

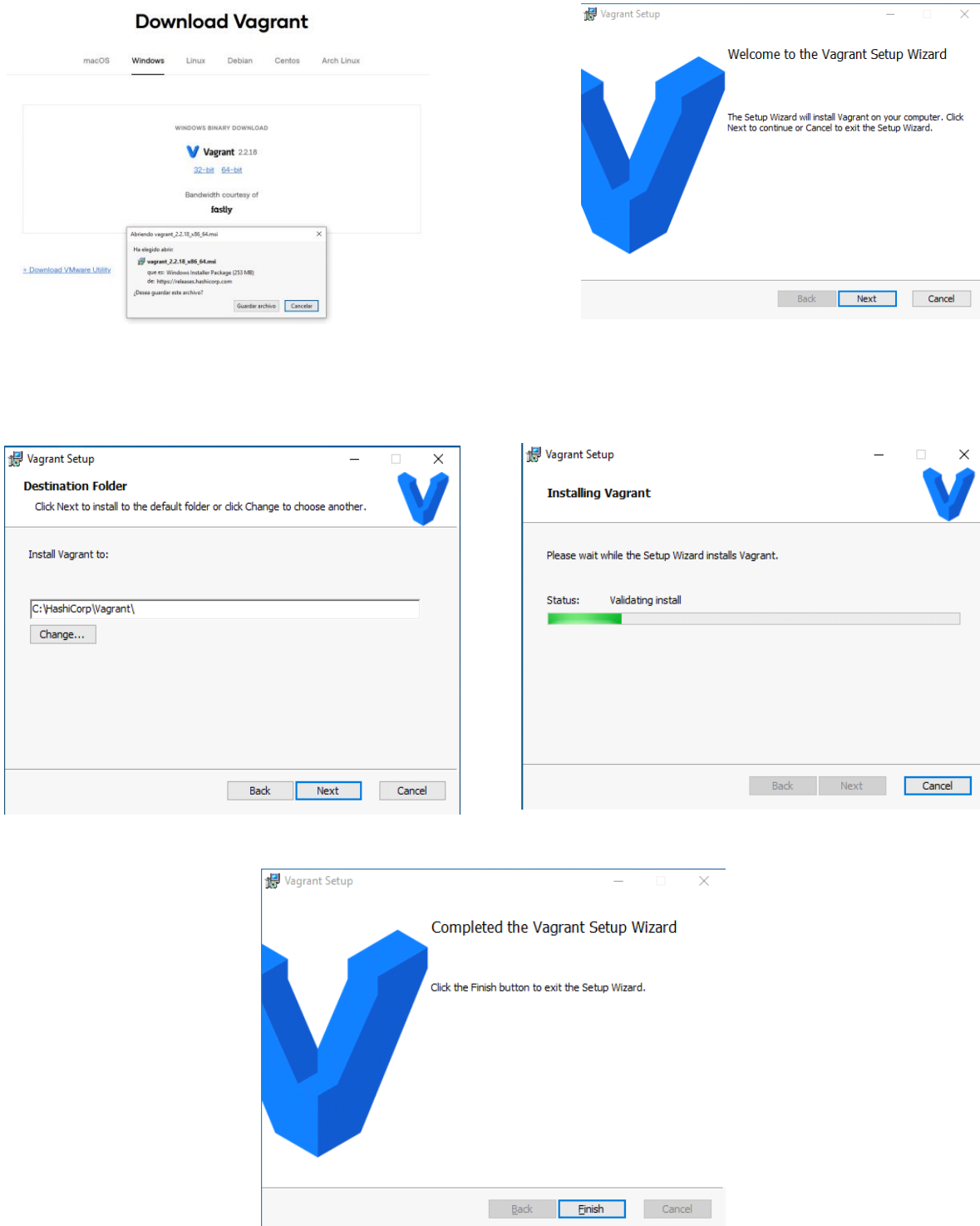
INSTALACIÓN DE SERVIDOR VAGRANT EN WINDOWS 10 VIRTUALIZADO

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Desenvolvimento Web en Contorno Cliente

2º DAW

En este documento veremos cómo instalar un servidor virtual Vagrant en un sistema Windows 10 virtualizado. En primer lugar, descargaremos el instalador de Vagrant desde la Web y procederemos a su instalación, donde elegiremos la ruta de instalación y esperaremos a que finalice el proceso.



Ahora comprobaremos que el programa está correctamente instalado mediante la consola de comandos.

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Versión 10.0.19043.928]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\David>vagrant
Usage: vagrant [options] <command> [<args>]

    -h, --help                Print this help.

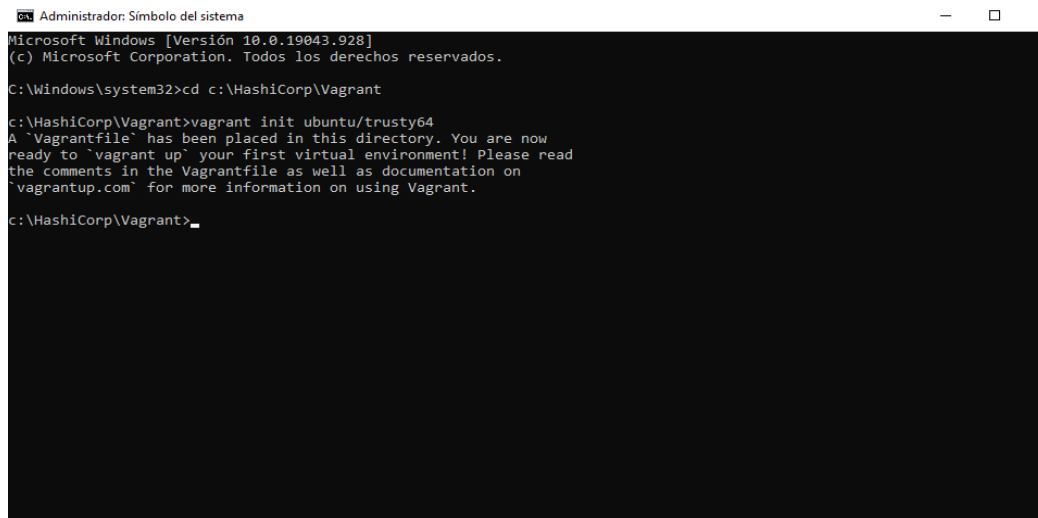
Common commands:
autocomplete    manages autocomplete installation on host
box             manages boxes: installation, removal, etc.
cloud           manages everything related to Vagrant Cloud
destroy         stops and deletes all traces of the vagrant machine
global-status   outputs status Vagrant environments for this user
halt            stops the vagrant machine
help           shows the help for a subcommand
init           initializes a new Vagrant environment by creating a Vagrantfile
login
package        packages a running vagrant environment into a box
plugin         manages plugins: install, uninstall, update, etc.
port           displays information about guest port mappings
powershell     connects to machine via powershell remoting
provision       provisions the vagrant machine
push           deploys code in this environment to a configured destination
rdp            connects to machine via RDP
reload         restarts vagrant machine, loads new Vagrantfile configuration
resume         resume a suspended vagrant machine
snapshot       manages snapshots: saving, restoring, etc.
ssh            connects to machine via SSH
ssh-config     outputs OpenSSH valid configuration to connect to the machine
status         outputs status of the vagrant machine
suspend        suspends the machine
up             starts and provisions the vagrant environment
upload         upload to machine via communicator
validate       validates the Vagrantfile
version        prints current and latest Vagrant version
winrm          executes commands on a machine via WinRM
winrm-config   outputs WinRM configuration to connect to the machine

For help on any individual command run `vagrant COMMAND -h`

Additional subcommands are available, but are either more advanced
or not commonly used. To see all subcommands, run the command
`vagrant list-commands`.
    --[no-]color            Enable or disable color output
    --machine-readable      Enable machine readable output
    -v, --version           Display Vagrant version
    --debug                Enable debug output
    --timestamp            Enable timestamps on log output
    --debug-timestamp       Enable debug output with timestamps
    --no-tty               Enable non-interactive output

C:\Users\David>
```

Ahora trataremos de iniciar el servicio de Vagrant mediante la consola de comandos situándonos en el directorio de instalación por defecto (c:\HashiCorp\Vagrant) y ejecutamos el comando "vagrant init ubuntu /trusty64" para que se cree el archivo "vagrantfile".

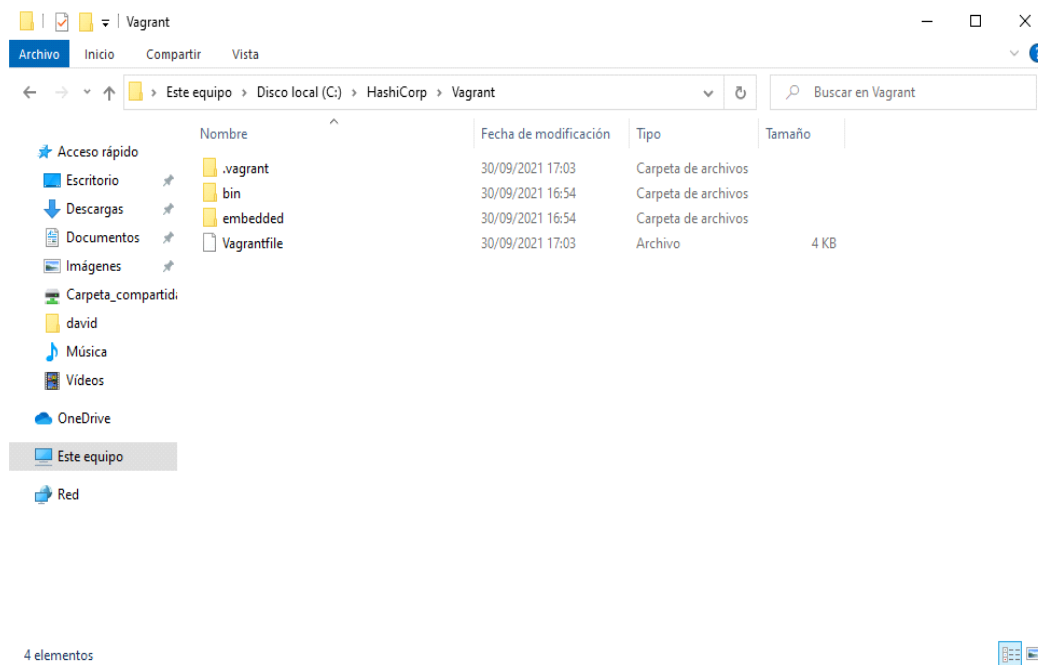


```
Administrador: Símbolo del sistema
Microsoft Windows [Versión 10.0.19043.928]
(c) Microsoft Corporation. Todos los derechos reservados.

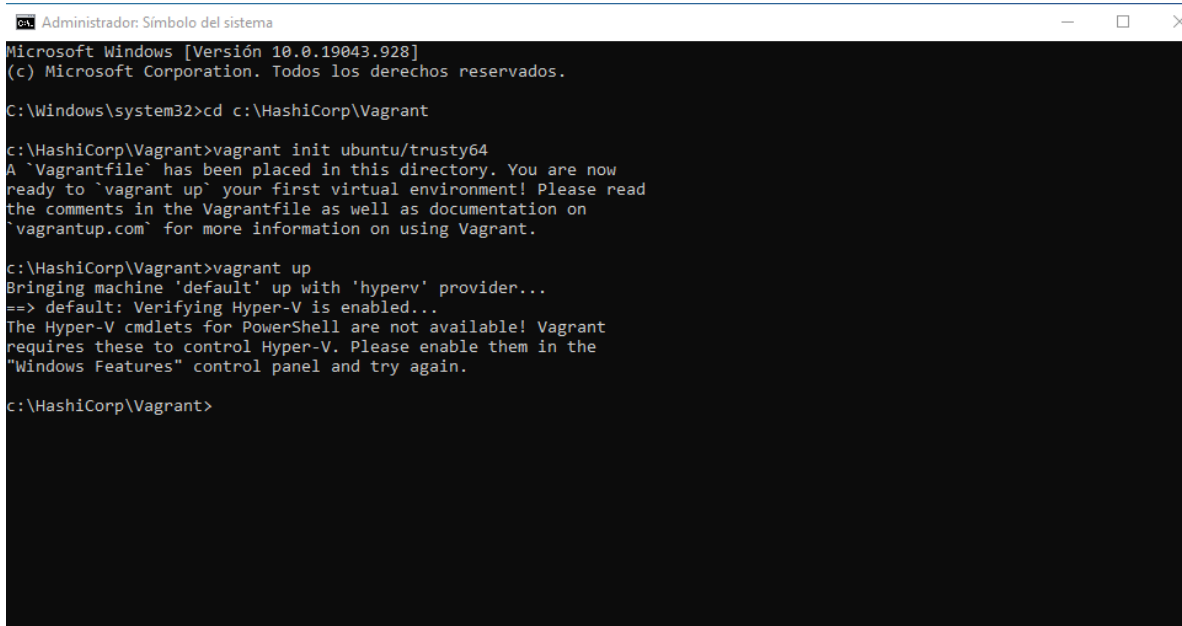
C:\Windows\system32>cd c:\HashiCorp\Vagrant

c:\HashiCorp\Vagrant>vagrant init ubuntu/trusty64
A 'Vagrantfile' has been placed in this directory. You are now
ready to `vagrant up` your first virtual environment! Please read
the comments in the Vagrantfile as well as documentation on
`vagrantup.com` for more information on using Vagrant.

c:\HashiCorp\Vagrant>
```



Seguidamente tratamos de iniciar el servidor con "vagrant up" pero nos saldrá un aviso de que Vagrant demanda ciertos requisitos para funcionar. En este caso descargaremos e instalaremos dos programas llamados "VirtualBox" y "Cmdlets for PowerShell", además de habilitar la característica HyperV de Windows.



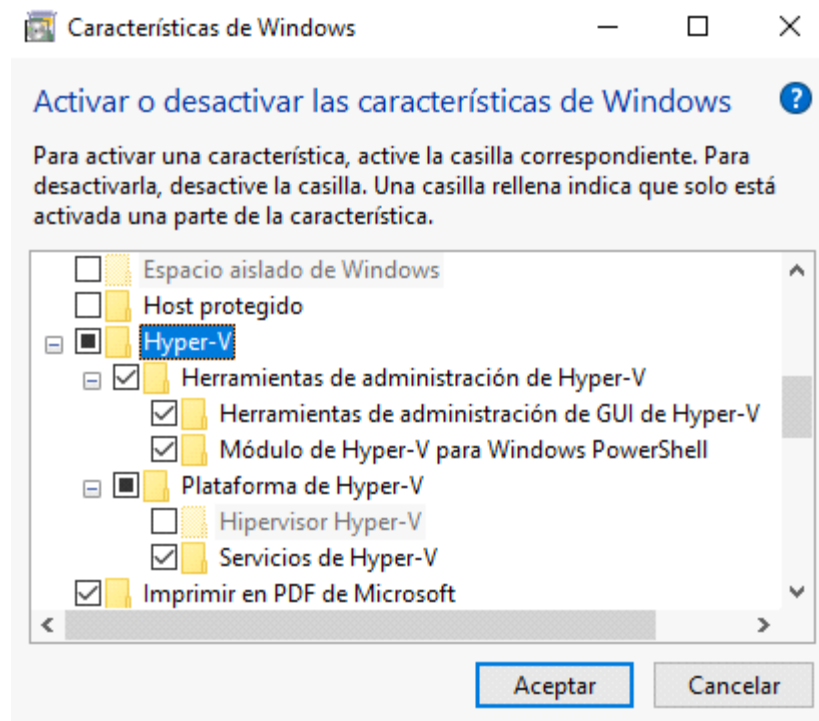
```
Administrador: Símbolo del sistema
Microsoft Windows [Versión 10.0.19043.928]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Windows\system32>cd c:\HashiCorp\Vagrant

c:\HashiCorp\Vagrant>vagrant init ubuntu/trusty64
A `Vagrantfile` has been placed in this directory. You are now
ready to `vagrant up` your first virtual environment! Please read
the comments in the Vagrantfile as well as documentation on
`vagrantup.com` for more information on using Vagrant.

c:\HashiCorp\Vagrant>vagrant up
Bringing machine 'default' up with 'hyperv' provider...
==> default: Verifying Hyper-V is enabled...
The Hyper-V cmdlets for PowerShell are not available! Vagrant
requires these to control Hyper-V. Please enable them in the
"Windows Features" control panel and try again.

c:\HashiCorp\Vagrant>
```



Repetimos el paso anterior con el comando “vagrant up” y esta vez sí puede crear un entorno virtualizado.

```
c:\HashiCorp\Vagrant>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Box 'ubuntu/trusty64' could not be found. Attempting to find and install...
    default: Box Provider: virtualbox
    default: Box Version: >= 0
==> default: Loading metadata for box 'ubuntu/trusty64'
    default: URL: https://vagrantcloud.com/ubuntu/trusty64
==> default: Adding box 'ubuntu/trusty64' (v20190514.0.0) for provider: virtualbox
    default: Downloading: https://vagrantcloud.com/ubuntu/boxes/trusty64/versions/20190514.0.0/providers/virtualbox.box
-
```

En la siguiente imagen vemos que realiza una serie de operaciones de descarga y configuración de archivos necesarios para hacer funcionar la máquina virtual con la que va a operar. En dicha imagen podemos comprobar que comprueba que la máquina está inicializada e operativa.

```
c:\HashiCorp\Vagrant>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Box 'ubuntu/trusty64' could not be found. Attempting to find and install...
default: Box Provider: virtualbox
default: Box Version: >= 0
==> default: Loading metadata for box 'ubuntu/trusty64'
default: URL: https://vagrantcloud.com/ubuntu/trusty64
==> default: Adding box 'ubuntu/trusty64' (v20190514.0.0) for provider: virtualbox
default: Downloading: https://vagrantcloud.com/ubuntu/boxes/trusty64/versions/20190514.0.0/providers/virtualbox.box
Download redirected to host: cloud-images.ubuntu.com
default:
==> default: Successfully added box 'ubuntu/trusty64' (v20190514.0.0) for 'virtualbox'!
==> default: Importing base box 'ubuntu/trusty64'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'ubuntu/trusty64' version '20190514.0.0' is up to date...
==> default: Setting the name of the VM: Vagrant_default_1633014806822_42133
==> default: Clearing any previously set forwarded ports...
Vagrant is currently configured to create VirtualBox synced folders with
the 'SharedFoldersEnableSymlinksCreate' option enabled. If the Vagrant
guest is not trusted, you may want to disable this option. For more
information on this option, please refer to the VirtualBox manual:

https://www.virtualbox.org/manual/ch04.html#sharedfolders

This option can be disabled globally with an environment variable:

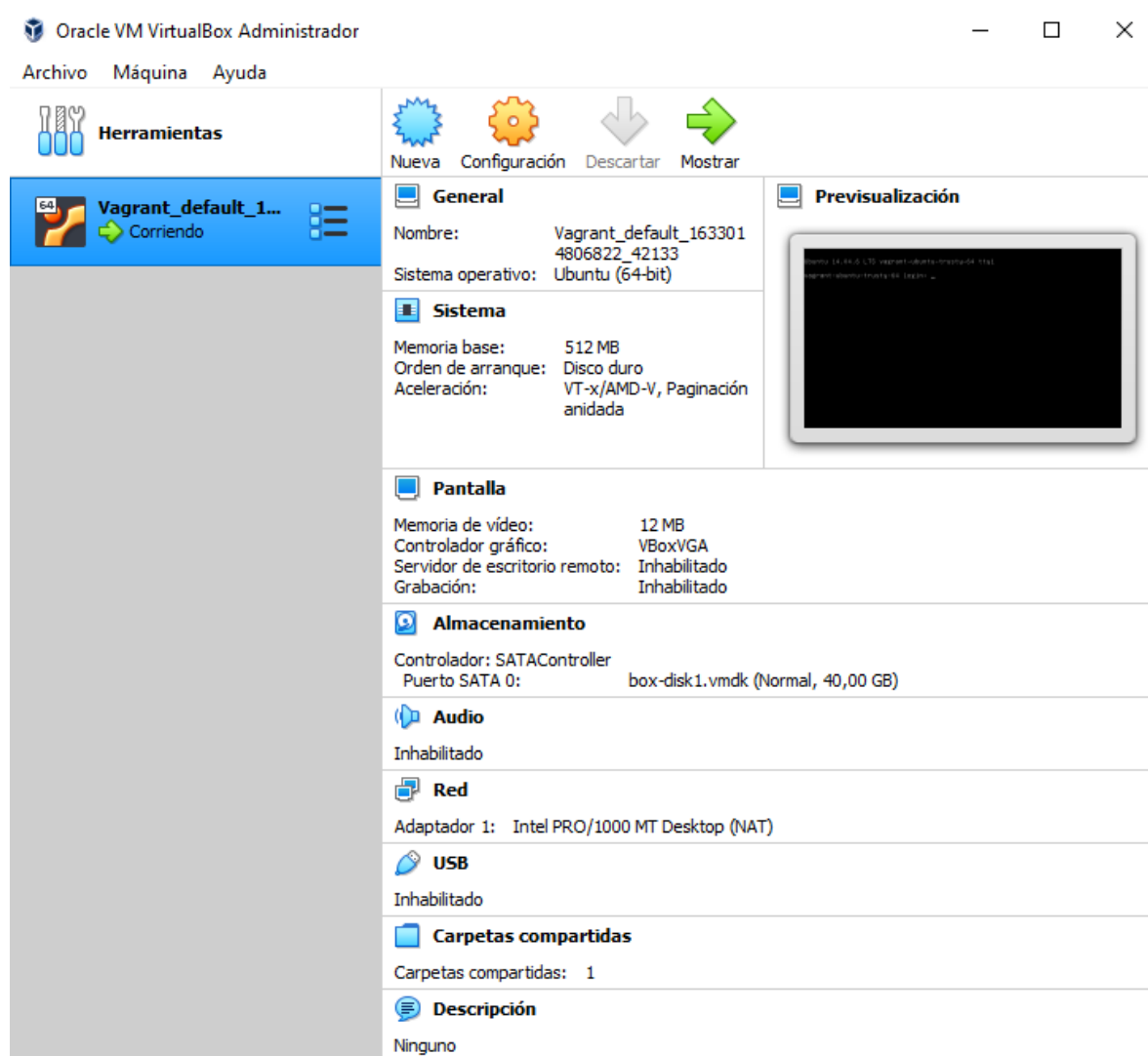
VAGRANT_DISABLE_VBOXSYMLINKCREATE=1

or on a per folder basis within the Vagrantfile:

config.vm.synced_folder '/host/path', '/guest/path', SharedFoldersEnableSymlinksCreate: false
==> default: Clearing any previously set network interfaces...
==> default: Preparing network interfaces based on configuration...
default: Adapter 1: nat
==> default: Forwarding ports...
default: 22 (guest) => 2222 (host) (adapter 1)
==> default: Booting VM...
==> default: Waiting for machine to boot. This may take a few minutes...
default: SSH address: 127.0.0.1:2222
default: SSH username: vagrant
default: SSH auth method: private key
default: Warning: Connection reset. Retrying...
default: Warning: Connection aborted. Retrying...
default: Warning: Remote connection disconnect. Retrying...
default: Warning: Connection aborted. Retrying...
default: Warning: Connection reset. Retrying...
default: Warning: Remote connection disconnect. Retrying...
default: Warning: Connection aborted. Retrying...
default: Warning: Connection reset. Retrying...
default: Warning: Remote connection disconnect. Retrying...
default: Warning: Connection aborted. Retrying...
default: Warning: Connection reset. Retrying...
default: Warning: Connection aborted. Retrying...
default: Warning: Connection reset. Retrying...
default: Warning: Connection aborted. Retrying...
default:
default: Vagrant insecure key detected. Vagrant will automatically replace
default: this with a newly generated keypair for better security.
default:
default: Inserting generated public key within guest...
default: Removing insecure key from the guest if it's present...
default: Key inserted! Disconnecting and reconnecting using new SSH key...
==> default: Machine booted and ready!
==> default: Checking for guest additions in VM...
default: The guest additions on this VM do not match the installed version of
default: VirtualBox! In most cases this is fine, but in rare cases it can
default: prevent things such as shared folders from working properly. If you see
default: shared folder errors, please make sure the guest additions within the
default: virtual machine match the version of VirtualBox you have installed on
default: your host and reload your VM.
default:
default: Guest Additions Version: 4.3.40
default: VirtualBox Version: 6.1
==> default: Mounting shared folders...
default: /vagrant => C:/HashiCorp/Vagrant

c:\HashiCorp\Vagrant>
```

Finalmente, en esta imagen vemos la interfaz de VirtualBox con la máquina virtual creada por Vagrant para operar y funcionando correctamente.



Bibliografía/Webgrafía

- De Luz, S. (2019): *Vagrant: instalación configuración y ejemplos de uso*, en RedesZone (recurso electrónico) [consulta el 30 de septiembre de 2021].