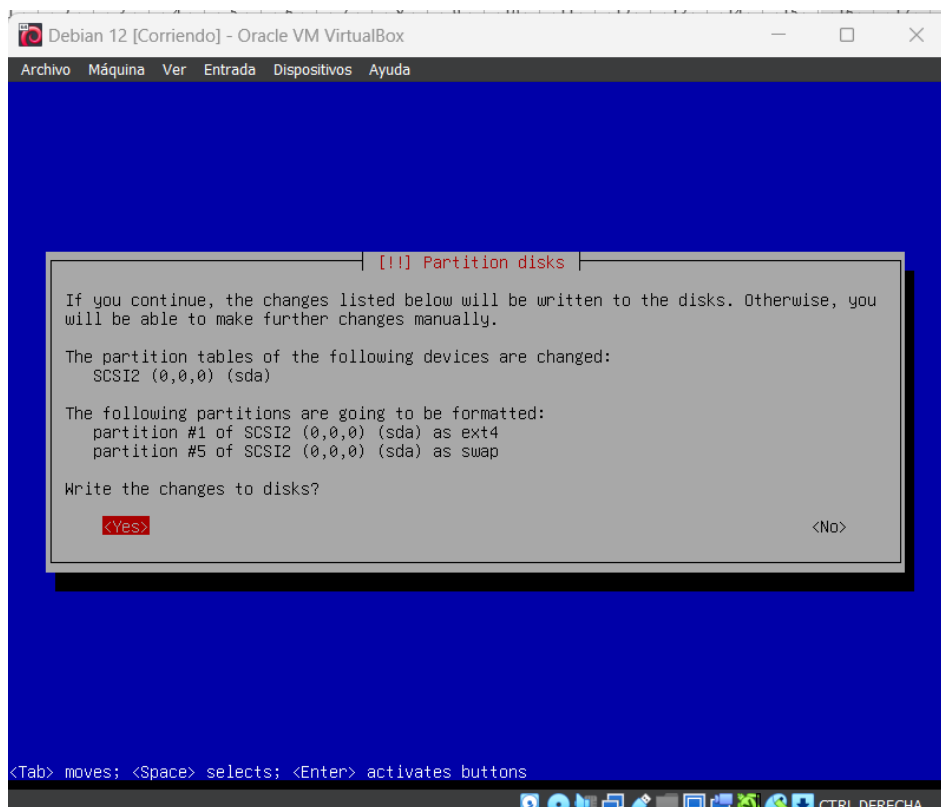


Realizar la partición de disco:

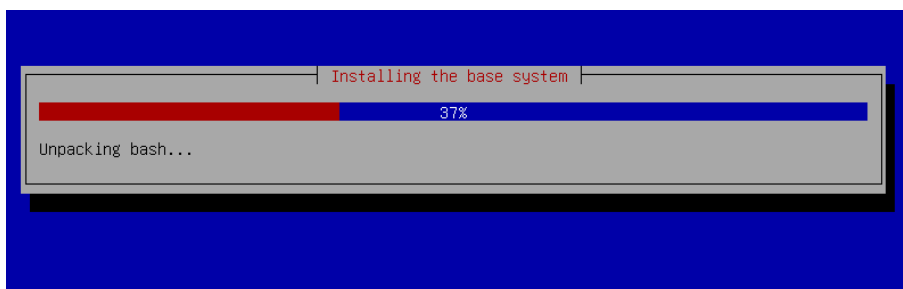




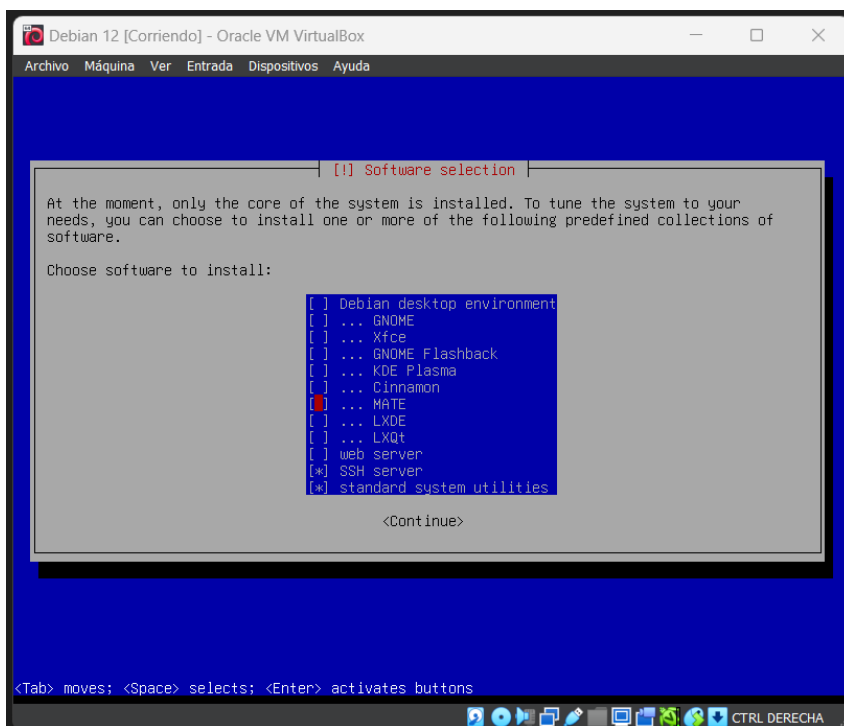
Confirmar los cambios



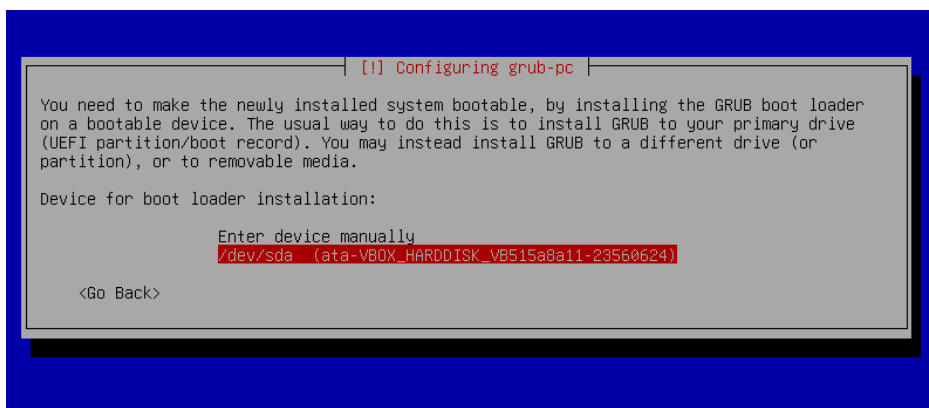
## Realizando la instalación



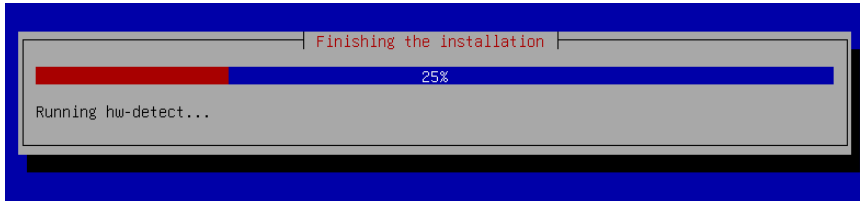
## Seleccionar softwares necesarios



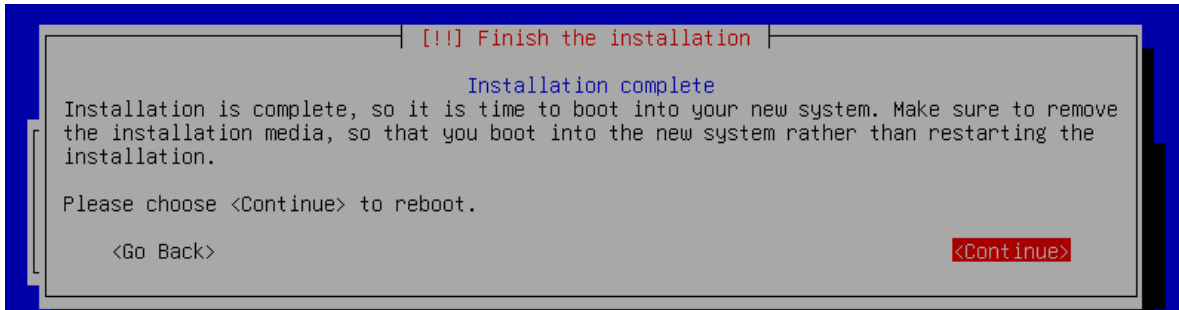
## Seleccionamos el disco que corresponde



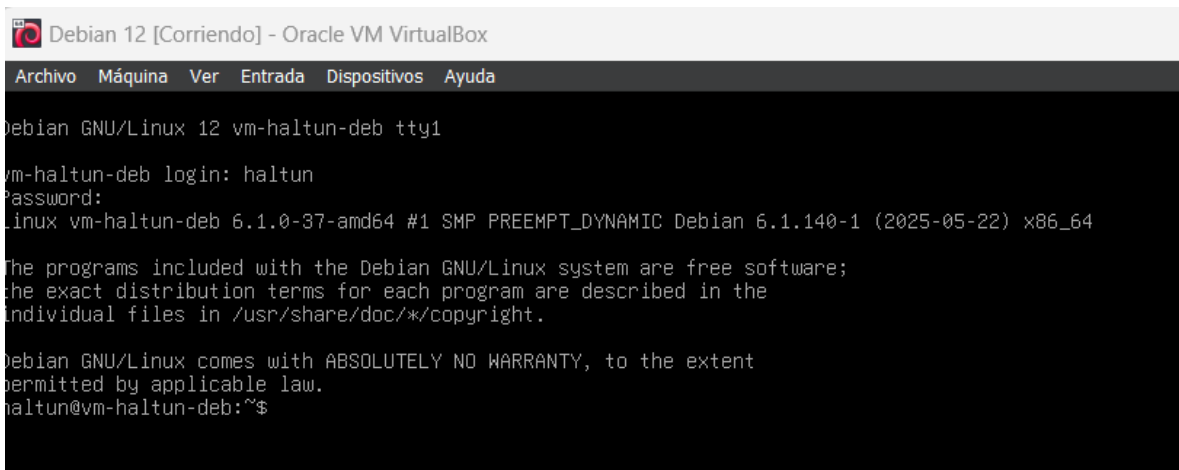
Esperamos la instalación:



Seleccionar Continue para que se pueda reiniciar la máquina virtual y se pueda utilizar



Instalación completa



## Obtener privilegios super usuario

```
Debian 12 [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
Debian GNU/Linux 12 vm-haltun-deb tty1

vm-haltun-deb login: haltun
Password:
Linux vm-haltun-deb 6.1.0-37-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.140-1 (2025-05-22) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Jul 25 15:24:27 CDT 2025 on tty1
haltun@vm-haltun-deb:~$ sudo -i
[sudo] password for haltun:
root@vm-haltun-deb:~#
```

## INSTALAR MySQL 8.x

```
root@vm-haltun-deb:~# wget https://dev.mysql.com/get/mysql-apt-config_0.8.29-1_all.deb
--2025-07-25 16:07:48-- https://dev.mysql.com/get/mysql-apt-config_0.8.29-1_all.deb
Resolving dev.mysql.com (dev.mysql.com)... 23.194.234.224, 2600:1403:c400:295::2e31, 2600:1403:c400:28b::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.194.234.224|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://repo.mysql.com//mysql-apt-config_0.8.29-1_all.deb [following]
--2025-07-25 16:07:49-- https://repo.mysql.com//mysql-apt-config_0.8.29-1_all.deb
Resolving repo.mysql.com (repo.mysql.com)... 23.13.78.79, 2600:1403:c400:1287::1d68, 2600:1403:c400:1289::1d68
Connecting to repo.mysql.com (repo.mysql.com)|23.13.78.79|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 18172 (18K) [application/x-debian-package]
Saving to: 'mysql-apt-config_0.8.29-1_all.deb'

mysql-apt-config_0.8.29-1_all.deb      100%[=====]
2025-07-25 16:07:49 (274 MB/s) - 'mysql-apt-config_0.8.29-1_all.deb' saved [18172/18172]

root@vm-haltun-deb:~#
```

```
Configuring mysql-apt-config
MySQL APT Repo features MySQL Server along with a variety of MySQL components. You may select the appropriate product
wish to receive.

Once you are satisfied with the configuration then select last option 'Ok' to save the configuration, then run 'apt-
Advanced users can always change the configurations later, depending on their own needs.

Which MySQL product do you wish to configure?

MySQL Server & Cluster (Currently selected: mysql-8.0)
MySQL Tools & Connectors (Currently selected: Enabled)
MySQL Preview Packages (Currently selected: Disabled)
Ok

<Ok>
```

```
root@vm-haltun-deb:~# sudo systemctl status mysql
● mysql.service - MySQL Community Server
   Loaded: loaded (/lib/systemd/system/mysql.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-07-25 16:39:24 CDT; 1min 2s ago
     Docs: man:mysqld(8)
           http://dev.mysql.com/doc/refman/en/using-systemd.html
   Main PID: 6545 (mysqld)
     Status: "Server is operational"
    Tasks: 37 (limit: 2300)
   Memory: 368.0M
      CPU: 2.394s
   CGroup: /system.slice/mysql.service
           └─6545 /usr/sbin/mysqld

Jul 25 16:39:23 vm-haltun-deb systemd[1]: Starting mysql.service - MySQL Community Server...
Jul 25 16:39:24 vm-haltun-deb systemd[1]: Started mysql.service - MySQL Community Server.
root@vm-haltun-deb:~#
```

```
root@vm-haltun-deb:~# sudo apt install -y htop
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
htop is already the newest version (3.2.2-2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@vm-haltun-deb:~#
```

```
root@vm-haltun-deb:~# sudo apt install -y nmap
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nmap is already the newest version (7.93+dfsg1-1).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

```

root@vm-haltun-deb:~# sudo apt install -y neofetch
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
neofetch is already the newest version (7.1.0-4).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@vm-haltun-deb:~# neofetch

_,met$$$$$gg.      root@vm-haltun-deb
,g$$$$$$$$$$$$$P.  -----
,$$P"            ""Y$$.  OS: Debian GNU/Linux 12 (bookworm) x86_64
,$$P.            $$$$.  Host: VirtualBox 1.2
,$$P             ,ggs.   Kernel: 6.1.0-37-amd64
d$$'            ,P"     Uptime: 1 hour, 25 mins
$$P             d$'     Packages: 503 (dpkg)
$$:            $$.     Shell: bash 5.2.15
$$;            Y$b._    Resolution: 1280x800
Y$$.           \."Y$$$$P" Terminal: /dev/pts/0
  $b           _.-_
  Y$$          Y$$.
  Y$$.         $b$.
    $b$.      Y$b$.
      Y$b$.   "Y$b".
        ""    ""

root@vm-haltun-deb:~#

```

## Instalar screenfetch

```
root@vm-haltun-deb:~# sudo apt install -y screenfetch
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
screenfetch is already the newest version (3.9.1+20210523-2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@vm-haltun-deb:~# screenfetch

      ,met$$$$$ggg
    g$$$$$S$$$$$P
  ,g$$$'""""""""Y$$$.
,g$$$,          ,,$$,
,g$$$,          ,,$$,
d$$$'   ,,$$,"''', $$$
,$$$'   d$,     , $$$
,$$$'   d$,     , $$$
,$$:    $$.     , d$$$'
,$$;    "Y$b..,, d$P'
Y$$$.   "Y$$$$$P,'"
Y$b     "_____.
 Y$$
  Y$$
   Y$b.
    Y$b.
     Y$b.
      """""

root@vm-haltun-deb:~#
```

```
root@vm-haltun-deb
OS: Debian 12 bookworm
Kernel: x86_64 Linux 6.1.0-37-amd64
Uptime: 1h 26m
Packages: 502
Shell: bash 5.2.15
Disk: 2.6G / 20G (14%)
CPU: Intel Core i7-10510U @ 2X 2.304GHz
GPU: VMware SVGA II Adapter
RAM: 641MiB / 1967MiB
```

## Instalar ssh server

```

root@vm-haltun-deb:~# sudo systemctl start ssh
root@vm-haltun-deb:~# sudo systemctl status ssh
* ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-07-25 15:23:49 CDT; 1h 27min ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Main PID: 508 (sshd)
      Tasks: 1 (limit: 2300)
     Memory: 6.7M
        CPU: 52ms
    CGroup: /system.slice/ssh.service
            └─508 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Jul 25 15:23:48 vm-haltun-deb systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Jul 25 15:23:49 vm-haltun-deb sshd[508]: Server listening on 0.0.0.0 port 22.
Jul 25 15:23:49 vm-haltun-deb sshd[508]: Server listening on :: port 22.
Jul 25 15:23:49 vm-haltun-deb systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
root@vm-haltun-deb:~#

```

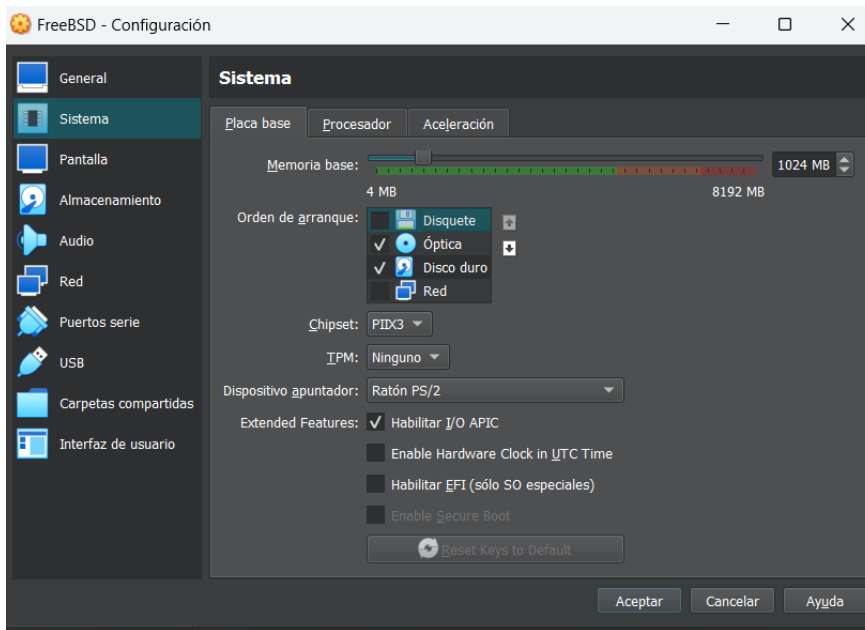
```
root@vm-haltun-deb:~# mysql --version
mysql Ver 8.0.43 for Linux on x86_64 (MySQL Community Server - GPL)
root@vm-haltun-deb:~# httpd --version
httpd 3.2.2
root@vm-haltun-deb:~# nmap --version
Nmap version 7.93 ( https://nmap.org )
Platform: x86_64-pc-linux-gnu
Compiled with: liblua-5.3.6 openssl-3.0.16 libssh2-1.10.0 libz-1.2.13 libpcre-8.39 libpcap-1.10.3 nmap-libdnet-1.12 ipv6
Compiled without:
Available nsock engines: epoll poll select
root@vm-haltun-deb:~#
```

## Conexión a NAP ip 10.0.2.15

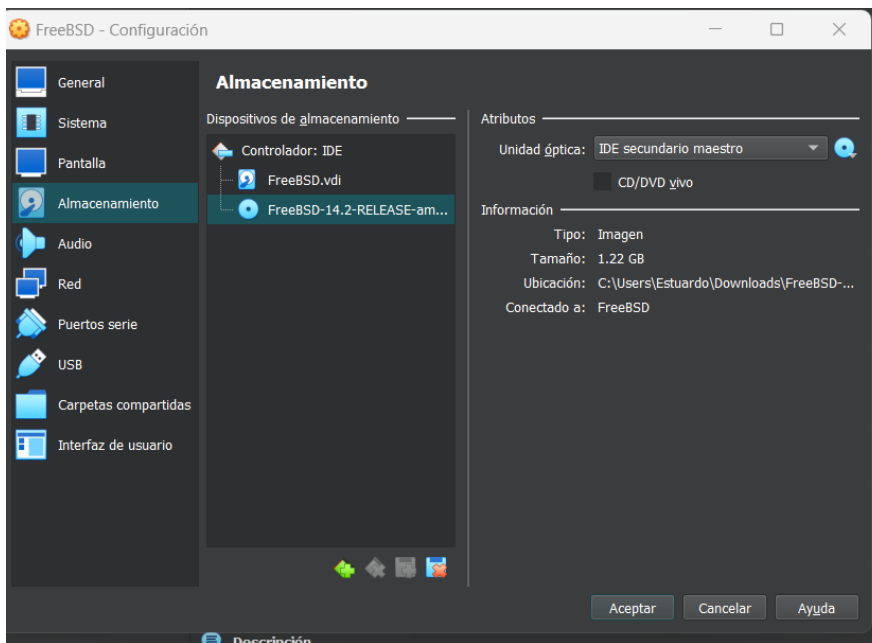
```
root@vm-haltun-deb:~# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:f:e4:ec brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic enp0s3
        valid_lft 80884sec preferred_lft 80884sec
    inet6 fe80::a00:27ff:fe2f:e4ec/64 scope link
        valid_lft forever preferred_lft forever
root@vm-haltun-deb:~#
```

## Unix > FreeBSD 14 Server (Consola)

Crear la máquina virtual y en la configuración quitar el floppy/disquete:

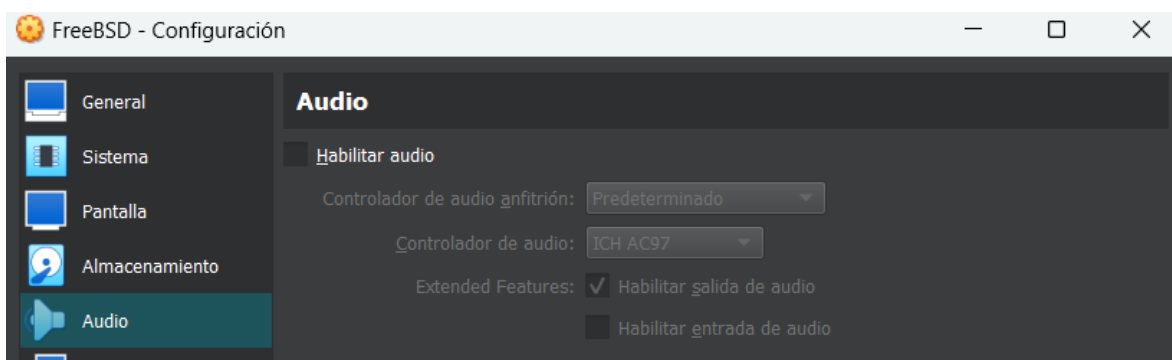


Buscamos la ISO de FreeBSD y la colocamos para que nos lea el disco

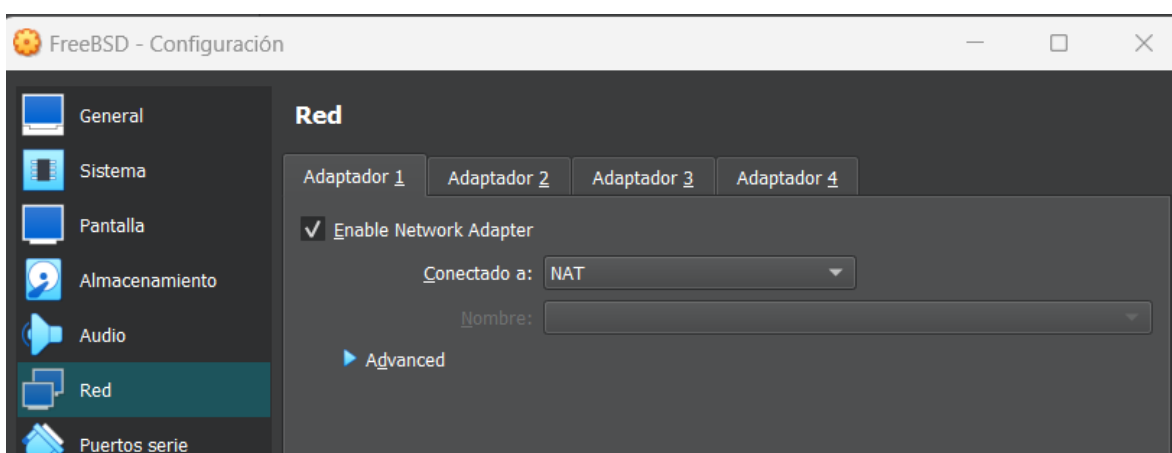




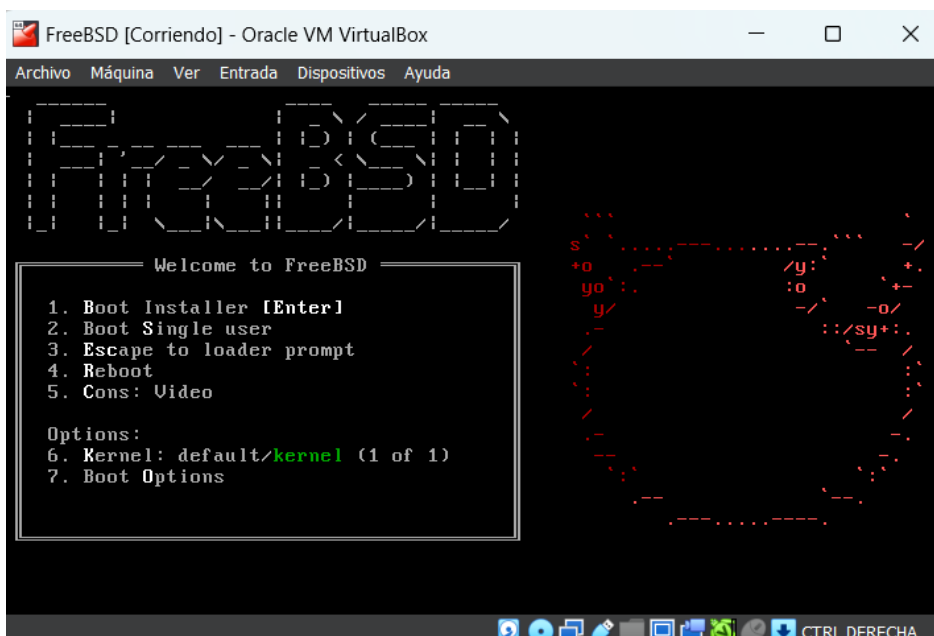
Desactivar el enable del audio



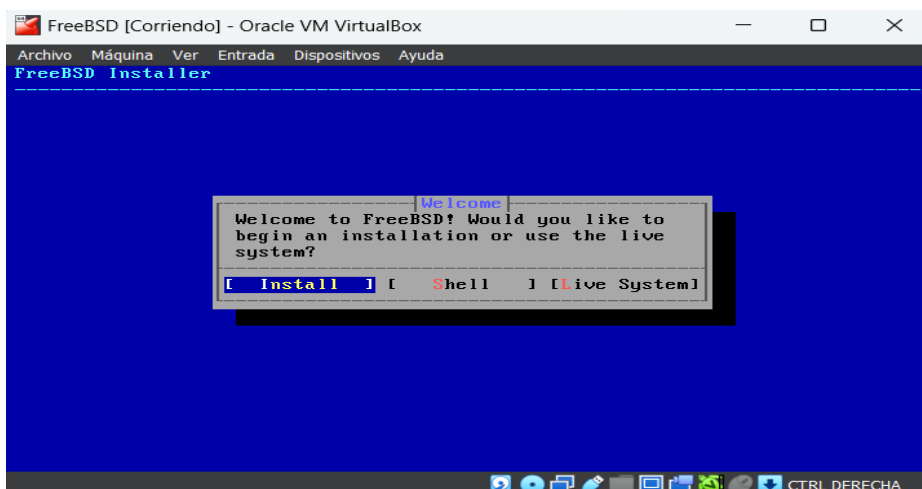
Red en NAT



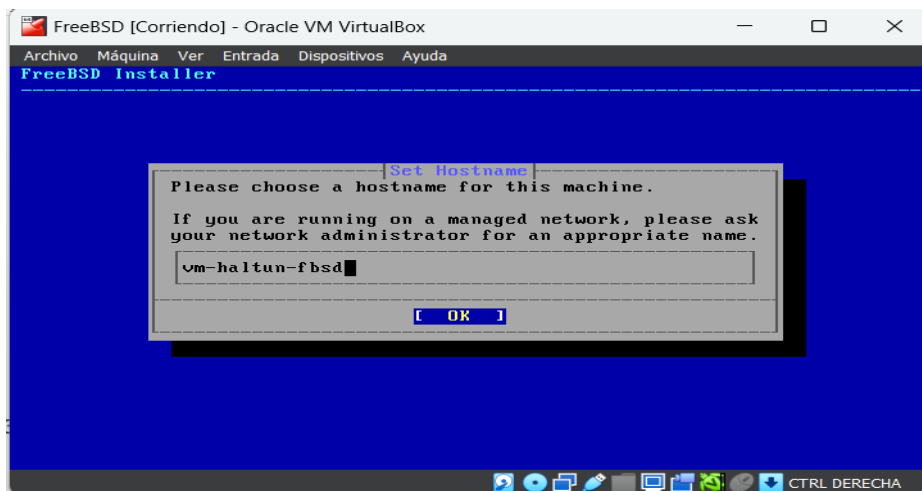
Ventana inicial



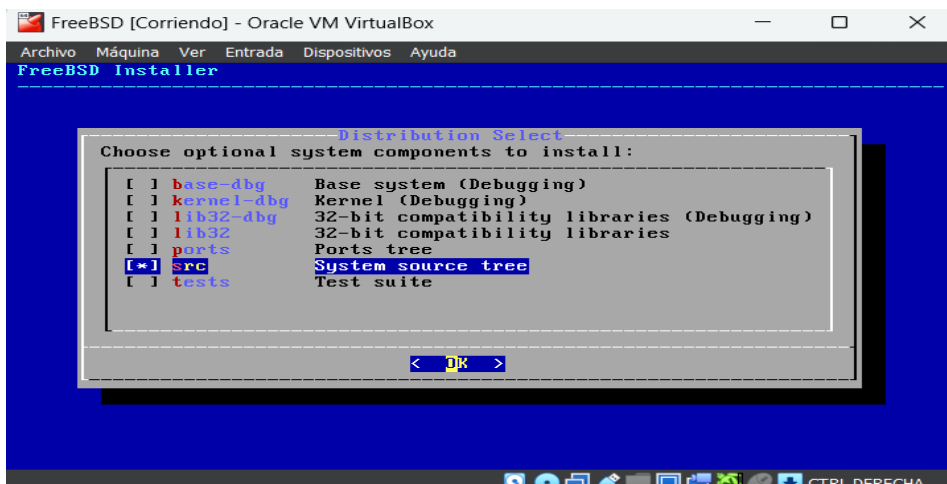
## Seleccionar Install



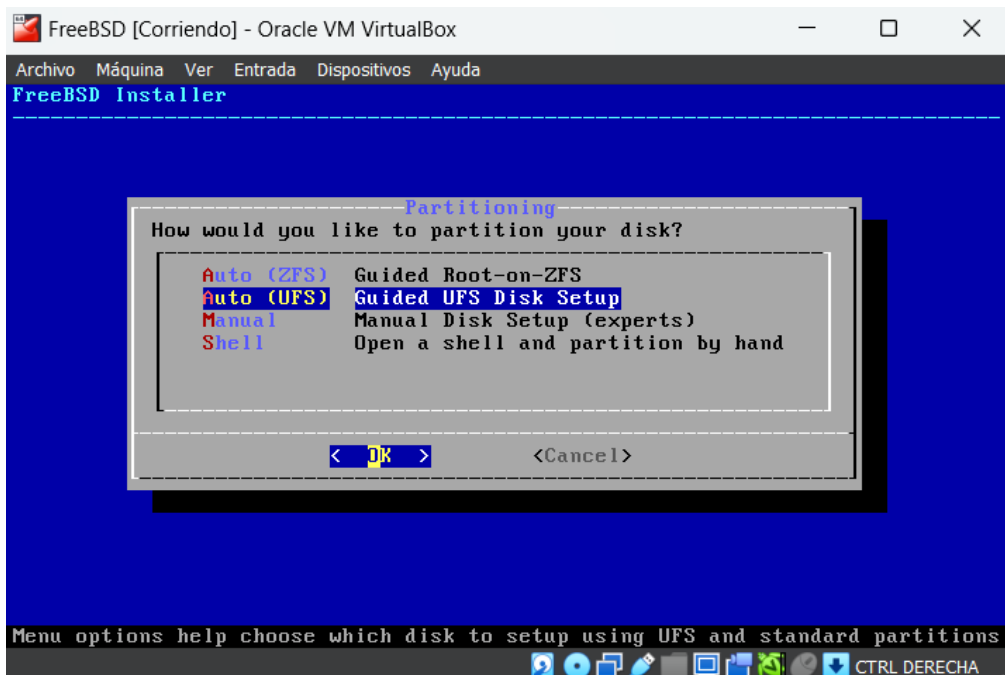
## Ingresar el hostname



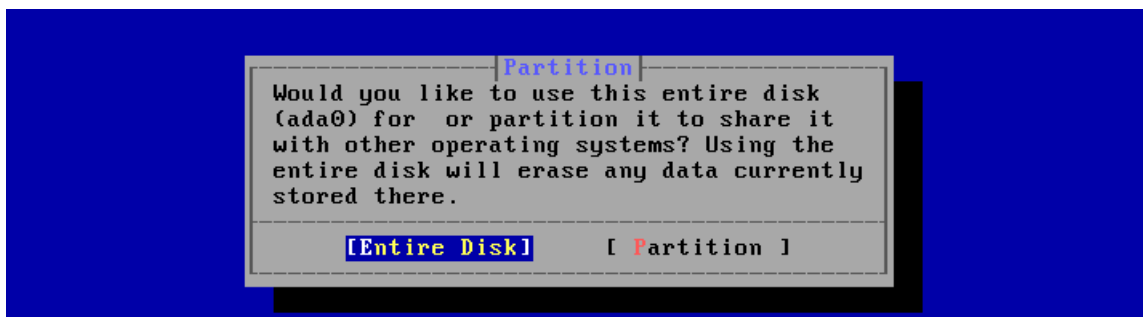
Dejamos selecciona únicamente la opción de las librerías:



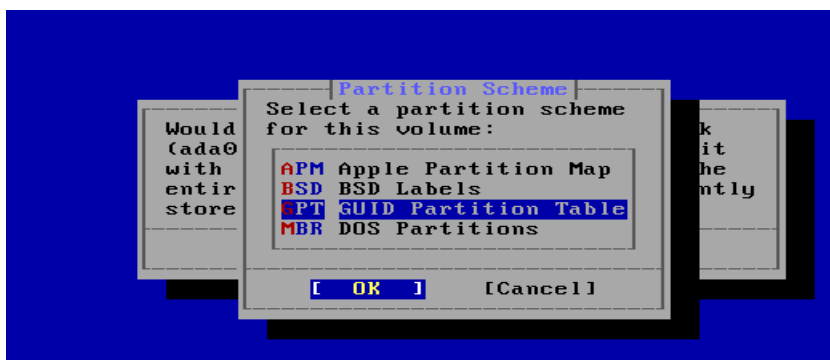
Ejecutamos la máquina virtual con Auto (UFS) así no permitirá que la partición tenga más de 8 de RAM



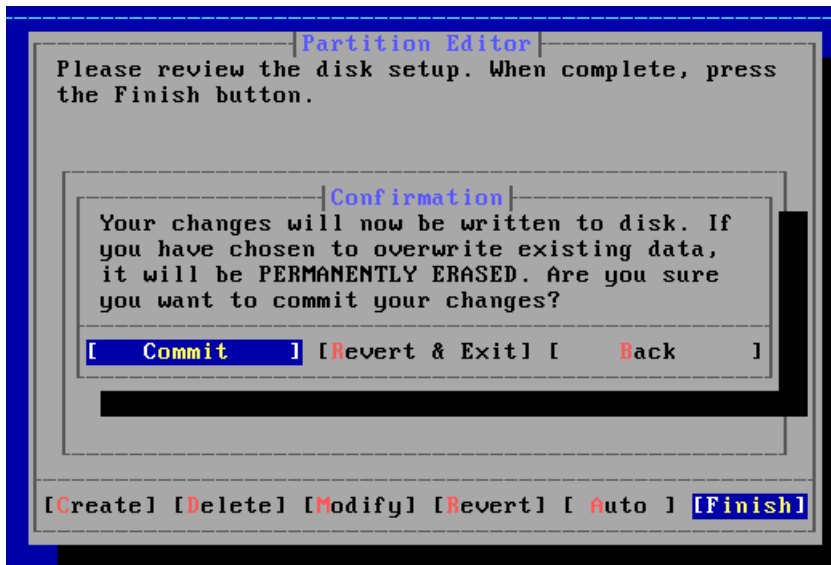
Confirmar



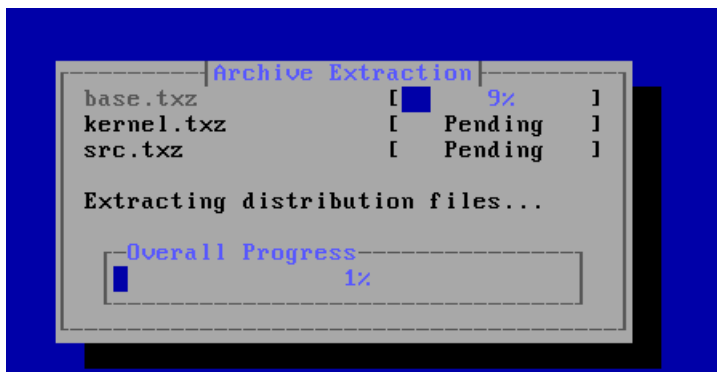
Luego realizamos la partición con la opción GPT



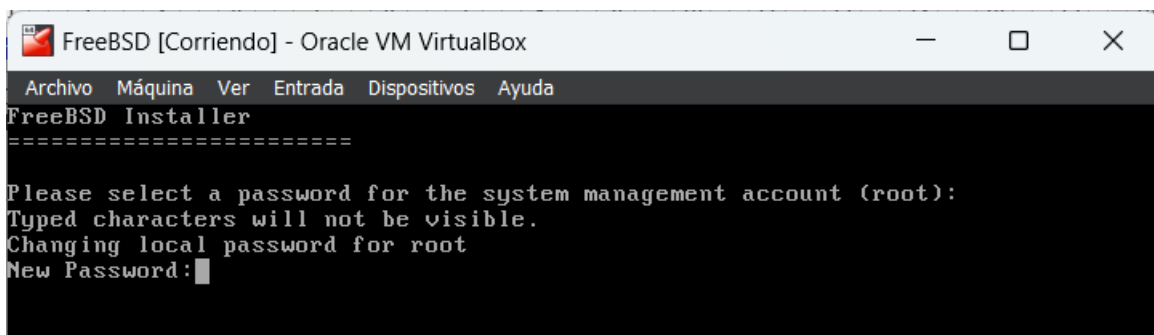
Finish y commit



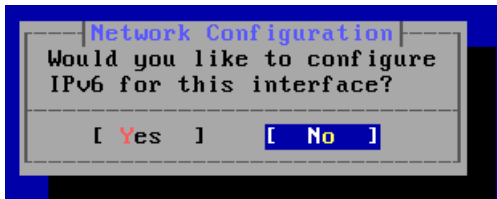
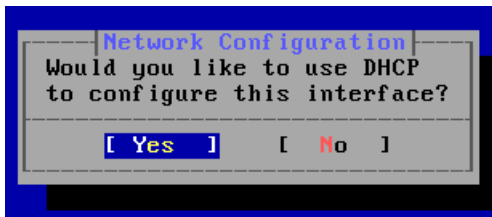
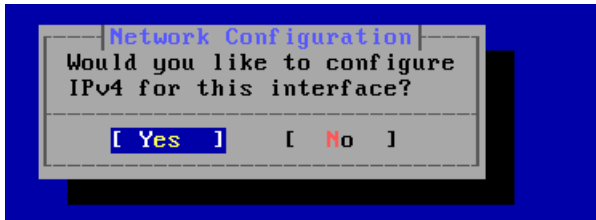
Realizar las descargas correspondientes, esperar hasta que el proceso termine de realizarse:



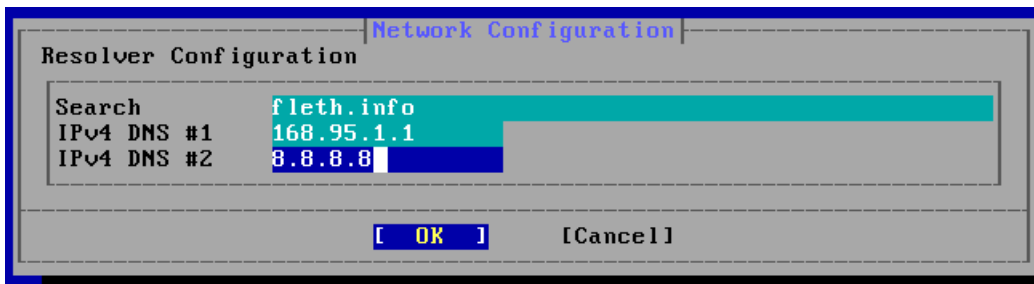
Colocar nueva contraseña



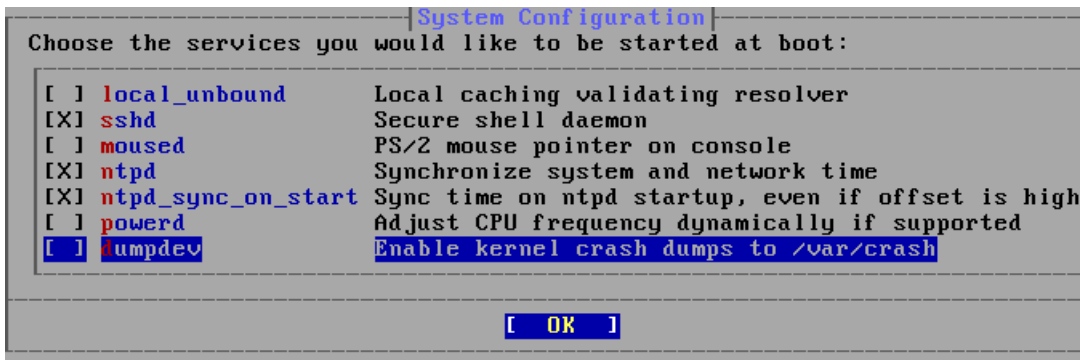
Presionamos YES, en la ventana de IPV4 y DHCP, para IPV6 presionamos que no



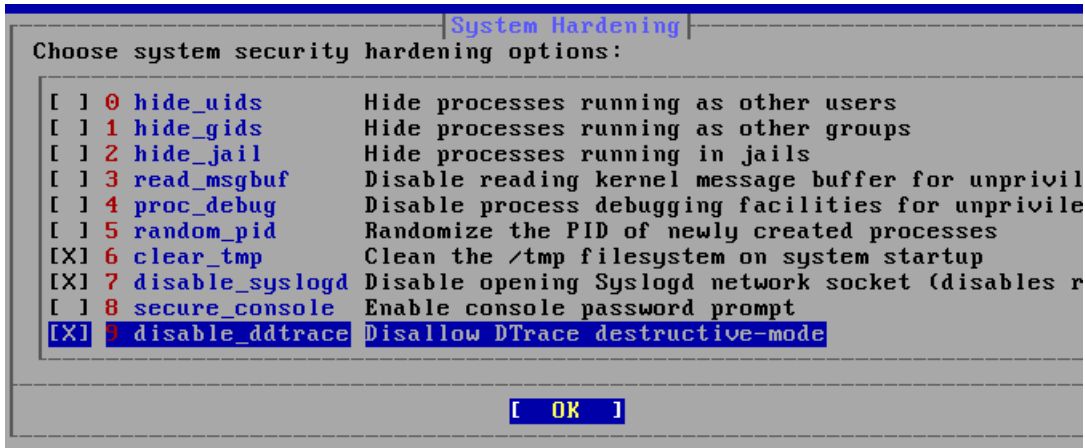
Colocar las IP



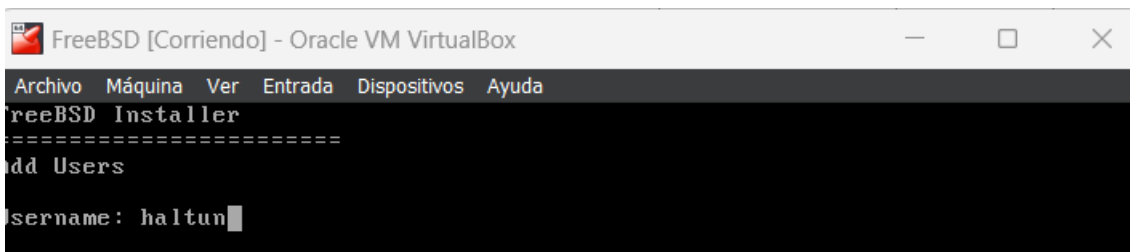
Seleccionamos los servicios que vamos a estar utilizando



Configuramos el sistema de seguridad

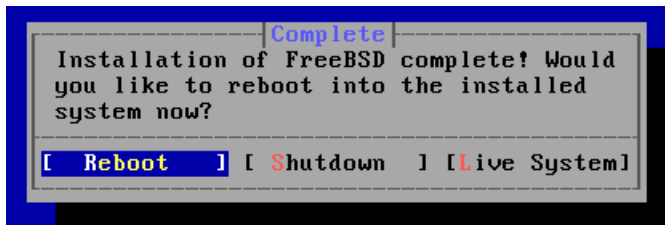


Agregar usuario

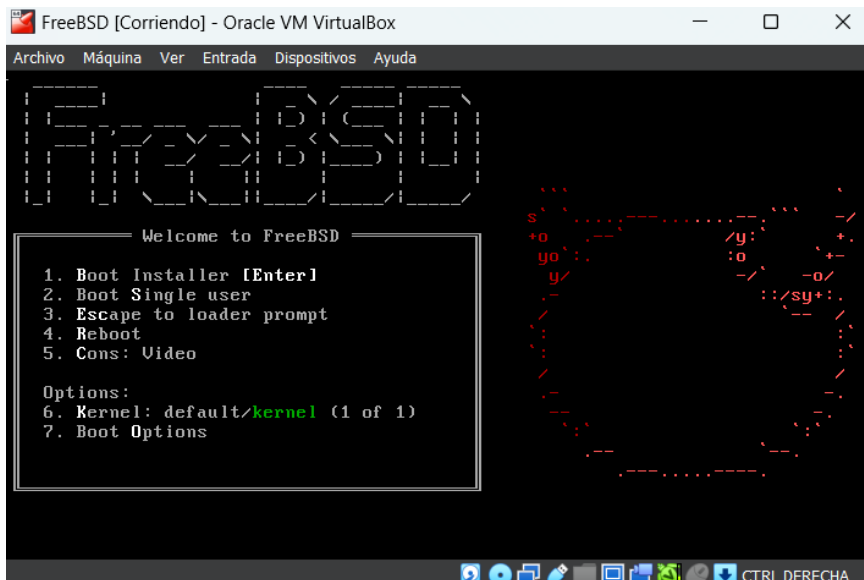


```
Full name: haltun
Uid [1001]:
Login group [haltun]:
Login group is haltun. Invite haltun into other groups? []: wheel
Login class [default]:
Shell (sh csh tcsh nologin) [sh]: /bin/sh
Home directory [/home/haltun]:
Home directory permissions (Leave empty for default):
Use password-based authentication? [yes]: yes
Use an empty password? (yes/no) [yes]: no
Use a random password? (yes/no) [no]: no
Enter password:
Enter password again:
Lock out the account after creation? [no]: no
Username      : haltun
Password      : *****
Full Name     : haltun
Uid           : 1001
Class         :
Groups        : haltun wheel
Home          : /home/haltun
Home Mode     :
Shell         : /bin/sh
Locked        : no
OK? (yes/no) [yes]:
```

## Reinicio de máquina virtual



## Ventana de inicio de FreeBSD:



## Usuario creado

```
haltun@vm-haltun-fbsd:~ $ id haltun
uid=1001(haltun) gid=1001(haltun) groups=1001(haltun),0(wheel)
haltun@vm-haltun-fbsd:~ $
```

## INSTALAR MySQL 8.x pkg install mysql80-server mysql80-client

```
https://docs.freebsd.org/en/articles/contributing/#ports-contributing
====
Message from mysql80-client-8.0.42:
--
This is the mysql CLIENT without the server.
for complete server and client, please install databases/mysql80-server
====
Message from mysql80-server-8.0.42:
--
There is no initial password for first time use of MySQL.
Keep in mind to reset it to a secure password.

MySQL80 has a default /usr/local/etc/mysql/my.cnf,
remember to replace it with your own
or set `mysql_optfile="$YOUR_CNF_FILE` in rc.conf.
root@vm-haltun-fbsd:~ # sudo sysrc mysql_enable="YES"
mysql_enable: -> YES
root@vm-haltun-fbsd:~ # sudo service mysql-server start
Starting mysql.
root@vm-haltun-fbsd:~ # sudo service mysql-server status
mysql is running as pid 2742.
root@vm-haltun-fbsd:~ #
```

## Instalar htop pkg install htop

```
root@vm-haltun-fbsd:~ # sudo pkg install htop
Updating FreeBSD repository catalogue...
FreeBSD repository is up to date.
All repositories are up to date.
The following 1 package(s) will be affected (of 0 checked):

New packages to be INSTALLED:
    htop: 3.4.0

Number of packages to be installed: 1

110 KiB to be downloaded.

Proceed with this action? [y/N]: y
[1/1] Fetching htop-3.4.0.pkg: 100% 110 KiB 113.0kB/s 00:01
Checking integrity... done (0 conflicting)
[1/1] Installing htop-3.4.0...
[1/1] Extracting htop-3.4.0: 100%
root@vm-haltun-fbsd:~ #
```

## Instalar nmap pkg install nmap

```
root@vm-haltun-fbsd:~ # sudo pkg install nmap
Updating FreeBSD repository catalogue...
FreeBSD repository is up to date.
All repositories are up to date.
The following 1 package(s) will be affected (of 0 checked):

New packages to be INSTALLED:
    nmap: 7.94_3

Number of packages to be installed: 1

The process will require 26 MiB more space.
6 MiB to be downloaded.

Proceed with this action? [y/N]: y
[1/1] Fetching nmap-7.94_3.pkg: 100% 6 MiB 566.3kB/s 00:11
Checking integrity... done (0 conflicting)
[1/1] Installing nmap-7.94_3...
[1/1] Extracting nmap-7.94_3: 100%
root@vm-haltun-fbsd:~ #
```

## Instalar neofetch pkg install neofetch

```

All repositories are up to date.
The following 3 package(s) will be affected (of 0 checked):

New packages to be INSTALLED:
    bash: 5.2.37
    neofetch: 7.1.0_1
    readline: 8.2.13_2

Number of packages to be installed: 3

The process will require 11 MiB more space.
2 MiB to be downloaded.

Proceed with this action? [y/N]: y
[1/3] Fetching neofetch-7.1.0_1.pkg: 100% 82 KiB 83.6kB/s 00:01
[2/3] Fetching readline-8.2.13_2.pkg: 100% 397 KiB 406.3kB/s 00:01
[3/3] Fetching bash-5.2.37.pkg: 100% 2 MiB 585.2kB/s 00:03
Checking integrity... done (0 conflicting)
[1/3] Installing readline-8.2.13_2...
[1/3] Extracting readline-8.2.13_2: 100%
[2/3] Installing bash-5.2.37...
[2/3] Extracting bash-5.2.37: 100%
[3/3] Installing neofetch-7.1.0_1...
[3/3] Extracting neofetch-7.1.0_1: 100%
root@vm-haltun-fbsd:~ #
```



Instalar screenfetch pkg install screenfetch

```
[15/16] Extracting xapgin0-1.3.4: 100%
[16/16] Installing screenFetch-3.9.9...
[16/16] Extracting screenFetch-3.9.9: 100%
root@vm-haltun-fbsd:~ #
```

Instalar ssh server

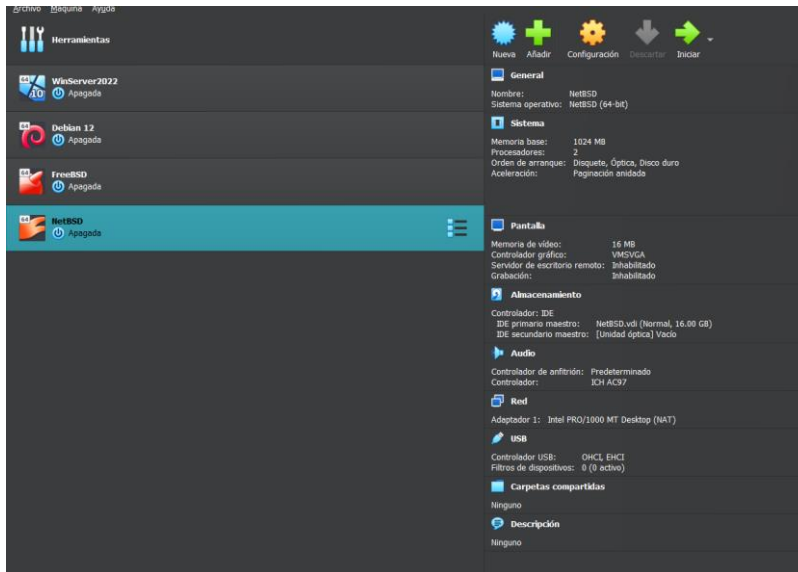
```
root@vm-haltun-fbsd:~ # sudo sysrc sshd_enable="YES"
sshd_enable: YES -> YES
root@vm-haltun-fbsd:~ # sudo service sshd start
sshd already running? (pid=784).
root@vm-haltun-fbsd:~ # sudo service sshd status
sshd is running as pid 784.
root@vm-haltun-fbsd:~ #
```

Conexión a NAP ip 10.0.2.15

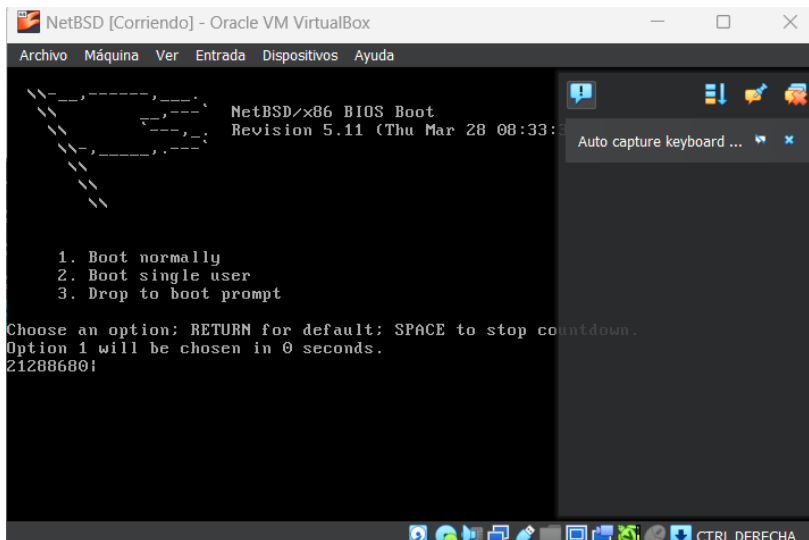
```
root@vm-haltun-fbsd:~ # ifconfig
em0: flags=1008843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST,LOWER_UP> metric 0 mtu
1500
    options=48505bb<RXCSUM, TXCSUM, VLAN_MTU, VLAN_HWTAGGING, JUMBO_MTU, VLAN_HWC
SUM, TS04, LRO, VLAN_HWFILTER, VLAN_HWTSO, HWSTATS, MEXTPG>
    ether 08:00:27:e8:2e:4e
    inet 10.0.2.15 netmask 0xffffffff00 broadcast 10.0.2.255
    media: Ethernet autoselect (1000baseT <full-duplex>)
    status: active
    nd6 options=29<PERFORMNUD, IFDISABLED, AUTO_LINKLOCAL>
lo0: flags=1008049<UP, LOOPBACK, RUNNING, MULTICAST, LOWER_UP> metric 0 mtu 16384
    options=6800003<RXCSUM, TXCSUM, LINKSTATE, RXCSUM_IPV6, TXCSUM_IPV6>
    inet 127.0.0.1 netmask 0xff000000
    inet6 ::1 prefixlen 128
    inet6 fe80::1%lo0 prefixlen 64 scopeid 0x2
    groups: lo
    nd6 options=21<PERFORMNUD, AUTO_LINKLOCAL>
root@vm-haltun-fbsd:~ #
```

## Unix > NetBSD 10 Server (Consola)

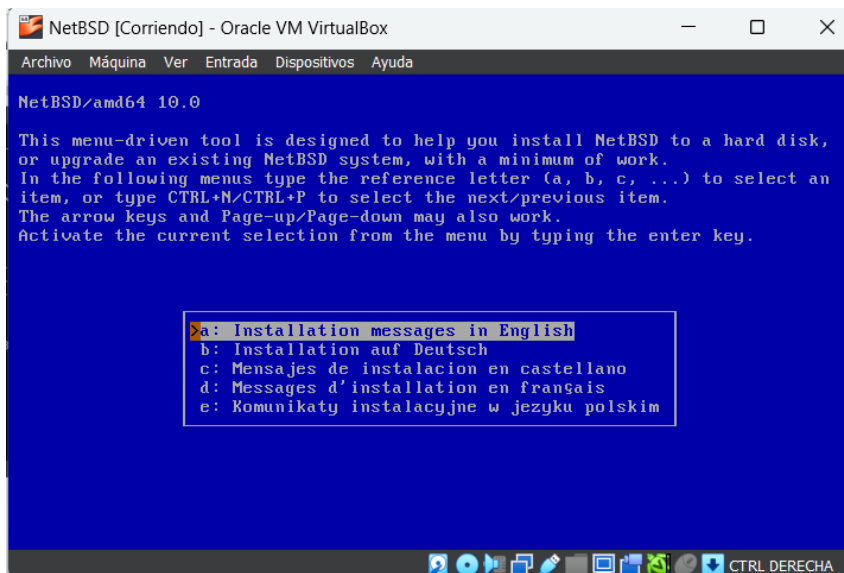
Crear máquina virtual



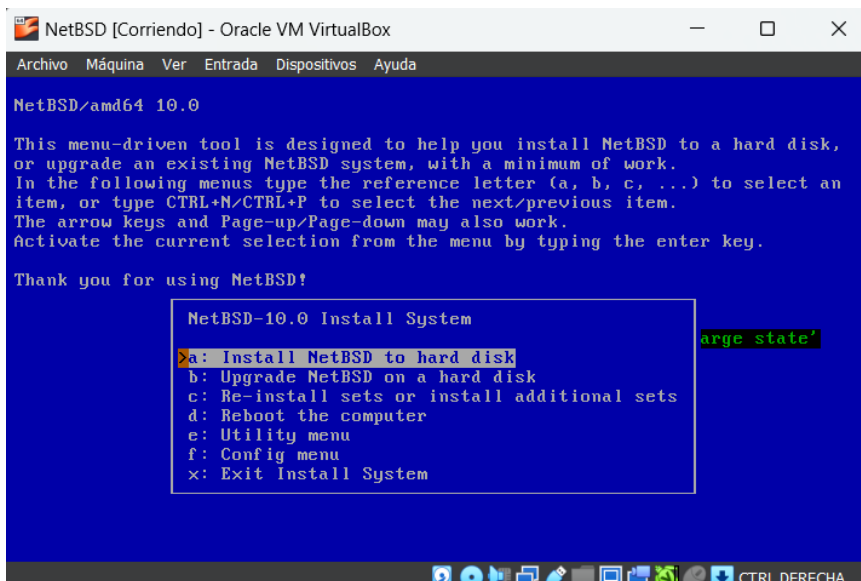
Ventana de inicio



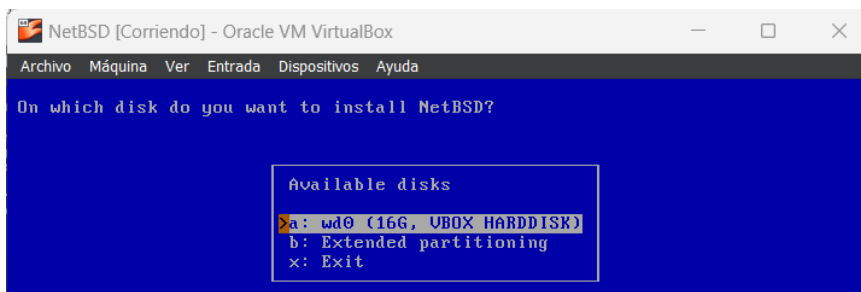
## Seleccionar idioma



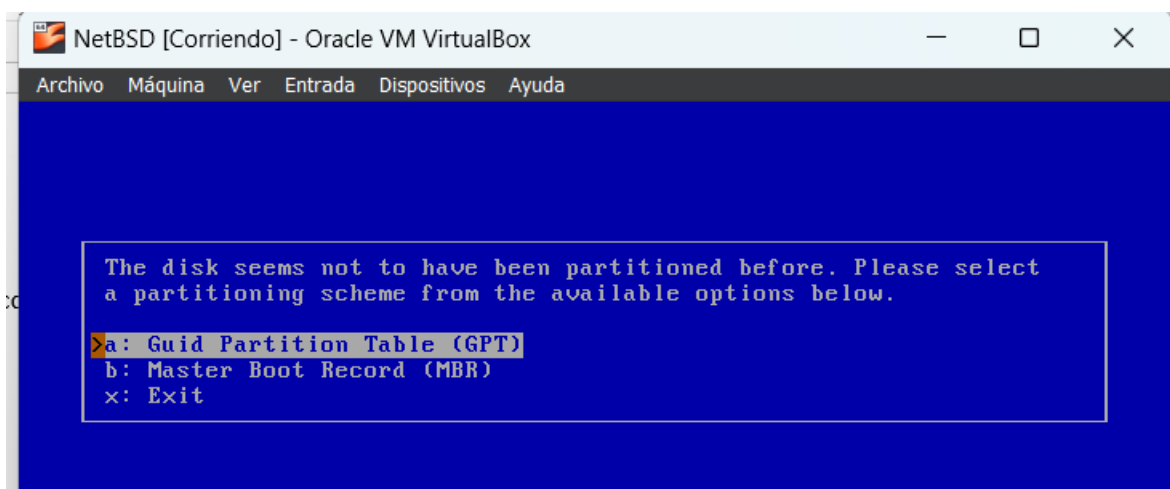
## Instalar Netbsd



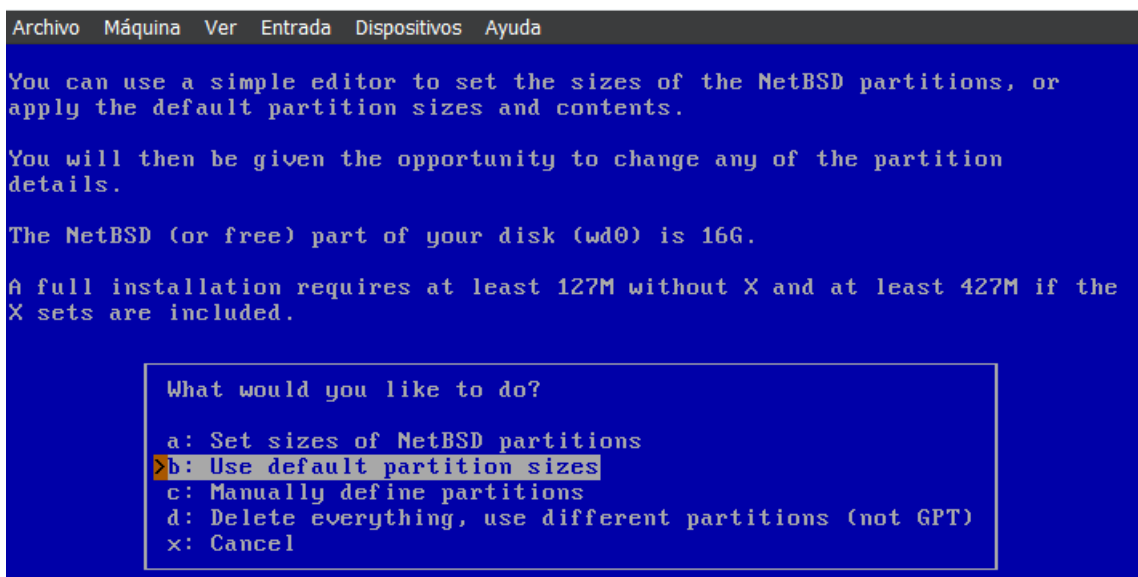
## Instalar el disco



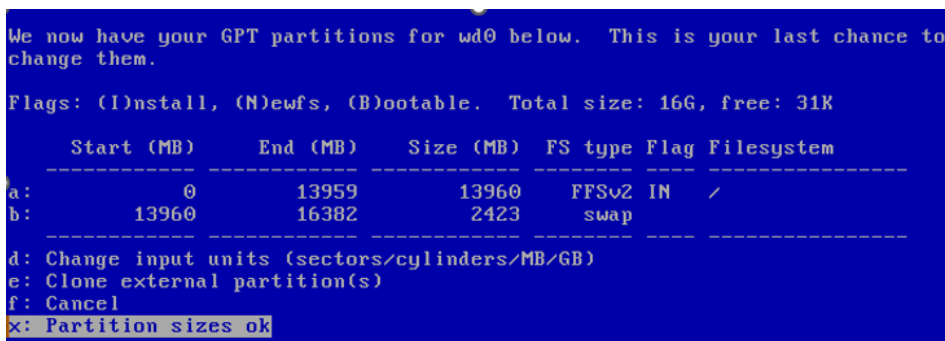
Seleccionar el tipo de partición



Realizar la partición por default



Presionar ok para seguir con el proceso:



Proceso listo para descargar:

```
Ok, we are now ready to install NetBSD on your hard disk (wd0).  Nothing has
been written yet.  This is your last chance to quit this process before
anything gets changed.

Shall we continue?

Yes or no?
a: No
>b: Yes
```

Utilizar el modo consola:

```
Would you like to install the normal set of bootblocks or serial bootblocks?

Normal bootblocks use the BIOS console device as the console (usually the
monitor and keyboard).  Serial bootblocks use the first serial port as the
console.

Selected bootblock: BIOS console

Bootblocks selection
>a: Use BIOS console
b: Use serial port com0
c: Use serial port com1
d: Use serial port com2
e: Use serial port com3
f: Set serial baud rate
g: Use existing bootblocks
x: Continue
```

Full instalación

```
The NetBSD distribution is broken into a collection of distribution sets.
There are some basic sets that are needed by all installations and there are
some other sets that are optional.  You may choose to install a core set
(Minimal installation), all of them (Full installation), or a custom group of
sets (Custom installation).

Select your distribution
>a: Full installation
b: Installation without X11
c: Minimal installation
d: Custom installation
x: Abandon installation
```

## Seleccionar Kernel y distribución del disco

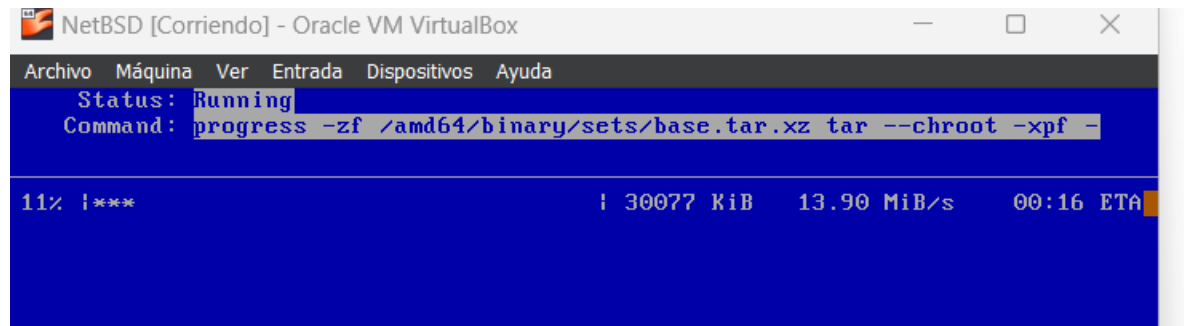
Your disk is now ready for installing the kernel and the distribution sets. As noted in your INSTALL notes, you have several options. For ftp or nfs, you must be connected to a network with access to the proper machines.

Sets selected 17, processed 0, Next set kern-GENERIC.

Install from

- a: CD-ROM / DVD / install image media
- b: HTTP
- c: FTP

## Instalando



## Esperar las descargas

The extraction of the selected sets for NetBSD-10.0 is complete. The system is now able to boot from the selected hard disk. To complete the installation, sysinst will give you the opportunity to configure some essential things first.

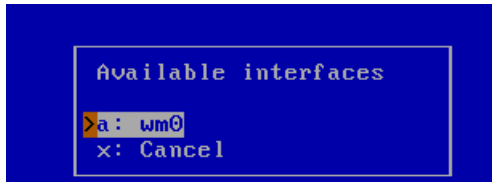
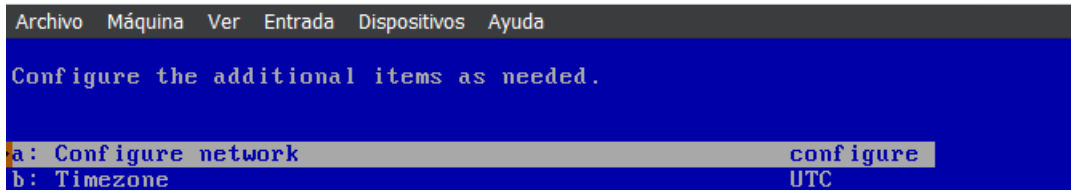
>Hit enter to continue

## Crear contraseña al usuario root

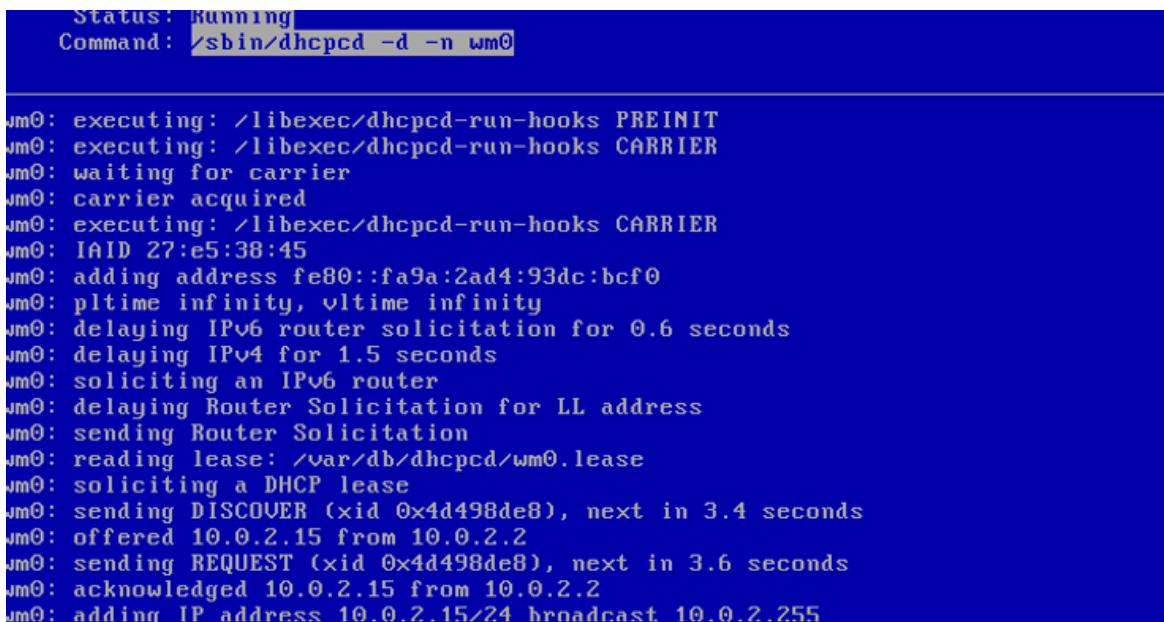
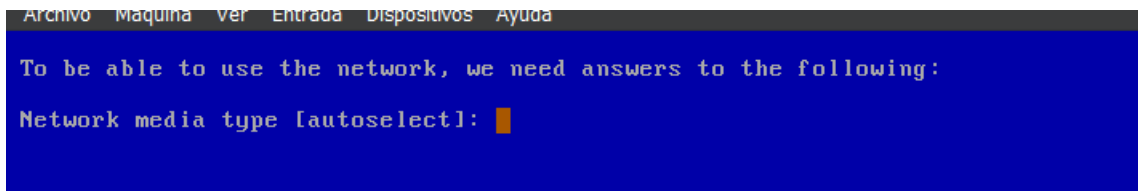
The root password of the newly installed system has not yet been initialized. If you do not want to set a password, enter an empty line.

hanging local password for root.  
ew password:

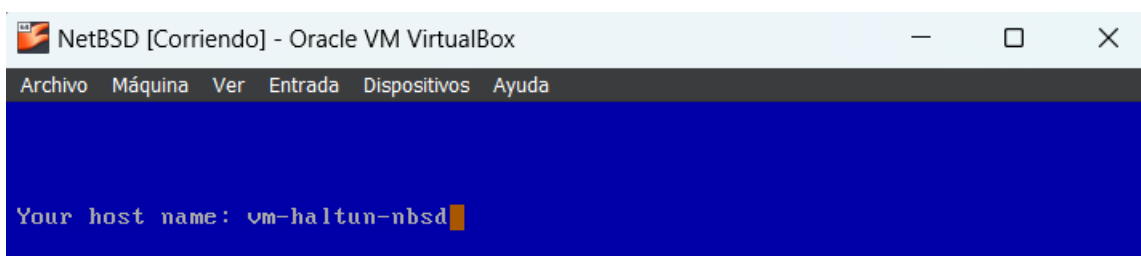
## Configurar la red



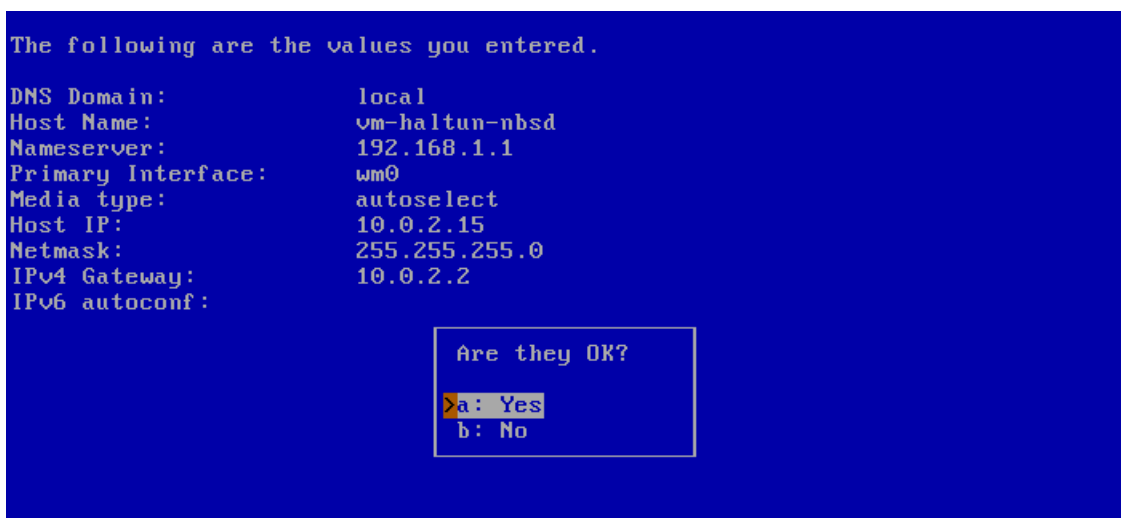
## Dejar la opción por defecto



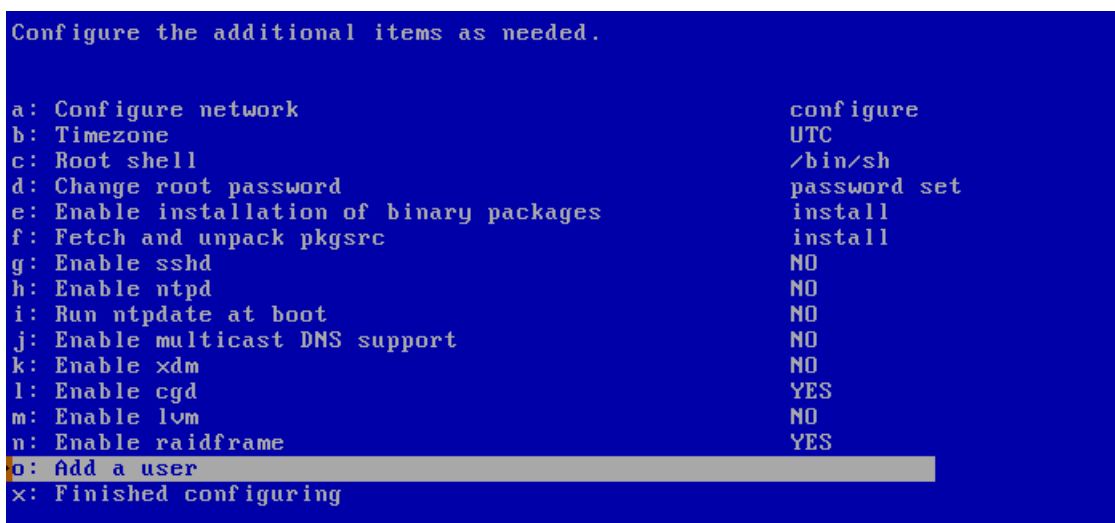
Asignar el hostname



Confirmar datos



Agregar un usuario





8 character username to add: haltun

Do you wish to add this user to group wheel?

>a: Yes  
b: No

8 character username to add: haltun

User shell

>a: /bin/sh  
b: /bin/ksh  
c: /bin/csh

Ingresar contraseña

Archivo Máquina Ver Entrada Dispositivos Ayuda

Status: Running

Command: passwd -l haltun

Changing local password for haltun.

New password:

Validar configuración

NetBSD/amd64 10.0

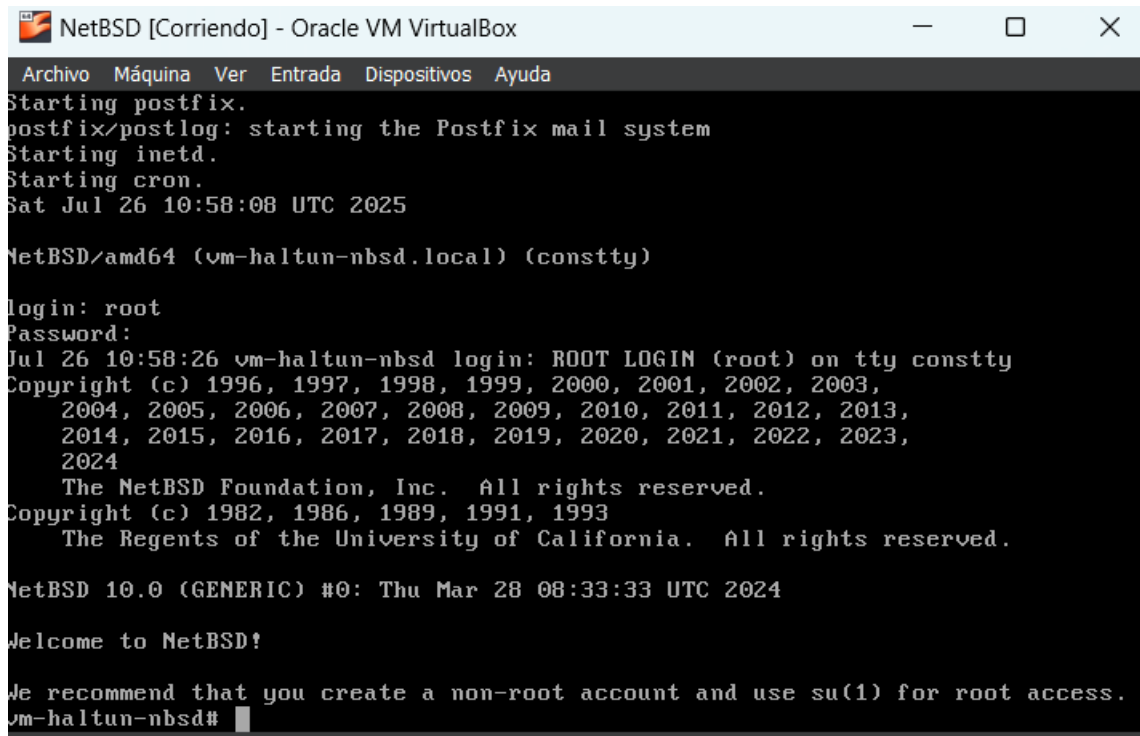
or upgrade an existing NetBSD system, with a minimum of work.  
In the following menus type the reference letter (a, b, c, ...) to select an  
item, or type CTRL+N/CTRL+P to select the next/previous item.  
The arrow keys and Page-up/Page-down may also work.  
Activate the current selection from the menu by typing the enter key.

Thank you for using NetBSD!

NetBSD-10.0 Install System

a: Install NetBSD to hard disk  
b: Upgrade NetBSD on a hard disk  
c: Re-install sets or install additional sets  
>d: Reboot the computer

Conexión completa



```
NetBSD [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
Starting postfix.
postfix/postlog: starting the Postfix mail system
Starting inetd.
Starting cron.
Sat Jul 26 10:58:08 UTC 2025

NetBSD/amd64 (vm-haltun-nbsd.local) (constty)

login: root
Password:
Jul 26 10:58:26 vm-haltun-nbsd login: ROOT LOGIN (root) on tty constty
Copyright (c) 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003,
2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013,
2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023,
2024
The NetBSD Foundation, Inc. All rights reserved.
Copyright (c) 1982, 1986, 1989, 1991, 1993
The Regents of the University of California. All rights reserved.

NetBSD 10.0 (GENERIC) #0: Thu Mar 28 08:33:33 UTC 2024

Welcome to NetBSD!

We recommend that you create a non-root account and use su(1) for root access.
vm-haltun-nbsd#
```

INSTALAR **MySQL 8.x** pkg install mysql80-server mysql80-client

```
vm-haltun-nbsd# tar xf /usr/pkgsrc.tar.gz
vm-haltun-nbsd# cd /usr/pkgsrc/databases/mysql80-client
vm-haltun-nbsd#
```

Instalar htop pkg install htop

```
vm-haltun-nbsd# cd /usr/pkgsrc/sysutils/htop
vm-haltun-nbsd#
```

Instalar nmap pkg install nmap

```
vm-haltun-nbsd# cd /usr/pkgsrc/net/nmap
vm-haltun-nbsd#
```

Instalar neofetch pkg install neofetch

```
vm-haltun-nbsd# cd /usr/pkgsrc/sysutils/neofetch
vm-haltun-nbsd#
```

Instalar ssh server

```
vm-haltun-nbsd# cd /usr/pkgsrc/security/openssh  
vm-haltun-nbsd#
```

Conexión a NAP ip 10.0.2.15

```
vm-haltun-nbsd# cd /usr/pkgsrc/misc/screenfetch  
cd: can't cd to /usr/pkgsrc/misc/screenfetch  
vm-haltun-nbsd# cd /usr/pkgsrc/security/openssh  
vm-haltun-nbsd# cd /usr/pkgsrc/misc/screenfetch  
cd: can't cd to /usr/pkgsrc/misc/screenfetch  
vm-haltun-nbsd# find . -type d -name '*screenfetch*'  
vm-haltun-nbsd# ifconfig  
wm0: flags=0x8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500  
    capabilities=0x2bf80<TS04,IP4CSUM_Rx,IP4CSUM_Tx,TCP4CSUM_Rx>  
    capabilities=0x2bf80<TCP4CSUM_Tx,UDP4CSUM_Rx,UDP4CSUM_Tx,TCP6CSUM_Tx>  
    capabilities=0x2bf80<UDP6CSUM_Tx>  
    enabled=0  
    ec_capabilities=0x7<ULAN_MTU,ULAN_HWTAGGING,JUMBO_MTU>  
    ec_enabled=0x2<ULAN_HWTAGGING>  
    address: 08:00:27:92:42:4b  
    media: Ethernet autoselect (1000baseT full-duplex)  
    status: active  
    inet6 fe80::a00:27ff:fe92:424b%wm0/64 flags 0 scopeid 0x1  
    inet 10.0.2.15/24 broadcast 10.0.2.255 flags 0  
lo0: flags=0x8049<UP,LOOPBACK,RUNNING,MULTICAST> mtu 33624  
    status: active  
    inet6 ::1/128 flags 0x20<NODAD>  
    inet6 fe80::1%lo0/64 flags 0 scopeid 0x2  
    inet 127.0.0.1/8 flags 0  
vm-haltun-nbsd#
```

## **Conclusión**

La instalación de Debian 12, FreeBSD y NetBSD 10 me permitió visualizar las diferencias claves entre distribuciones de tipo GNU/Linux y Unix-like BSD, en aspectos como el proceso de instalación, el manejo de paquetes y la configuración inicial del sistema. Debian 12 se destaca por su facilidad de instalación, interfaz gráfica amigable, reconocimiento automático de hardware y amplio soporte de paquetes. FreeBSD ofrece un enfoque más técnico, pero muy robusto, con una instalación clara pero menos asistida. NetBSD 10 mostró ser un sistema altamente portable y modular, aunque más complejo de configurar al inicio, especialmente en entornos virtuales.