Laboratorio de Investigación GUGLER Administración GNU/Linux

Máquinas Virtuales





















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Introducción

Nuestro principal objetivo es enseñarte cómo obtener el programa para tener tu propia máquina virtual fácil y rápido. Pero primero abordaremos las principales preguntas claves Qué es un maquina virtual? Cómo funcionan? Para que se utilizan habitualmente?

- Que es una máquina virtual?

En términos generales, una máquina virtual es un software que nos permite emular de forma fácil el funcionamiento de una computadora dentro de otra.

- Cómo funciona una maquina virtual en nuestro sistema operativo?

Una máquina virtual es un software que emula el funcionamiento de una computadora real con todos los componentes de hardware que necesita para funcionar (disco duro, memoria RAM, tarjetas de red, tarjeta gráfica, etc.) y que puede ejecutar cualquier sistema operativo o programa, tal y como lo haría una computadora real.

- Para que se utilizan habitualmente las máquinas virtuales?

Existen múltiples usos para las máquinas virtuales, ya que permiten emular casi cualquier sistema operativo estándar (Windows, GNU/Linux, MacOS, Android, etc.), y dado que se ejecutan en una capa de software diferente y totalmente aislada, uno de los usos más frecuentes es el de probar diferentes sistemas operativos, programas o configuraciones con total seguridad para tu ordenador real ya que, si algo falla en la máquina virtual, este fallo no afectará en absoluto al ordenador que la ejecuta.



Sin más dilataciones vamos como el proceso de instalación del programa, dependiendo del sistema operativo tendremos que seguir los siguientes pasos.

Instalación

- Windows

Nos dirigimos a la <u>página principal</u> y elegimos la sección descargas.



VirtualBox is a powerful x86 and AMD64/Intel64 virtualization product for enterprise as well as home use. Not only is VirtualBox an extremely feature rich, high performance product for enterprise customers, it is also the only professional solution that is freely available as Open Source Software under the terms of the GNU General Public License (GPL) version 2. See "About VirtualBox" for an introduction.

Presently, VirtualBox runs on Windows, Linux, Macintosh, and Solaris hosts and supports a large number of guest operating systems including but not limited to Windows (NT 4.0, 2000, XP, Server 2003, Vista, Windows 7, Windows 8, Windows 10), DOS/Windows 3.x, Linux (2.4, 2.6, 3.x and 4.x), Solaris and OpenSolaris, OS/2, and OpenBSD.

VirtualBox is being actively developed with frequent releases and has an ever growing list of features, supported guest operating systems and platforms it runs on. VirtualBox is a community effort backed by a dedicated company: everyone is encouraged to contribute while Oracle ensures the product always meets professional quality criteria.



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Una vez ingresado tendremos que elegir **Windows hosts** para descargar la última versión, hay que tener en cuenta que descargamos la versión para x64 si su sistema es x86 tendremos que irnos a <u>VirtualBox 5.2 builds</u> y descargar la última versión disponible.

VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

If you're looking for the latest VirtualBox 5.2 packages, see VirtualBox 5.2 builds. Please also use version 5.2 if you still need support for 32-bit hosts, as this has been discontinued in 6.0. Version 5.2 will remain supported until July 2020.

VirtualBox 6.0.14 platform packages

- ➡Windows hosts
- ⇒OS X hosts
- Linux distributions
- Solaris hosts

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Una vez descargado, tendremos que ejecutar el instalador y es el típico siguiente, siguiente e instalar y obtenemos el ícono en el escritorio listo para funcionar.

- Linux

Tenes dos opciones disponibles para realizar el proceso:

- + Tendemos que tener una terminal para realizar el proceso, ingresamos el siguiente comando **sudo apt update** para refrescar los repositorios disponibles en el sistema, posteriormente tendremos que poner **sudo apt install virtualbox** para obtener el programa de virtualización.
- + Ingresamos a la <u>página principal</u> y elegimos descargas en la sección de **Linux distributions** tendremos que seleccionar la versión compatible con nuestra distribución.



Tendremos que ejecutar el archivo .rpm o .deb dependiendo la distribución e instalarlo en el sistema desde el gestor de paquetes o mediante consola.

 ⇒All distributions (built on EL6 and therefore not requiring recent system libraries)

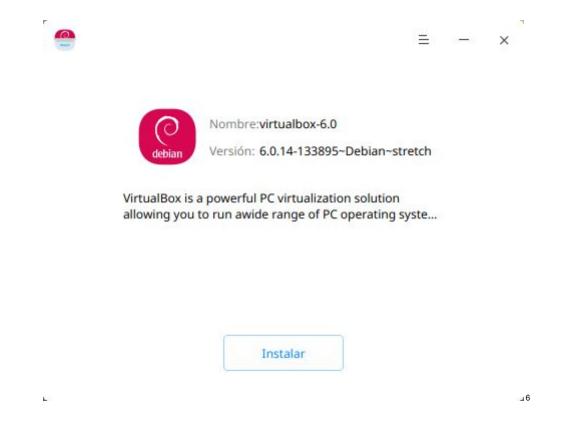
 Gracle Linux 6 / Red Hat Enterprise Linux 6 / CentOS 6

6

Acá te mostraremos cómo sería el proceso de instalación de paquetes .deb, una vez descargado obtendremos el siguiente archivo que tendremos que ejecutar.



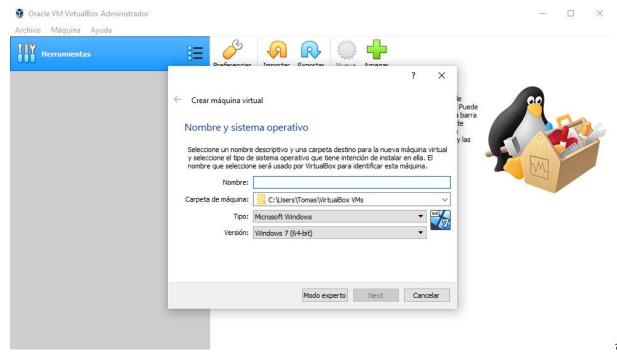
En mi caso estoy en Deepin que trae un administrador de paquetes que es tan fácil como ejecutar el .deb, poner en instalar nos pedirá la clave y listo ya podes disfrutar de VirtualBox.



Configuración

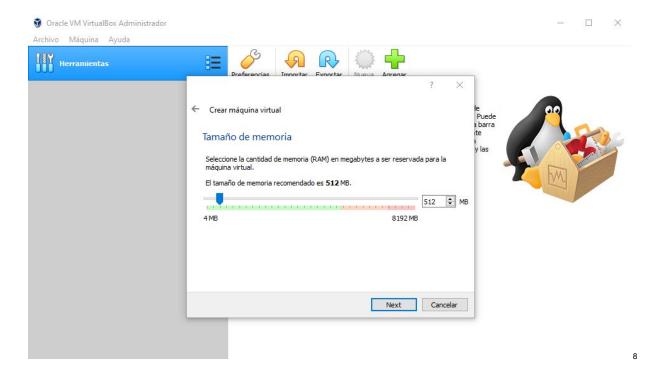
En ambos sistemas es la misma configuración:

Agregamos un nueva máquina virtual e iniciamos el proceso de configuración.



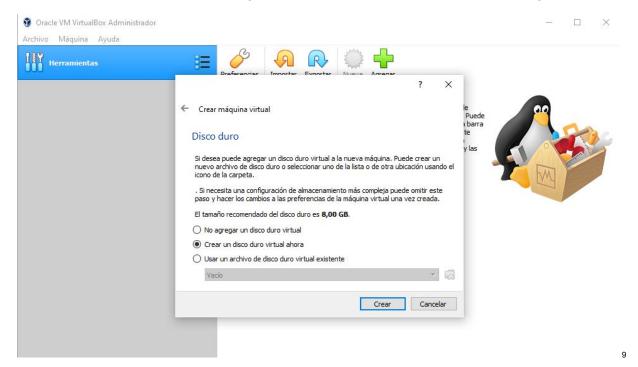
Tendremos que elegir nombre y lugar de guardado, además el tipo de sistema operativo que queremos virtualizar ya sea Linux, Windows, etc en sus diversas distribuciones o versiones.

Tendremos que elegir la cantidad de memoria que le vamos a asignar a la máquina virtual, hay que tener cuidado de no asignarle más de la recomendado porque puede ocasionar crasheos repentinos.

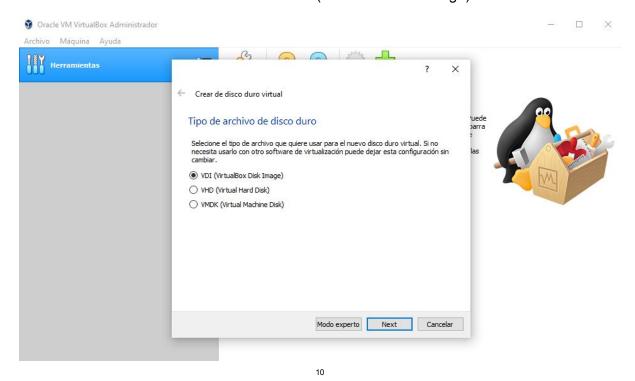


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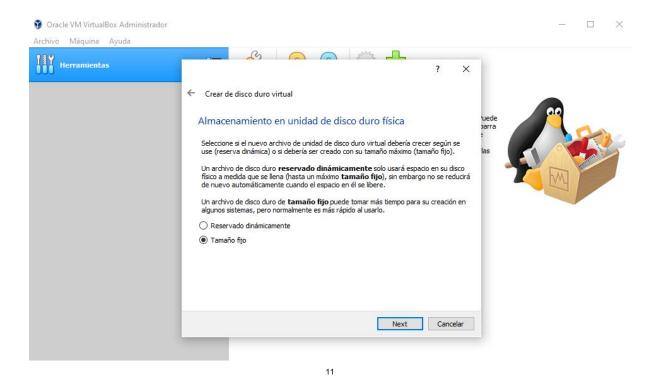
El próximo paso será configurar el espacio en disco que le vamos a asignar.



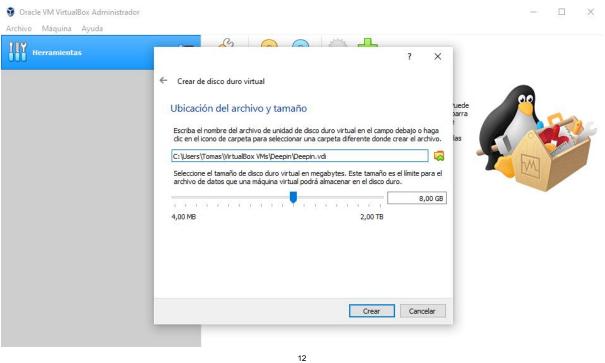
Creamos un disco VDI (VirtualBox Disk Image).



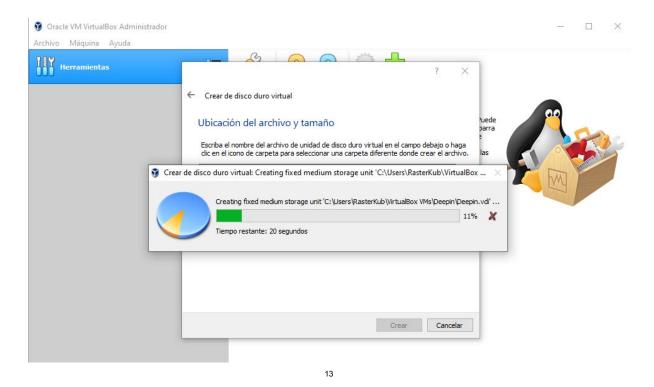
Tendremos que elegir la opción **Tamaño Fijo** para asignar un espacio limitado y que no se expanda ilimitadamente como en la opción de **Reservado dinámicamente**.



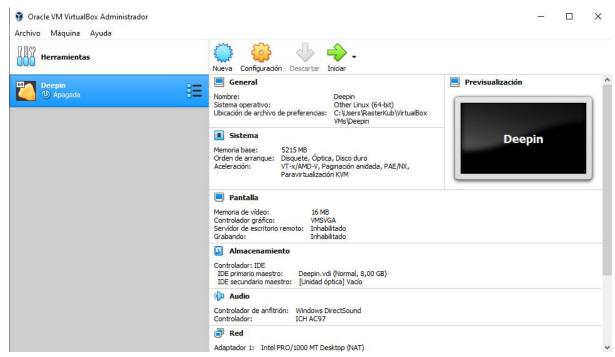
Elegimos la cantidad de espacio que deseamos asignarle y la ubicación.



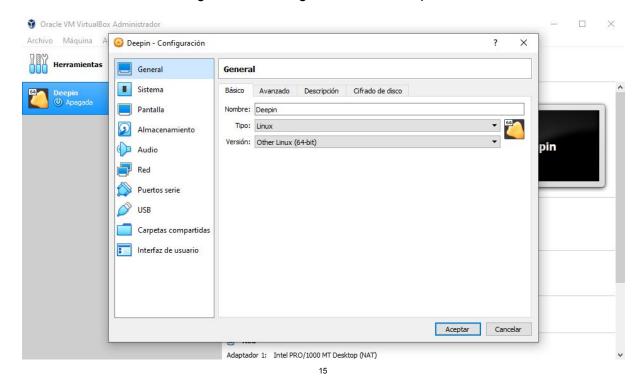
Iniciara el proceso de asignación de espacio del disco para la máquina virtual.



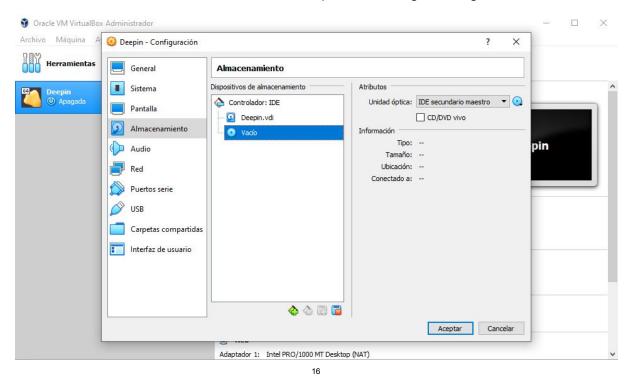
Una vez finalizado el proceso nos aparecerá la máquina en la lista.



Nos dirigimos a la configuración de la máquina virtual.



Tendremos que elegir la imagen .iso del sistema que queremos inciar, para eso tendremos que irnos a la sección de **Almacenamiento** y luego en el disco vacío al costado nos aparece un disco de color azul en donde podremos elegir la imagen .iso



Solamente restaría aceptar los cambios e iniciar la máquina virtual.

Conclusión

En sí este trabajo está destinado a poder demostrar de manera sencilla como poder instalar y configurar una máquina con la herramienta virtualbox para diferentes sistemas operativos, por lo tanto te permitirá realizar diversas pruebas con diversos sistemas en un misma computadora sin necesidad de comprometer tus archivos, y también es útil para iniciar en un nuevo sistema operativo.

También nos permite tener un sistema operativo en una computadora que no nos dejaría en un principio por ejemplo: tener una Mac y con la máquina virtual poder usar windows.

Así que si no tienes experiencia con GNU/Linux por ejemplo es una herramienta increíble para poder empezar a dar los primeros pasos en el mundo Linux, así que no dudes en utilizarla esta increible herramienta!

Bibliografía

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VirtualBox https://www.virtualbox.org/

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