

# ACTIVIDAD 2 - SHELL SCRIPTS DE APROVISIONAMIENTO

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OPTATIVA - 2º ASIR

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## Ver video que está en la Guía antes de realizar la actividad

<https://www.youtube.com/watch?v=aLYMcwslcwk>

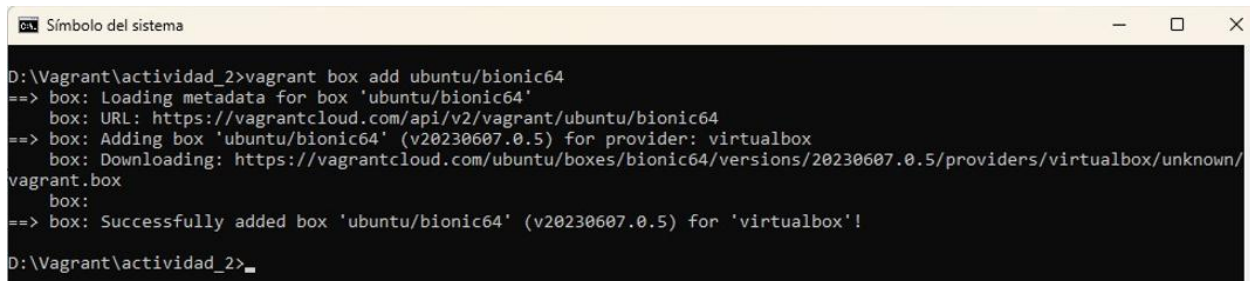
1. Necesitamos una máquina virtual con una versión de ubuntu. Busca en Vagrant Hub, un box adecuado.

Hemos creado la carpeta "D:\Vagrant\actividad\_2>" Nos colocamos en ella.

Usamos: **vagrant box add ubuntu/bionic64**

Es la versión más nueva de ubuntu que hay en vagranthub.

<https://portal.cloud.hashicorp.com/vagrant/discover/ubuntu/bionic64>



```
D:\Vagrant\actividad_2>vagrant box add ubuntu/bionic64
==> box: Loading metadata for box 'ubuntu/bionic64'
      box: URL: https://vagrantcloud.com/api/v2/vagrant/ubuntu/bionic64
==> box: Adding box 'ubuntu/bionic64' (v20230607.0.5) for provider: virtualbox
      box: Downloading: https://vagrantcloud.com/ubuntu/boxes/bionic64/versions/20230607.0.5/providers/virtualbox/unknown/
vagrant.box
      box:
==> box: Successfully added box 'ubuntu/bionic64' (v20230607.0.5) for 'virtualbox'!
D:\Vagrant\actividad_2>
```

## 2. Inicializa y levanta la máquina virtual

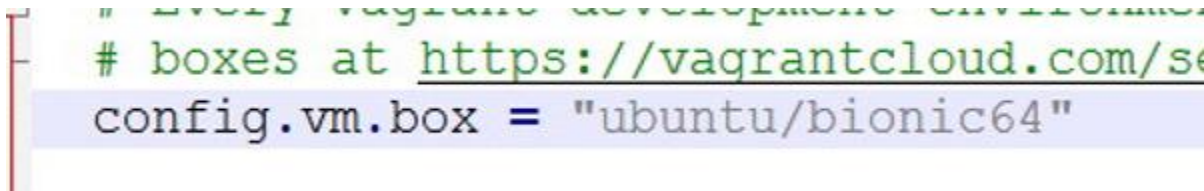
Descargamos el vagrantfile

### vagrant init

```
D:\Vagrant\actividad_2>vagrant init
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.
```

Abrimos el **vagrantfile** y modificamos **config.vm.box**

config.vm.box = "ubuntu/bionic64"



```
# Every Vagrant development environment should have this box
# boxes at https://vagrantcloud.com/s
config.vm.box = "ubuntu/bionic64"
```

Y ahora lo levantamos:

### vagrant up

```
D:\Vagrant\actividad_2>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Importing base box 'ubuntu/bionic64'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'ubuntu/bionic64' version '20230607.0.5' is up to date...
==> default: Setting the name of the VM: actividad_2_default_1763216758086_98125
==> 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: Running 'pre-boot' VM customizations...
==> 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
```

3. Comprueba que tienes acceso.

Nos conectamos por SSH

**vagrant ssh**

```
D:\Vagrant\actividad_2>vagrant ssh
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-212-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat Nov 15 14:27:18 UTC 2025

System load:  0.95               Processes:            101
Usage of /:   3.0% of 38.70GB    Users logged in:     0
Memory usage: 13%               IP address for enp0s3: 10.0.2.15
Swap usage:   0%

Expanded Security Maintenance for Infrastructure is not enabled.
0 updates can be applied immediately.

Enable ESM Infra to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '20.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

vagrant@ubuntu-bionic:~$
```

## Aprovisionamiento inline

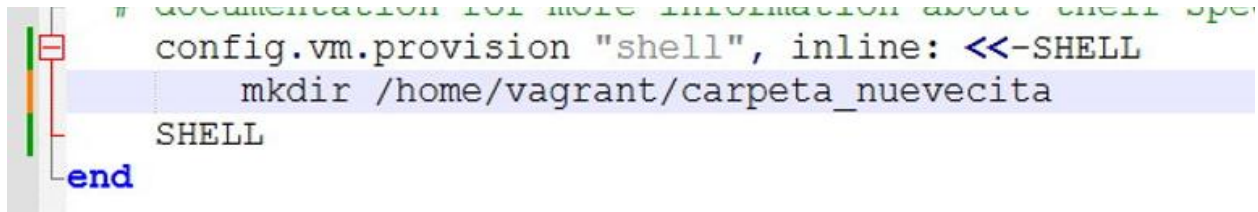
- Crea un aprovisionamiento de tipo shell inline, en el que crees una carpeta nueva.

En el **vagrantfile** nos vamos a **config.vm.provision** y lo modificamos:

**config.vm.provision "shell", inline: <<-SHELL**

**mkdir /home/vagrant/carpeta\_nuevecita**

**SHELL**



- ¿Cómo puedes ejecutar el aprovisionamiento si la máquina ya está levantada? ¿Y si no? Usa la que te interese

Si ya está levantado usamos “**vagrant provision**” y si está apagado se aplicará el aprovisionamiento la próxima vez que lo levantemos. En este caso hemos usado la primera opción.

```

D:\Vagrant\actividad_2>vagrant provision
==> default: Running provisioner: shell...
    default: Running: inline script

D:\Vagrant\actividad_2>_
  
```

- Comprueba que el aprovisionamiento se ha realizado

```
default: Running: inline script

D:\Vagrant\actividad_2>vagrant ssh
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-212-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat Nov 15 14:33:33 UTC 2025

System load:  0.02               Processes:           98
Usage of /:   3.0% of 38.70GB    Users logged in:    0
Memory usage: 13%               IP address for enp0s3: 10.0.2.15
Swap usage:   0%

Expanded Security Maintenance for Infrastructure is not enabled.
0 updates can be applied immediately.

Enable ESM Infra to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '20.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Sat Nov 15 14:27:18 2025 from 10.0.2.2
vagrant@ubuntu-bionic:~$ ls -l
total 4
drwxr-xr-x 2 root root 4096 Nov 15 14:33 carpeta_nuevecita
vagrant@ubuntu-bionic:~$
```

## Aprovisionamiento por documento

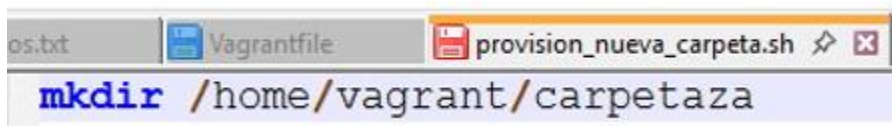
- Elimina el aprovisionamiento anterior y crea uno nuevo mediante un fichero, que cree una nueva carpeta (que sea distinta)

Creamos en el mismo directorio un archivo ".sh" En mi caso

**"provision\_nueva\_carpeta.sh"**

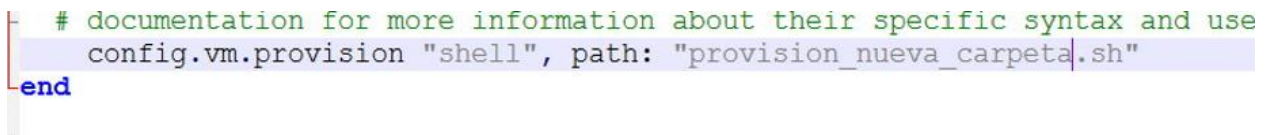
Introducimos en el:

**mkdir /home/vagrant/carpetaza**



Ahora, en el vagrantfile:

**config.vm.provision "shell", path: "provision\_nueva\_carpeta.sh"**



Guardalo todo.

- Recarga el aprovisionamiento

**vagrant provision**

```
D:\Vagrant\actividad_2>vagrant provision
==> default: Running provisioner: shell...
    default: Running: C:/Users/CRISTO~1/AppData/Local/Temp/vagrant-shell20251115-9316-y68su0.sh
D:\Vagrant\actividad_2>
```



- ¿Existe la carpeta nueva? ¿Existe la carpeta anterior?

Si, existen ambas carpetas.

```
D:\Vagrant\actividad_2>vagrant ssh
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-212-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat Nov 15 14:41:38 UTC 2025

System load:  0.0               Processes:            97
Usage of /:   3.0% of 38.70GB   Users logged in:     0
Memory usage: 13%              IP address for enp0s3: 10.0.2.15
Swap usage:   0%

Expanded Security Maintenance for Infrastructure is not enabled.

0 updates can be applied immediately.

Enable ESM Infra to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '20.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Sat Nov 15 14:33:33 2025 from 10.0.2.2
vagrant@ubuntu-bionic:~$ ls -l
total 8
drwxr-xr-x 2 root root 4096 Nov 15 14:33 carpeta_nuevecita
drwxr-xr-x 2 root root 4096 Nov 15 14:41 carpetaza
vagrant@ubuntu-bionic:~$
```

## Modifica los recursos que usa la VM

- Indica que cuando se use VirtualBox use solo una cpu y 1gb de ram

Modificamos el vagrantfile.

```
config.vm.provider "virtualbox" do |vb|  
  # # Display the VirtualBox GUI when booting the machine  
  # vb.gui = true  
  #  
  # # Customize the amount of memory on the VM:  
  vb.memory = "1024"  
  vb.cpus = 1  
end  
#  
config.vm.provider "virtualbox" do |vb|  
  # # Display the VirtualBox GUI when booting the machine  
  # vb.gui = true  
  #  
  # # Customize the amount of memory on the VM:  
  vb.memory = "1024"  
  vb.cpus = 1  
end  
#
```

- Aplica los cambios y demuestra que se han llevado a cabo

Para los cambios de hardware hay que usar “**vagrant reload**” (reinicia la maquina):

```
D:\Vagrant\actividad_2>vagrant reload
==> default: Attempting graceful shutdown of VM...
default: Guest communication could not be established! This is usually because
default: SSH is not running, the authentication information was changed,
default: or some other networking issue. Vagrant will force halt, if
default: capable.
==> default: Forcing shutdown of VM...
==> default: Checking if box 'ubuntu/bionic64' version '20230607.0.5' is up to date...
==> default: Clearing any previously set forwarded ports...
==> default: Fixed port collision for 22 => 2222. Now on port 2200.
==> default: Clearing any previously set network interfaces...
==> default: Preparing network interfaces based on configuration...
default: Adapter 1: nat
==> default: Forwarding ports...
default: 22 (guest) => 2200 (host) (adapter 1)
==> default: Running 'pre-boot' VM customizations...
==> default: Booting VM...
==> default: Waiting for machine to boot. This may take a few minutes...
default: SSH address: 127.0.0.1:2200
default: SSH username: vagrant
default: SSH auth method: private 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: 5.2.42
default: VirtualBox Version: 7.1
==> default: Mounting shared folders...
default: D:/Vagrant/actividad_2 => /vagrant
==> default: Machine already provisioned. Run `vagrant provision` or use the `--provision`
==> default: flag to force provisioning. Provisioners marked to run always will still run.
```

RAM: `grep MemTotal /proc/meminfo`

CPU: `grep processor /proc/cpuinfo | wc -l`

```
D:\Vagrant\actividad_2>vagrant ssh
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-212-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat Nov 15 14:55:03 UTC 2025

System load:  0.78               Processes:            88
Usage of /:   3.0% of 38.70GB    Users logged in:     0
Memory usage: 11%               IP address for enp0s3: 10.0.2.15
Swap usage:   0%

Expanded Security Maintenance for Infrastructure is not enabled.

0 updates can be applied immediately.

Enable ESM Infra to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '20.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Sat Nov 15 14:41:38 2025 from 10.0.2.2
vagrant@ubuntu-bionic:~$ grep MemTotal /proc/meminfo
MemTotal:      1008716 kB
vagrant@ubuntu-bionic:~$ grep processor /proc/cpuinfo | wc -l
1
vagrant@ubuntu-bionic:~$
```