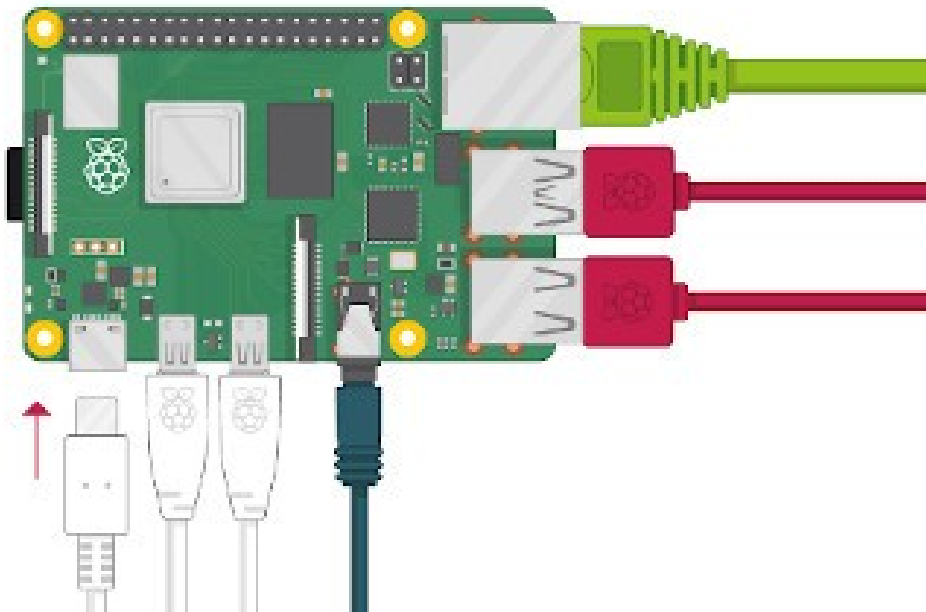


Internet de las Cosas

Raspberry Pi 4 Instalación



Rogelio Ferreira Escutia

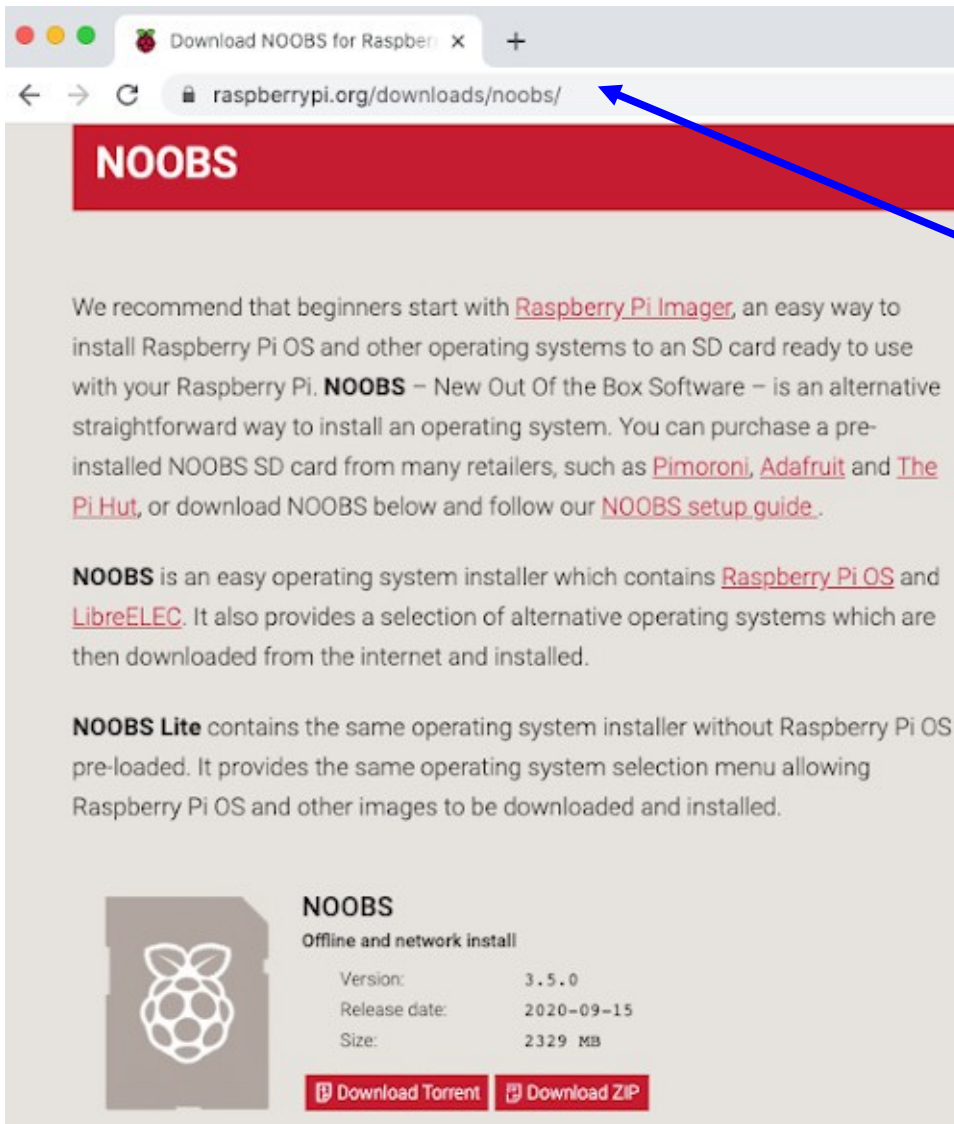
Profesor / Investigador
Tecnológico Nacional de México
Campus Morelia



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 explaining that NOOBS is an alternative to Raspberry Pi Imager for installing operating systems on an SD card. It mentions that NOOBS is available as pre-installed SD cards from retailers like Pimoroni, Adafruit, and The Pi Hut, or can be downloaded and installed manually. A blue arrow points from the right side of the slide to the address bar. At the bottom of the page, there is a section titled "NOOBS" with a sub-heading "Offline and network install". This section includes a table with the following information:

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

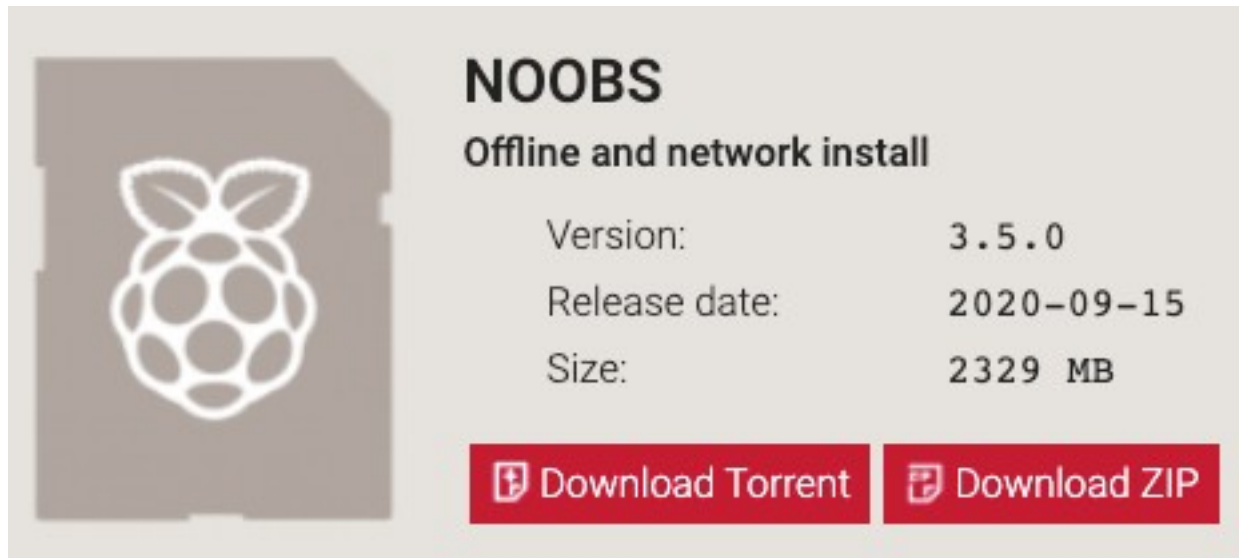
Below the table are two red buttons: "Download Torrent" and "Download ZIP". To the left of the table is an icon of an SD card with the Raspberry Pi logo.

”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 text reads 'NOOBS' and '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.

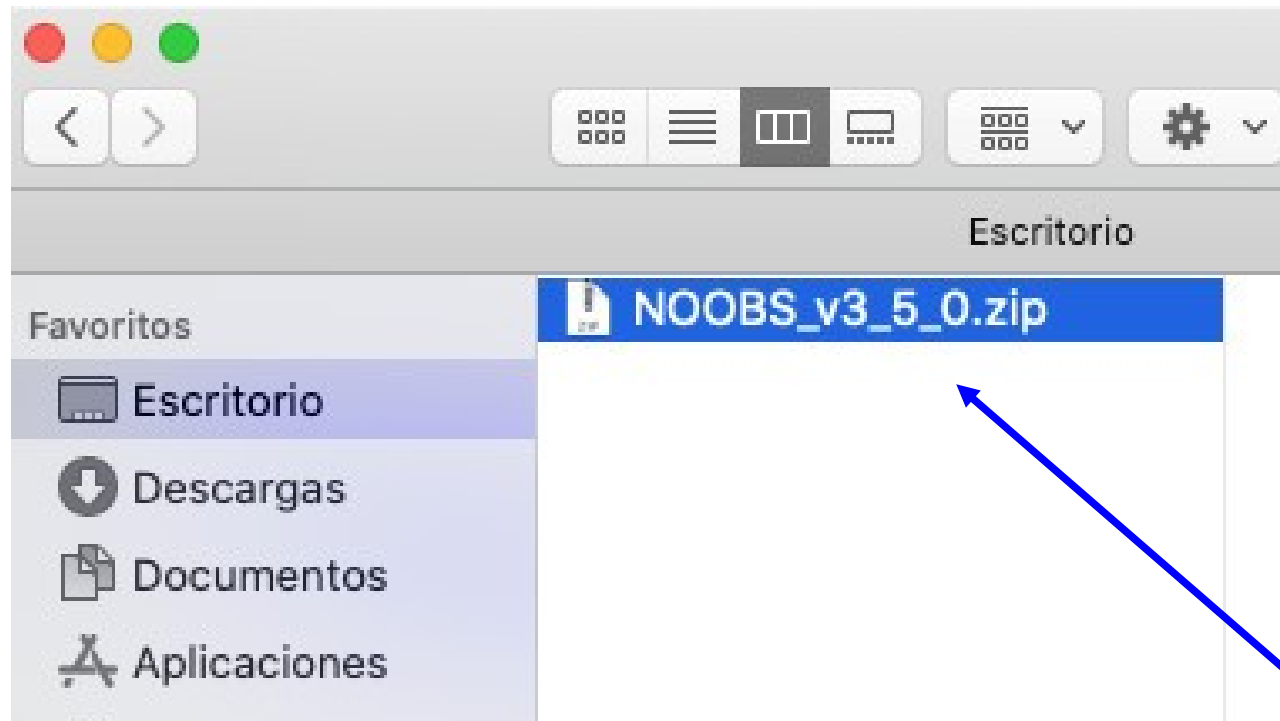
| | |
|---------------|------------|
| Version: | 3.5.0 |
| Release date: | 2020-09-15 |
| Size: | 2329 MB |

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



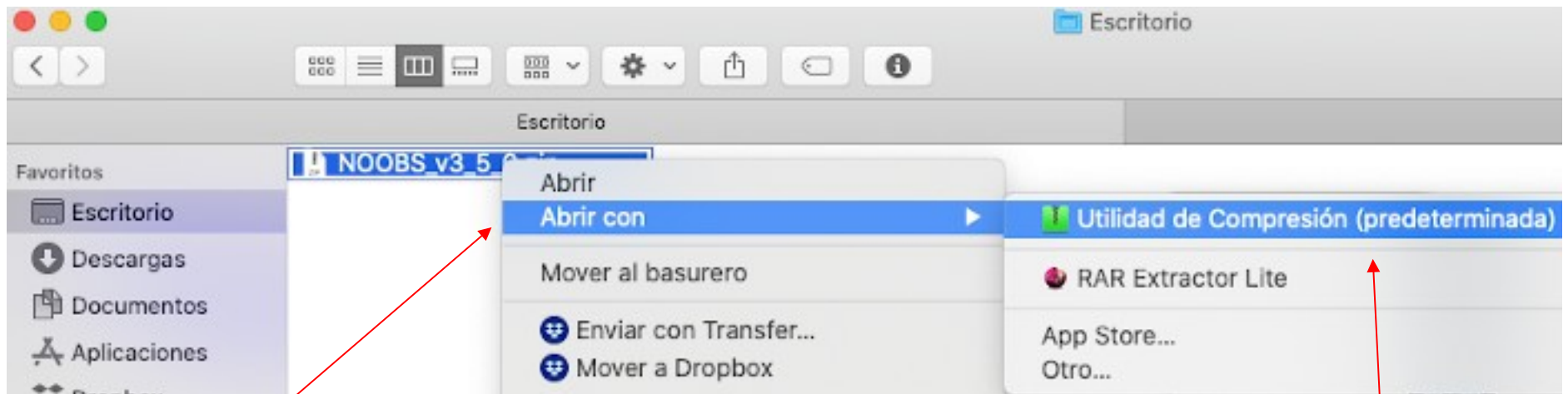
Archivo descargado

- El archivo descargado está en formato ZIP



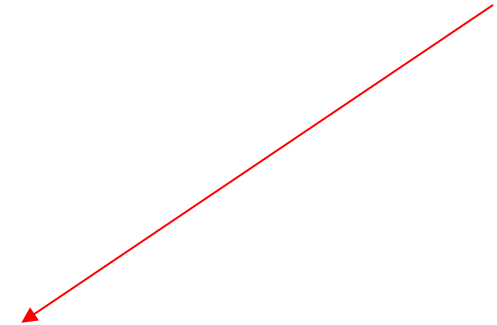
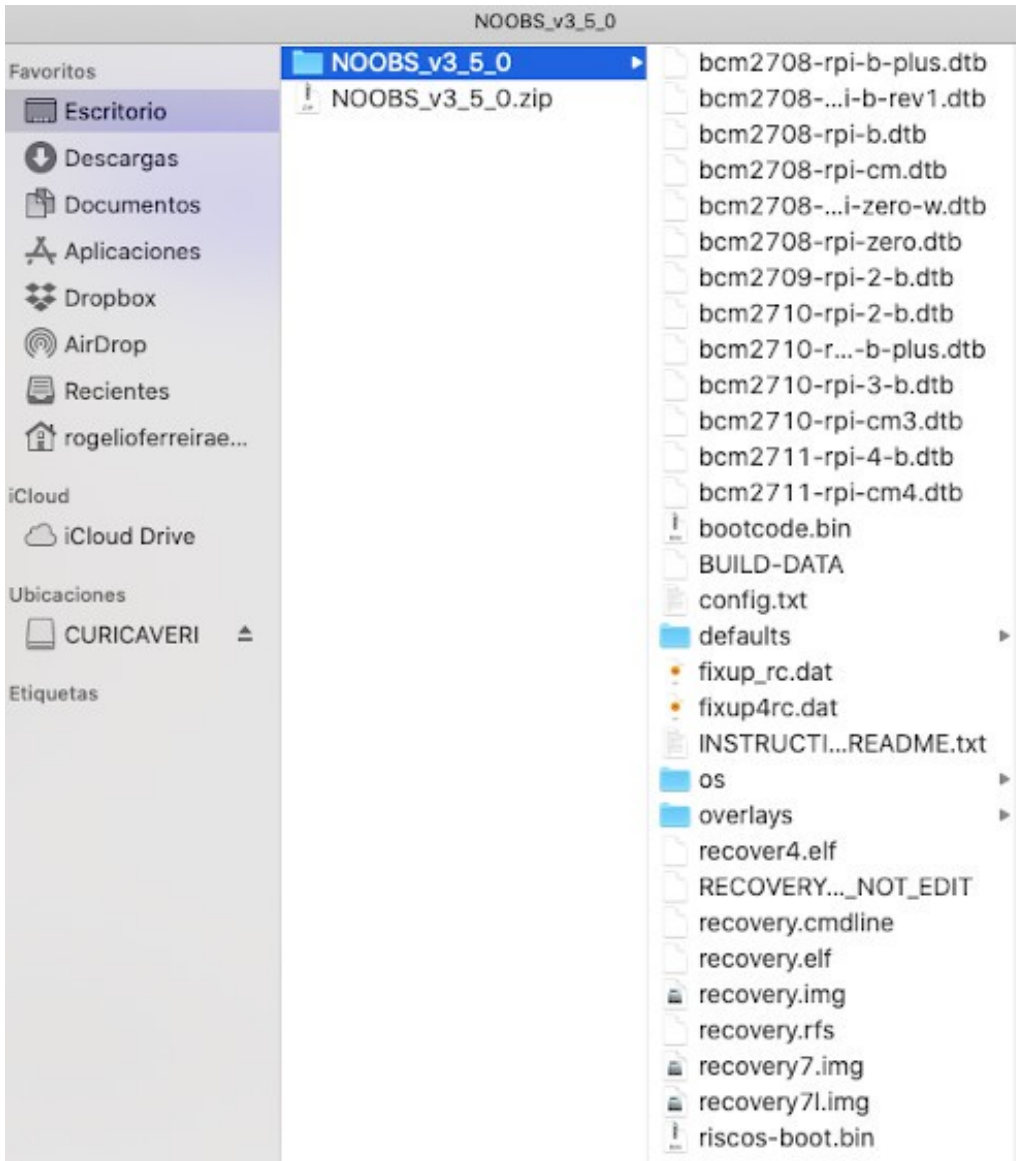
Descomprimir

- 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:



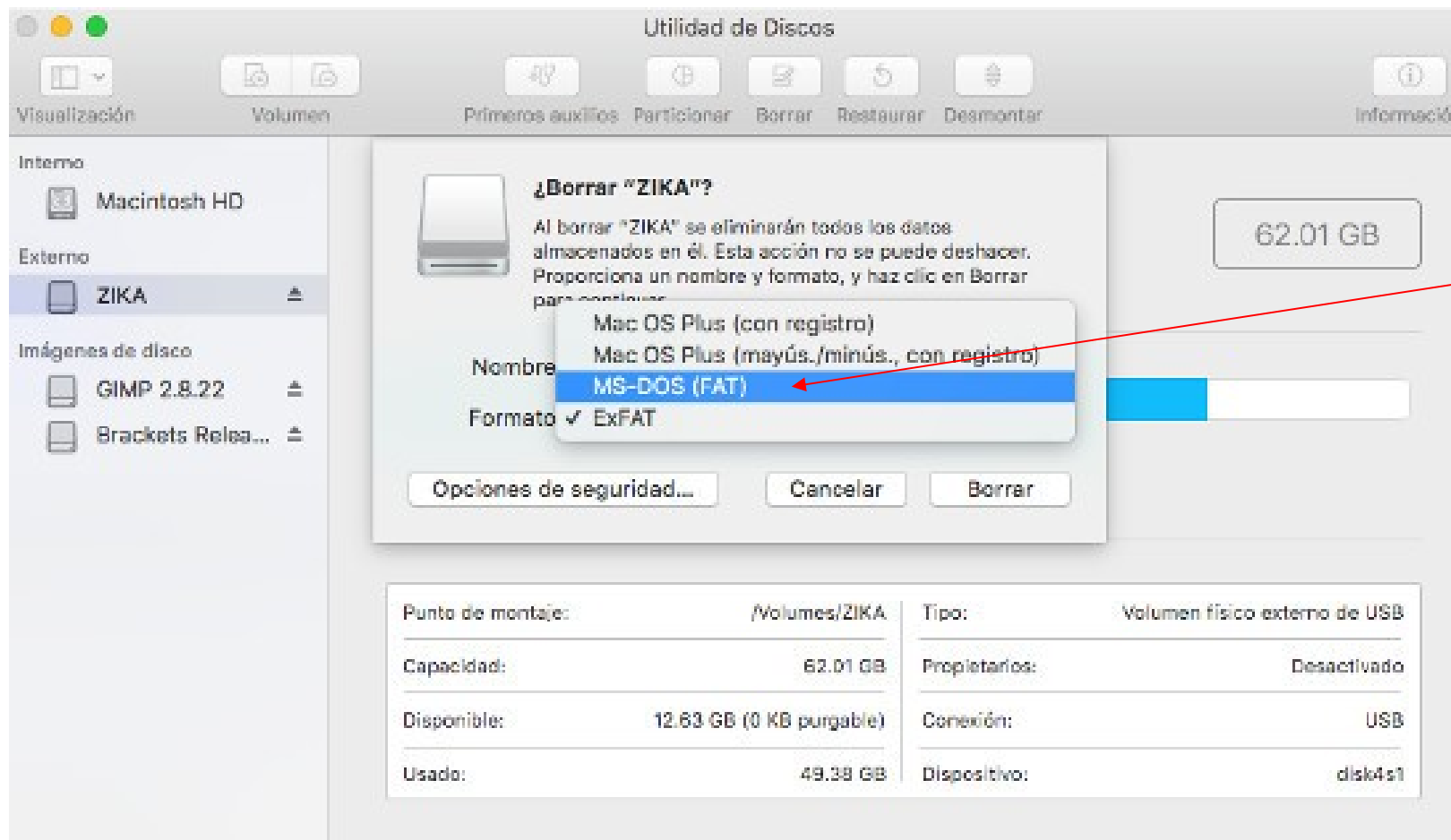
Tarjeta Micro SD

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



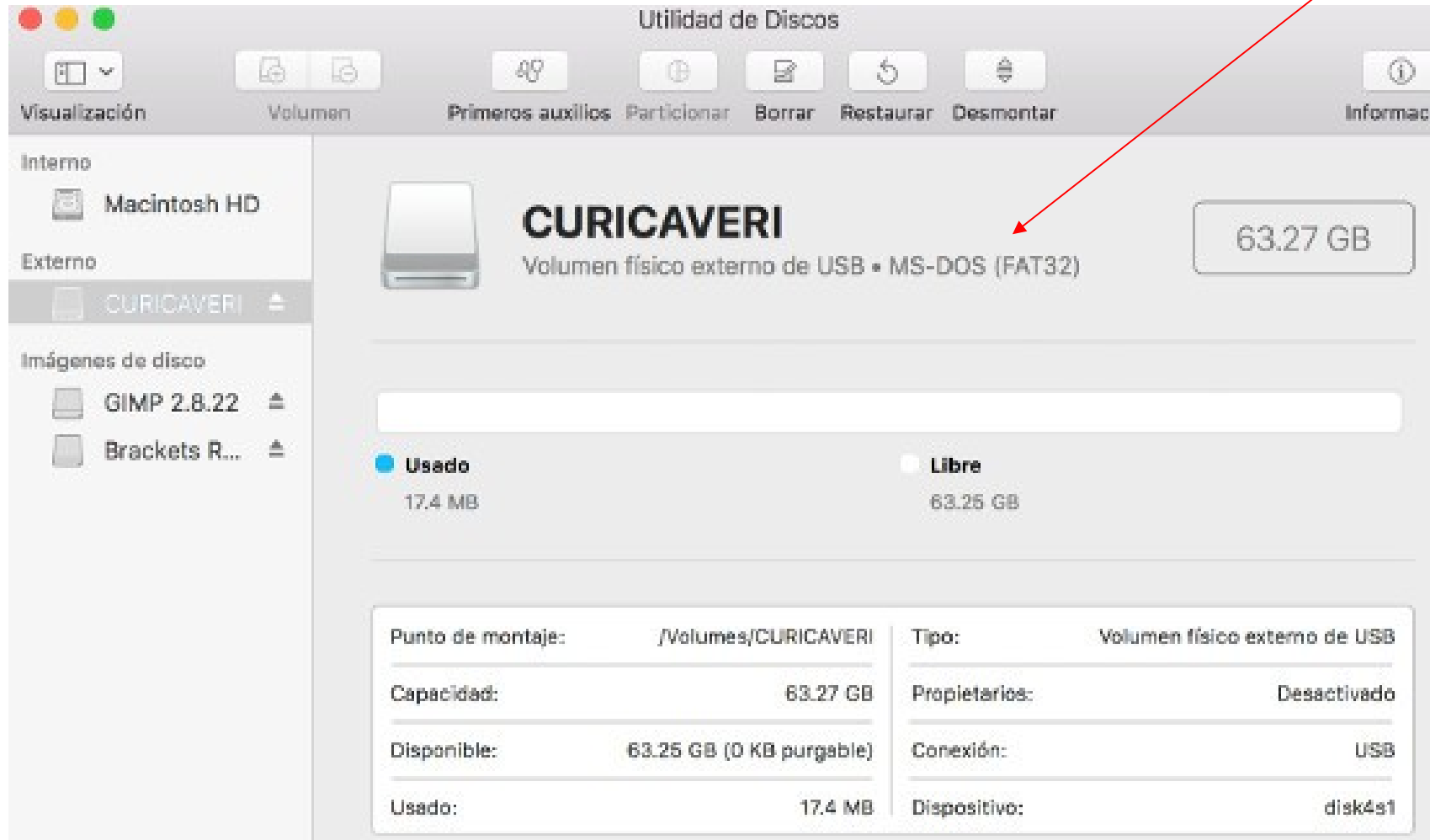
Formato

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



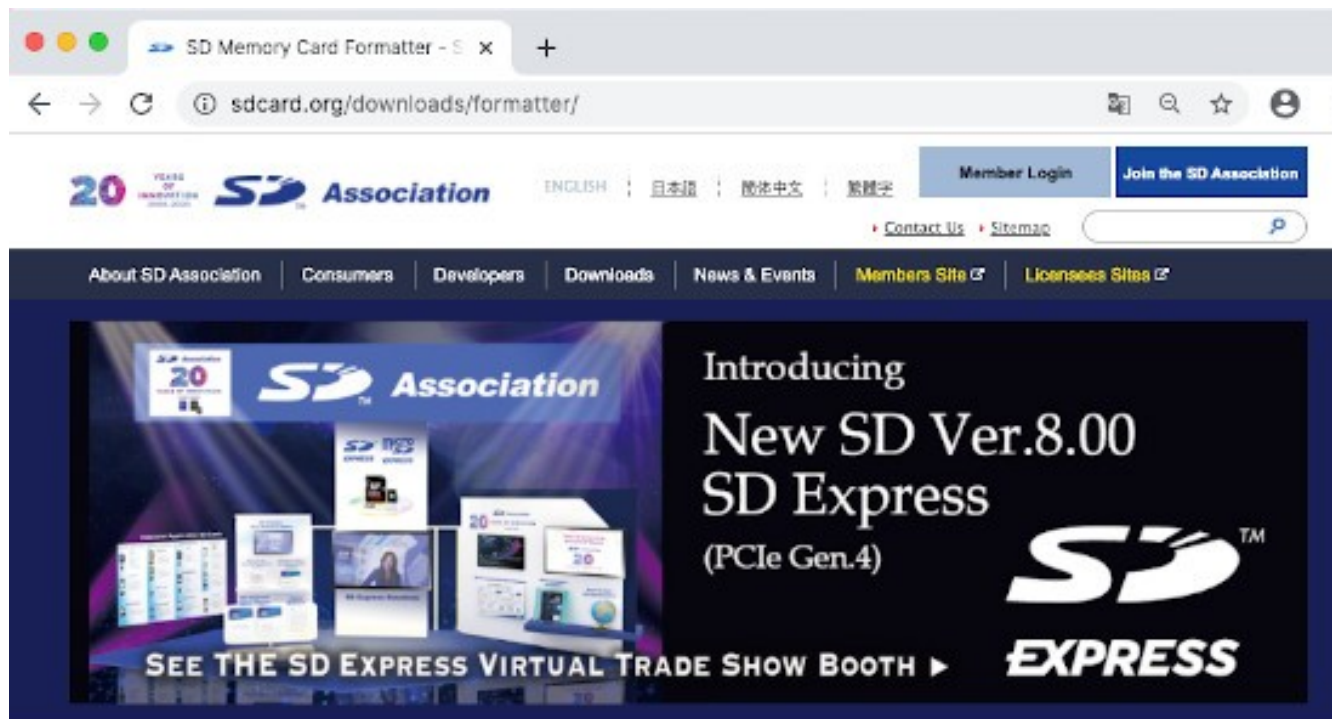
Formato

- 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

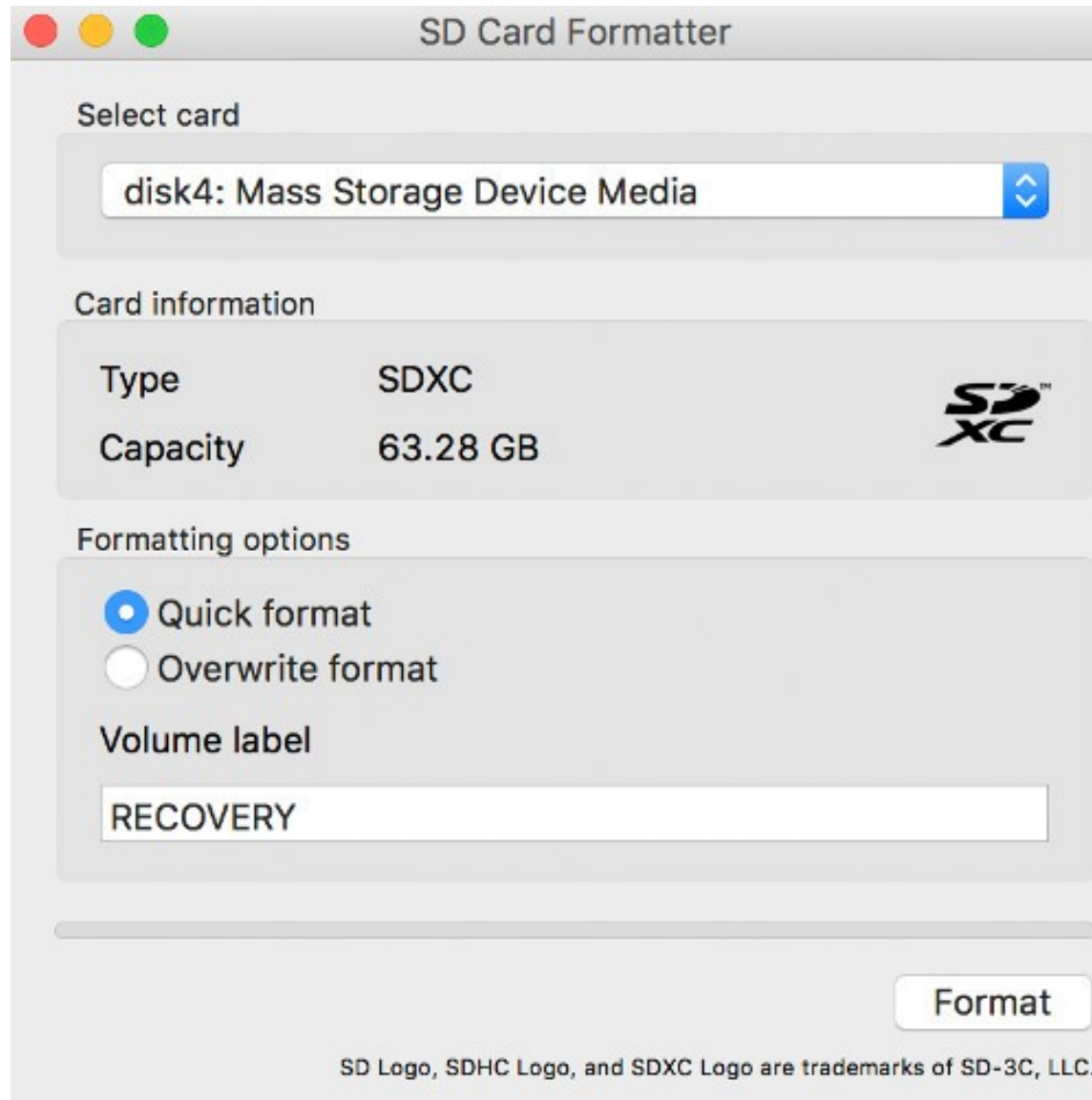


SD Memory Card Formatter 5.0.1 for SD/SDHC/SDXC

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).

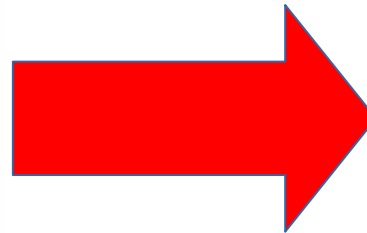
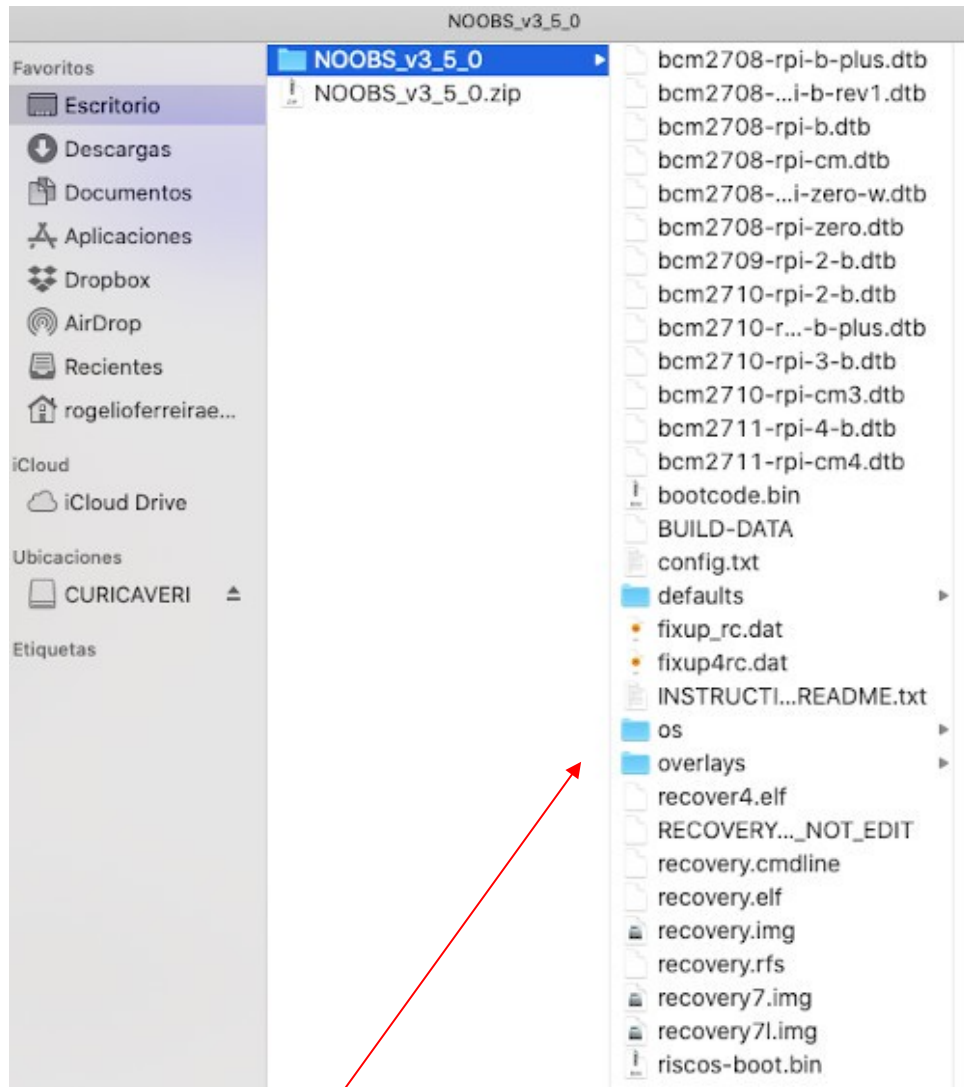


SD Formatter (Mac)



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

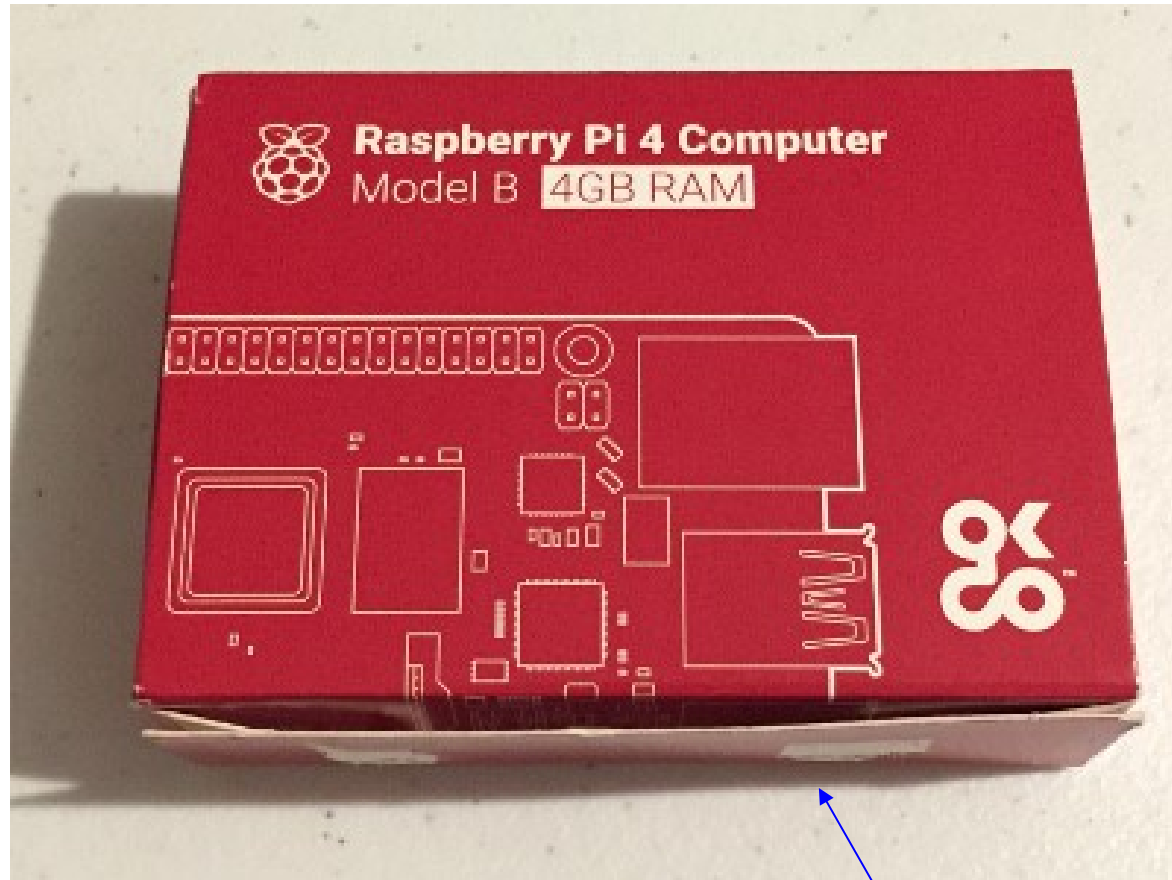


- **Fabricado en China**

- **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

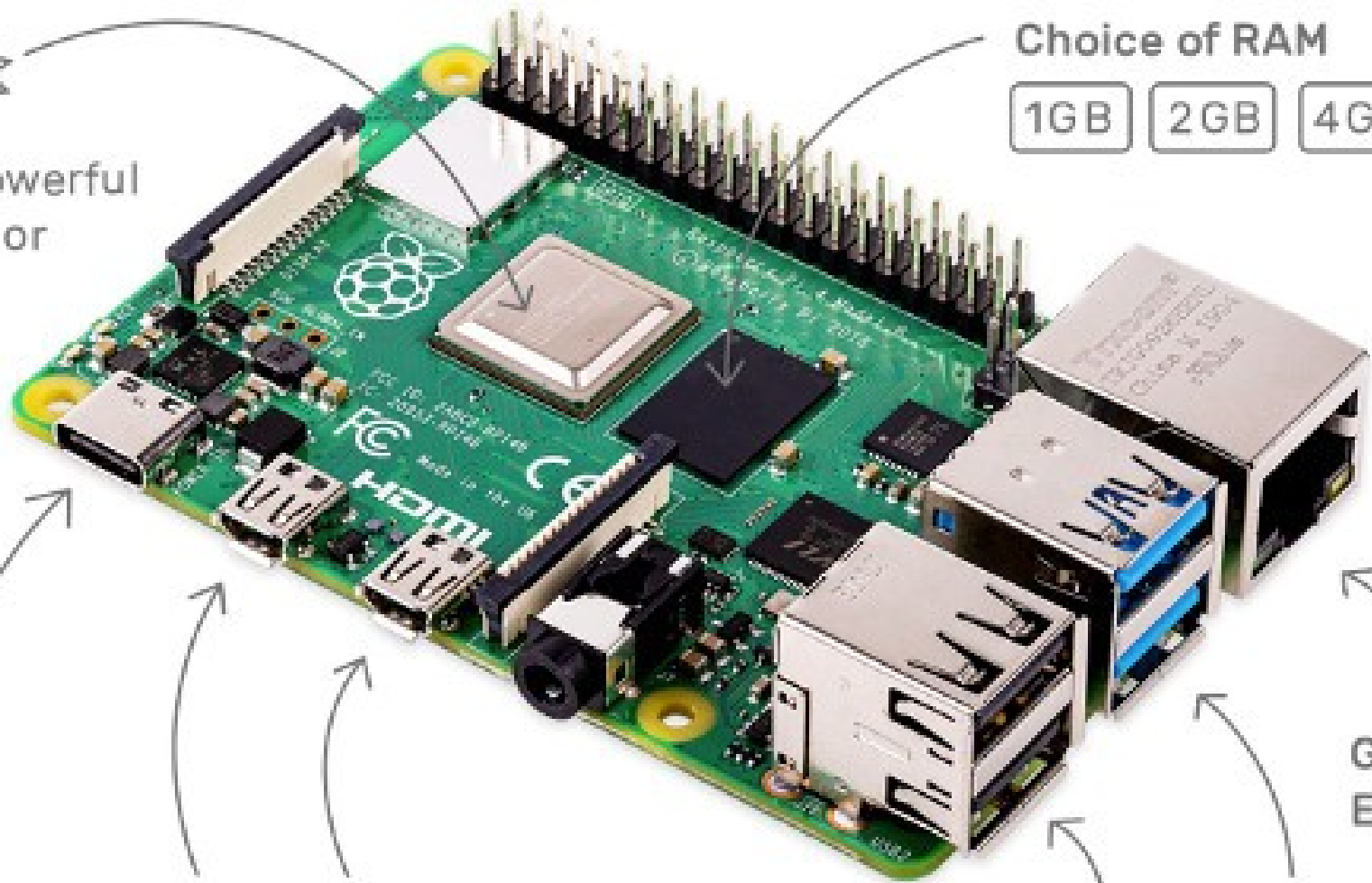
USB-C Power supply

MICRO HDMI PORTS
Supporting 2 x 4K displays

USB 2

USB 3

GIGABIT
ETHERNET



Monitor

- Se requiere un monitor con conexión HDMI



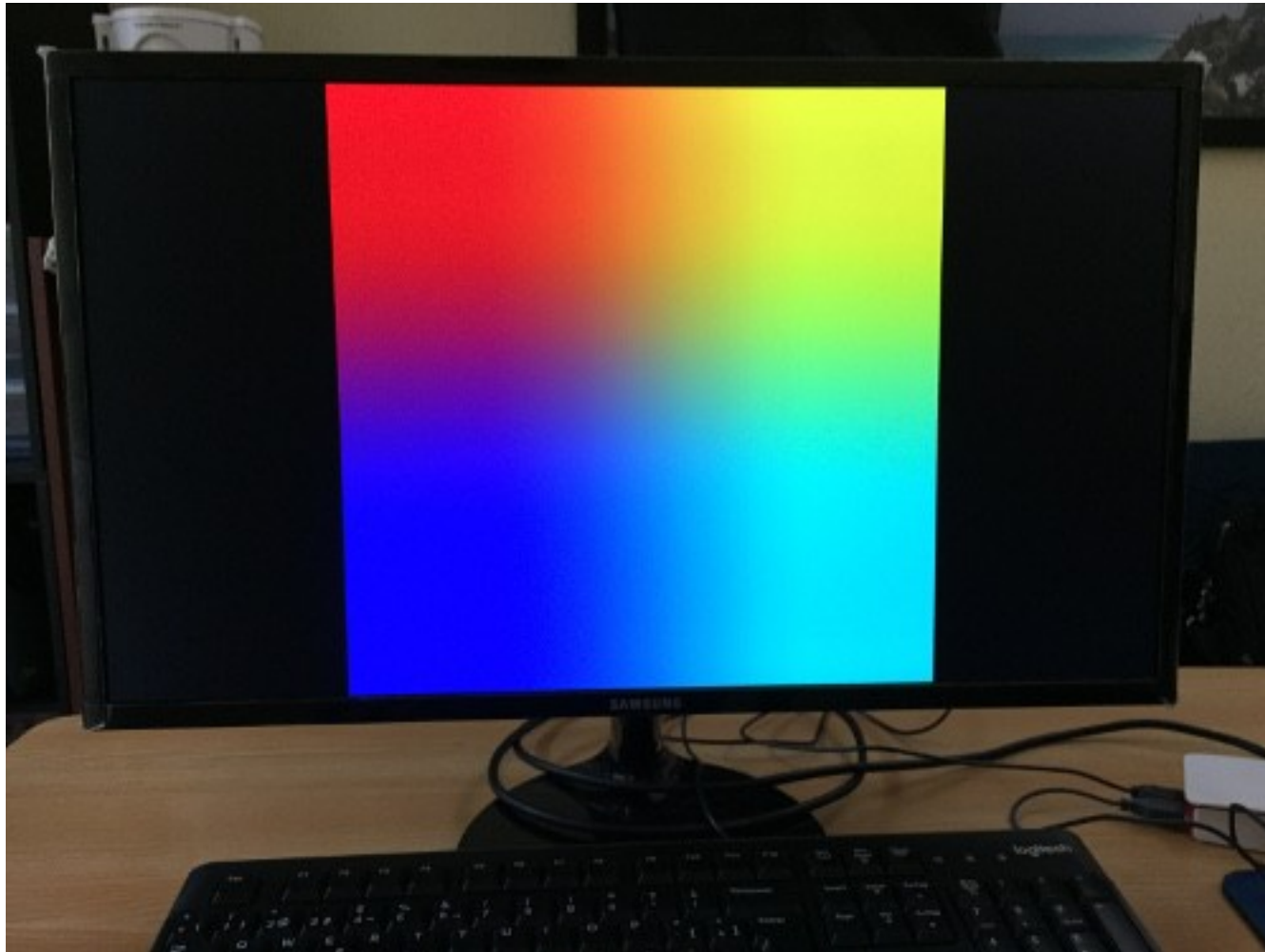
Monitor

- **Monitor Samsung HDMI de 24 pulgadas**



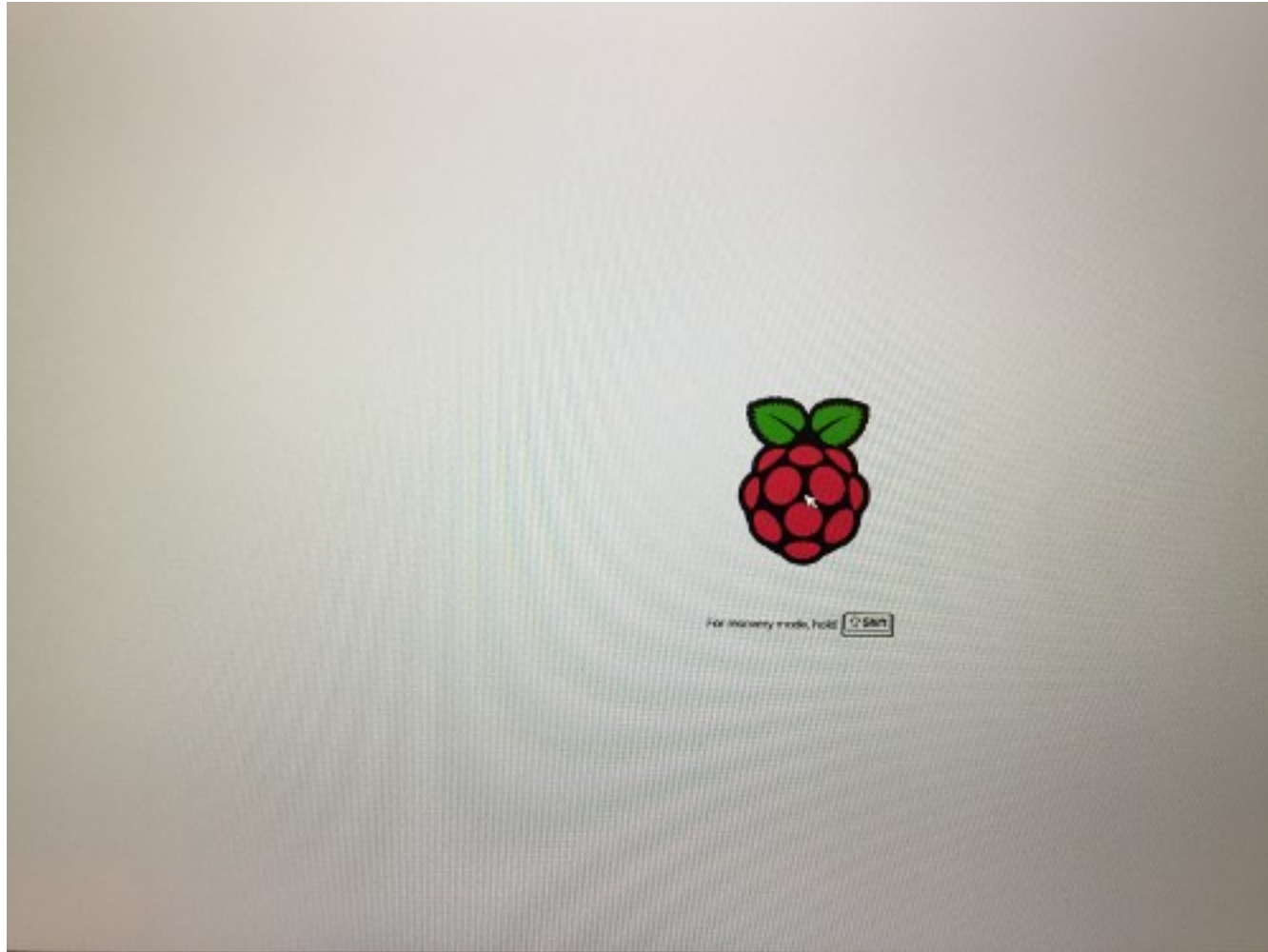
Inicio

- **Pantalla de inicio:**



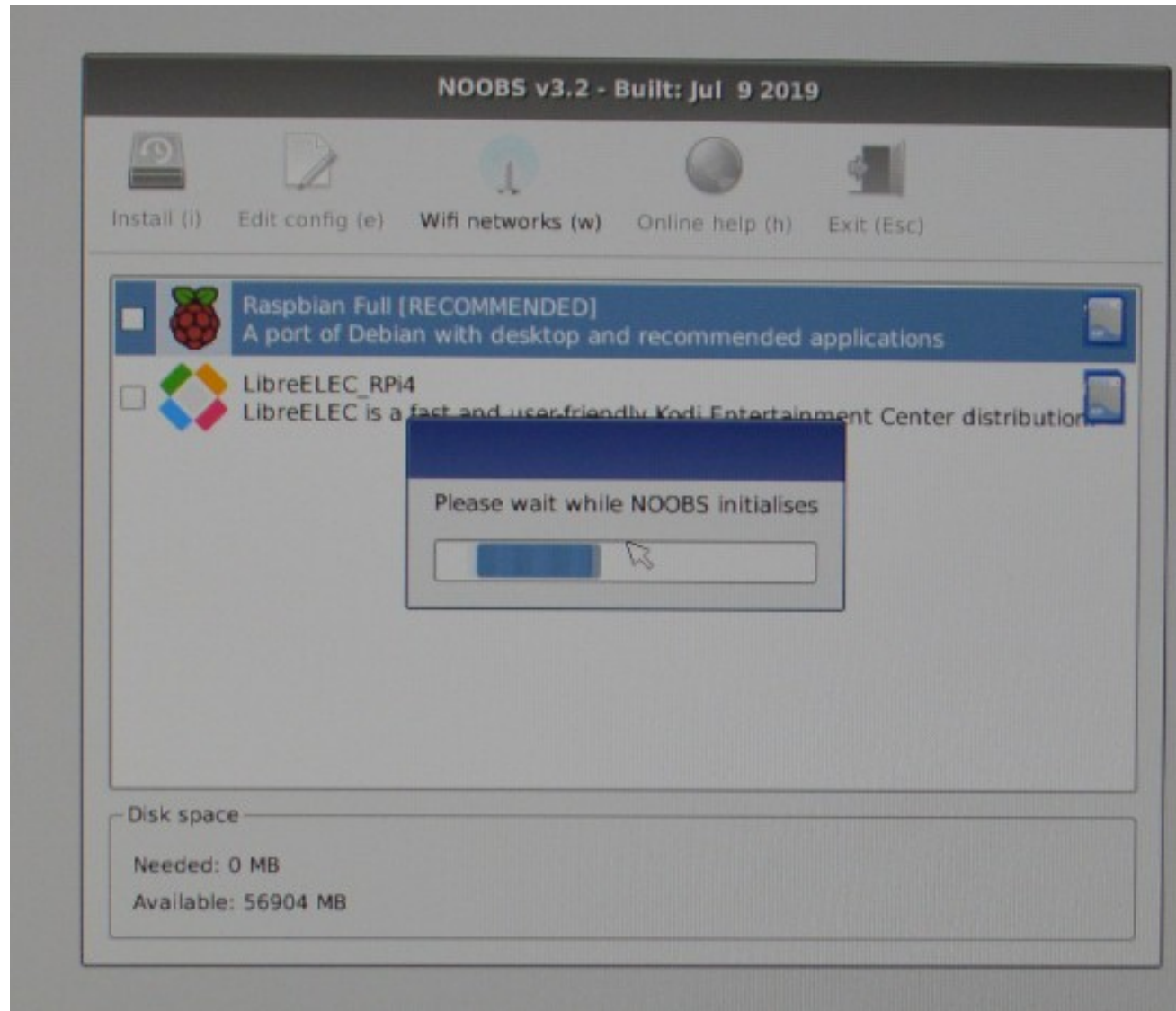
Arranque

- Conectar el Raspberry y arranca con la siguiente pantalla:



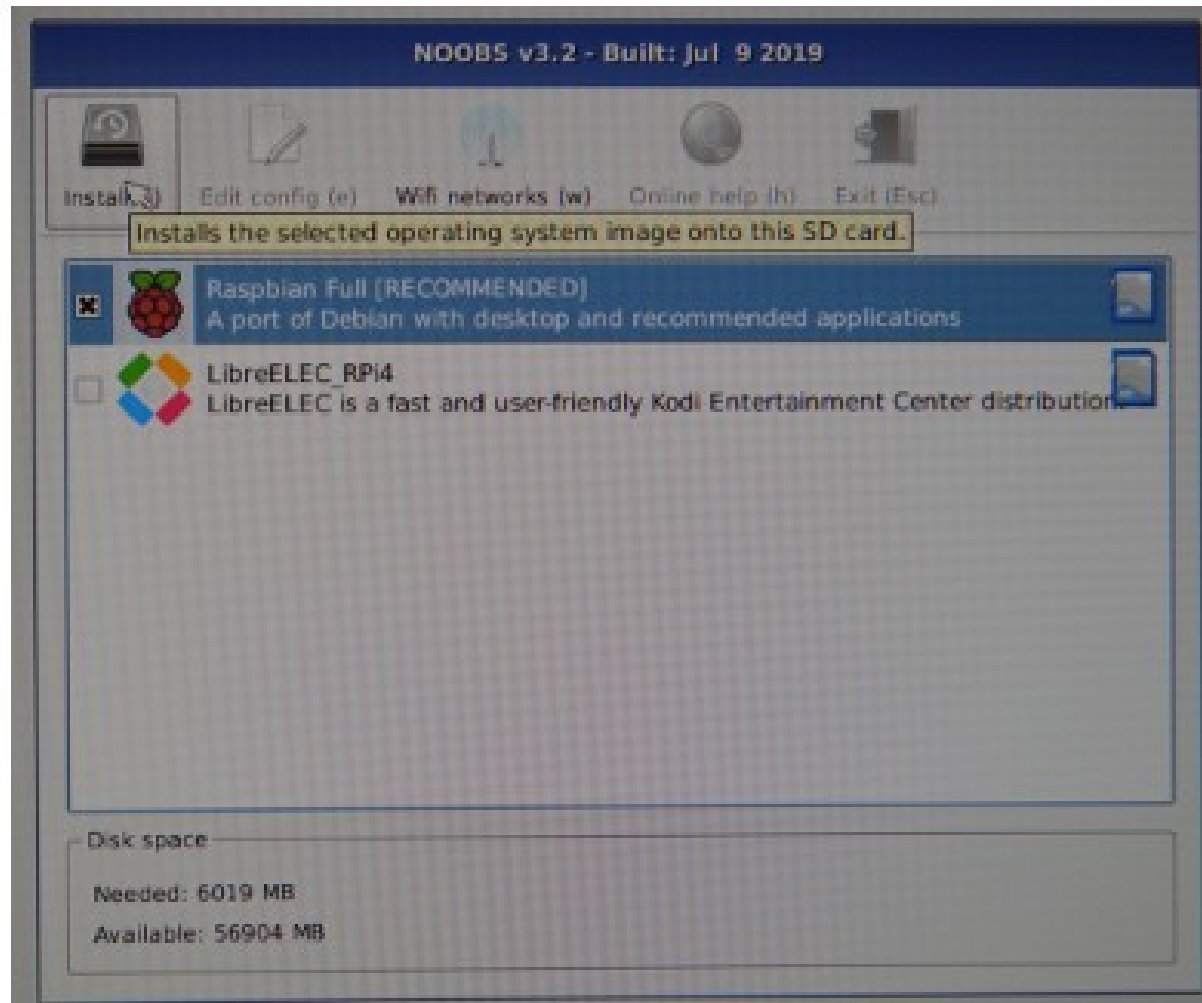
Opciones

- **Aparecen las opciones a instalar:**



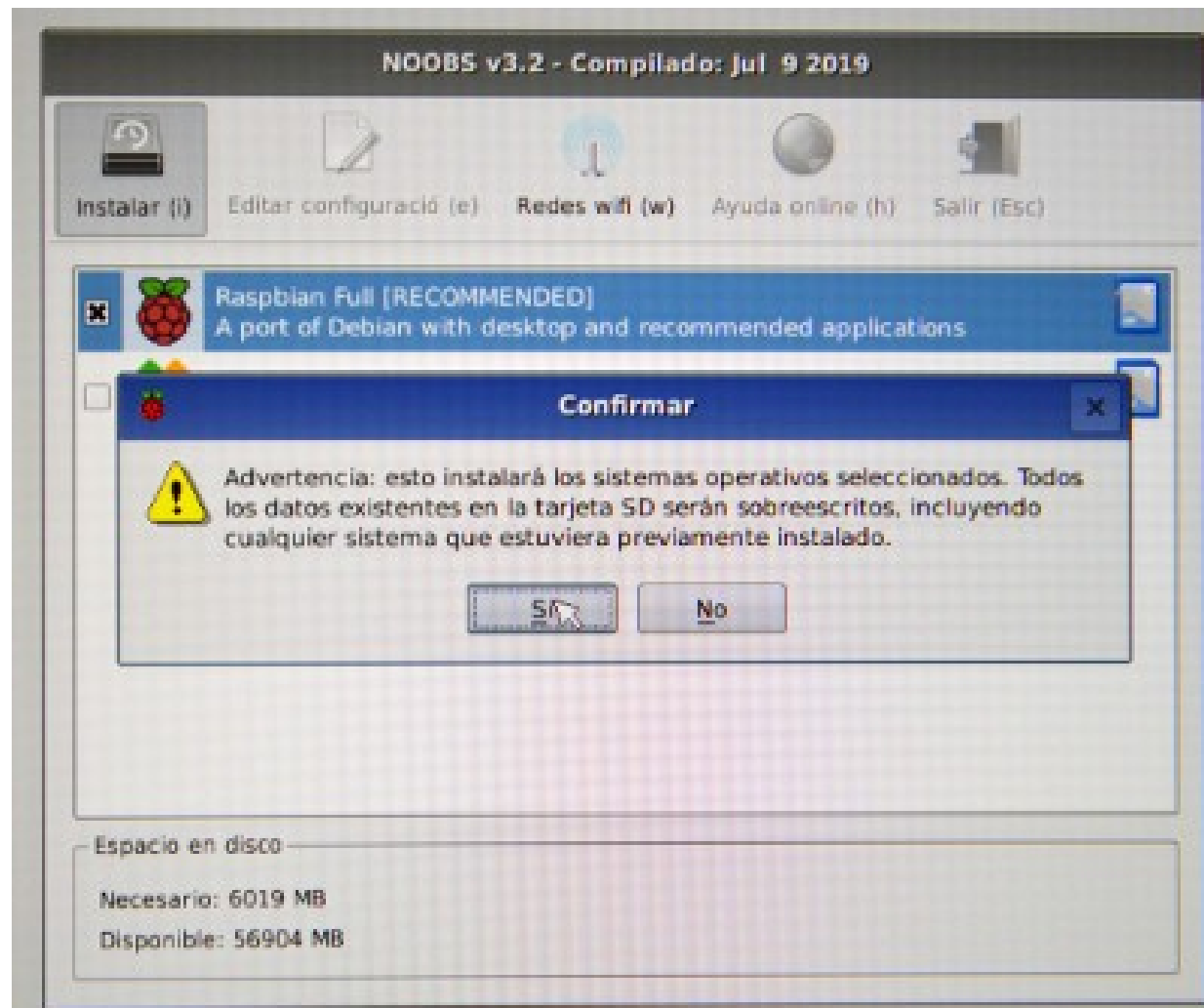
Raspbian

- Se selecciona Raspbian como el sistema a instalar:



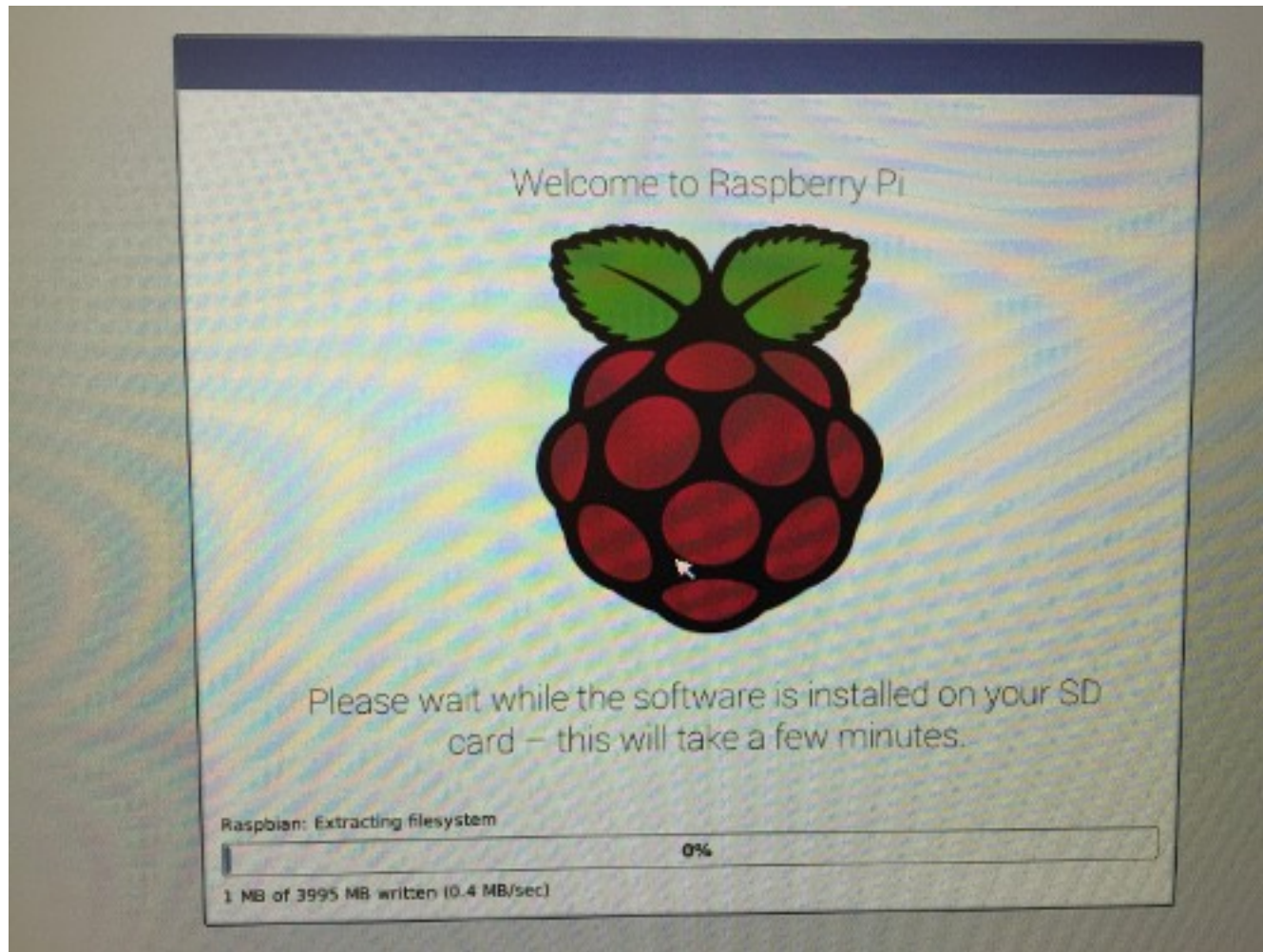
Raspbian

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



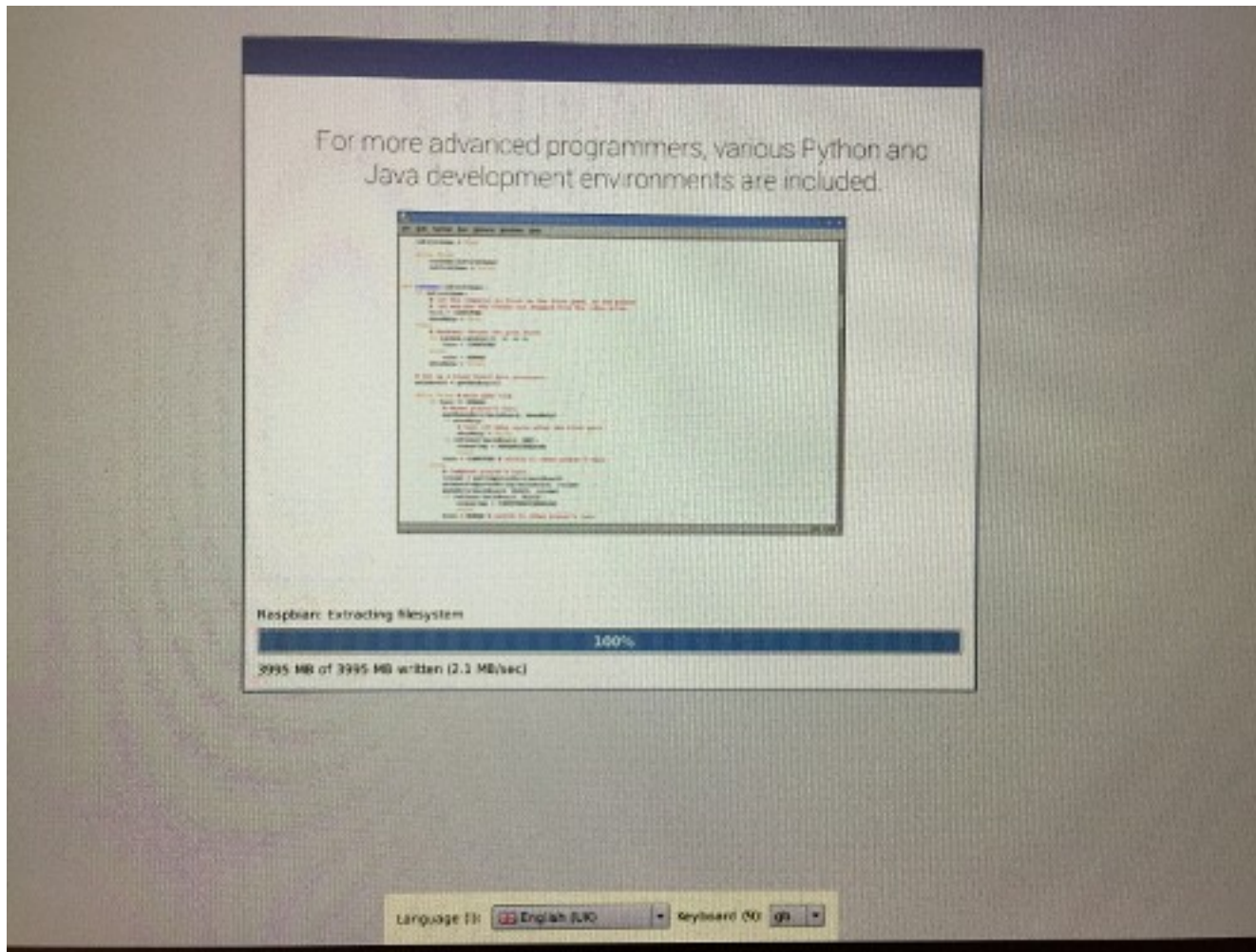
Instalación

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



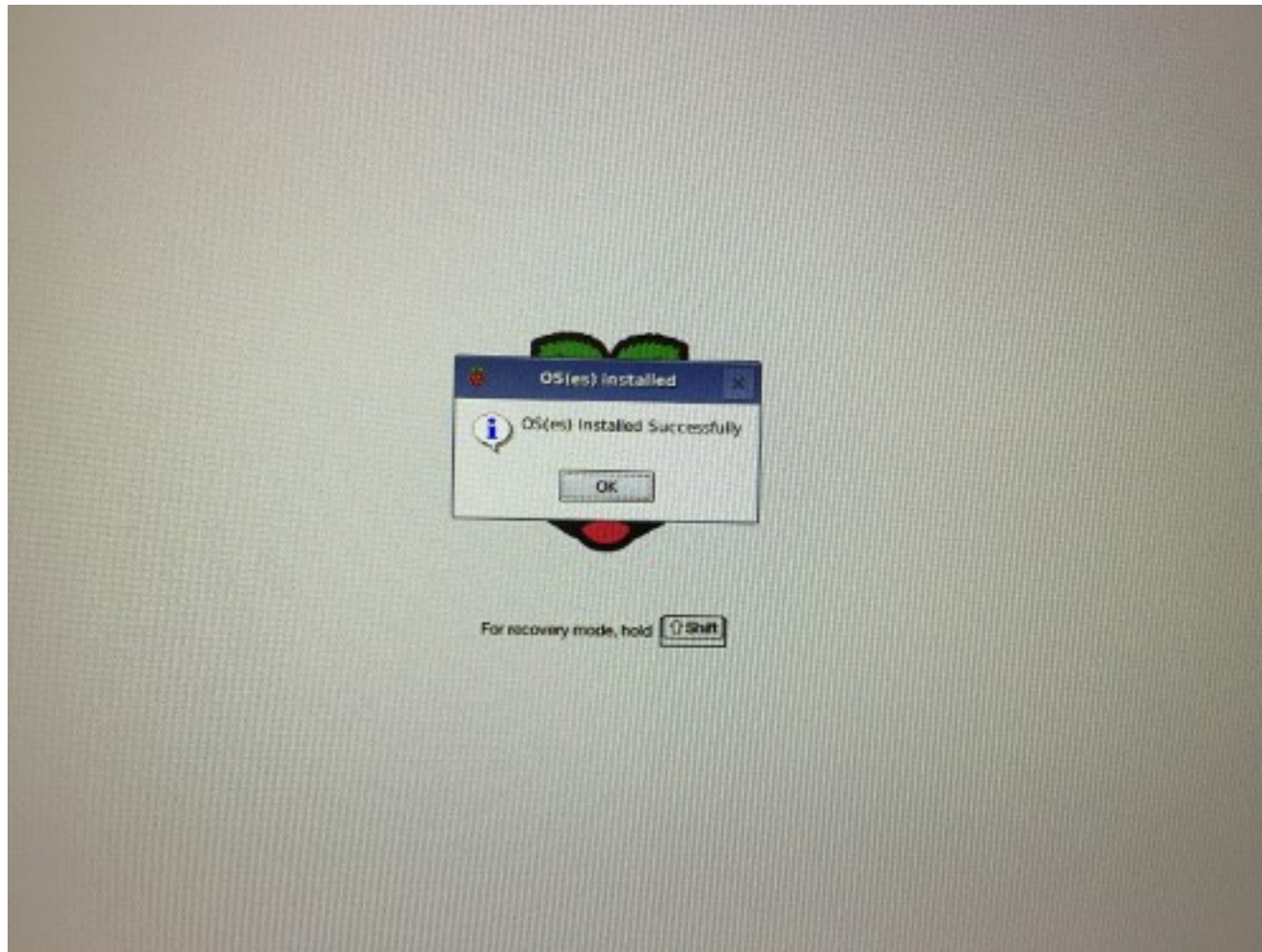
Instalación

- Pantalla indicando el 100% de la instalación:



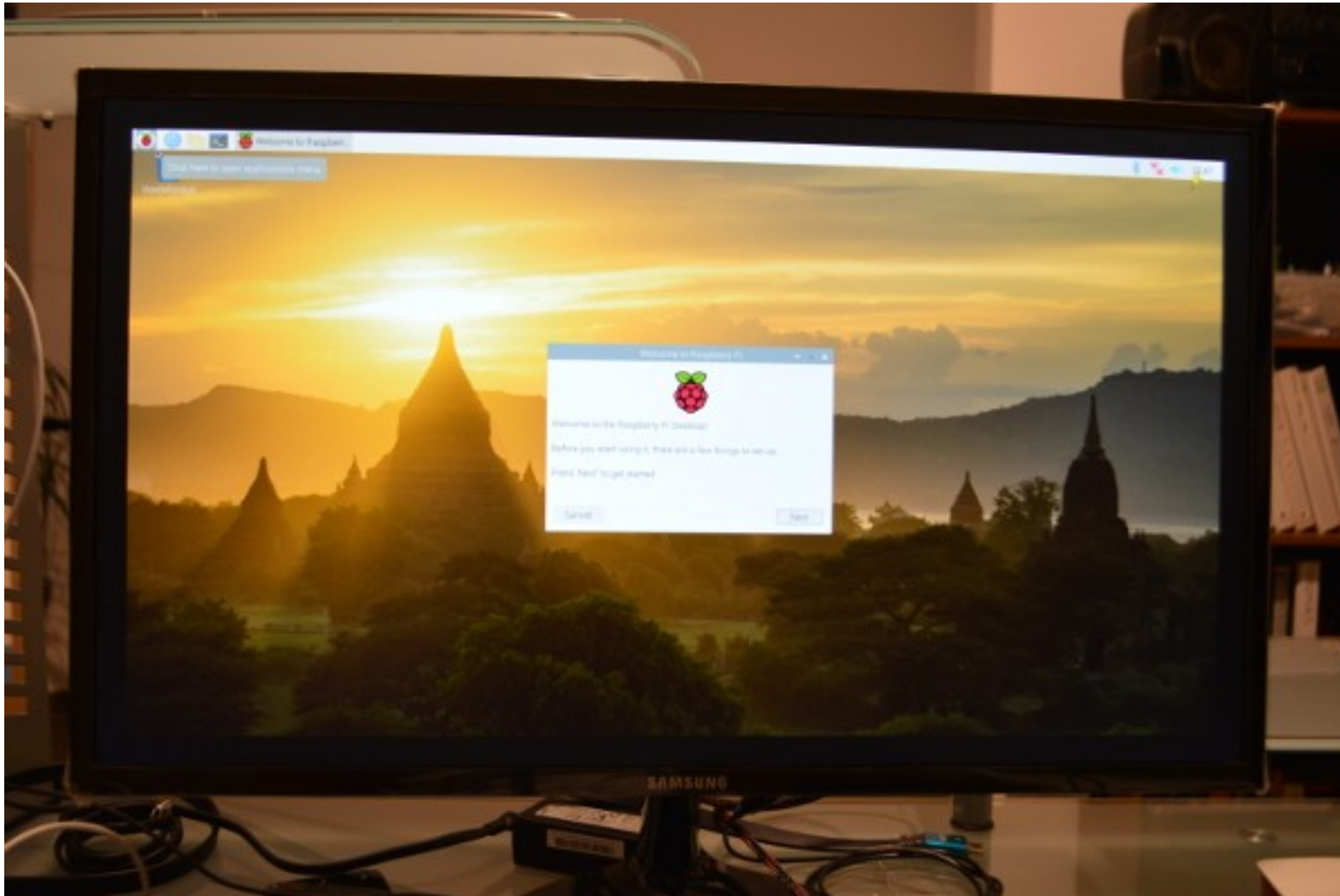
Instalación

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



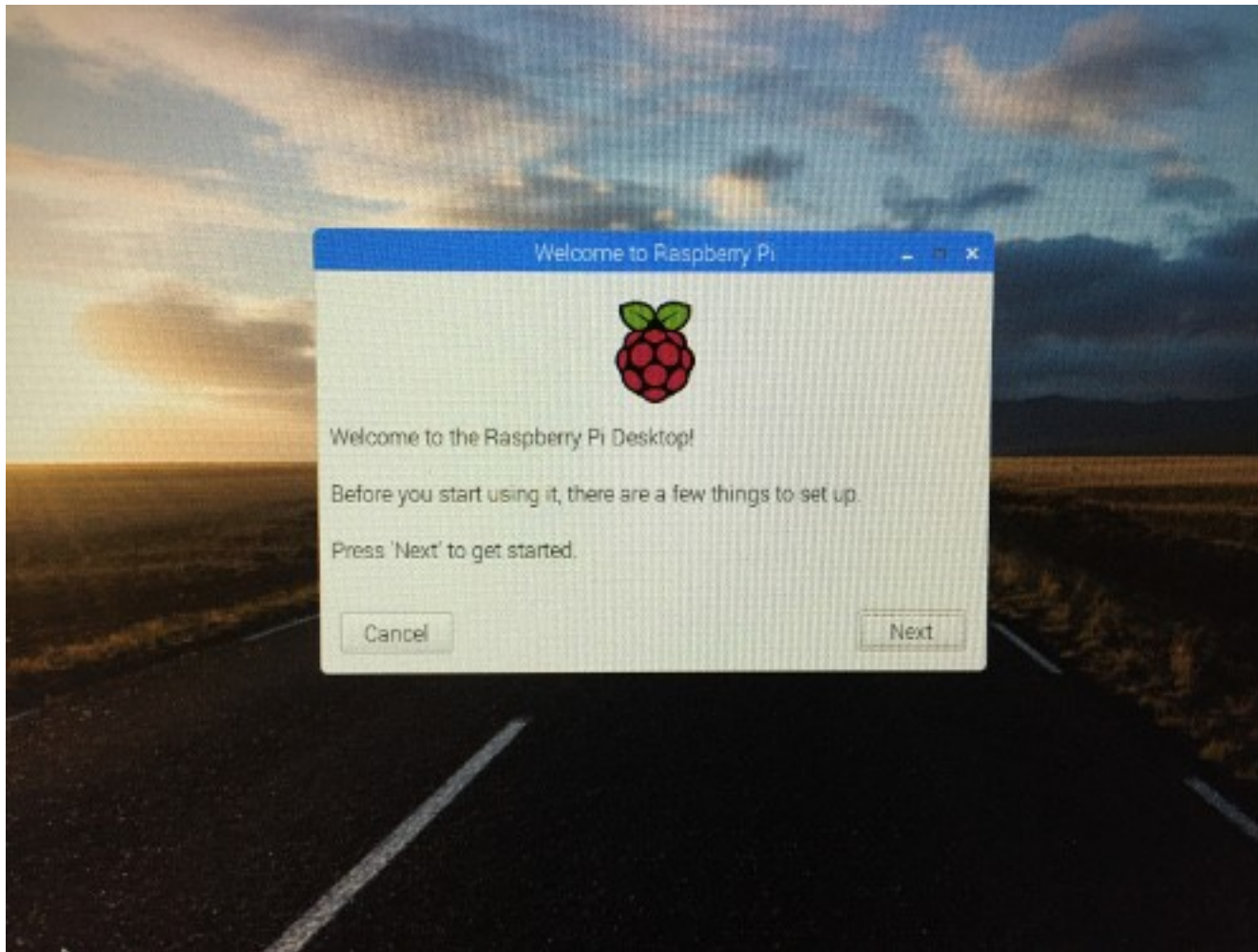
Pantalla

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



Configuración

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



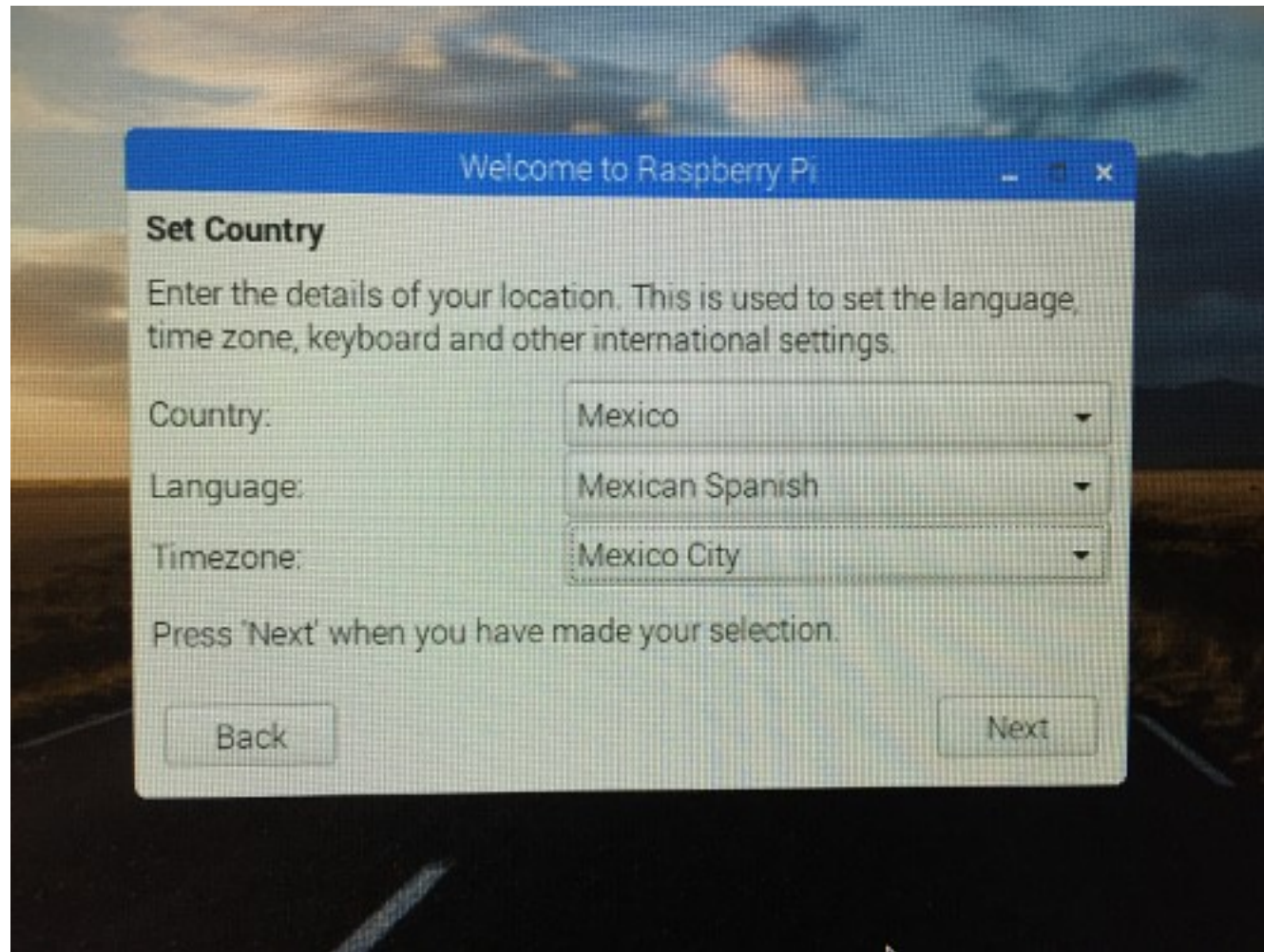
Teclado

- **Seleccionar teclado:**



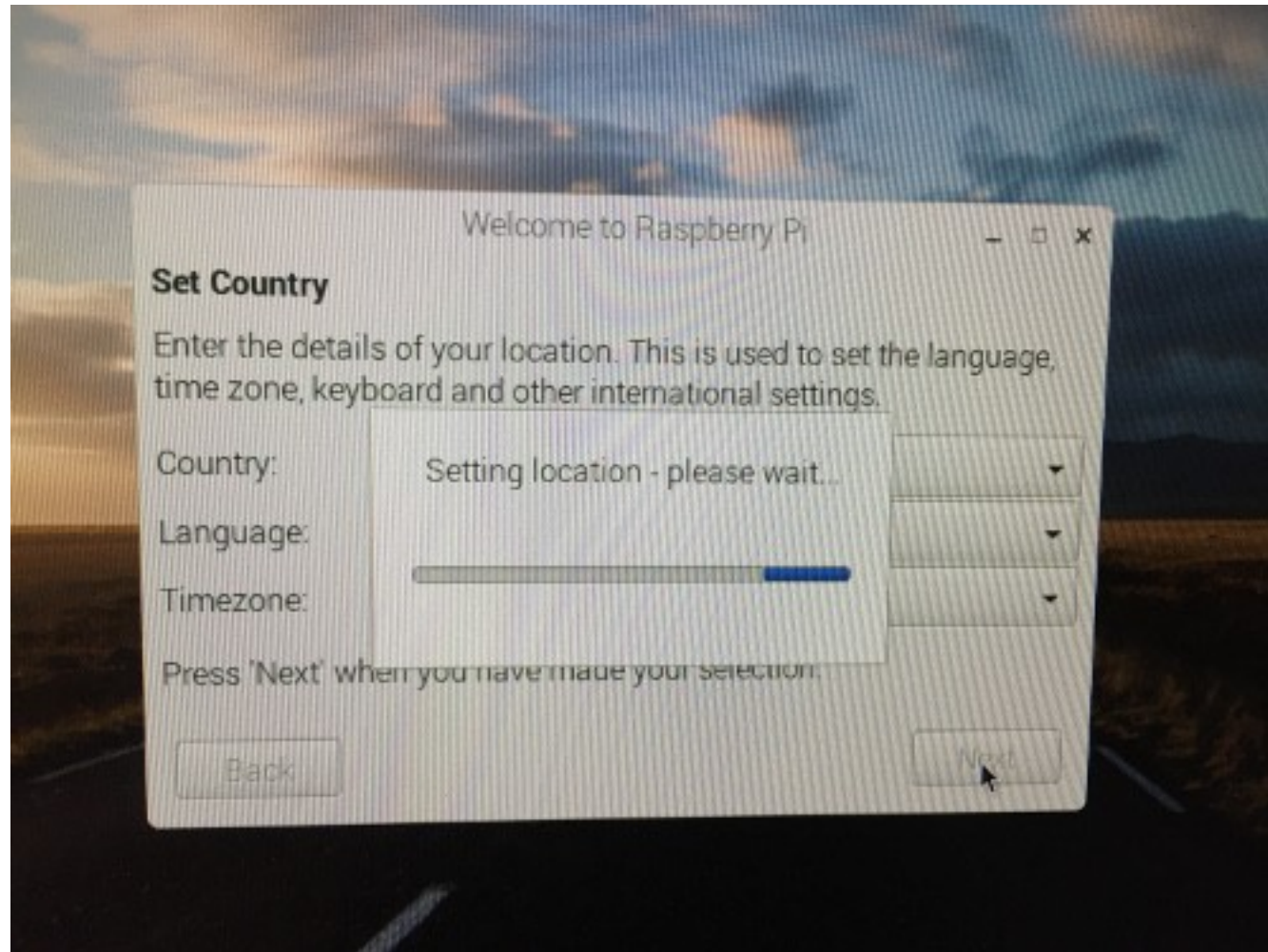
País

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



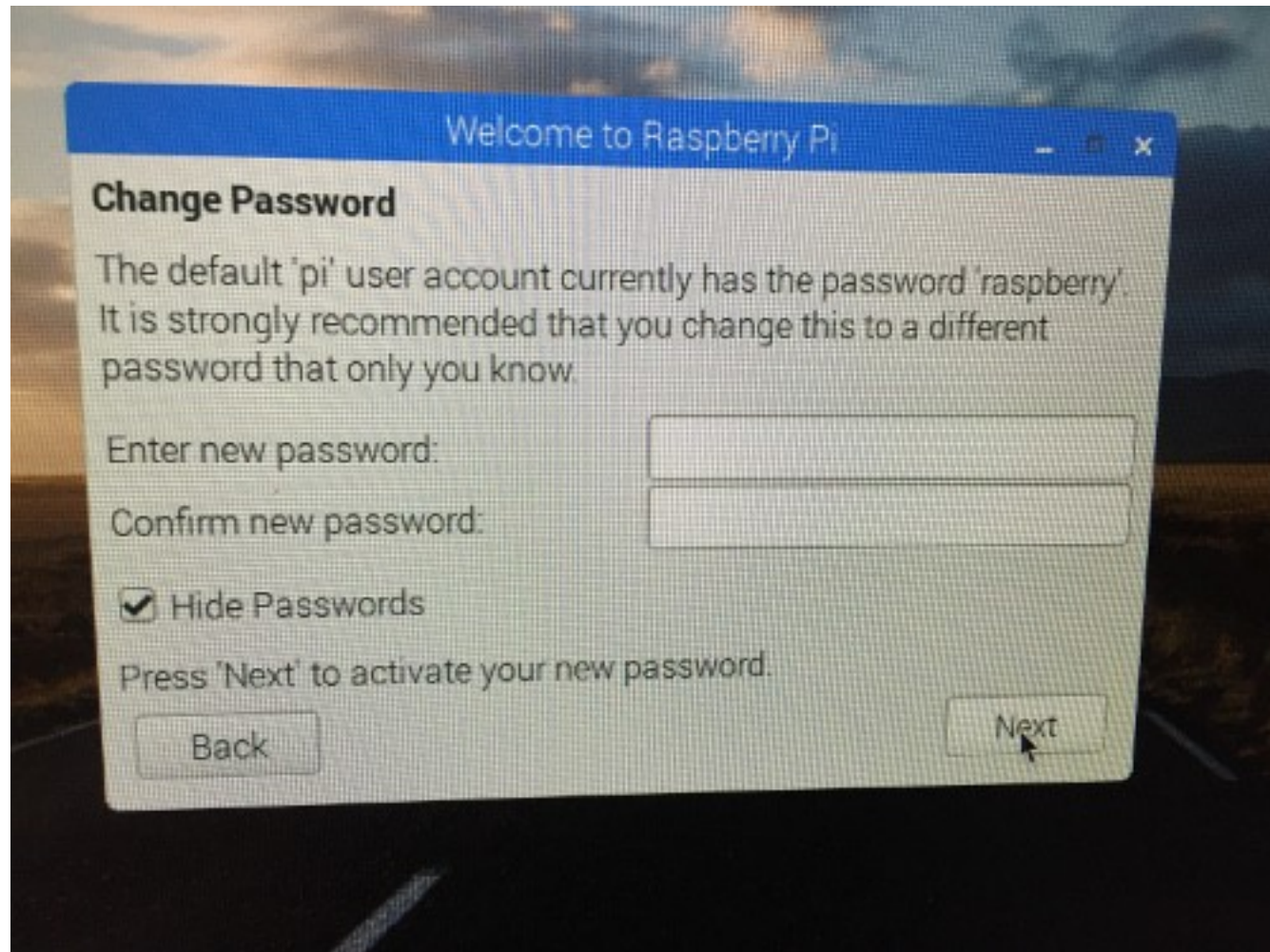
País

- **Actualizando los datos:**



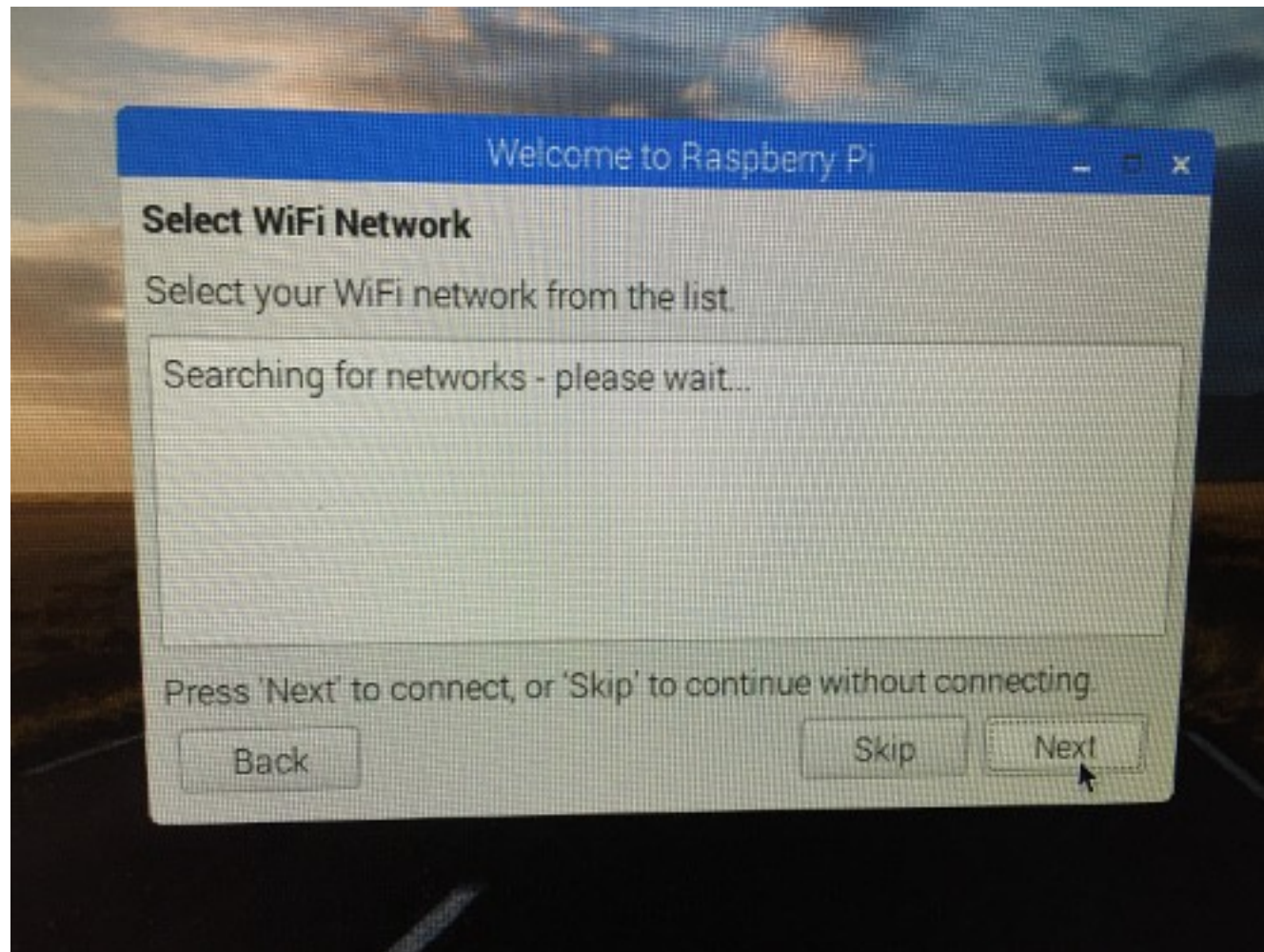
Clave

- **Pregunta la clave de acceso:**



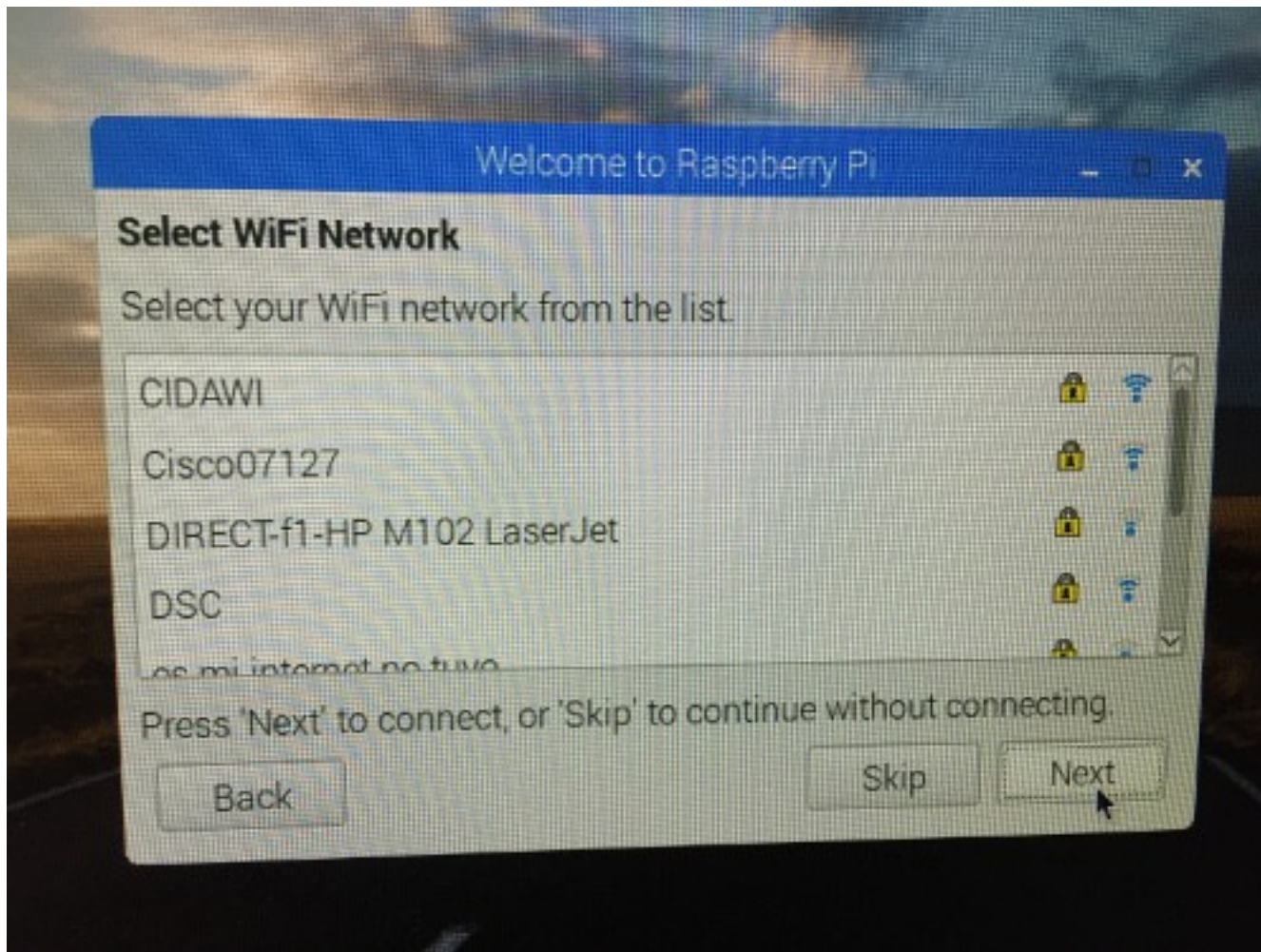
Internet

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



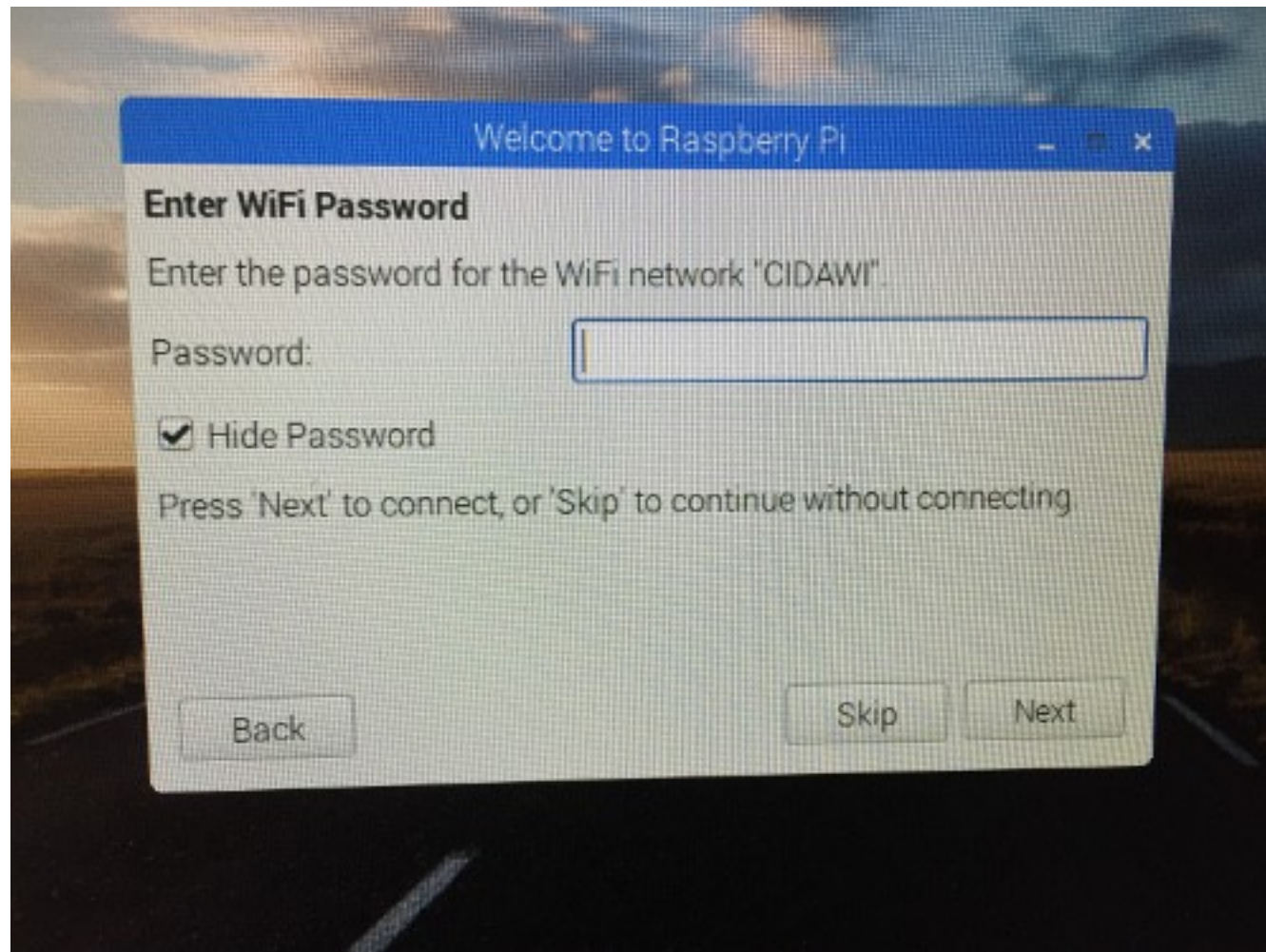
Internet

- **Redes encontradas:**



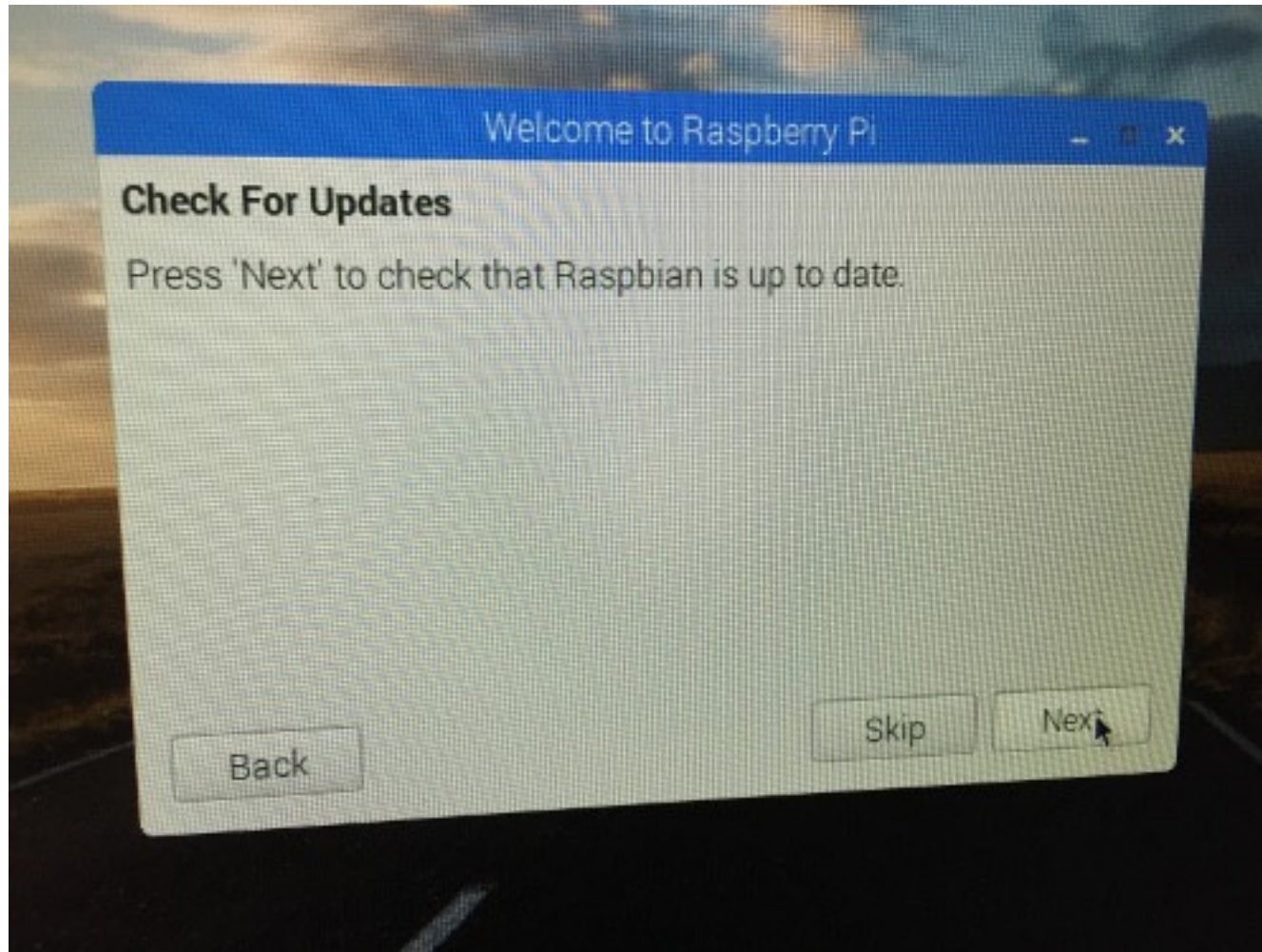
Internet

- **Clave para acceder la red:**



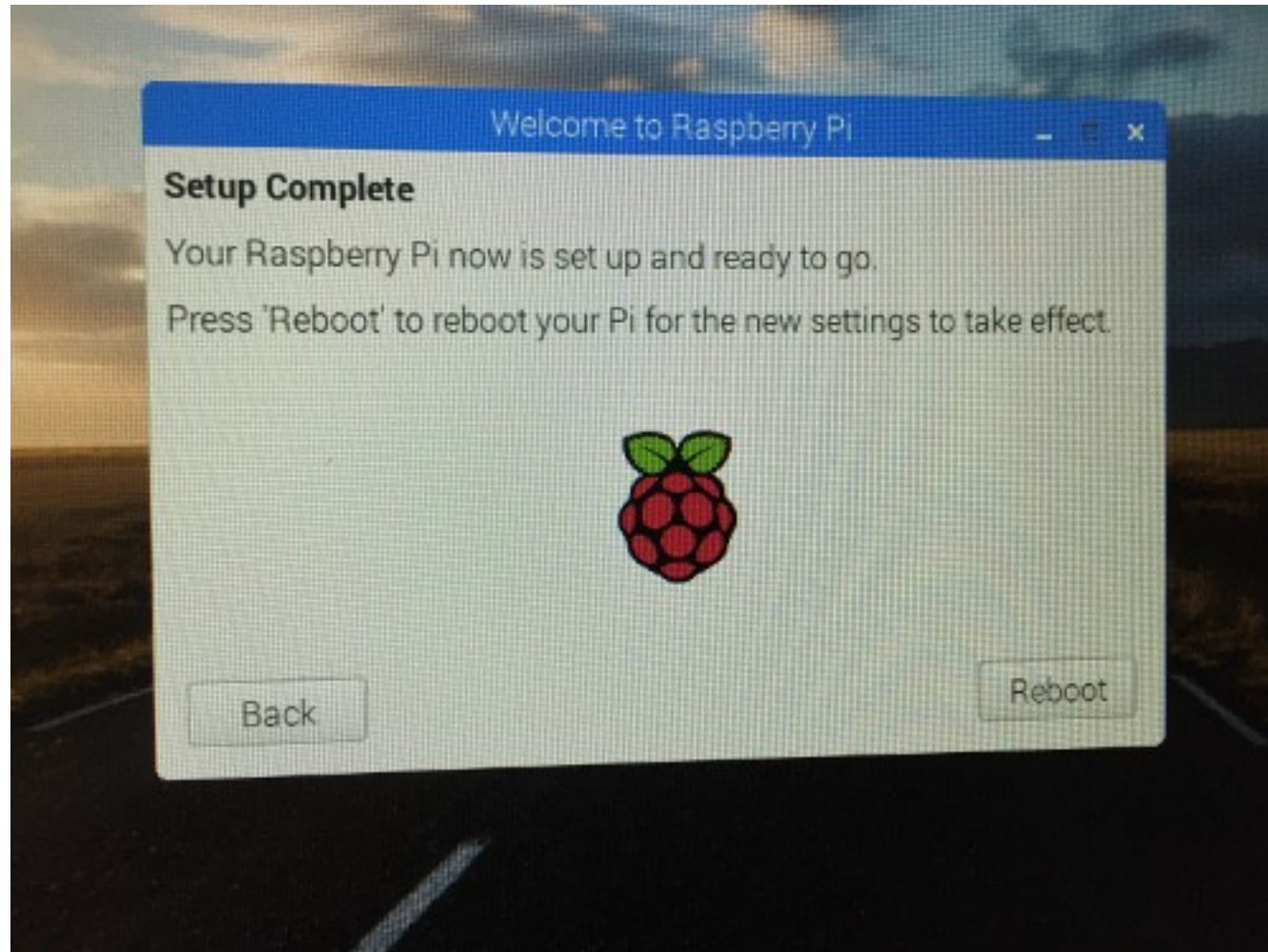
Actualización

- **Buscar actualización de paquetes:**



Finalizar

- Terminando la configuración:



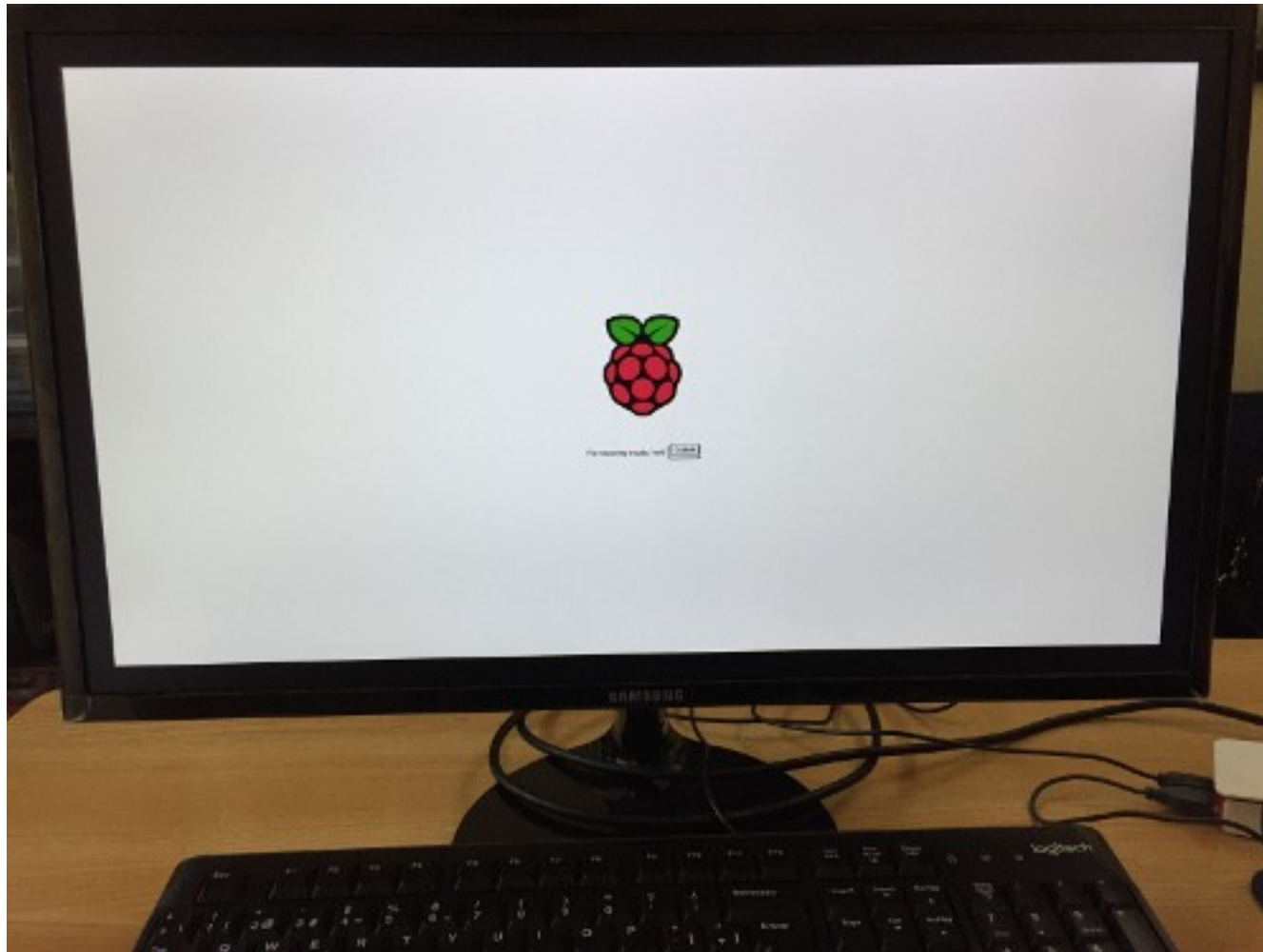
Re-Inicio

- **Pantalla al volver a arrancar:**



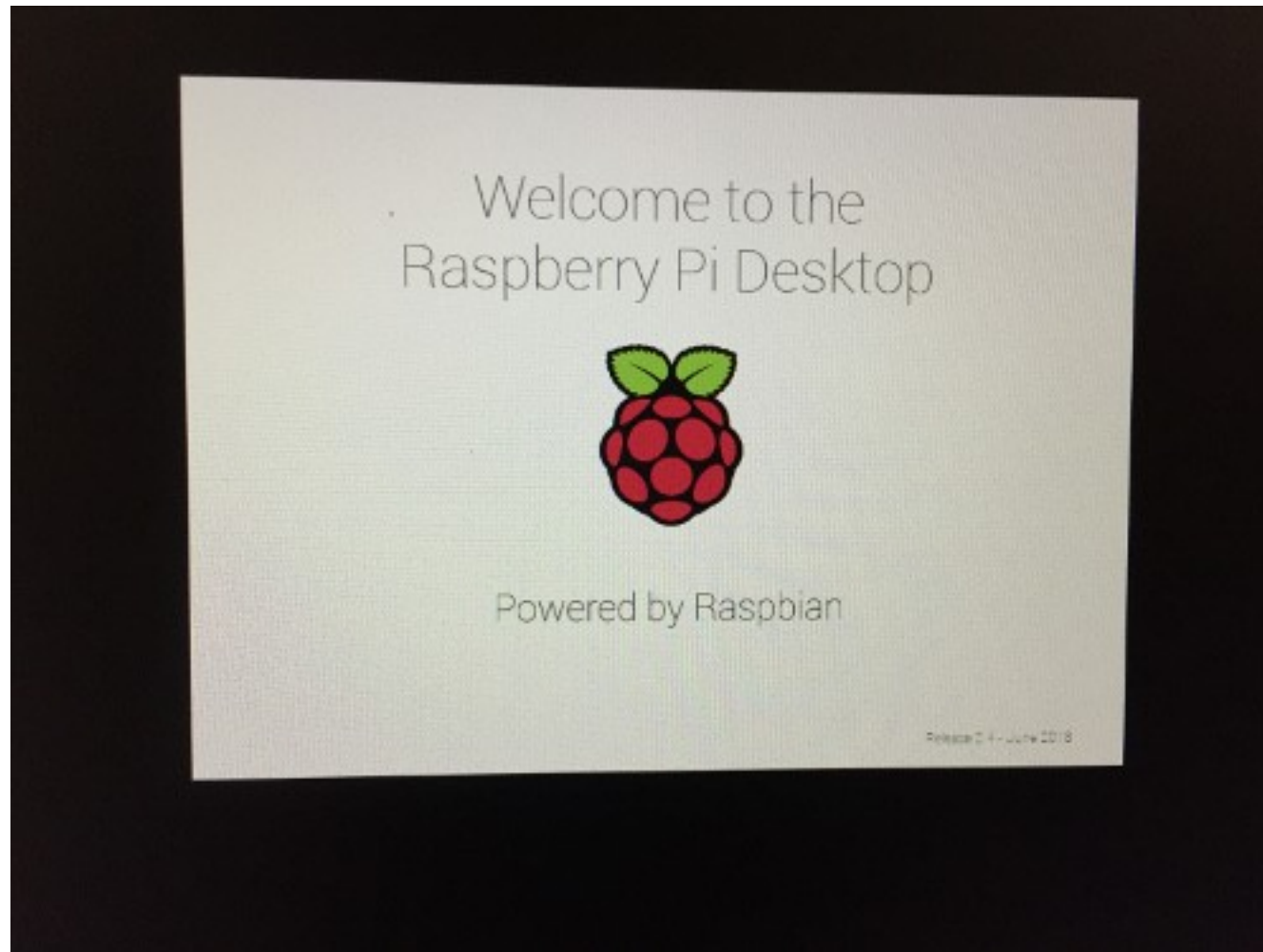
Re-Inicio

- **Pantalla al volver a arrancar:**



Pantalla inicial

- **Pantalla de bienvenida al sistema:**



Escritorio

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



Navegador

- Navegador Chromium en funcionamiento:





Rogelio Ferreira Escutia

Profesor / Investigador
Tecnológico Nacional de México
Campus Morelia



rogelio.fe@morelia.tecnm.mx



rogeplus@gmail.com



xumarhu.net



[@rogeplus](https://twitter.com/rogeplus)



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



[rogelioferreiraescutia](https://www.linkedin.com/in/rogelioferreiraescutia)

