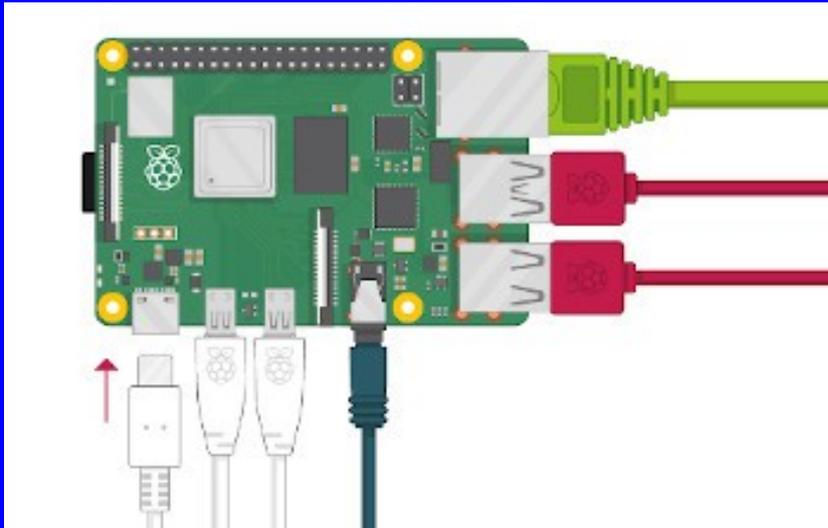


Internet de las Cosas

Raspberry Pi 4 Instalación (2021)



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Tecnológico Nacional de México
Campus Morelia



Instalación

(descarga del software)

Raspberry Pi OS

- Descargar el Raspberry Pi OS:

raspberrypi.com/software/operating-systems/#raspberry-pi-os-32-bit

Raspberry Pi OS

Compatible with:
[All Raspberry Pi models](#)



Raspberry Pi OS with desktop and recommended software

Release date: October 30th 2021
Kernel version: 5.10
Size: 3,045MB
[Show SHA256 file integrity hash:](#)
[Release notes](#)

Download
[Download torrent](#)

Raspberry Pi OS with desktop

Release date: October 30th 2021
Kernel version: 5.10
Size: 1,148MB
[Show SHA256 file integrity hash:](#)
[Release notes](#)

Download
[Download torrent](#)

Raspberry Pi OS Lite

Release date: October 30th 2021
Kernel version: 5.10
Size: 463MB
[Show SHA256 file integrity hash:](#)
[Release notes](#)

Download
[Download torrent](#)



Raspberry Pi

- **Versión a descargar (archivo ZIP):**

Raspberry Pi OS with desktop and recommended software

Release date: October 30th 2021

Kernel version: 5.10

Size: 3,045MB

Show SHA256 file integrity hash:

[Release notes](#)

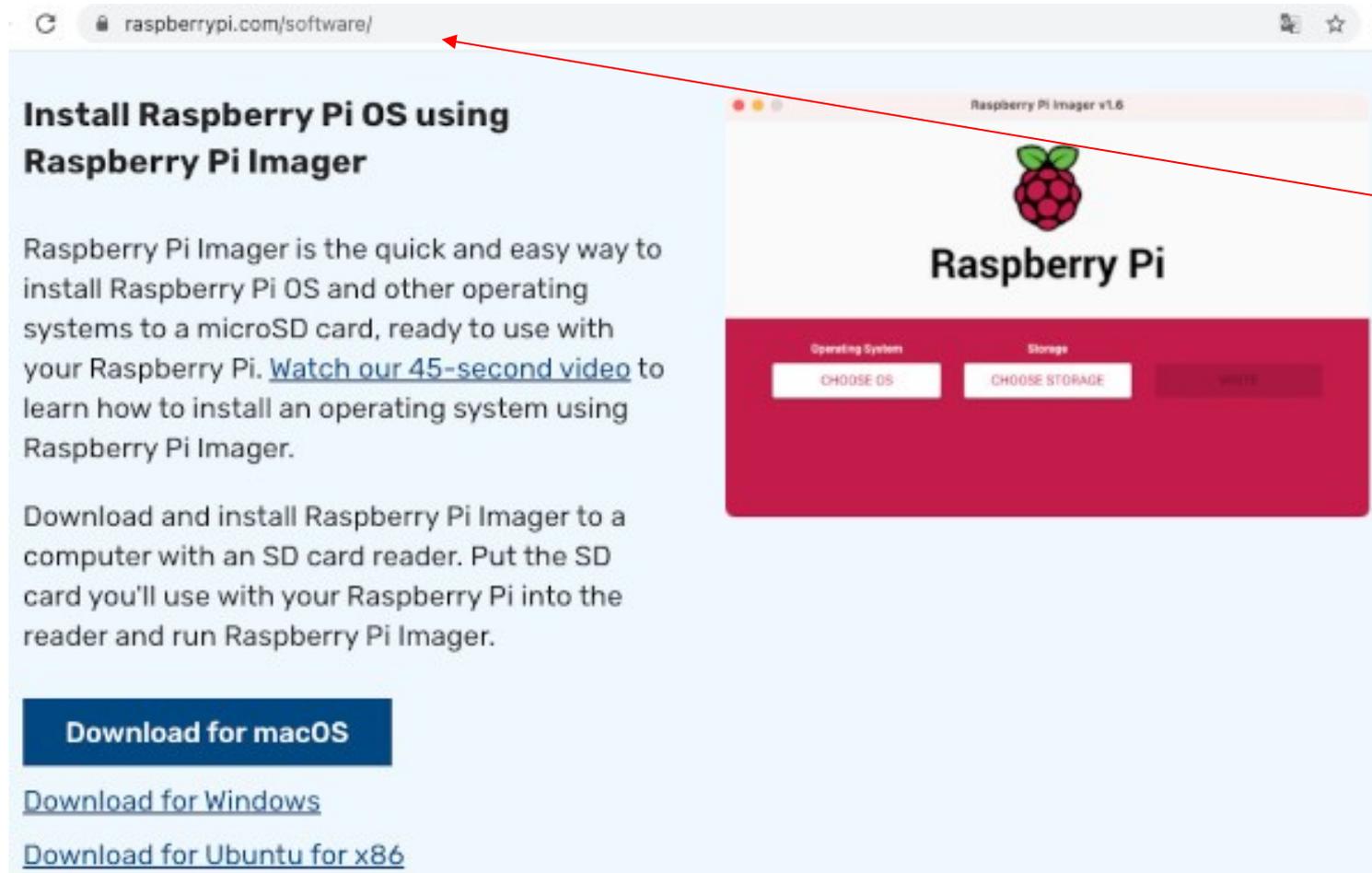
Download

[Download torrent](#)



Raspberry Pi Imager

- Descargar el software que prepara las memorias MicroSD para instalar el Raspberry Pi:

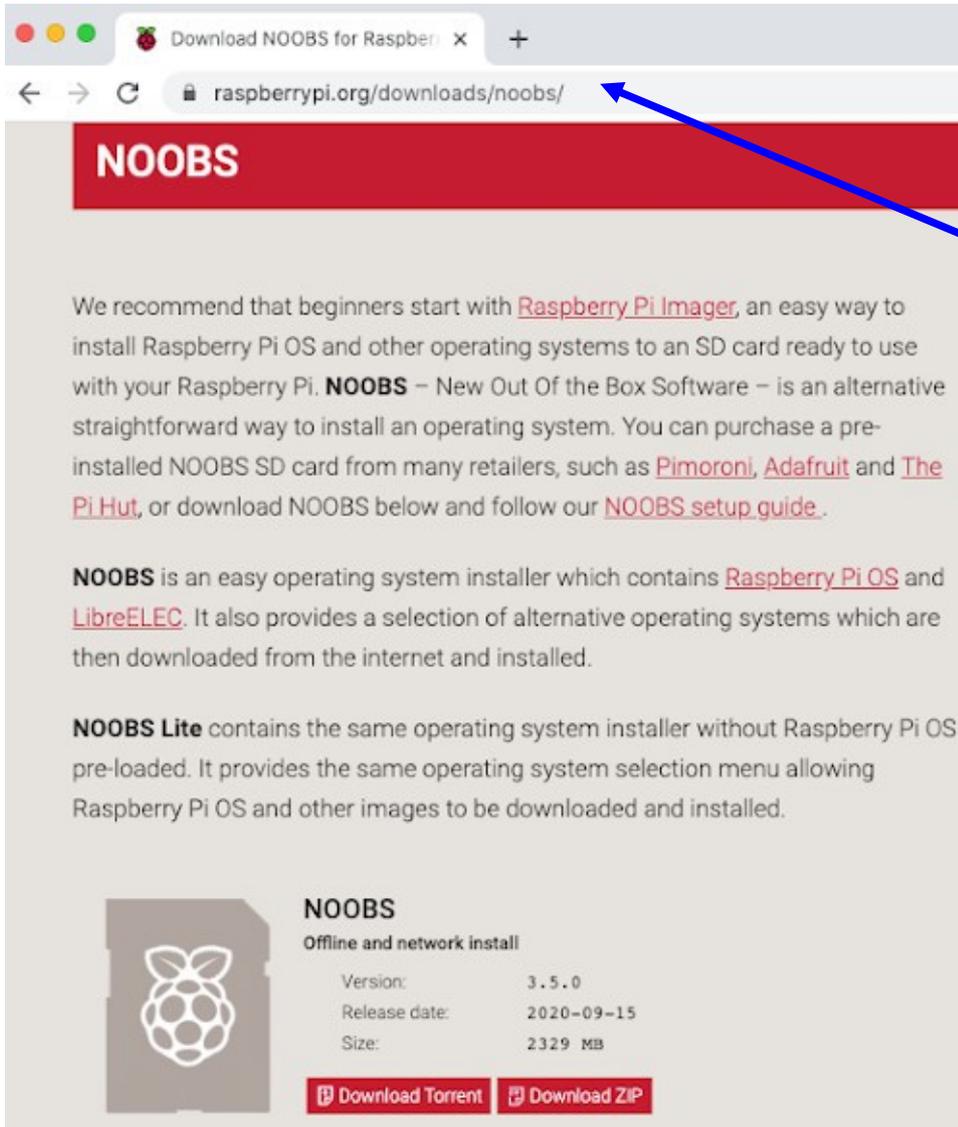


The image shows a screenshot of the Raspberry Pi website's software page. The browser address bar displays 'raspberrypi.com/software/'. The main heading reads 'Install Raspberry Pi OS using Raspberry Pi Imager'. Below this, a paragraph explains that the imager is a quick and easy way to install OS to a microSD card. A link to a 45-second video is provided. Further down, instructions are given on how to use the imager with an SD card reader. Three download links are listed: 'Download for macOS', 'Download for Windows', and 'Download for Ubuntu for x86'. On the right side, a preview of the Raspberry Pi Imager v1.6 application is shown. The application window features the Raspberry Pi logo and the text 'Raspberry Pi'. Below the logo, there are three buttons: 'CHOOSE OS' under the 'Operating System' label, 'CHOOSE STORAGE' under the 'Storage' label, and a 'WRITE' button.

Instalación

Página Oficial de Raspberry Pi

- Ir a la página oficial:



The screenshot shows a web browser window with the address bar displaying "raspberrypi.org/downloads/noobs/". The page content includes a red header with the word "NOOBS" in white. Below the header, there is a paragraph of text recommending the Raspberry Pi Imager and describing NOOBS as an alternative installation method. A blue arrow points from the right side of the slide to the address bar. At the bottom of the page, there is a table with technical details for NOOBS and two download buttons.

NOOBS

We recommend that beginners start with [Raspberry Pi Imager](#), an easy way to install Raspberry Pi OS and other operating systems to an SD card ready to use with your Raspberry Pi. **NOOBS** – New Out Of the Box Software – is an alternative straightforward way to install an operating system. You can purchase a pre-installed NOOBS SD card from many retailers, such as [Pimoroni](#), [Adafruit](#) and [The Pi Hut](#), or download NOOBS below and follow our [NOOBS setup guide](#).

NOOBS is an easy operating system installer which contains [Raspberry Pi OS](#) and [LibreELEC](#). It also provides a selection of alternative operating systems which are then downloaded from the internet and installed.

NOOBS Lite contains the same operating system installer without Raspberry Pi OS pre-loaded. It provides the same operating system selection menu allowing Raspberry Pi OS and other images to be downloaded and installed.

	NOOBS Offline and network install
Version:	3.5.0
Release date:	2020-09-15
Size:	2329 MB

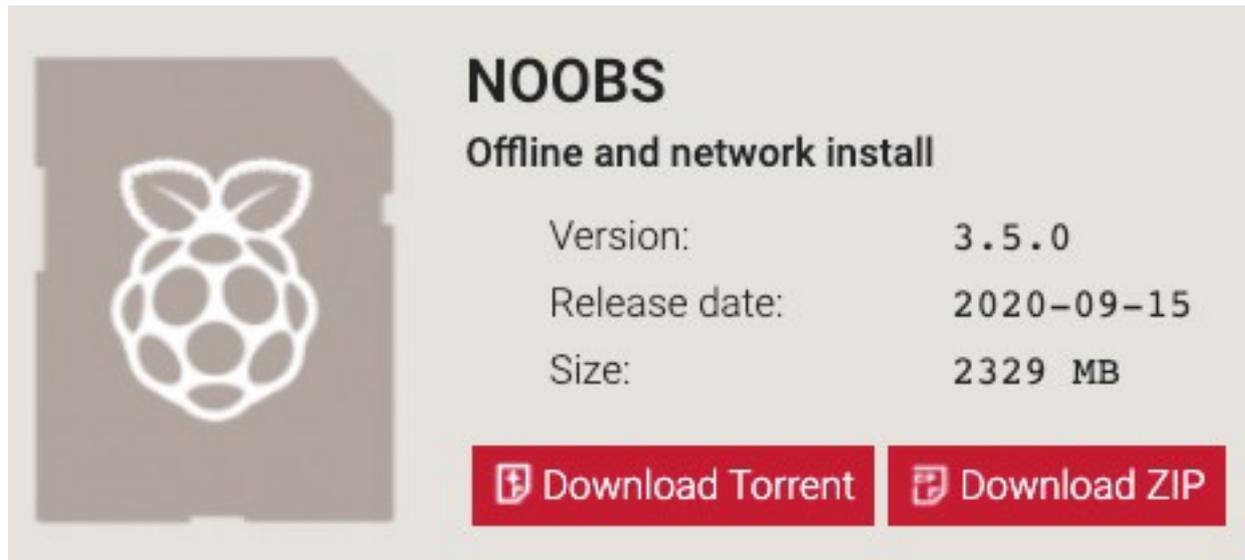
[Download Torrent](#) [Download ZIP](#)

”Raspberry Pi”, <https://www.raspberrypi.org/downloads/noobs/>, noviembre 2020



NOOBS

- **Descargar NOOBS:**



The screenshot shows the NOOBS download page. On the left is a Raspberry Pi logo on a card. To the right, the title 'NOOBS' is followed by 'Offline and network install'. Below this, a table lists the version (3.5.0), release date (2020-09-15), and size (2329 MB). At the bottom are two red buttons: 'Download Torrent' and 'Download ZIP'. A blue arrow points from the bottom right towards the 'Download ZIP' button.

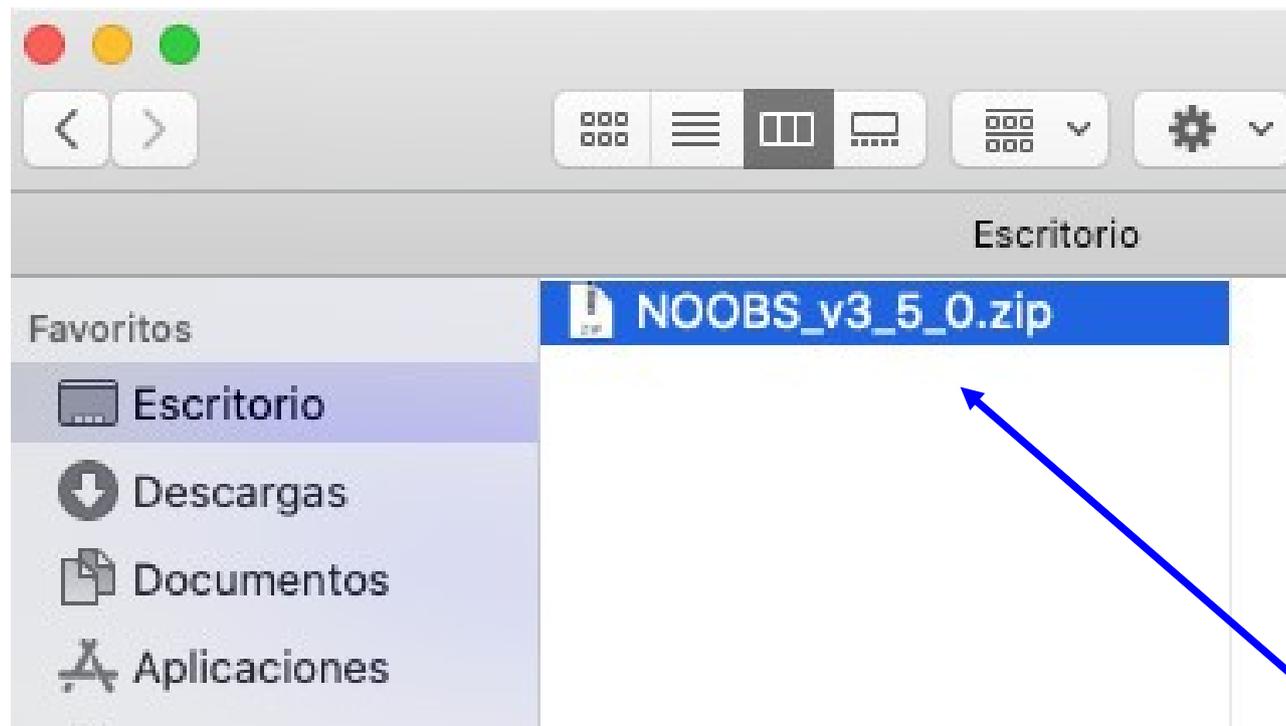
Version:	3.5.0
Release date:	2020-09-15
Size:	2329 MB

[Download Torrent](#) [Download ZIP](#)



Archivo descargado

- El archivo descargado está en formato ZIP



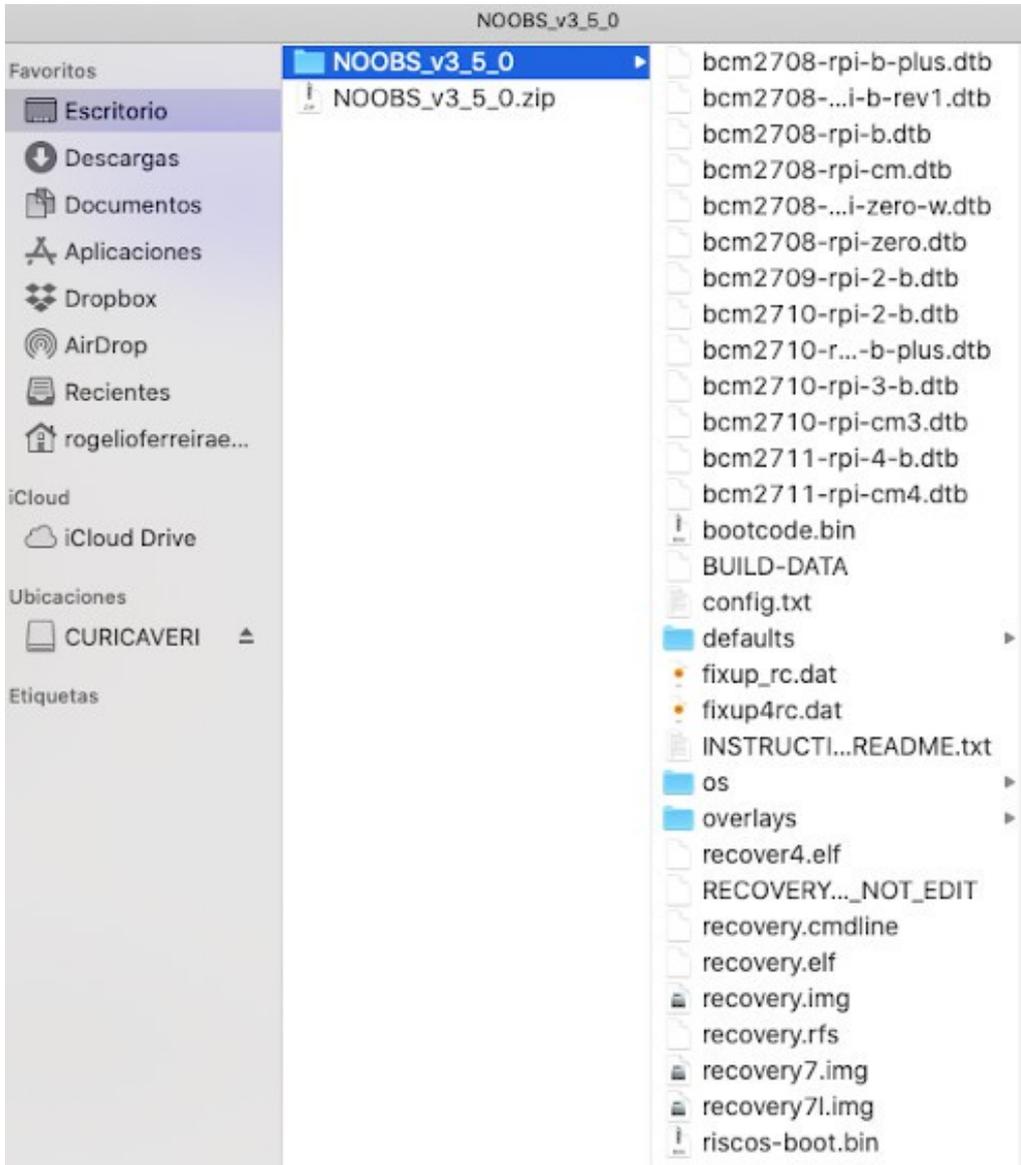
Descomprimir

- Descomprimimos el archivo ZIP



Archivos finales

- Los archivos ya descomprimidos serán los que se van a copiar en el directorio raíz de la tarjeta Micro SD:



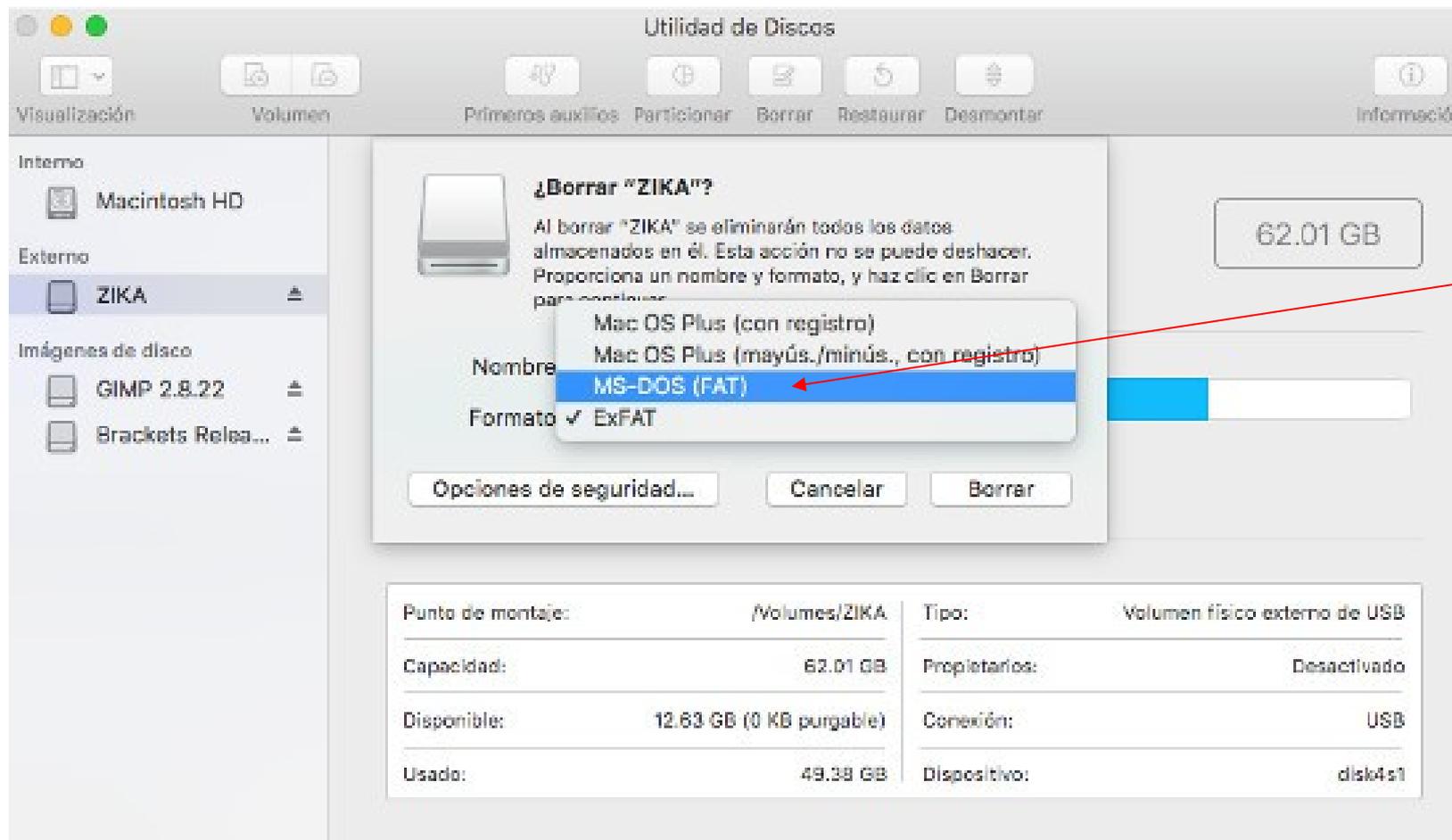
Tarjeta Micro SD

- Se requiere una tarjeta micro SD (se recomienda de 64 GB y clase 10).



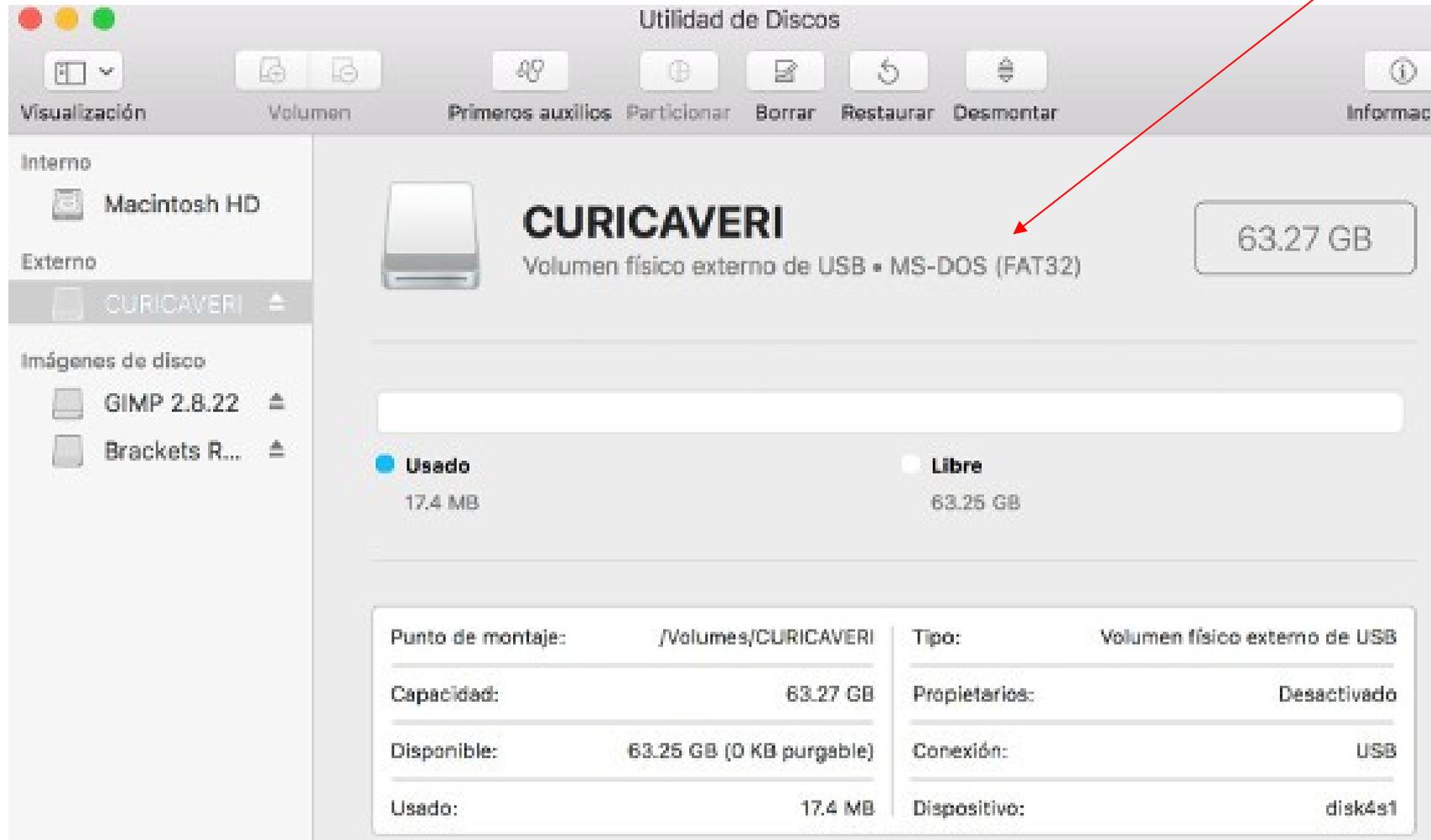
Formato

- Formatear la tarjeta a sistema FAT (FAT 32 bits).
- **NOTA: No utilizar formato ExtFAT (FAT 64 bits) o ningún otro formato!**



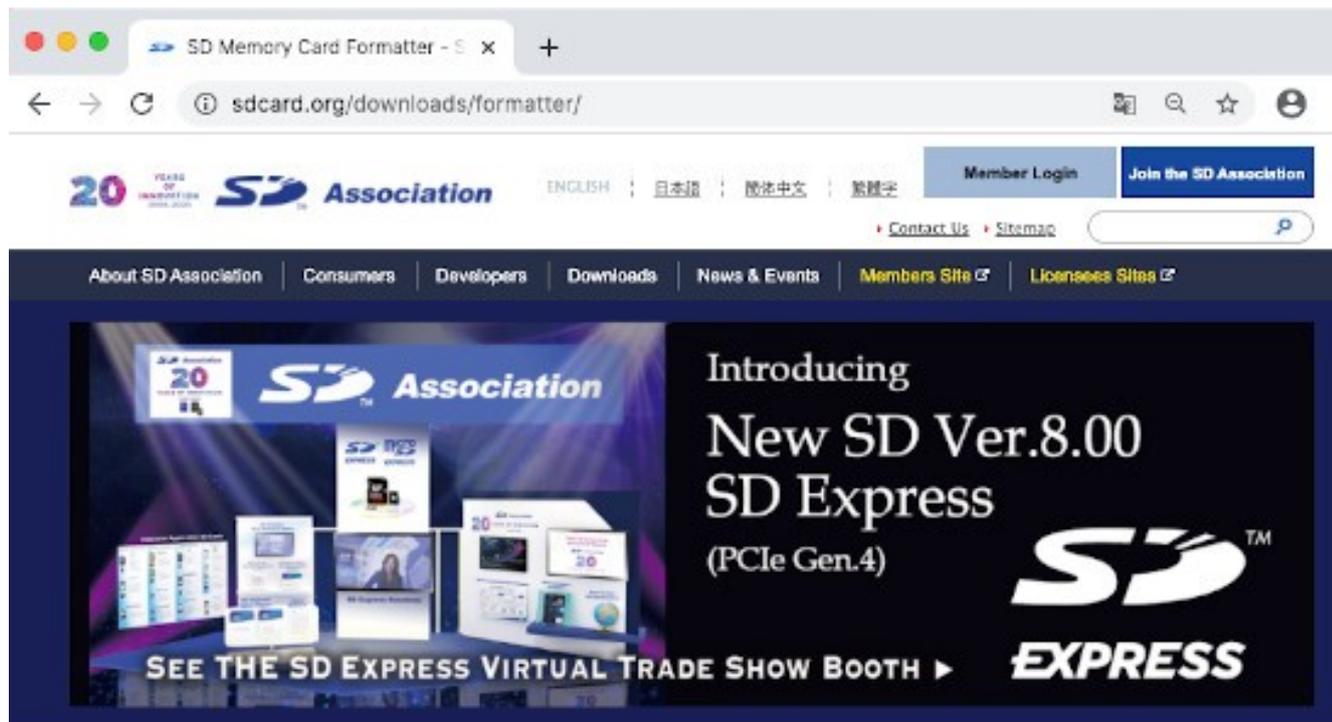
Formato

- Memoria lista formateada con “Utilidad de Discos” (Mac):



SD Formatter

- Si el sistema operativo no tiene la opción para formatear FAT 32 bits, se puede utilizar la herramienta oficial de la SD Association:



SD Memory Card Formatter

HOME > Downloads > SD Memory Card Formatter

> Downloads

> SD Association Whitepapers

> Simplified Specifications

> SD Memory Card Formatter

SHARE

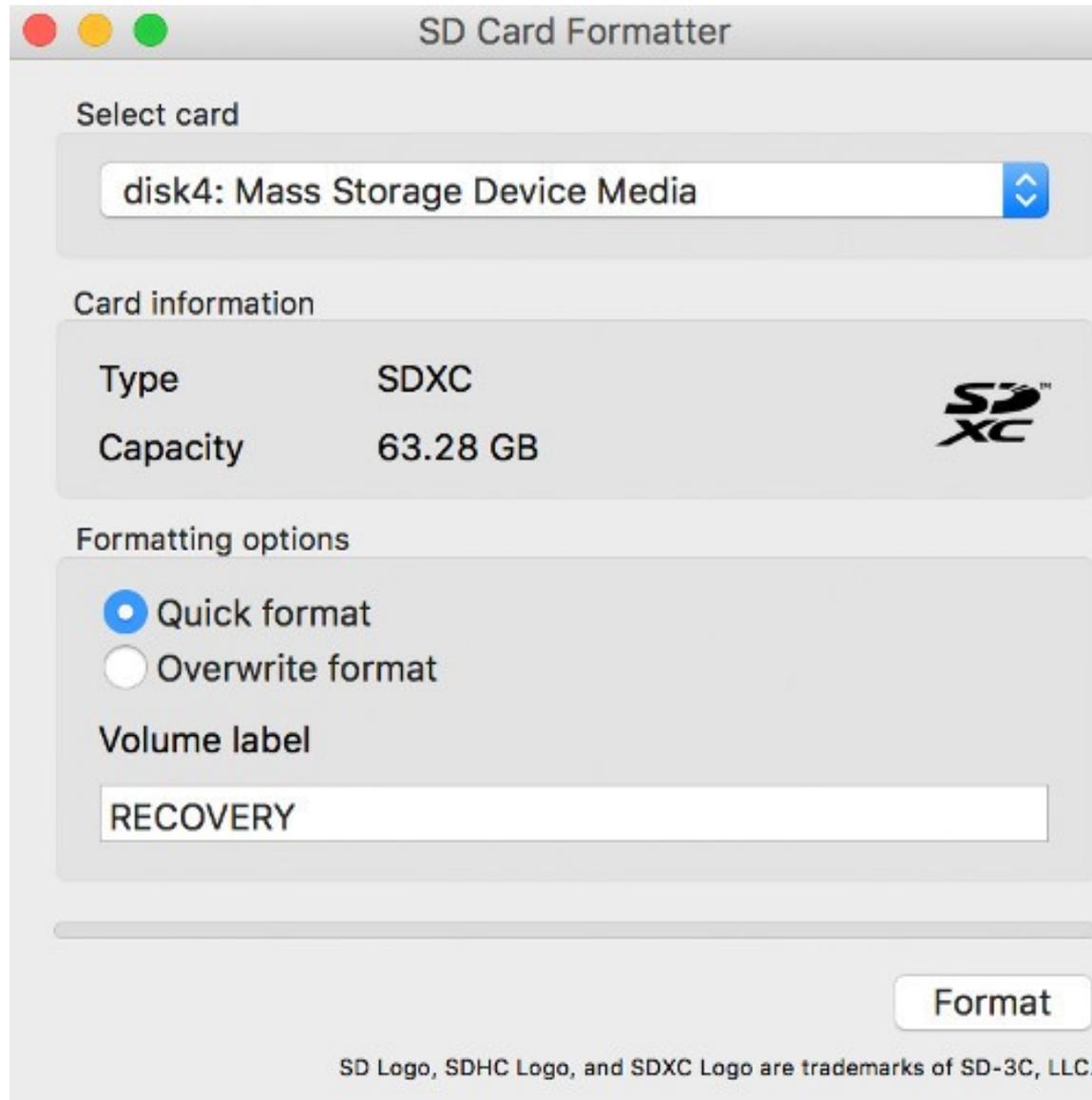


SD Memory Card Formatter 5.0.1 for SD/SDHC/SDXC

The SD Memory Card Formatter formats SD Memory Card, SDHC Memory Card and SDXC Memory Card (respectively SD/SDHC/SDXC Cards) complying with the SD File System Specification created by the SD Association (SDA).

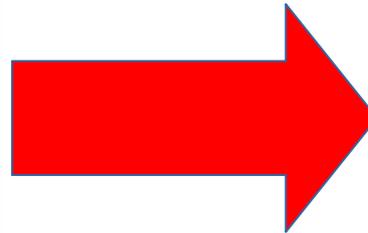
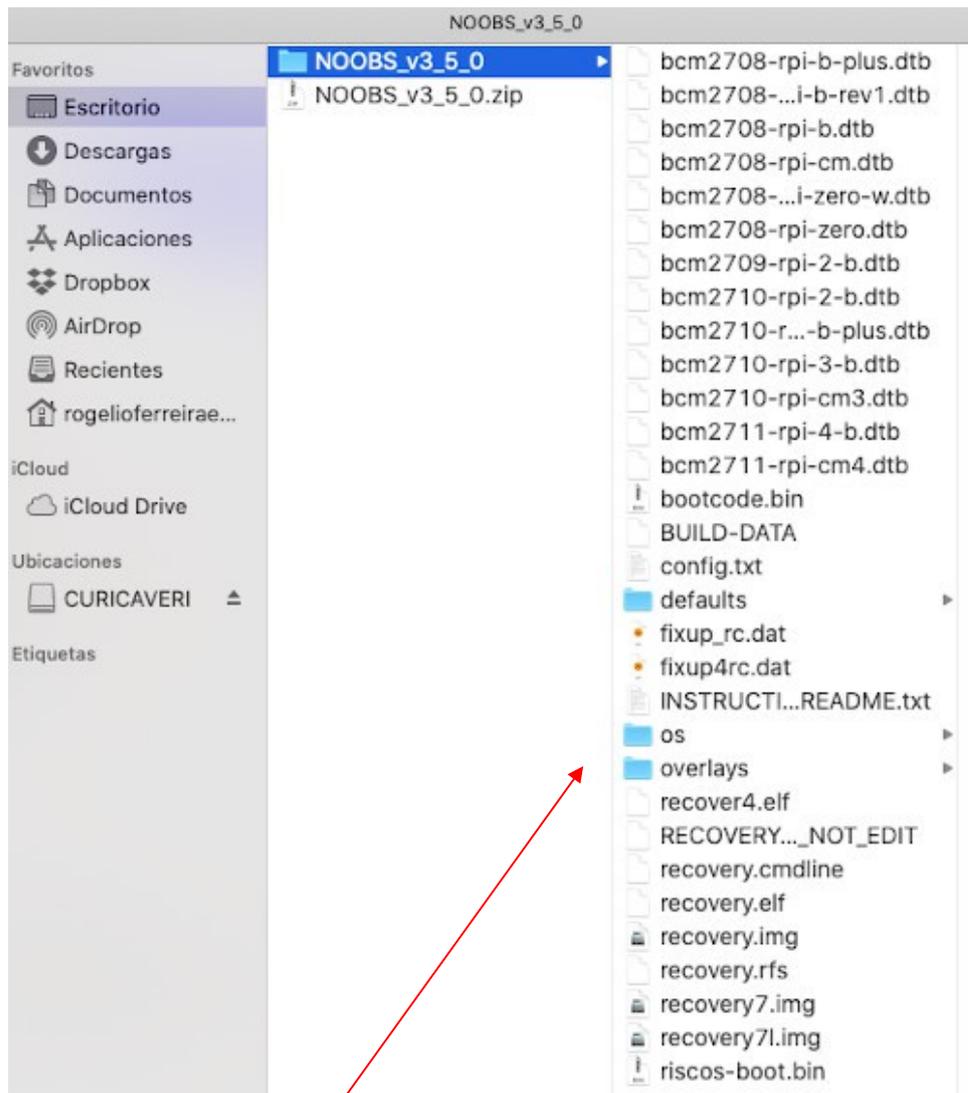


SD Formatter (Mac)



Copiar

- Copiar los archivos que se descomprimieron anteriormente a la memoria Micro SD (sólo los archivos, no la carpeta):



Raspberry Pi

- Se requiere un Raspberry Pi 4



Insertar Memoria

- Colocar la memoria Micro SD dentro del Raspberry Pi



Raspberry Pi Compatibles

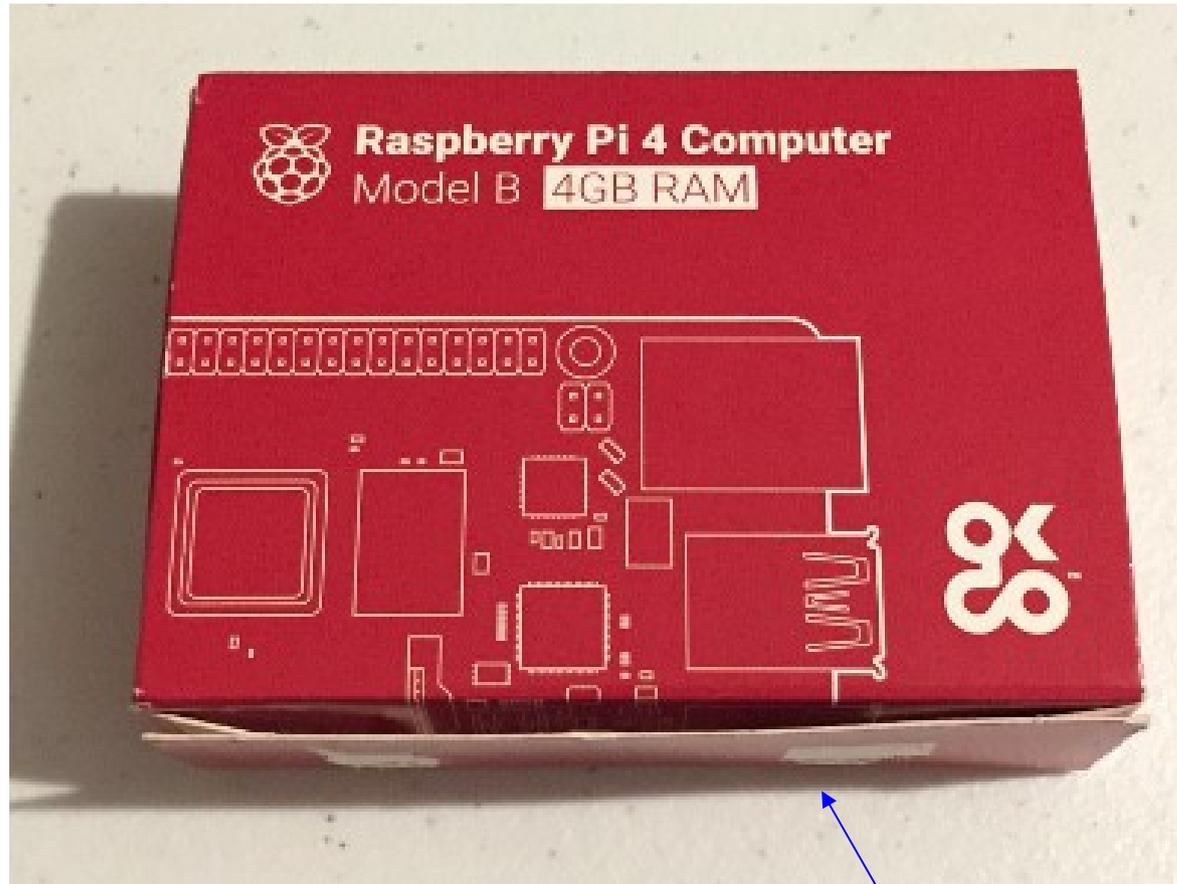


■ **Fabricado en China**

■ **Fabricado en Inglaterra**



Raspberry Pi Compatibles



- **Fabricado en Inglaterra**



Carcasa

- Se recomienda una carcasa (cajita) para proteger a la Raspberry Pi:



Ensamble

- Colocar el Raspberry Pi dentro de su carcasa.



NEW

More powerful processor

Choice of RAM

1GB 2GB 4GB

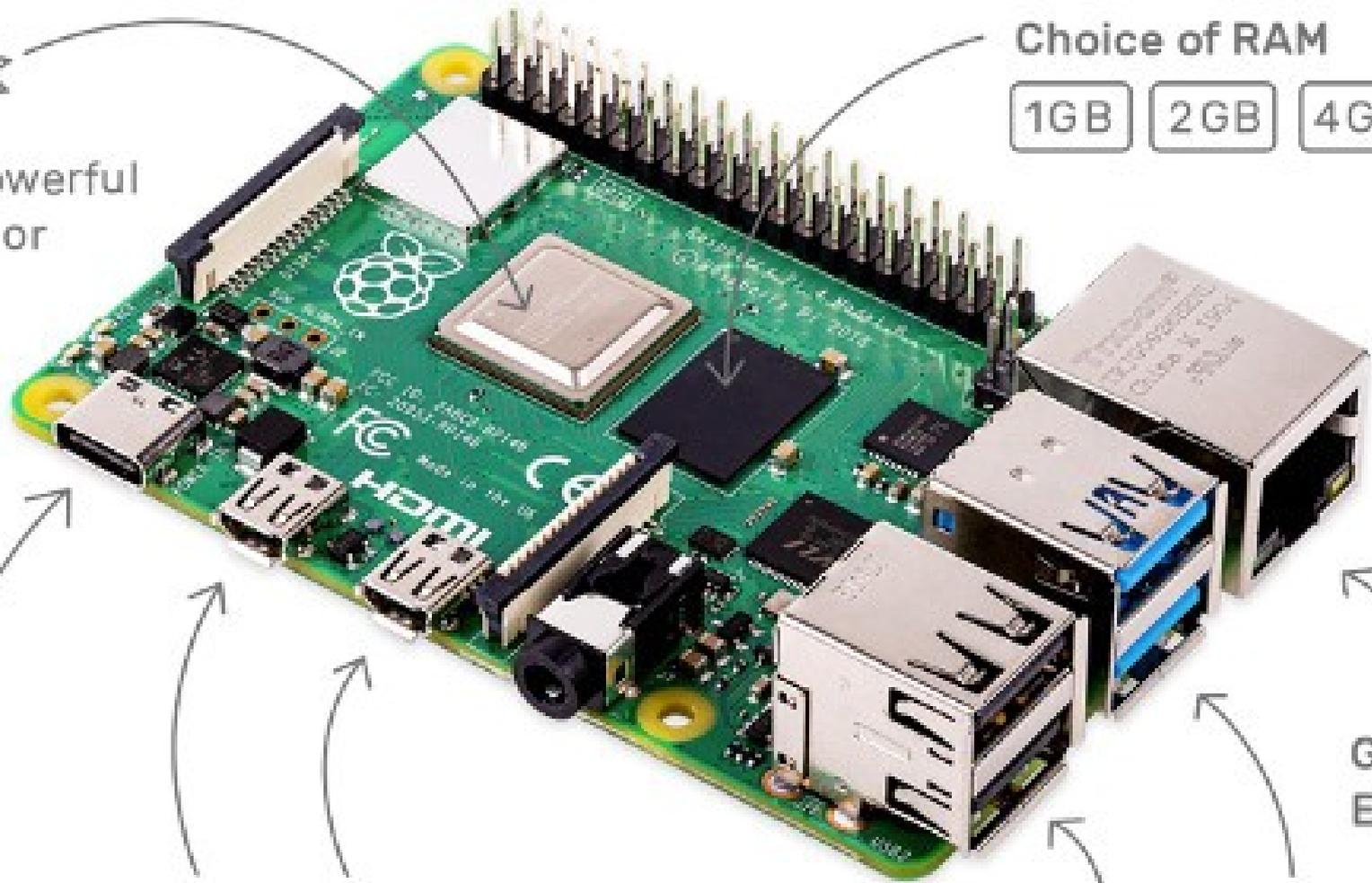
USB-C Power supply

MICRO HDMI PORTS
Supporting 2 x 4K displays

USB 2

USB 3

GIGABIT
ETHERNET



Monitor

- Se requiere un monitor con conexión HDMI



Monitor

- **Monitor Samsung HDMI de 24 pulgadas**



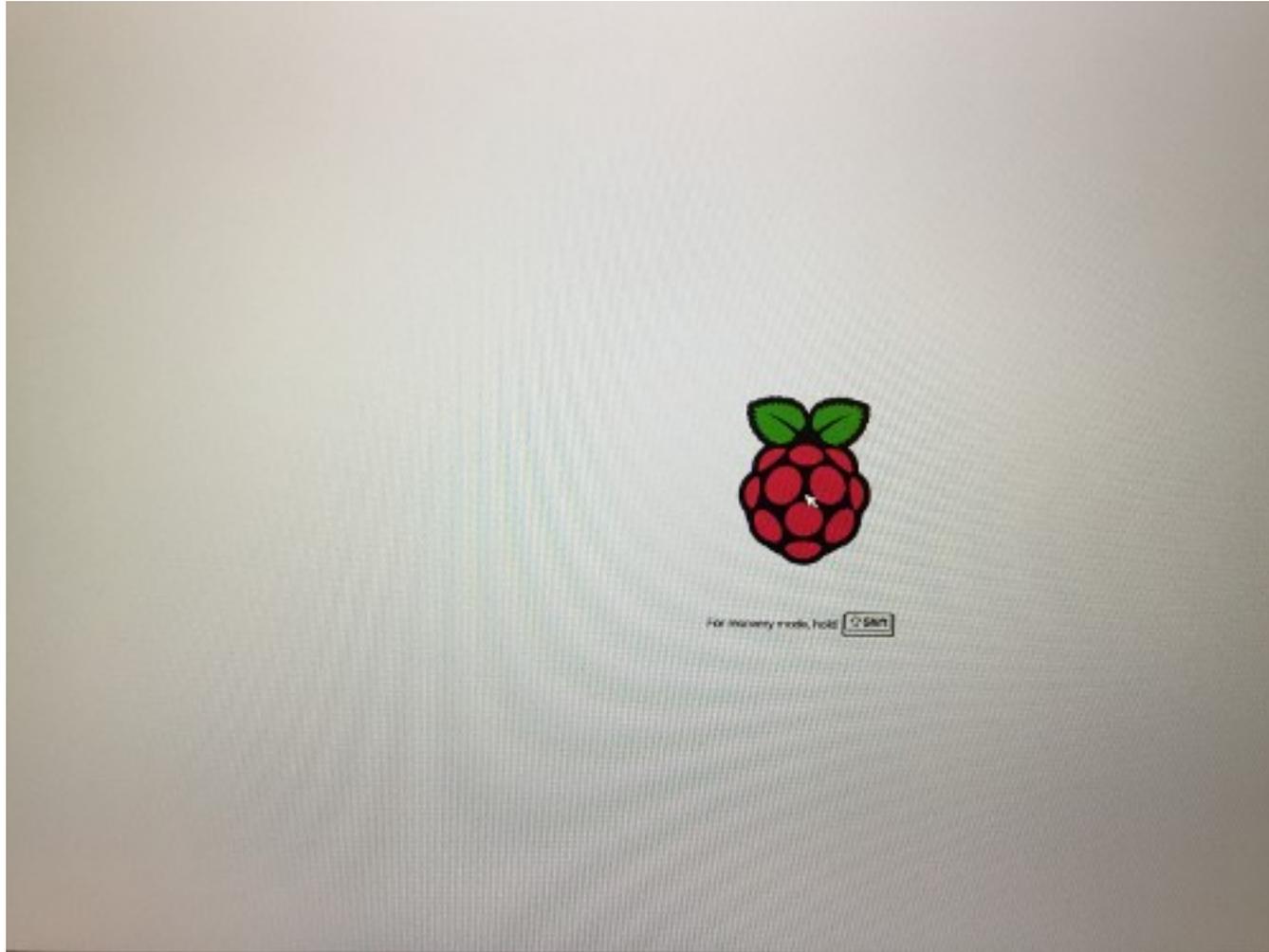
Inicio

- **Pantalla de inicio:**



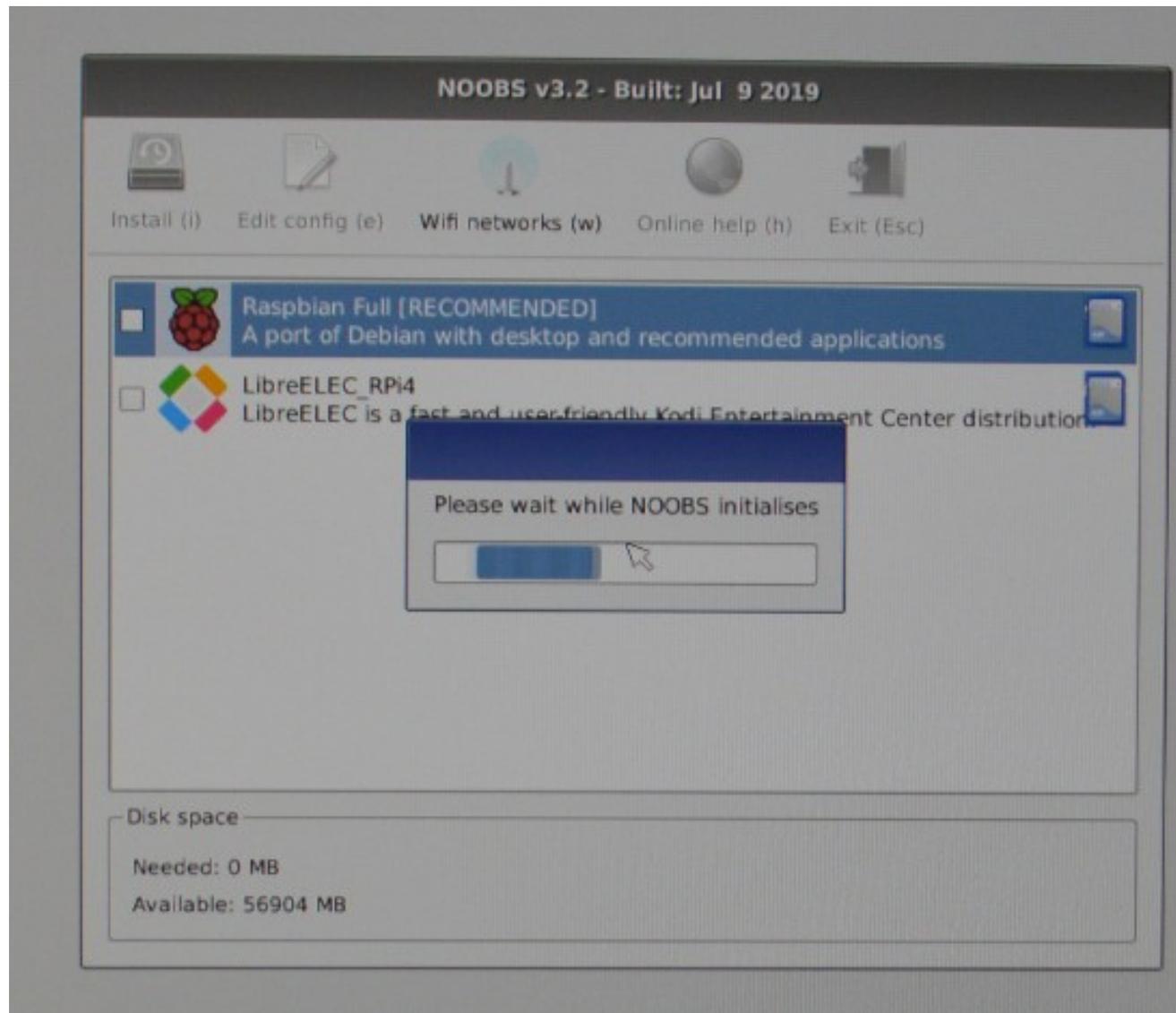
Arranque

- Conectar el Raspberry y arranca con la siguiente pantalla:



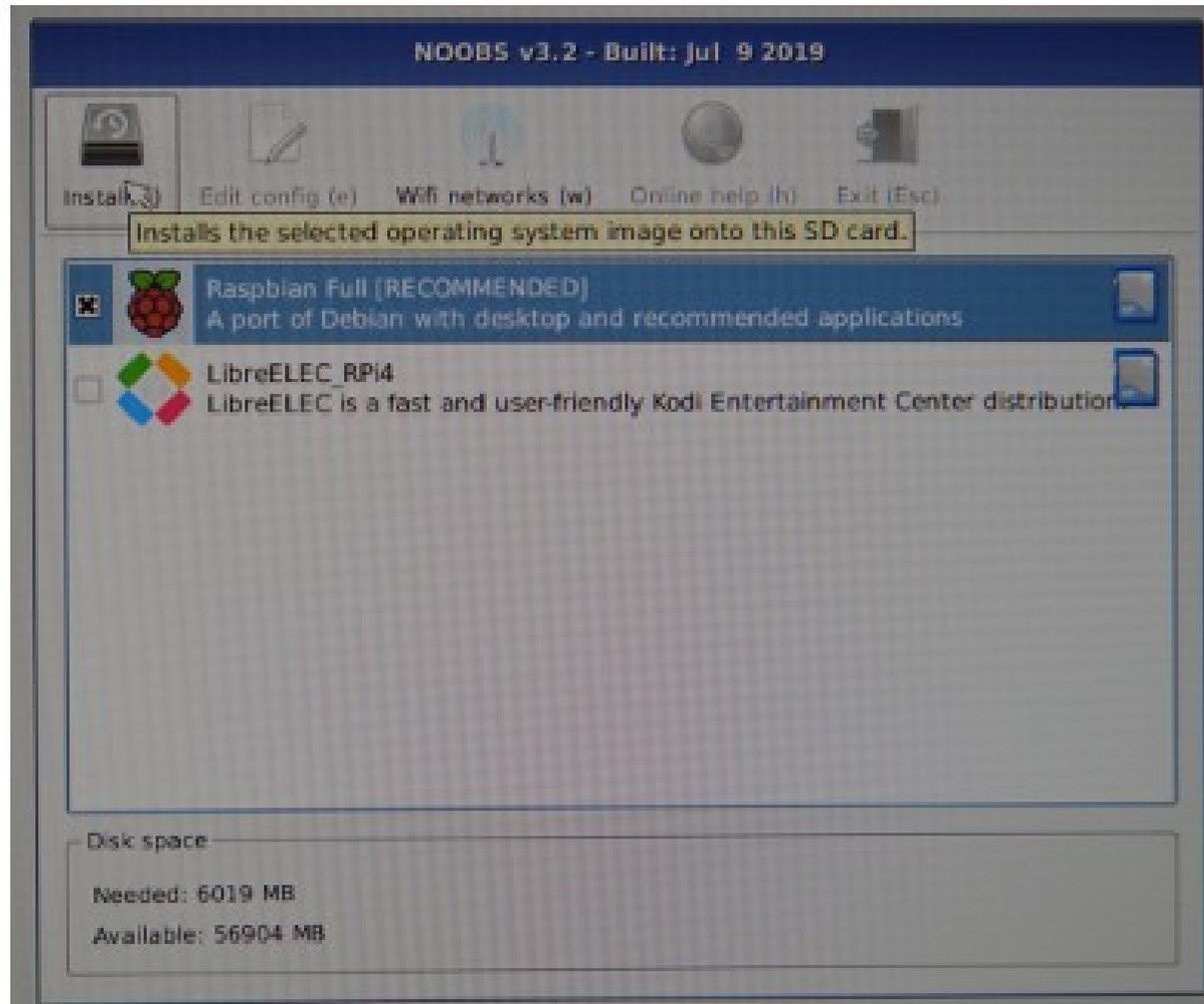
Opciones

- **Aparecen las opciones a instalar:**



Raspbian

- Se selecciona Raspbian como el sistema a instalar:



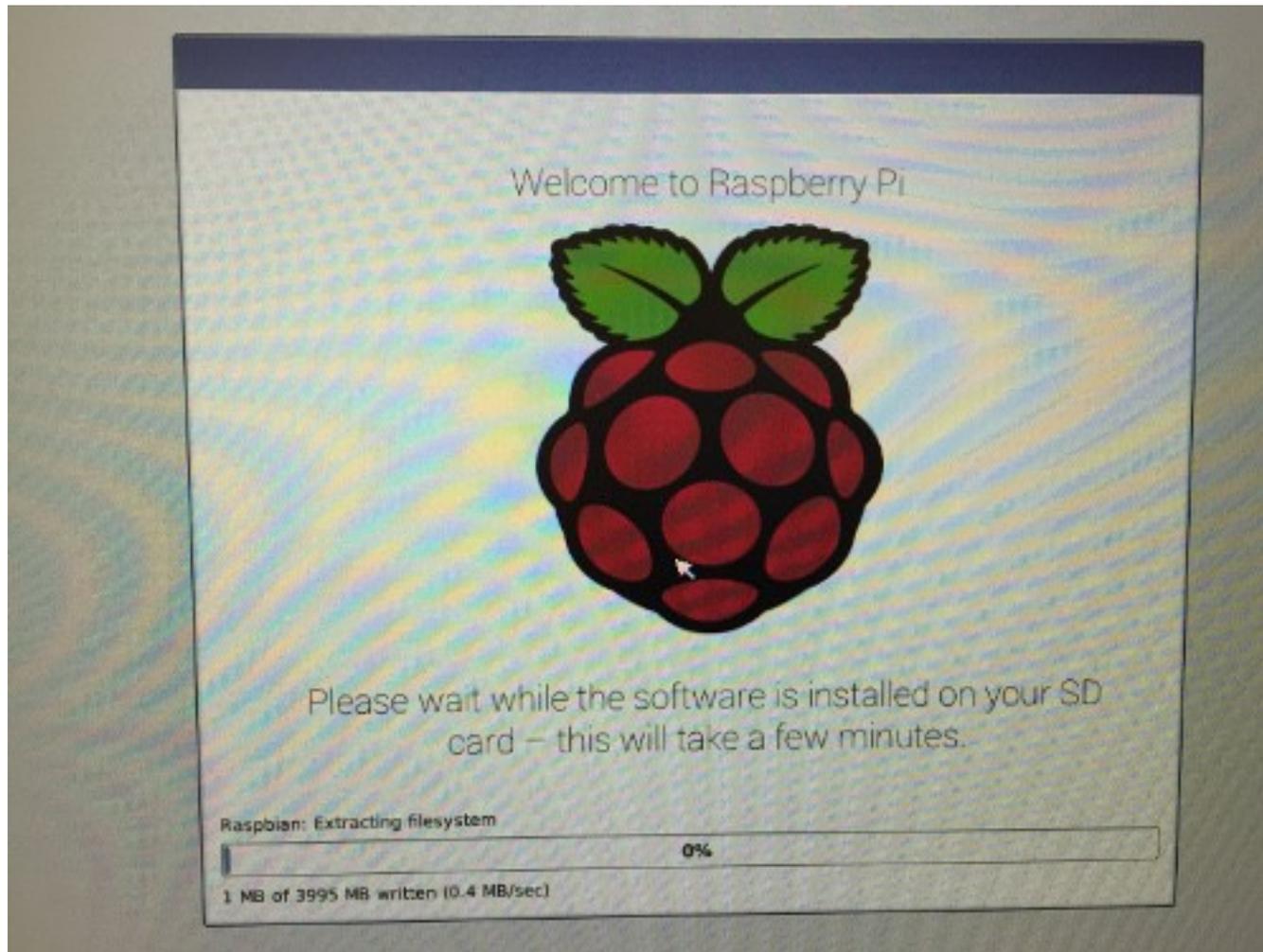
Raspbian

- Se indica que se borrará todo el contenido de la memoria:



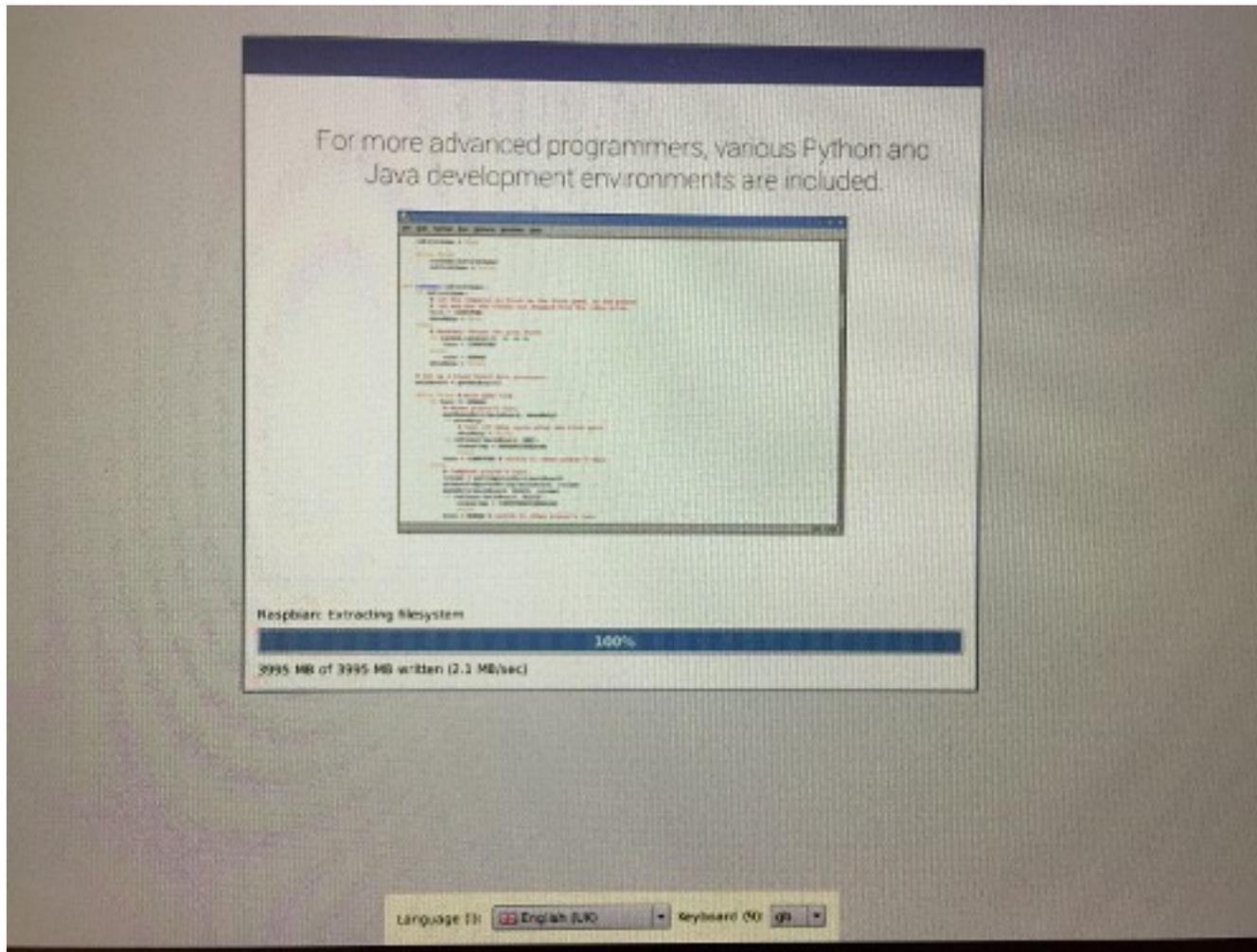
Instalación

- Inicia el proceso de instalación (aproximadamente 20 minutos en total):



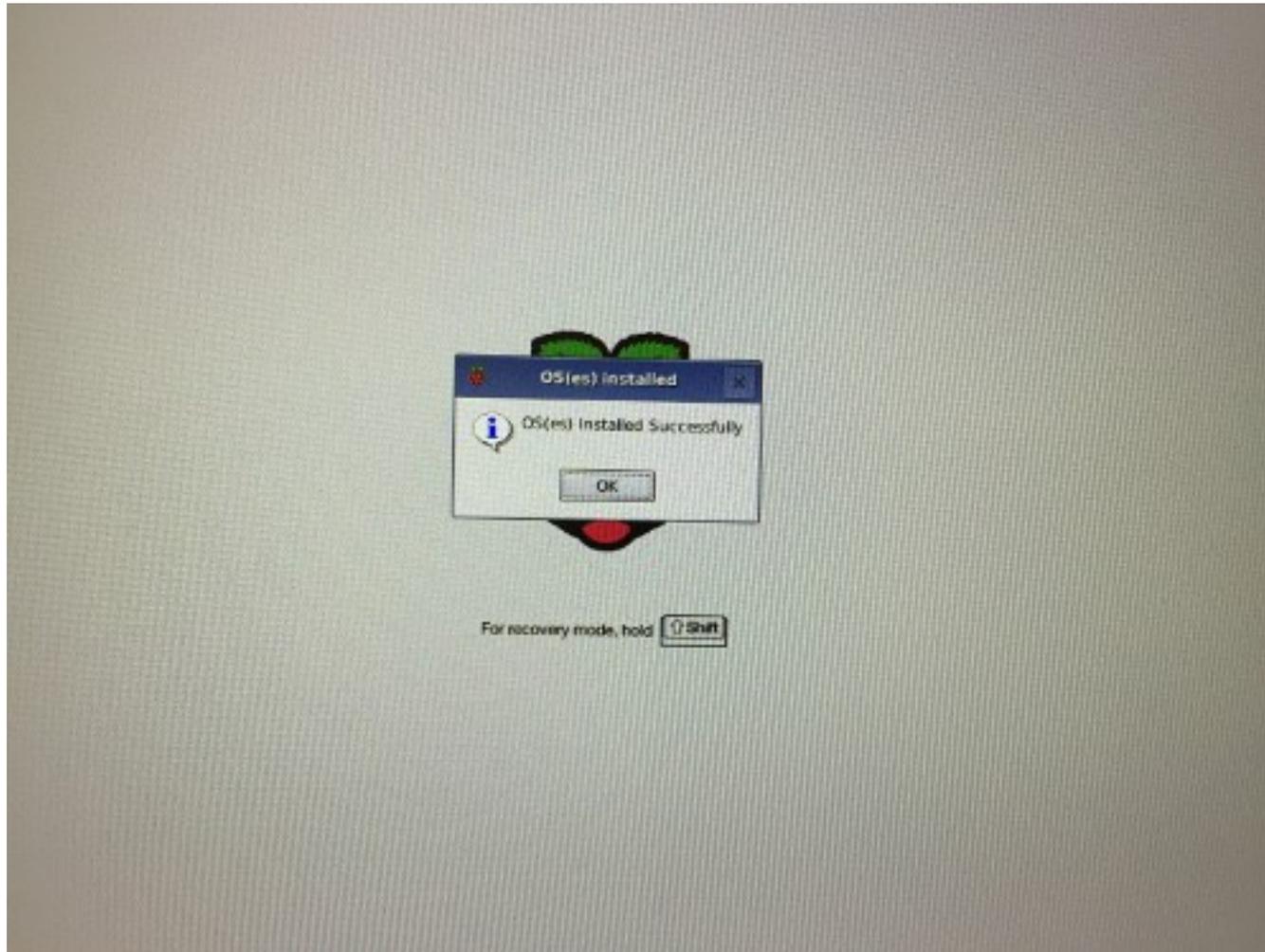
Instalación

- **Pantalla indicando el 100% de la instalación:**



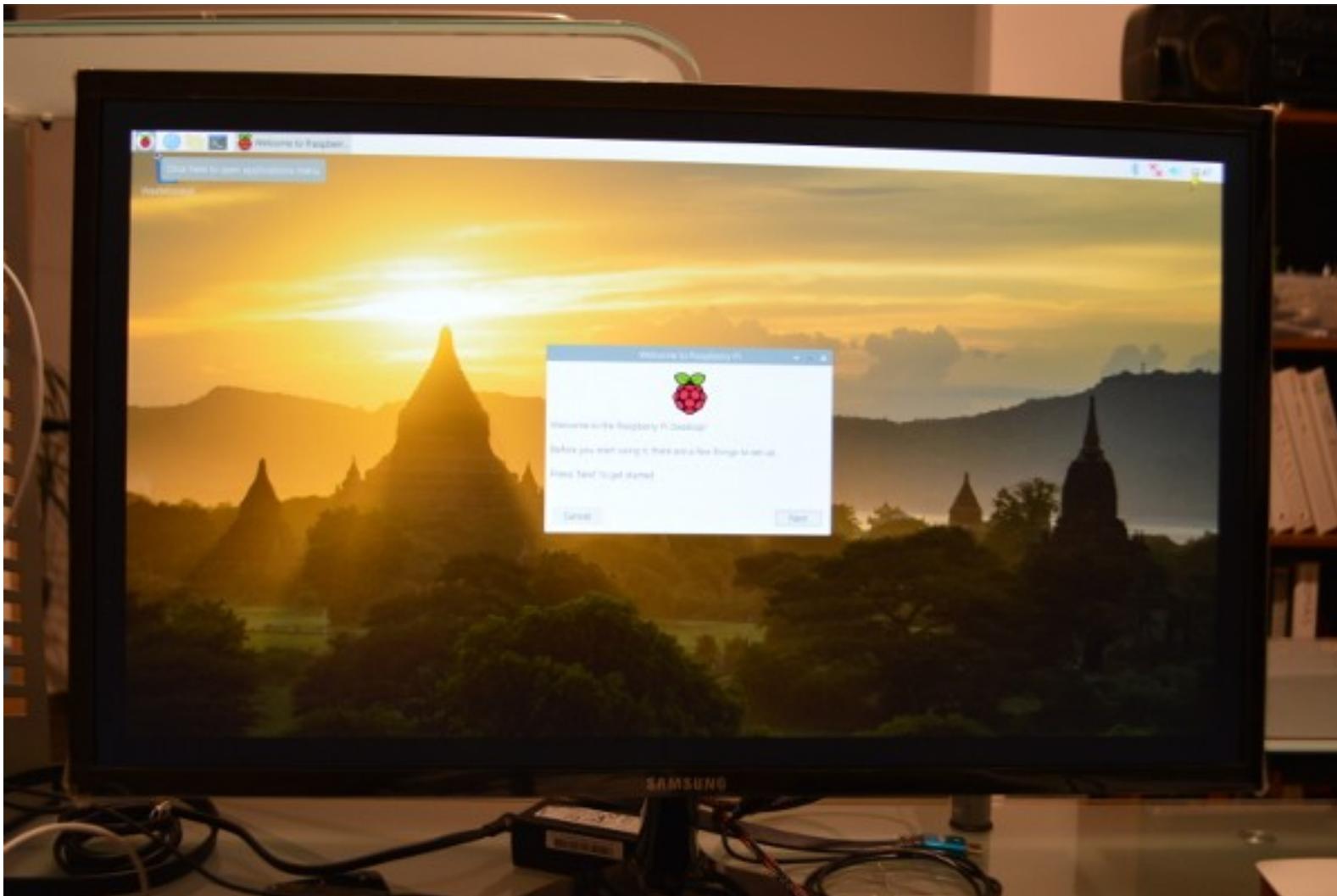
Instalación

- **Pantalla de finalización de la instalación:**



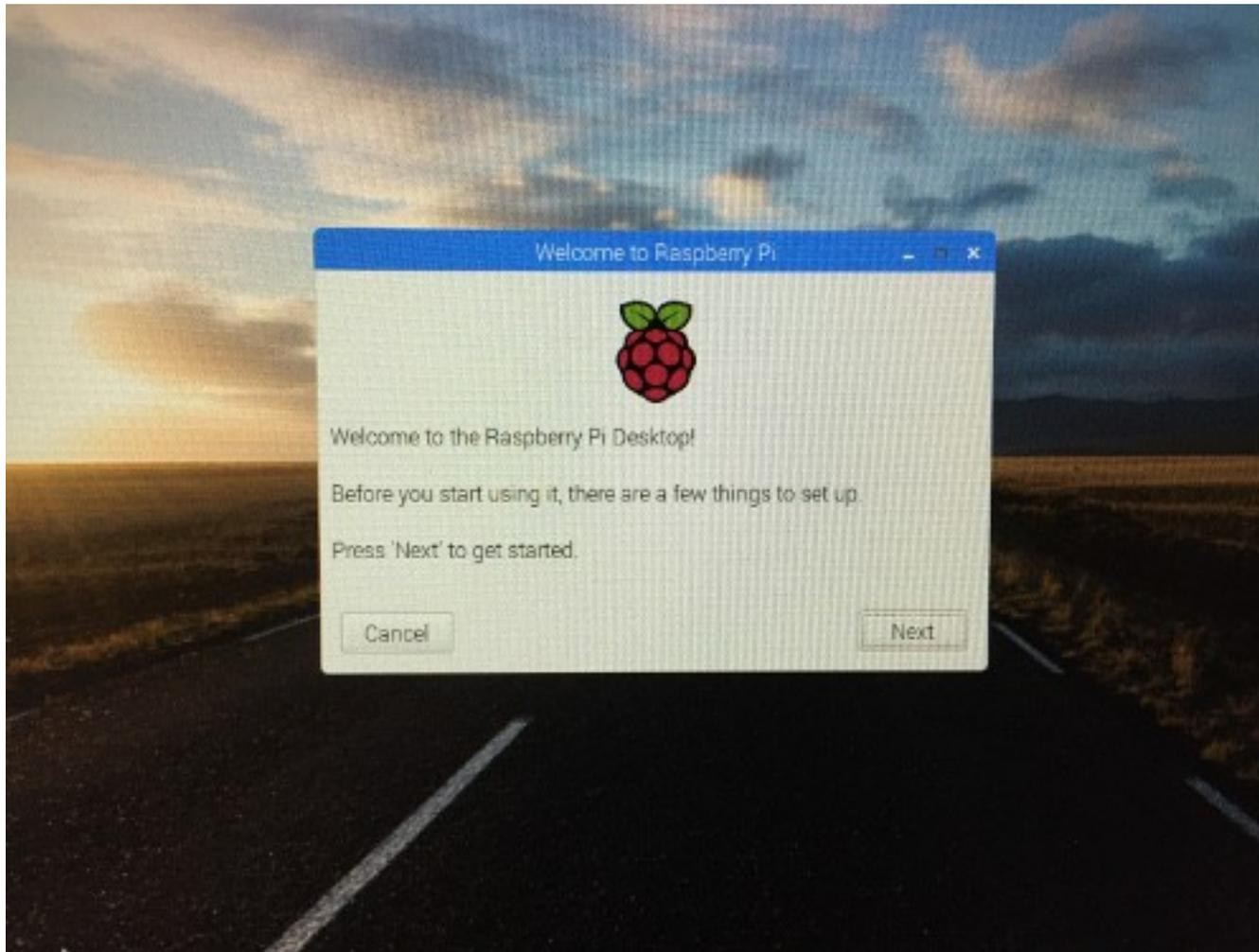
Pantalla

- **Pantalla completa al terminar la instalación:**



Configuración

- **Ahora viene el proceso de configuración:**



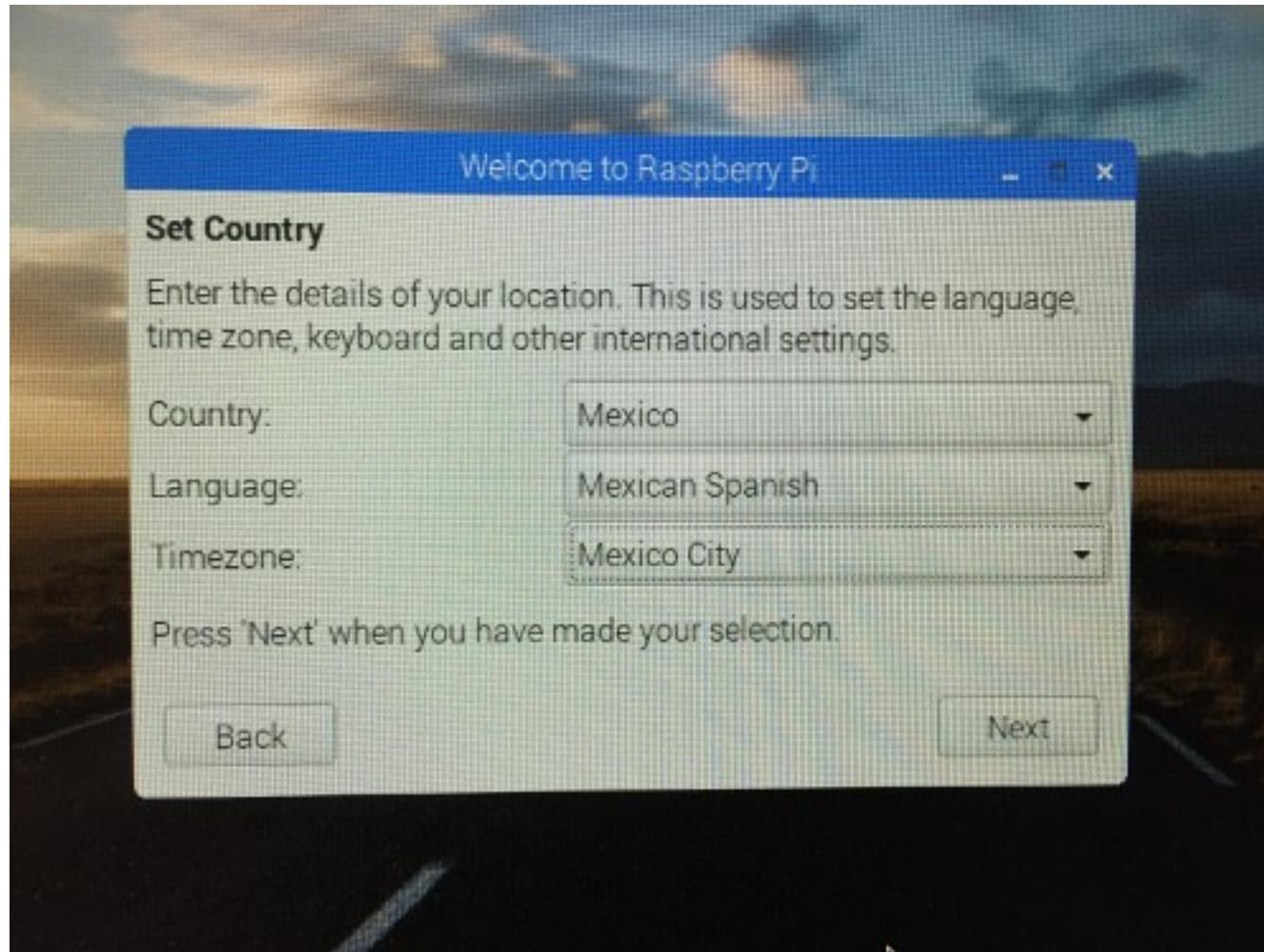
Teclado

- **Seleccionar teclado:**



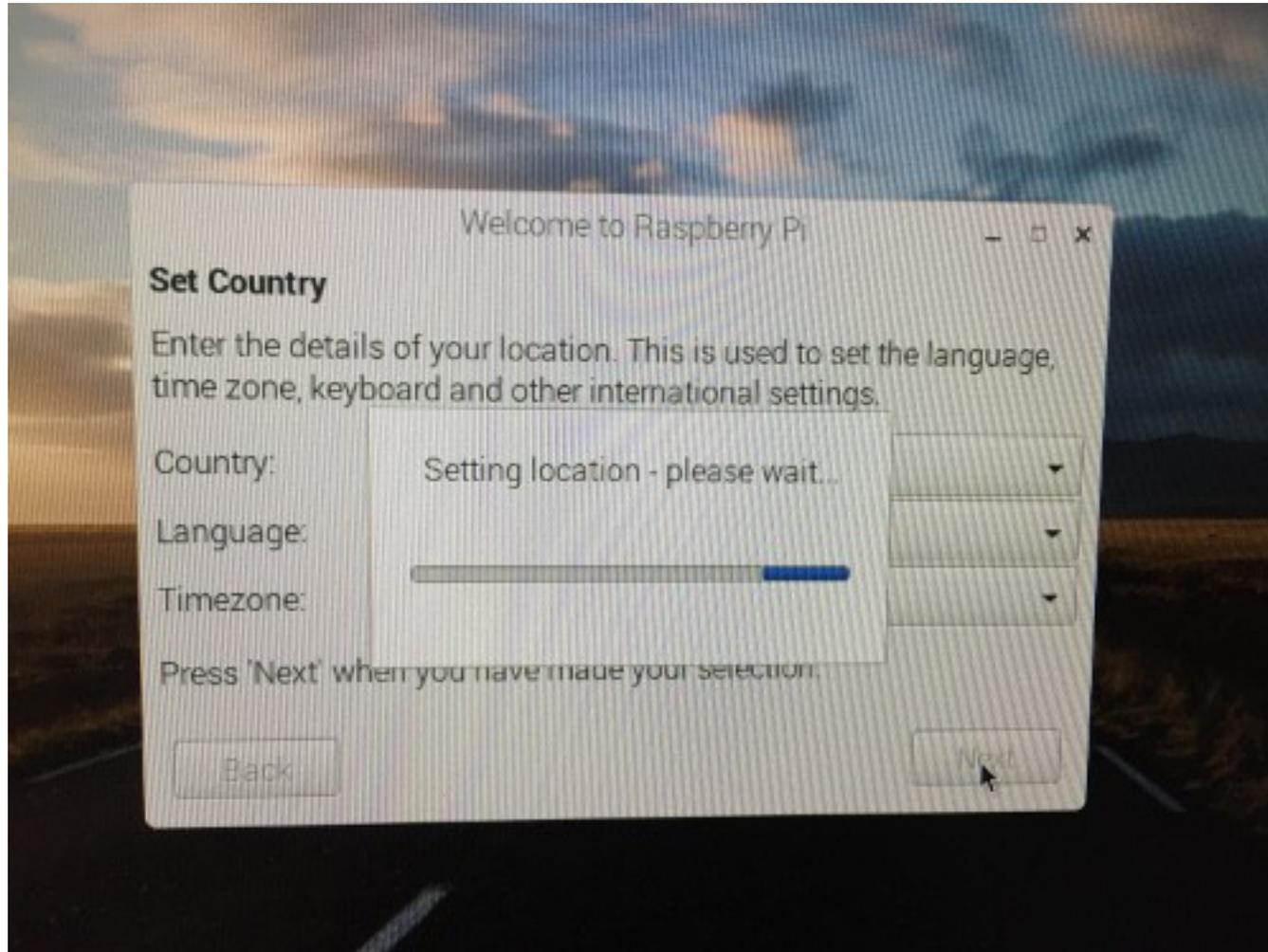
País

- **Seleccionar país, lenguaje y zona horaria:**



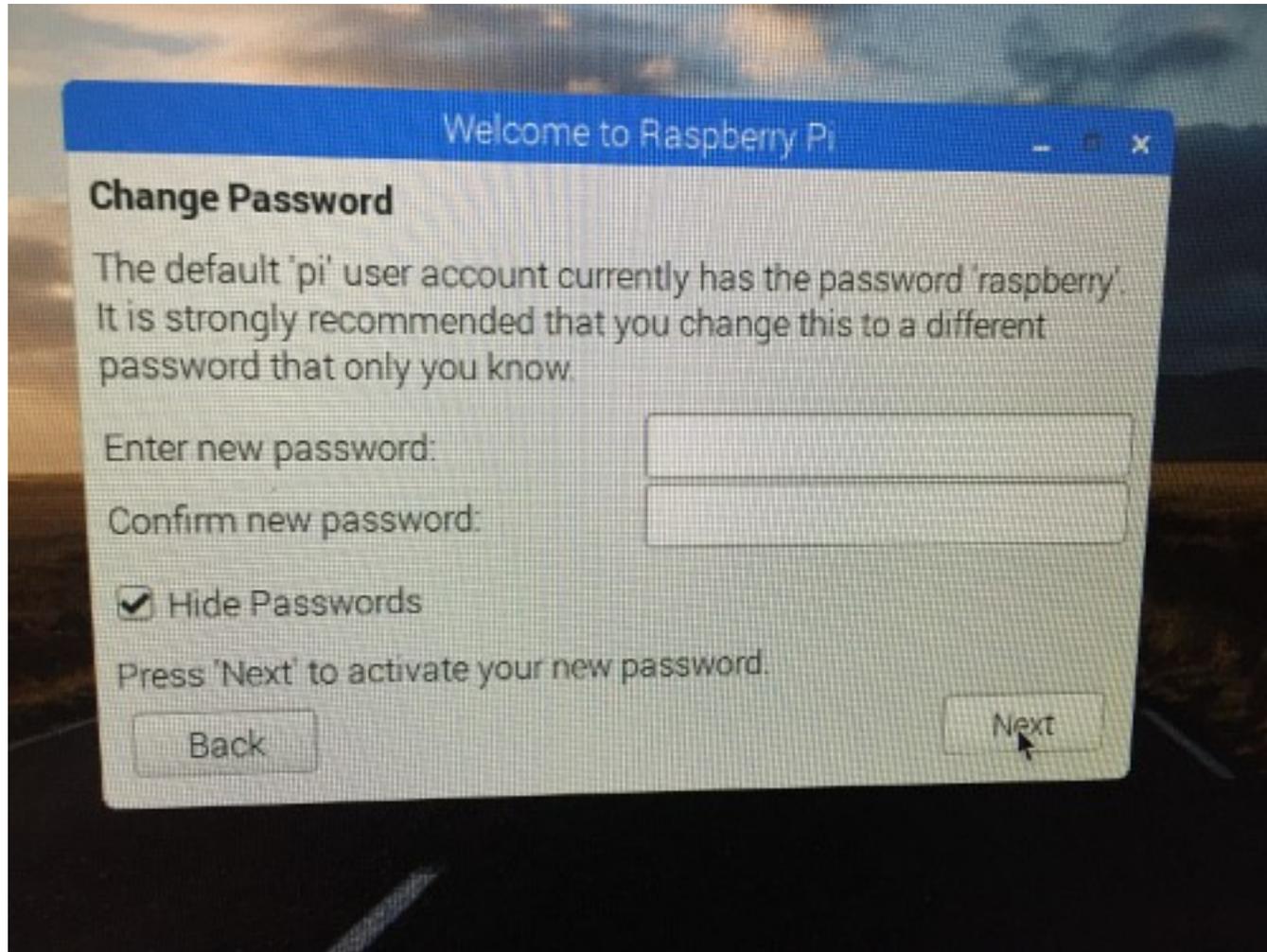
País

- **Actualizando los datos:**



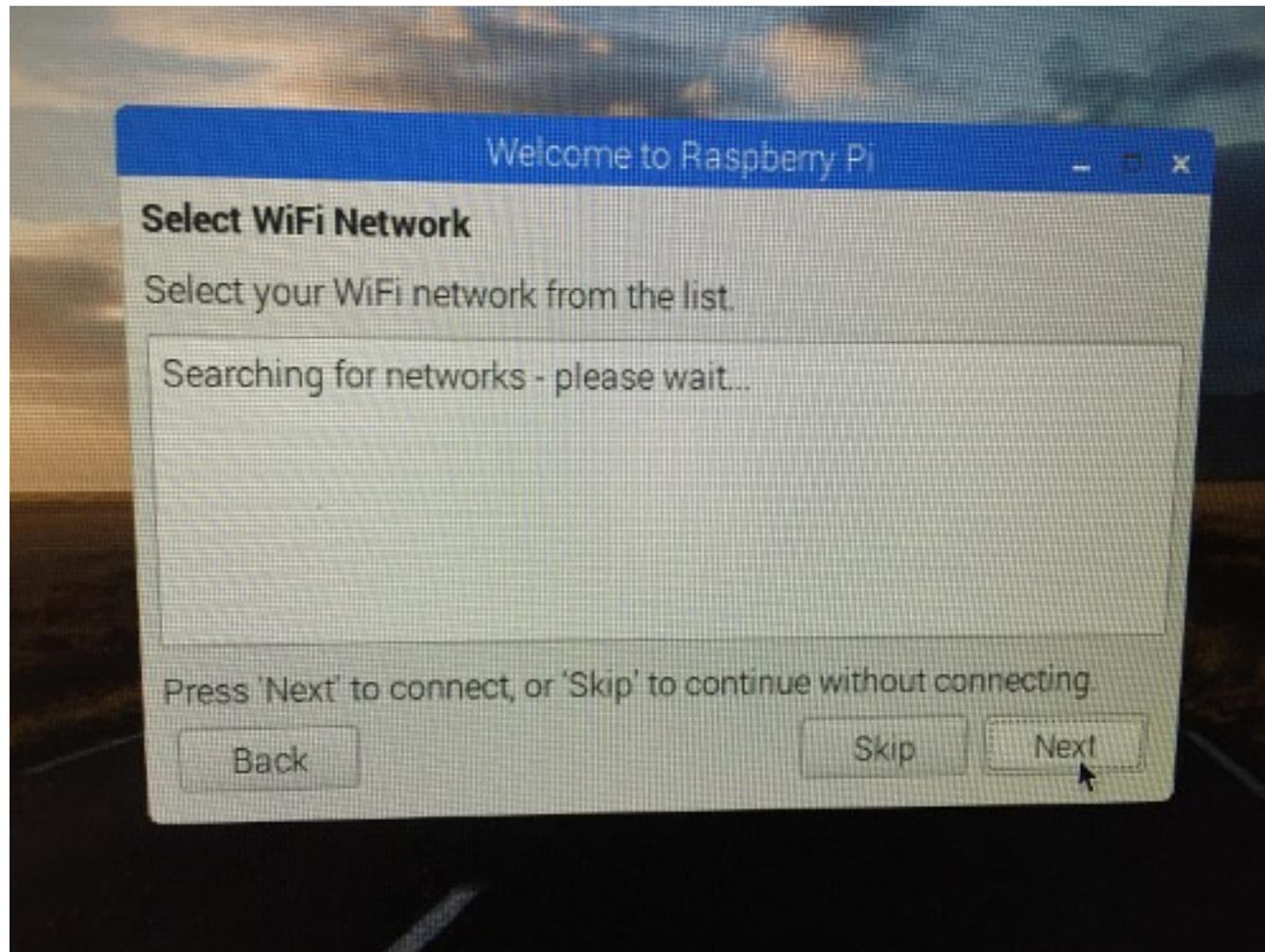
Clave

- **Pregunta la clave de acceso:**



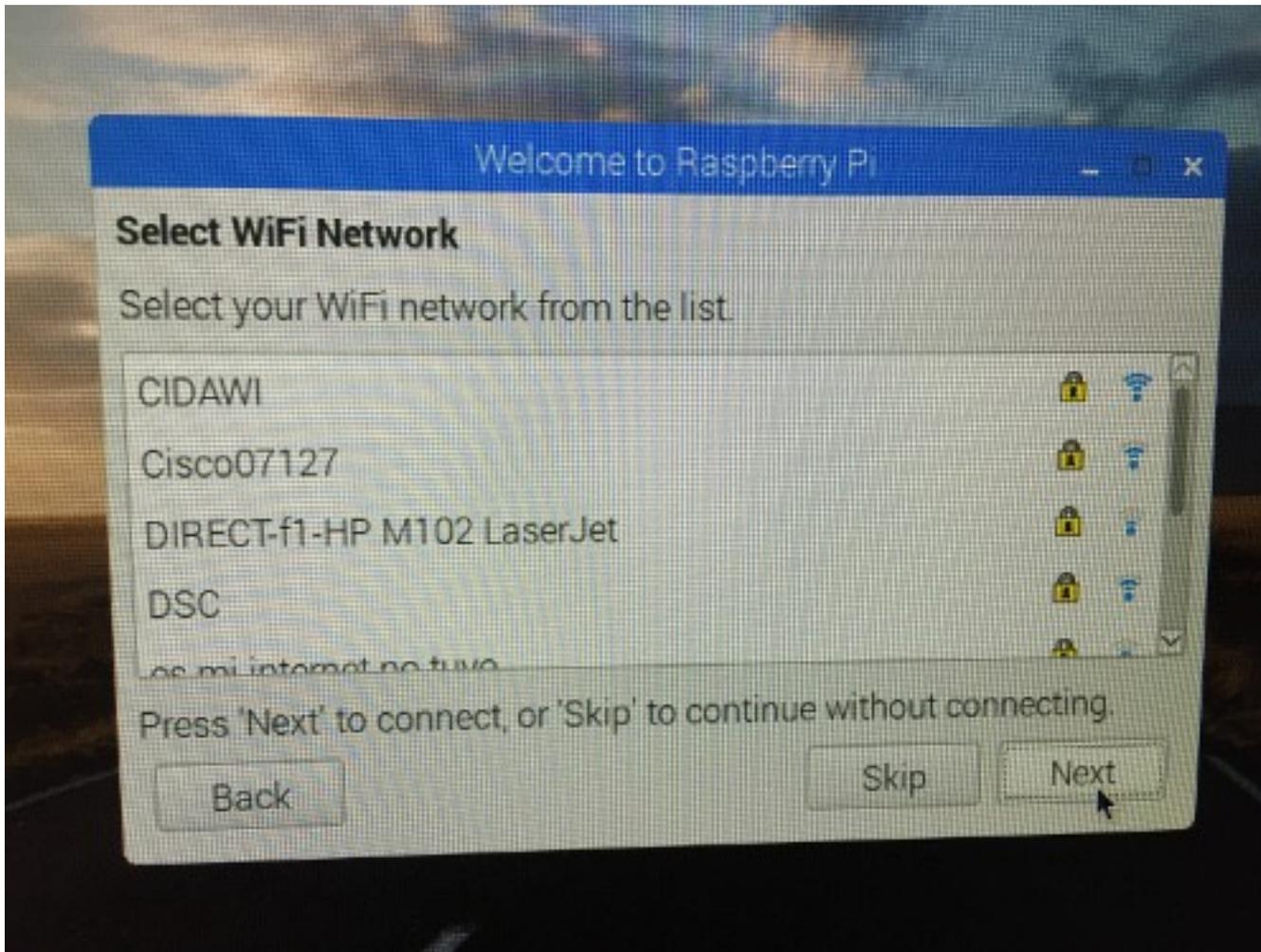
Internet

- **Buscando y configurando redes para acceso a Internet:**



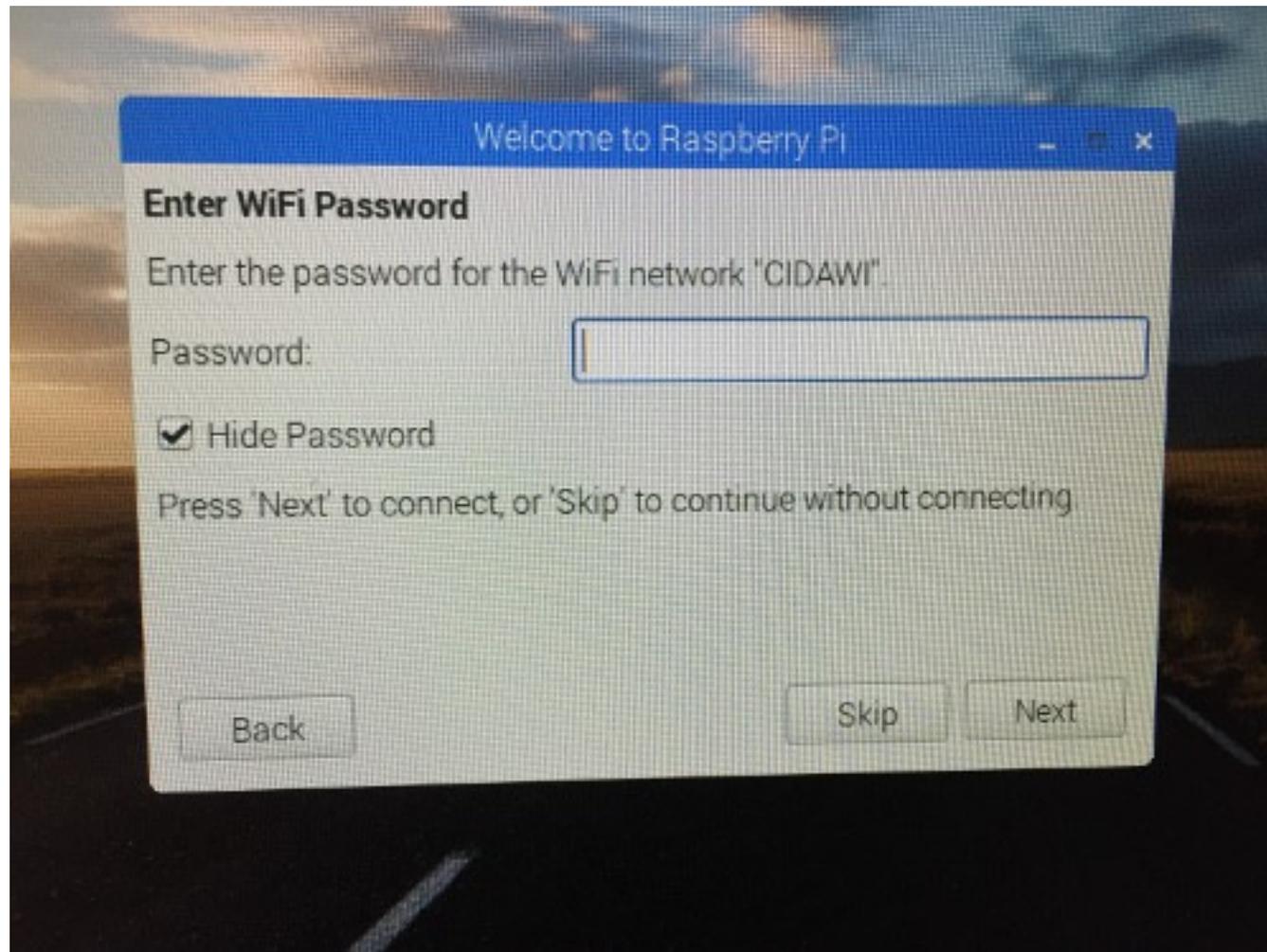
Internet

- **Redes encontradas:**



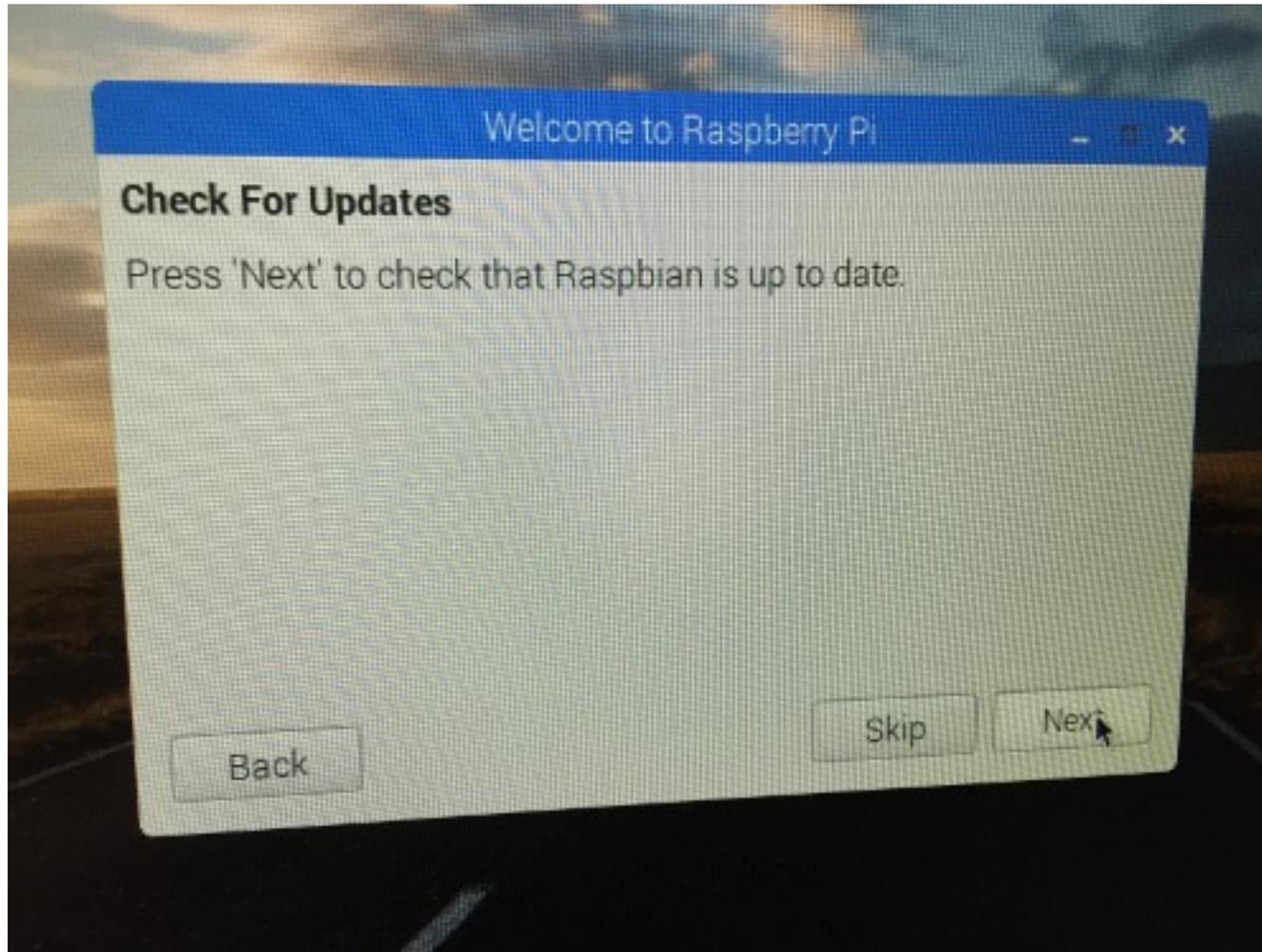
Internet

- **Clave para acceder la red:**



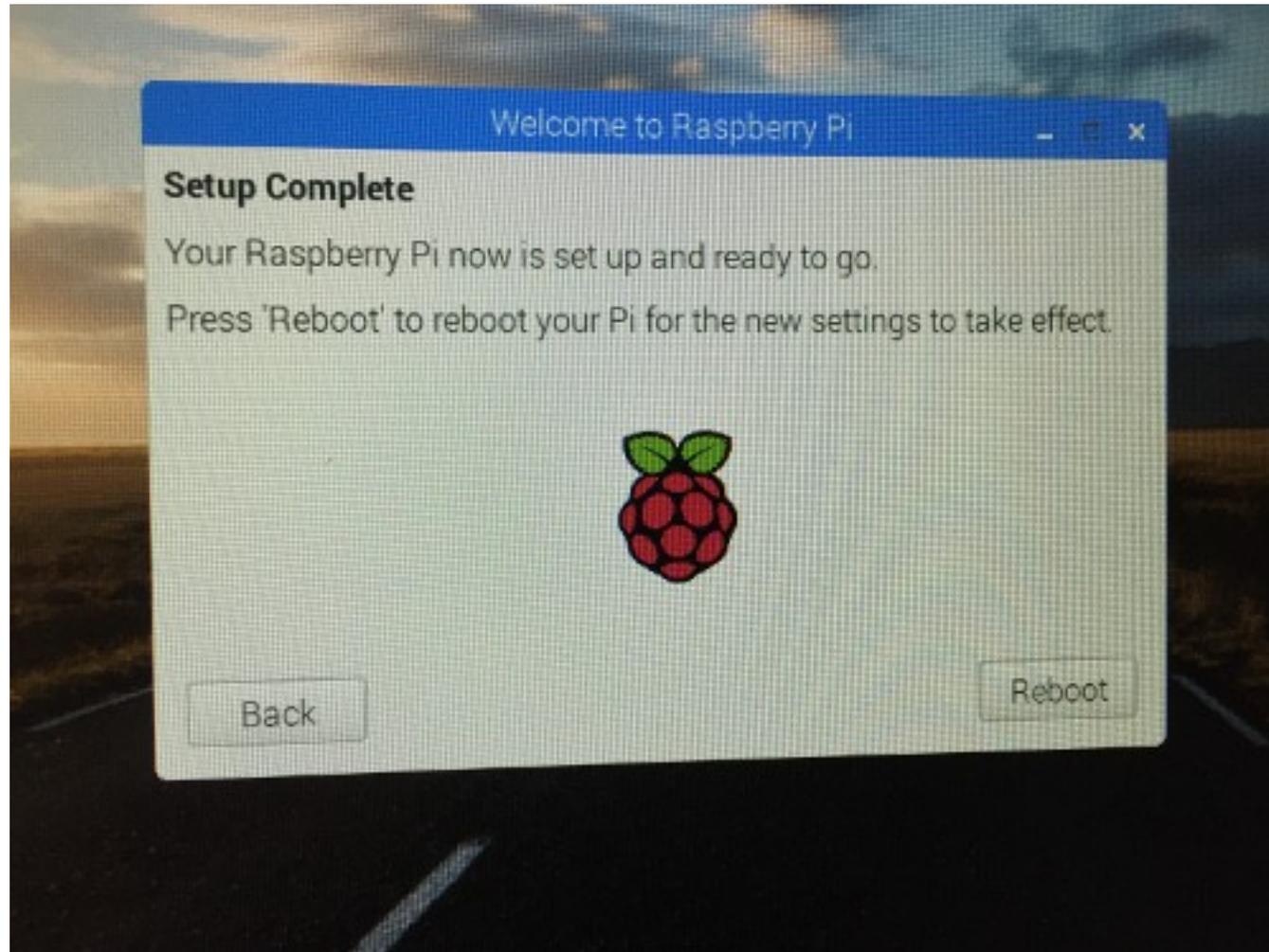
Actualización

- **Buscar actualización de paquetes:**



Finalizar

- Terminando la configuración:



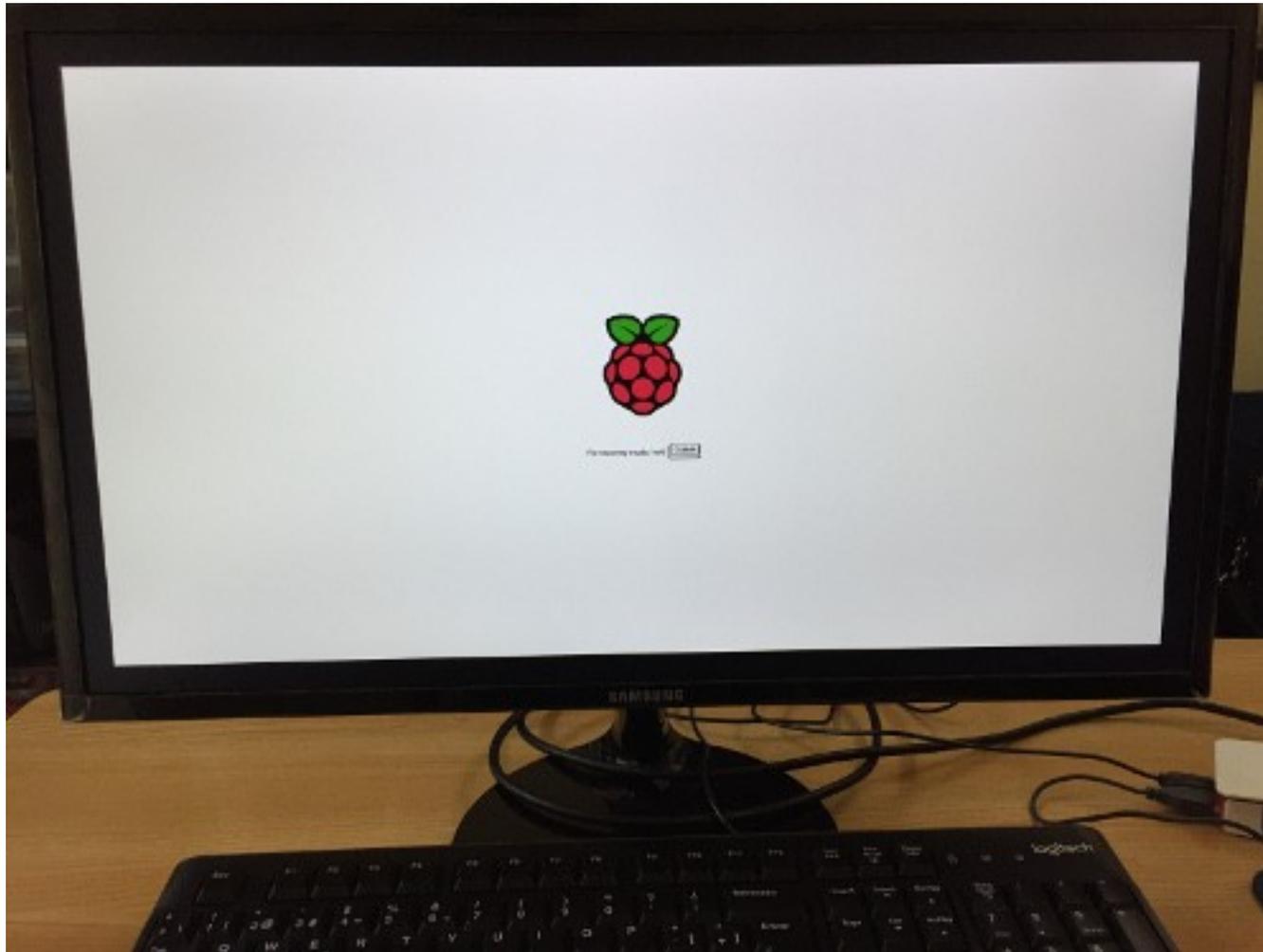
Re-Inicio

- **Pantalla al volver a arrancar:**



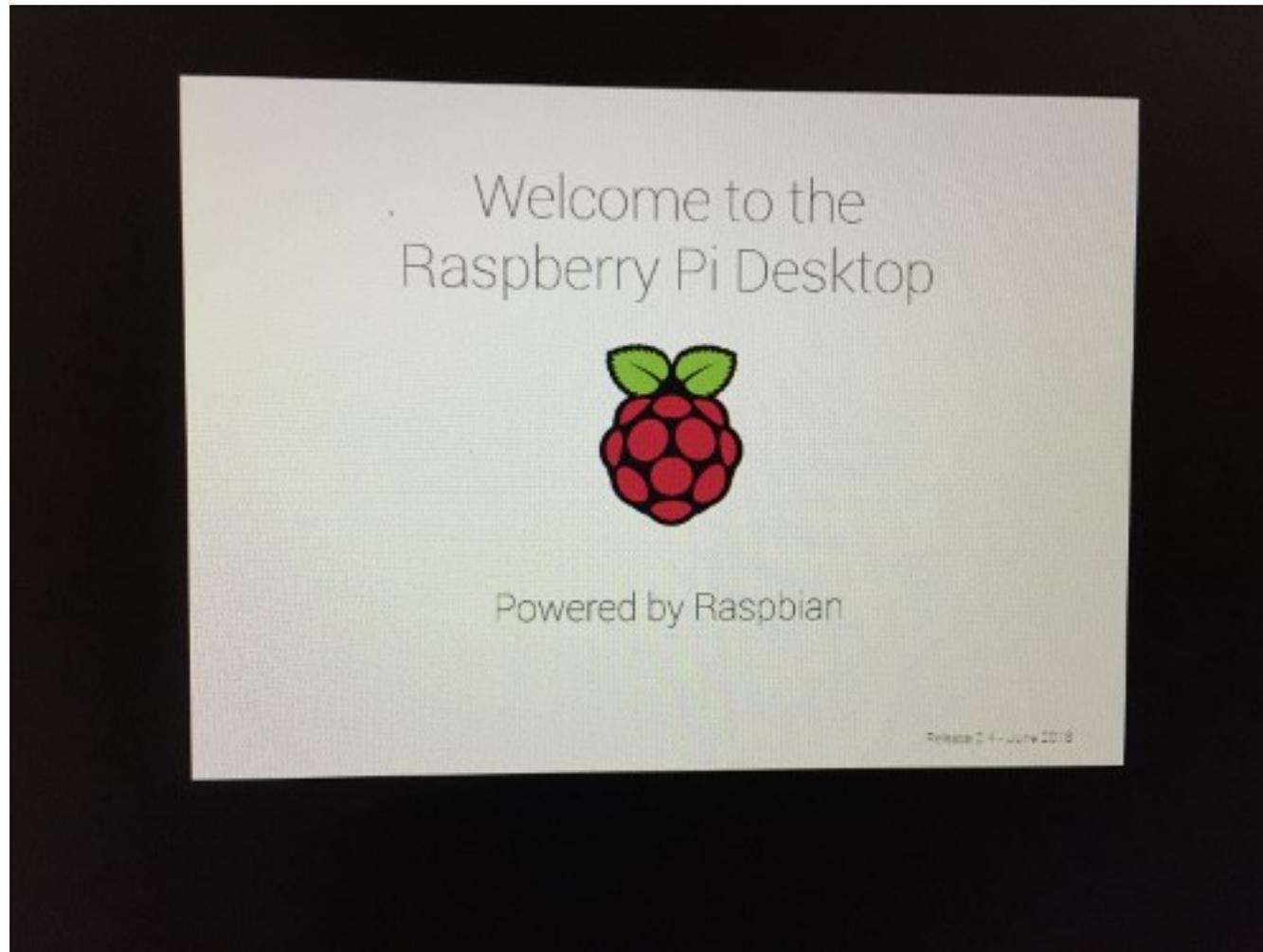
Re-Inicio

- **Pantalla al volver a arrancar:**



Pantalla inicial

- **Pantalla de bienvenida al sistema:**



Escritorio

- **Pantalla del escritorio completa al arranque:**



Navegador

- Navegador Chromium en funcionamiento:





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channel/UC0on88n3LwTKxJb8T09sGjg](https://www.youtube.com/channel/UC0on88n3LwTKxJb8T09sGjg)



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