

Internet de las Cosas

Raspberry Pi Instalación



Rogelio Ferreira Escutia

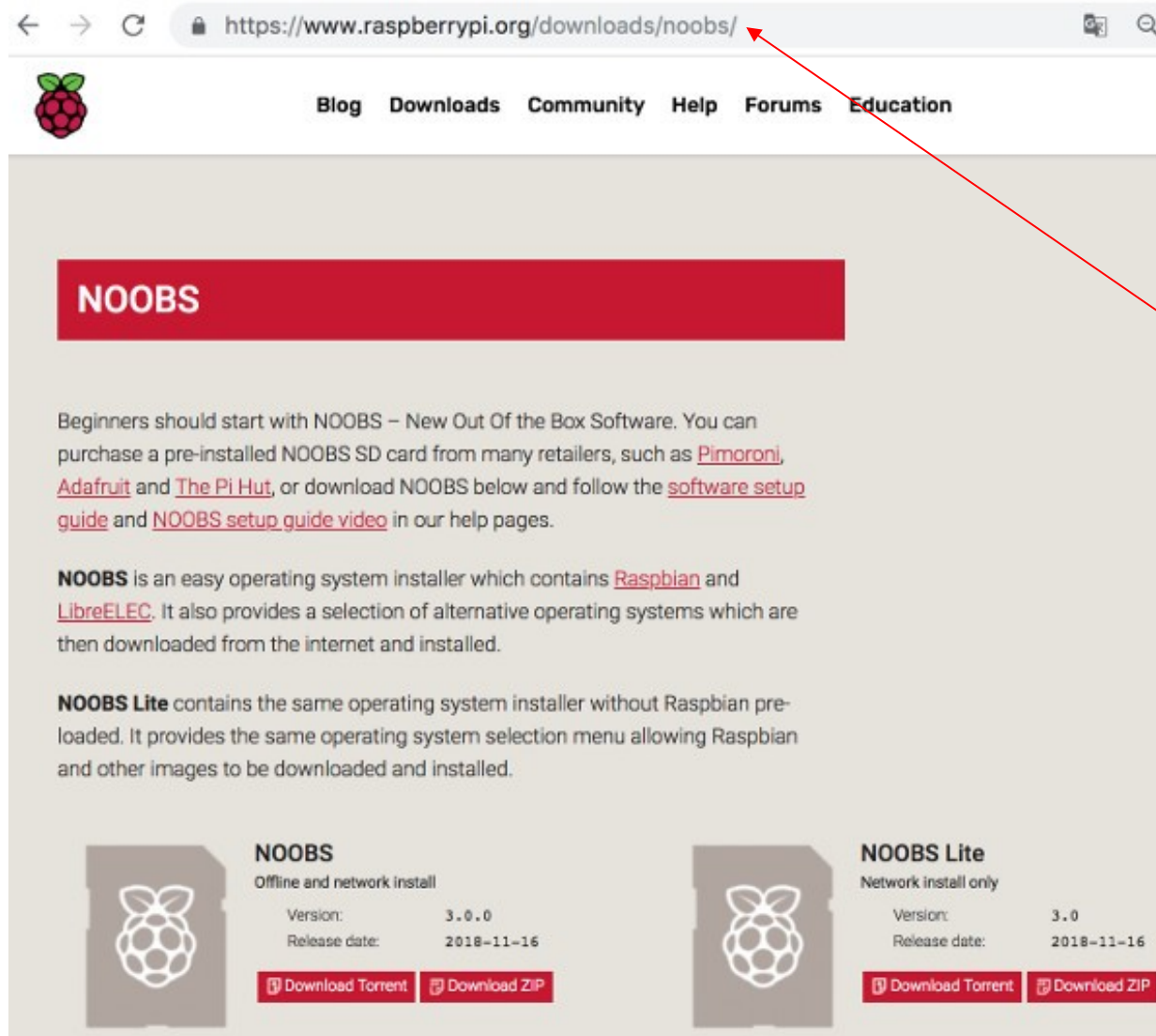
Profesor / Investigador
Tecnológico Nacional de México
Campus Morelia



Instalación

Página Oficial de Raspberry Pi

- Ir a la página oficial:

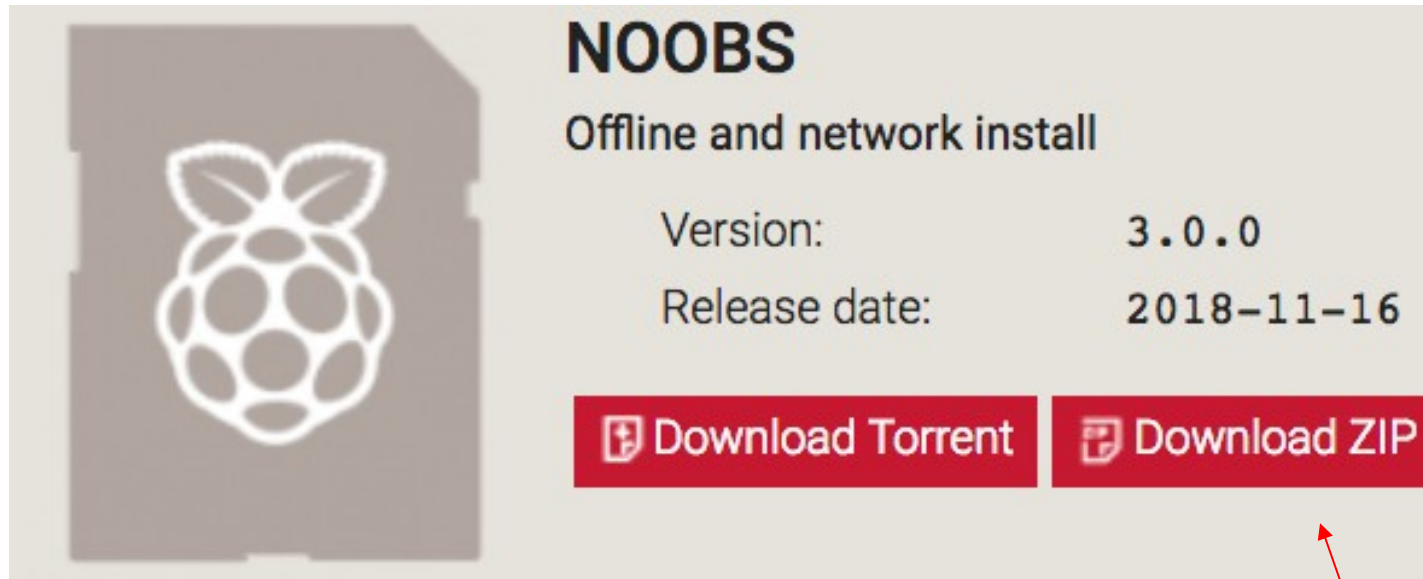


The screenshot shows the official Raspberry Pi website page for downloading NOOBS. The browser address bar displays the URL <https://www.raspberrypi.org/downloads/noobs/>. The page features a navigation menu with links for Blog, Downloads, Community, Help, Forums, and Education. A prominent red banner at the top of the main content area contains the word "NOOBS" in white. Below this, the text explains that beginners should start with NOOBS (New Out Of the Box Software) and provides links to retailers like Pimoroni, Adafruit, and The Pi Hut, as well as software setup guides and videos. It also describes NOOBS as an easy operating system installer containing Raspbian and LibreELEC, and mentions NOOBS Lite as a version without Raspbian pre-loaded. At the bottom, there are two download options: NOOBS (Offline and network install) and NOOBS Lite (Network install only). Both options show version 3.0.0 and a release date of 2018-11-16, with buttons for "Download Torrent" and "Download ZIP".



NOOBS

- **Descargar NOOBS:**



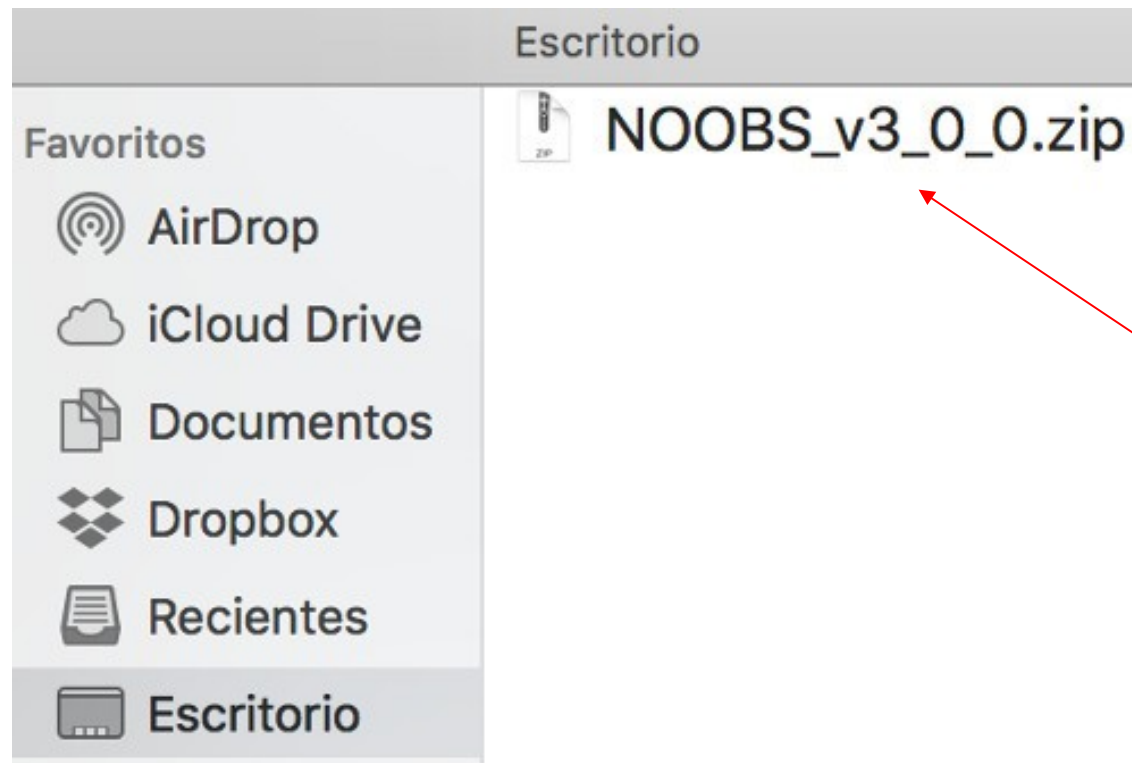
The screenshot shows the NOOBS download page. On the left is a large icon of a Raspberry Pi SD card with the Raspberry Pi logo. To the right, the text reads "NOOBS" in large bold letters, followed by "Offline and network install". Below this, the version is listed as "3.0.0" and the release date as "2018-11-16". At the bottom, there are two red buttons: "Download Torrent" and "Download ZIP". A red arrow points from the bottom right of the page towards the "Download ZIP" button.

Version:	3.0.0
Release date:	2018-11-16

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

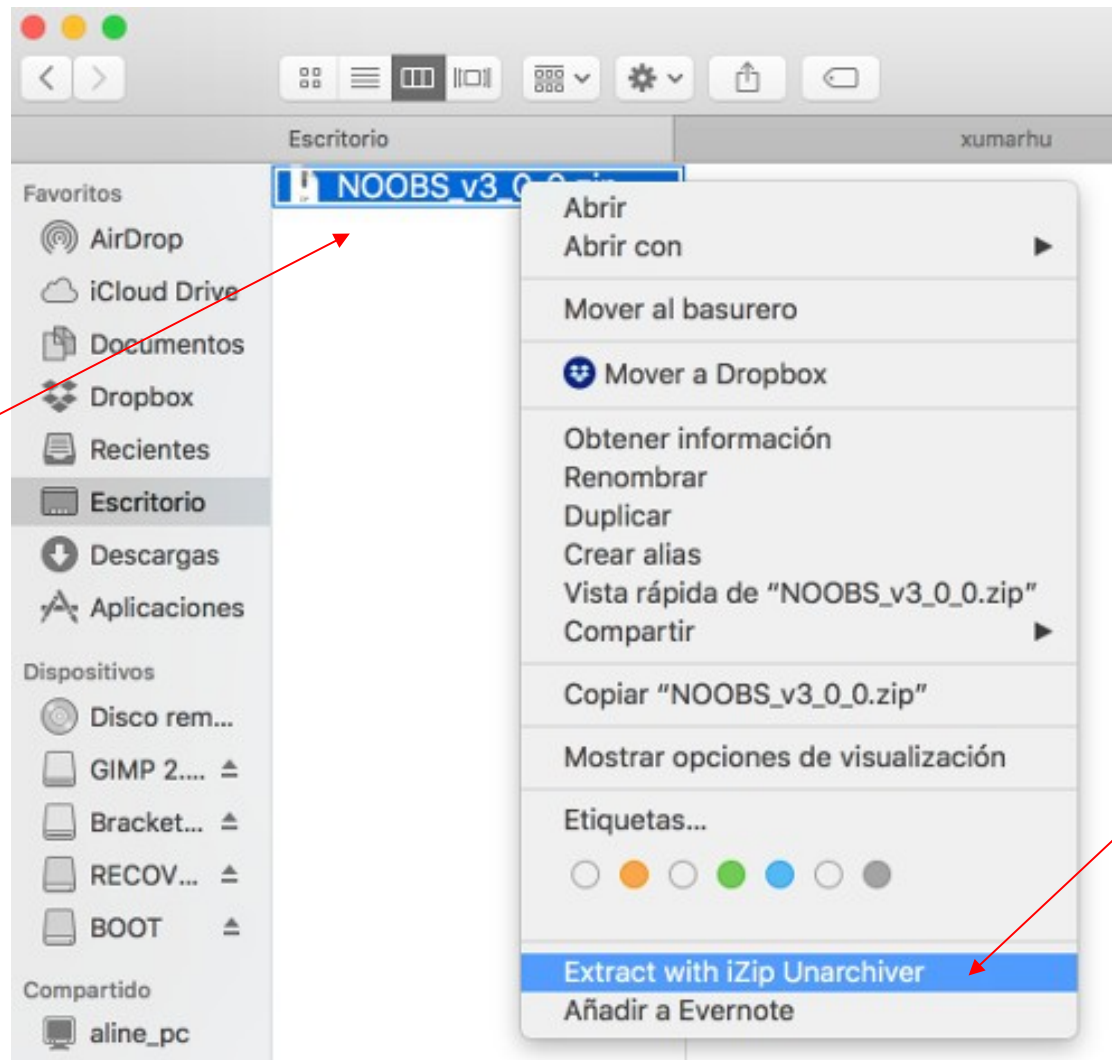
Archivo descargado

- **El archivo descargado está en formato ZIP**



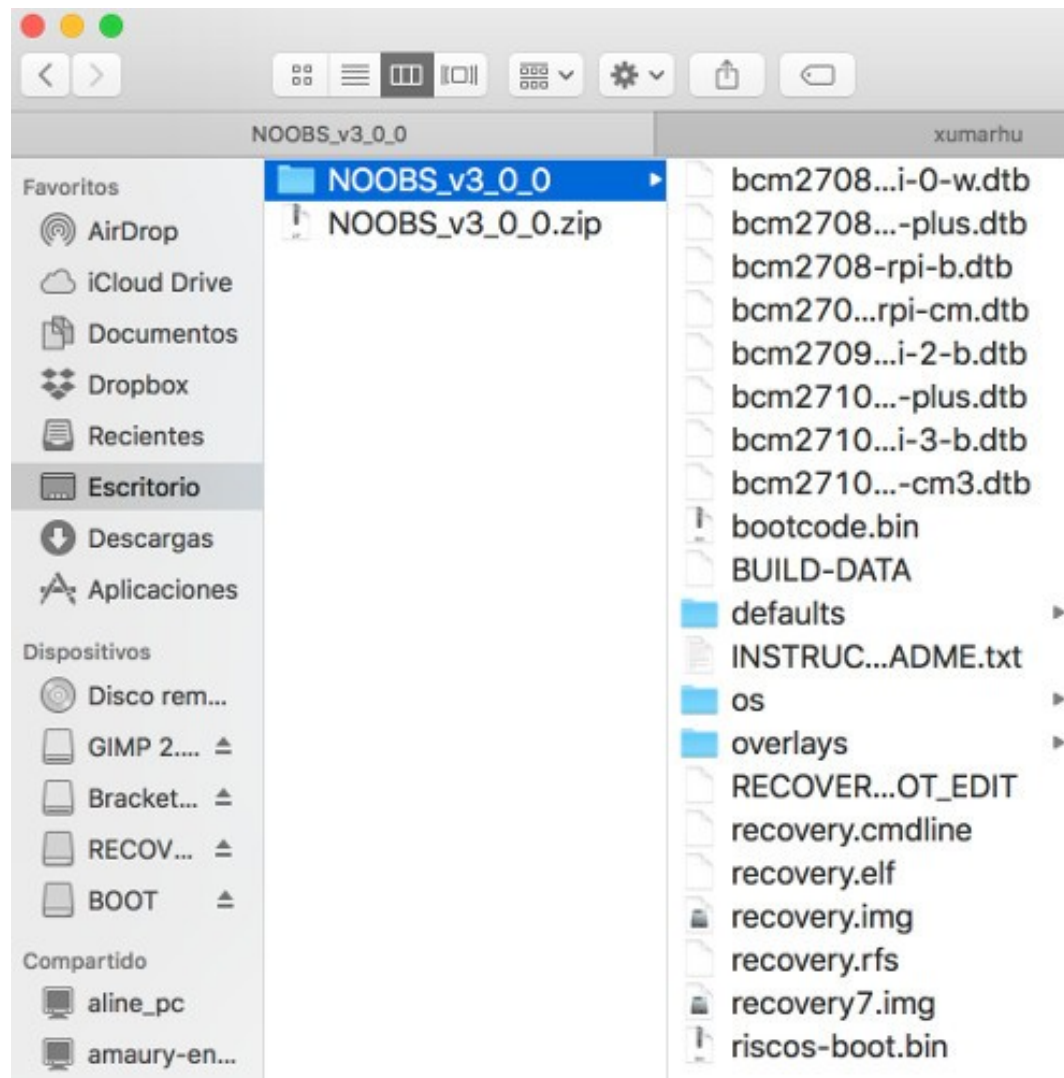
Descomprimir

- **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:



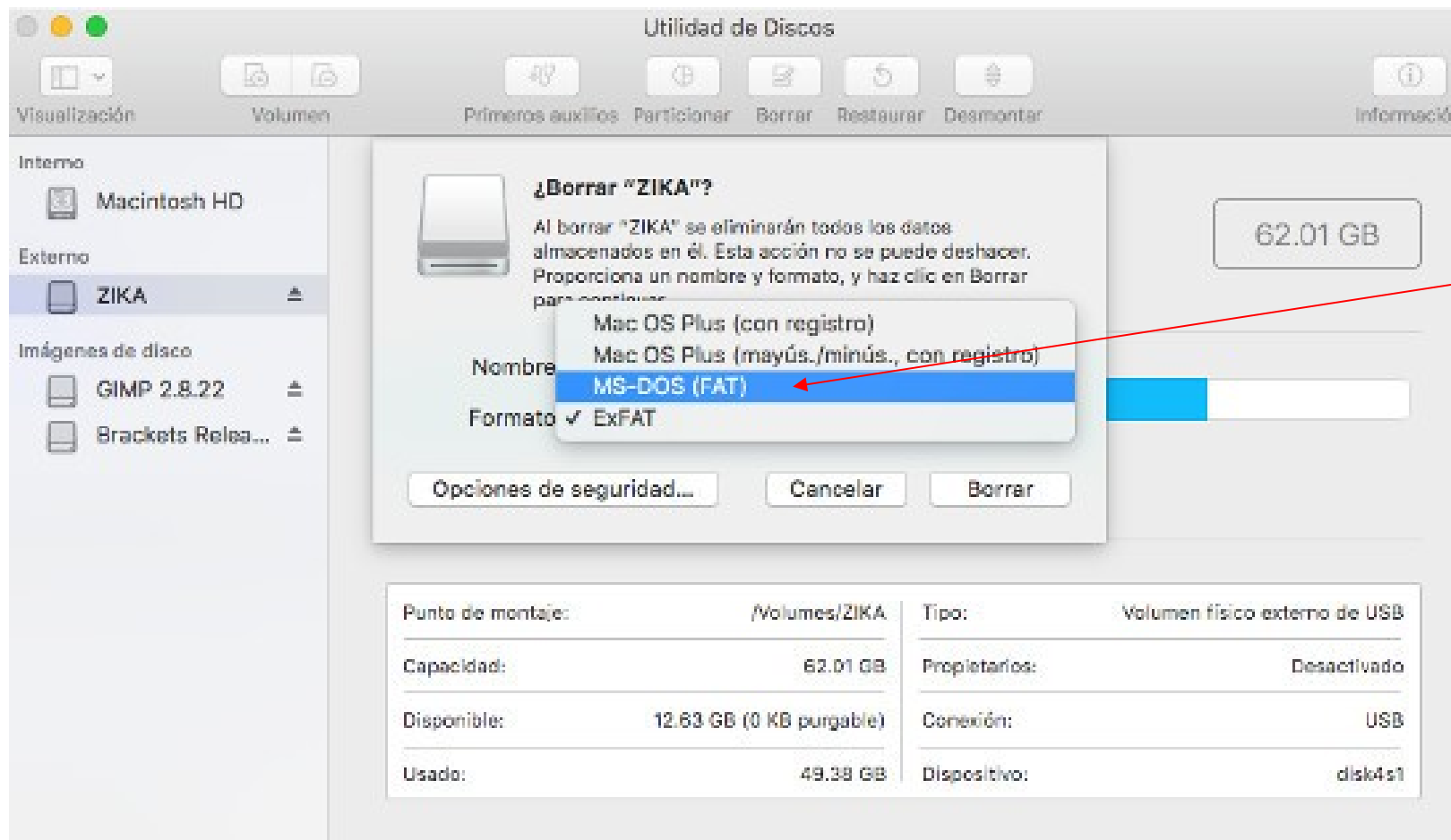
Tarjeta Micro SD

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



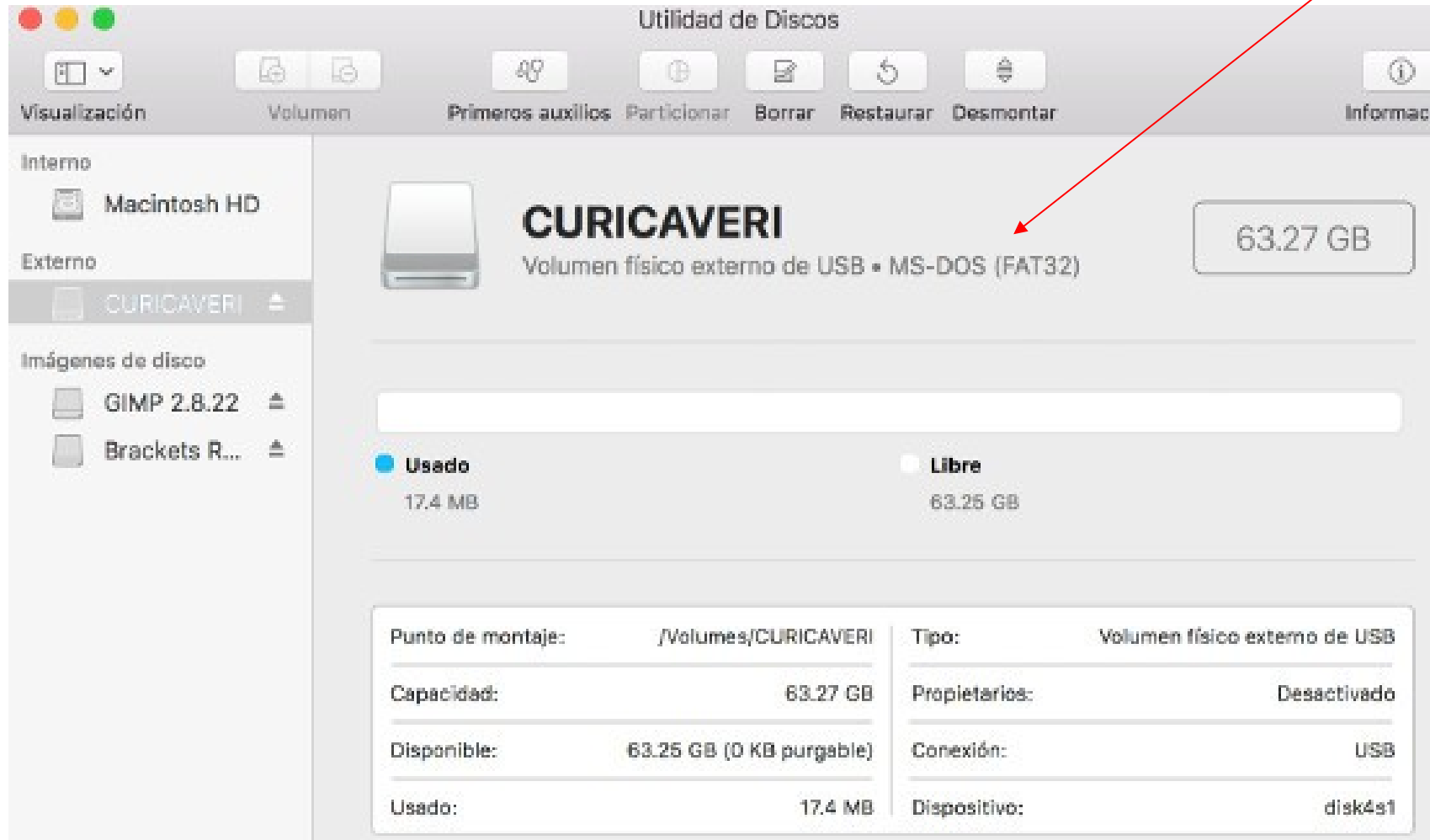
Formato

- **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

SD Memory Card Formatter for Windows Download

SD Memory Card Formatter for Mac Download

FAQ

> SD Association Brochure Download



SD Memory Card Formatter 5.0.1 for SD/SDHC/SDXC

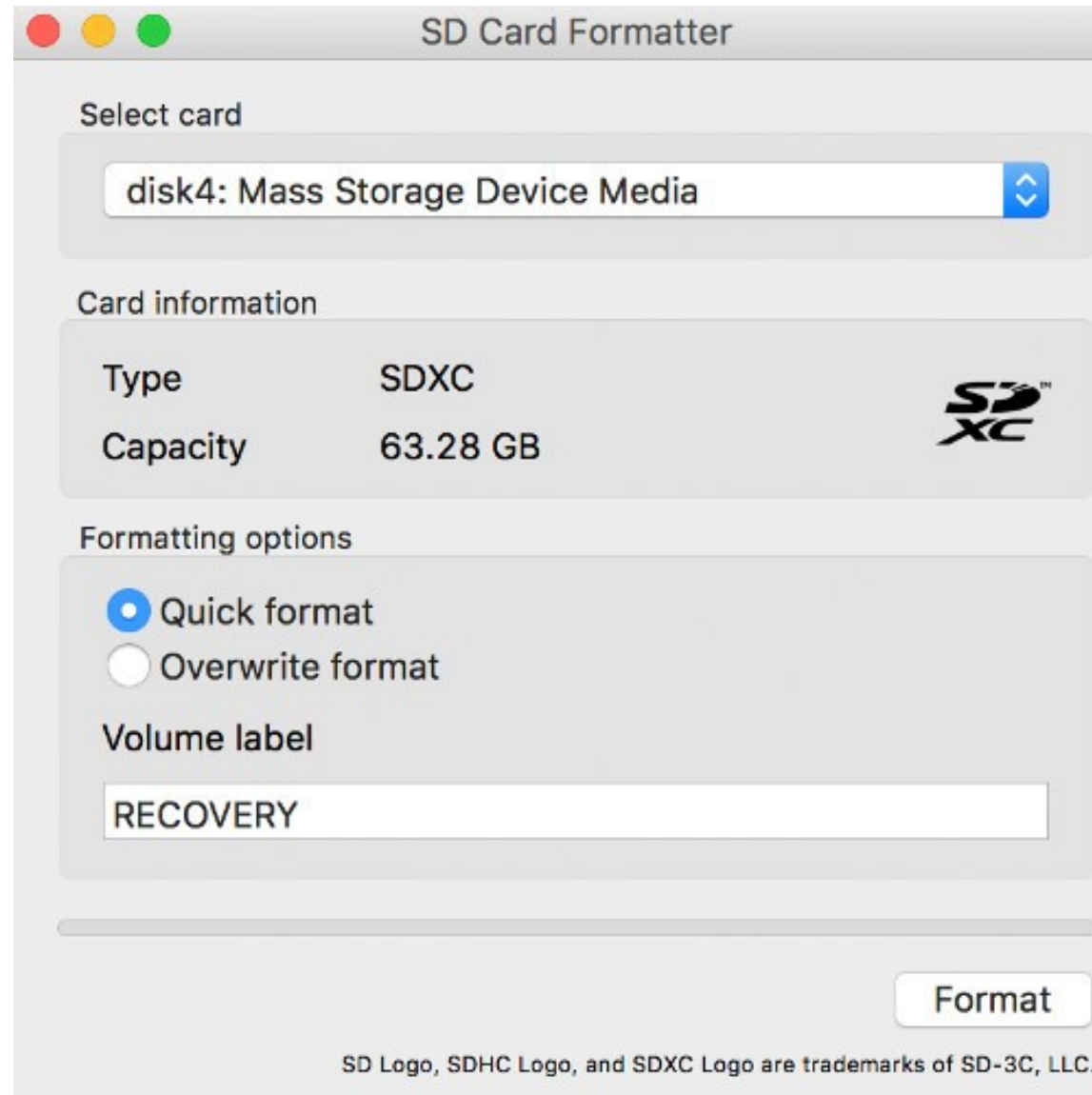
The SD Memory Card Formatter formats SD Memory Card, SDHC Memory Card and SDXC Memory Card (respectively SD/SDHC/SDXC Cards) complying with the SD File System Specification created by the SD Association (SDA).

It is strongly recommended to use the SD Memory Card Formatter to format SD/SDHC/SDXC Cards rather than using formatting tools provided with individual operating systems. In general, formatting tools provided with operating systems can format various storage media including SD/SDHC/SDXC Cards, but it may not be optimized for SD/SDHC/SDXC Cards and it may result in lower performance.

SD/SDHC/SDXC Cards have a "Protected Area" for SD Card security purposes. The SD Memory Card Formatter does not format the protected area in the SD/SDHC/SDXC Cards. The protected area shall be formatted by an appropriate PC application or SD host devices that provide SD security function.

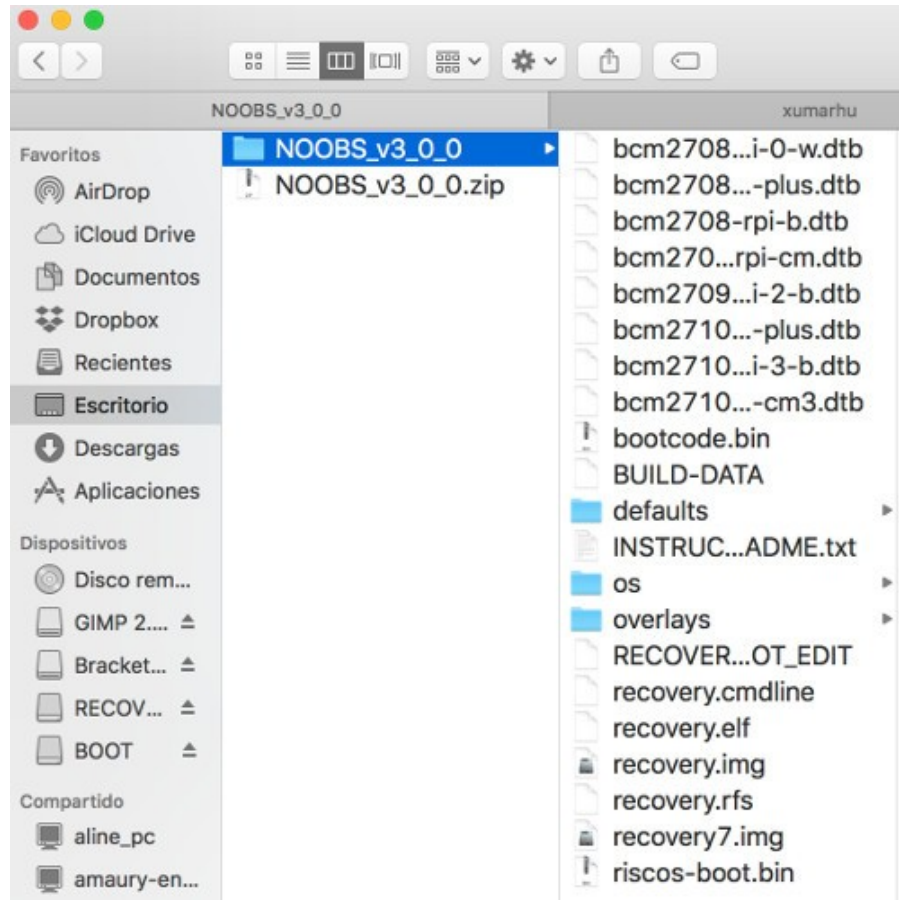


SD Formatter



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 3B+



Insertar Memoria

- Colocar la memoria Micro SD dentro del Raspberry Pi



Raspberry Pi Compatibles



■ **Fabricado en China**

■ **Fabricado en Inglaterra**



Carcasa

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



Ensamble

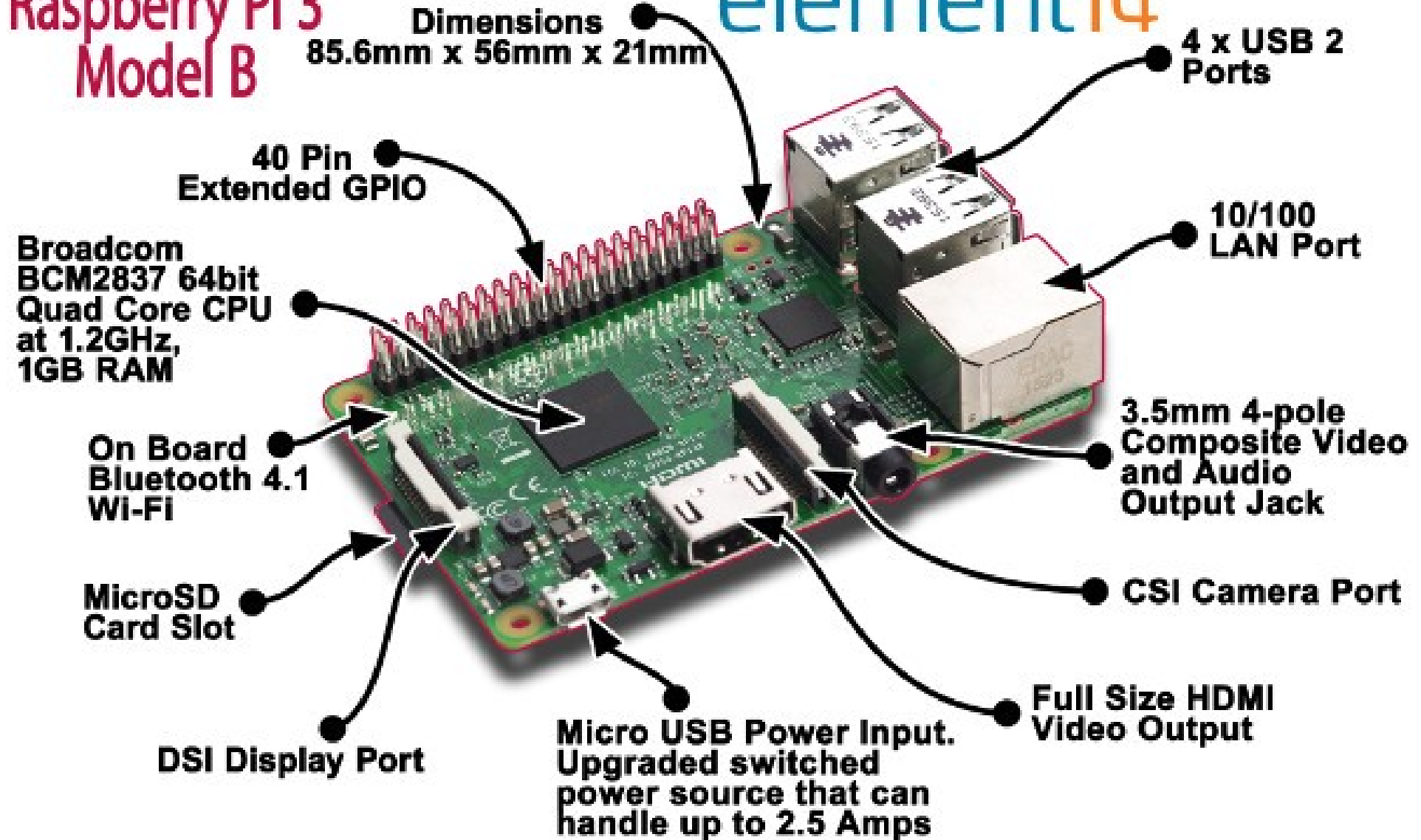
- **Colocar el Raspberry Pi dentro de su carcasa.**



Raspberry Pi 3 Model B

element14

Dimensions
85.6mm x 56mm x 21mm



Monitor

- Se requiere un monitor con conexión HDMI



Monitor

- **Monitor Samsung HDMI de 24 pulgadas**



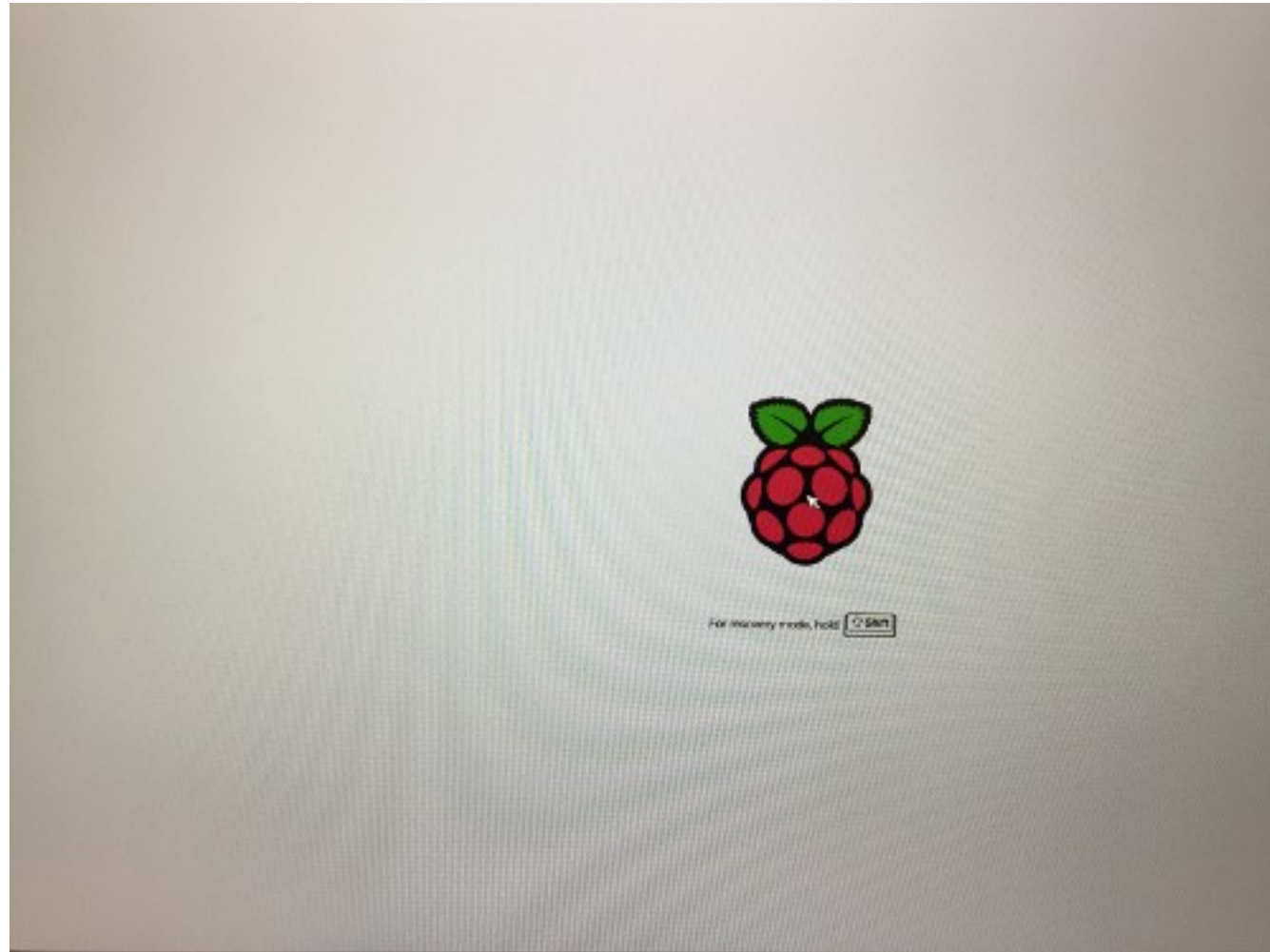
Inicio

- **Pantalla de inicio:**



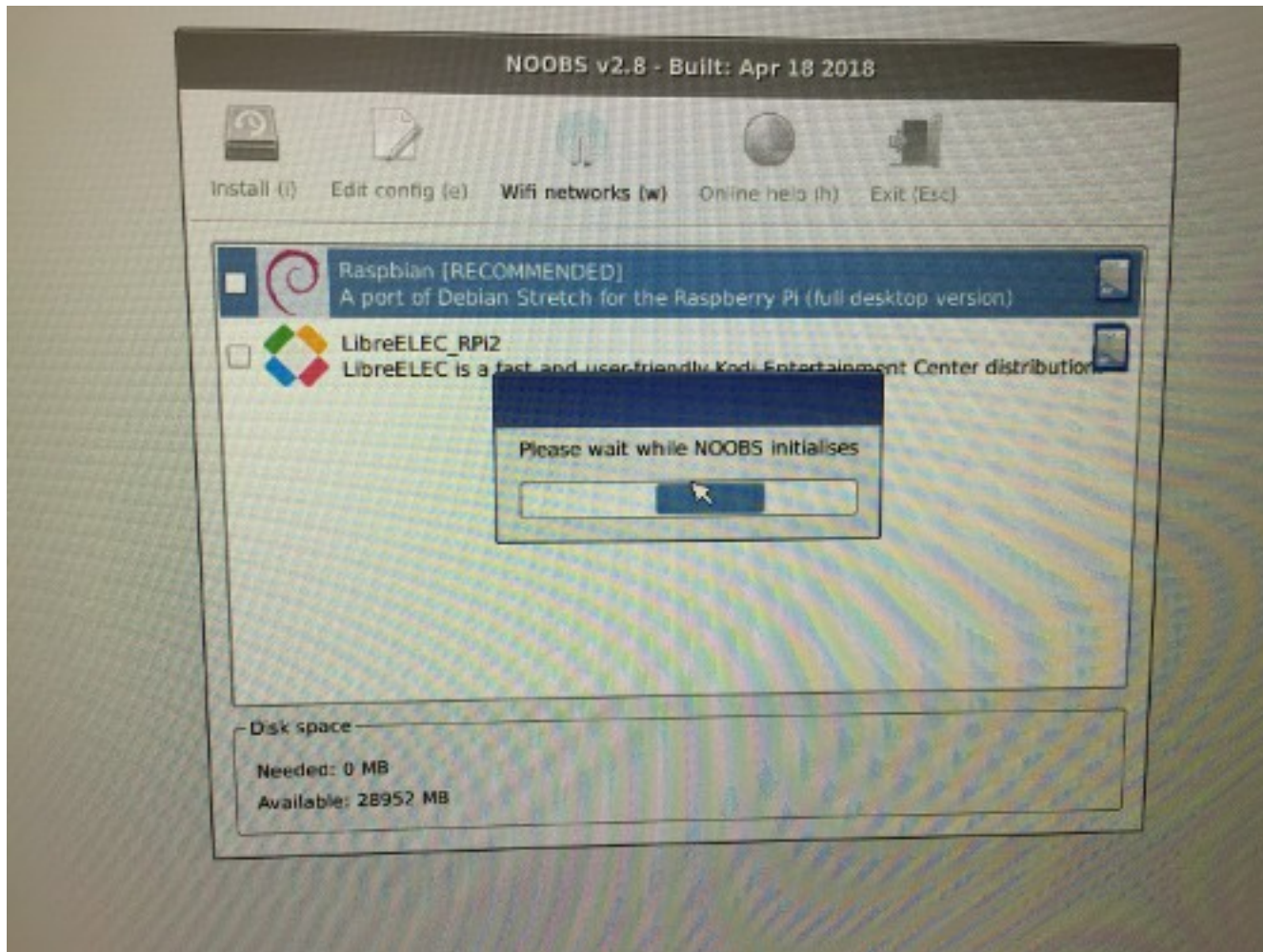
Arranque

- Conectar el Raspberry y arranca con la siguiente pantalla:



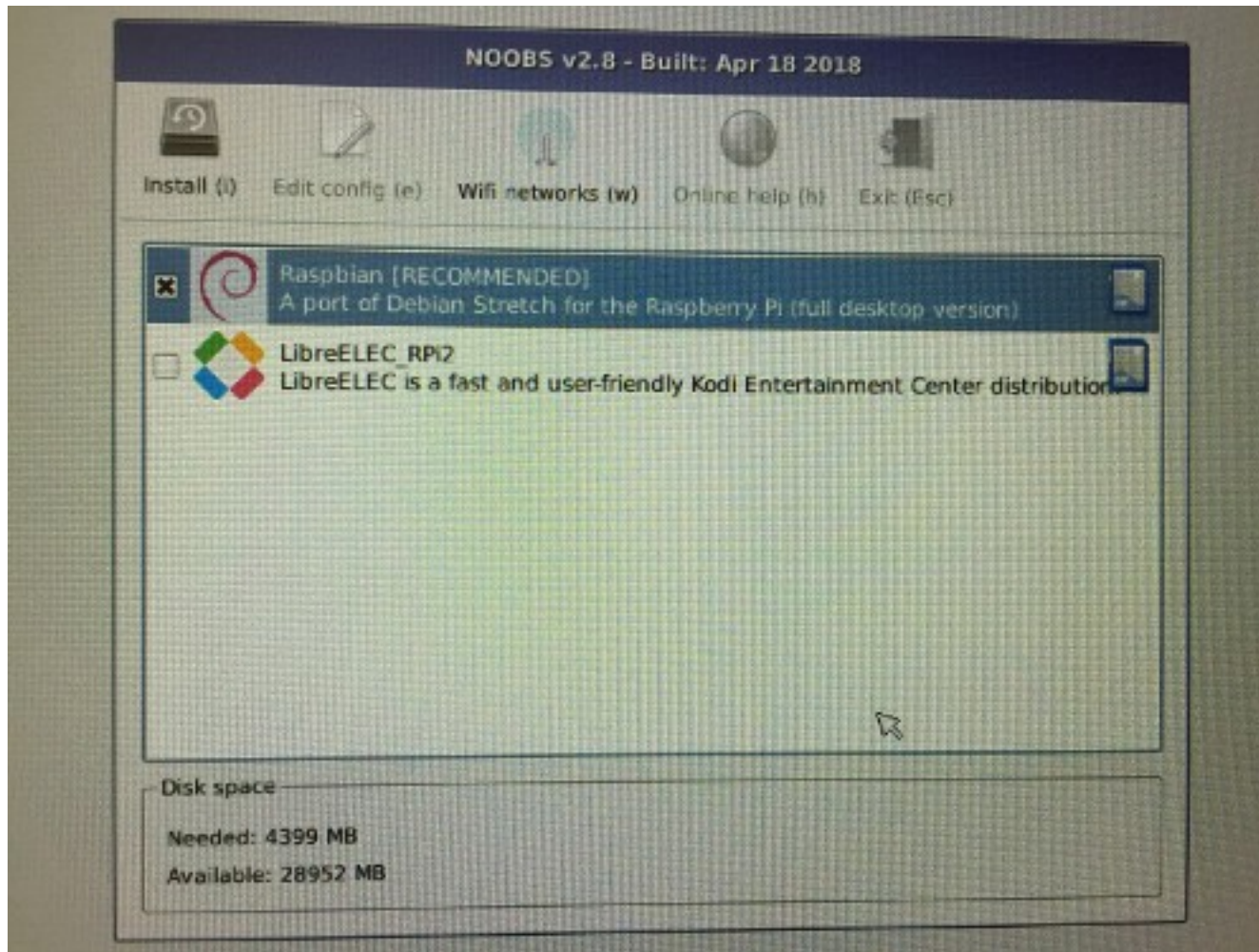
Opciones

- Aparecen las opciones a instalar:



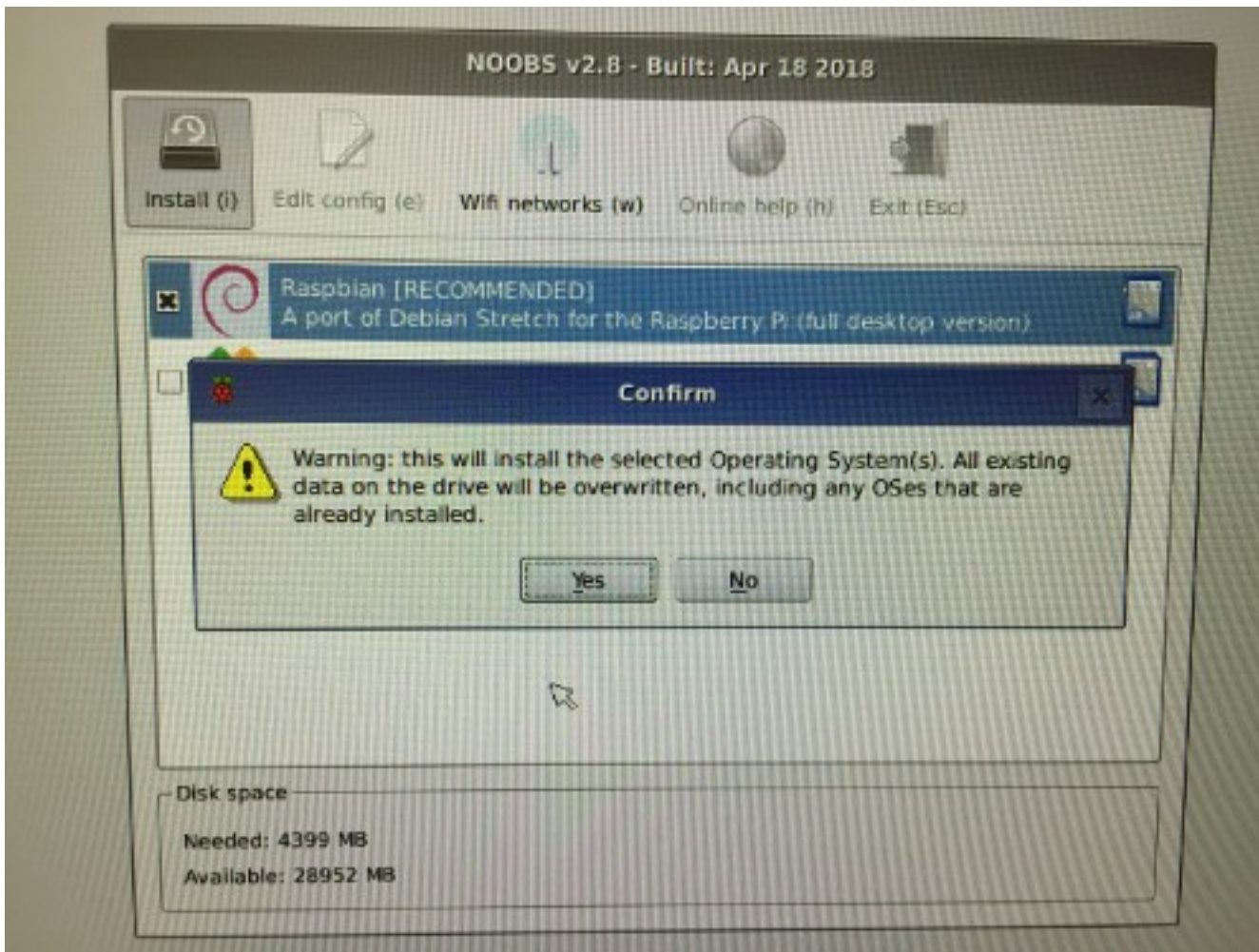
Raspbian

- Se selecciona Raspbian como el sistema a instalar:



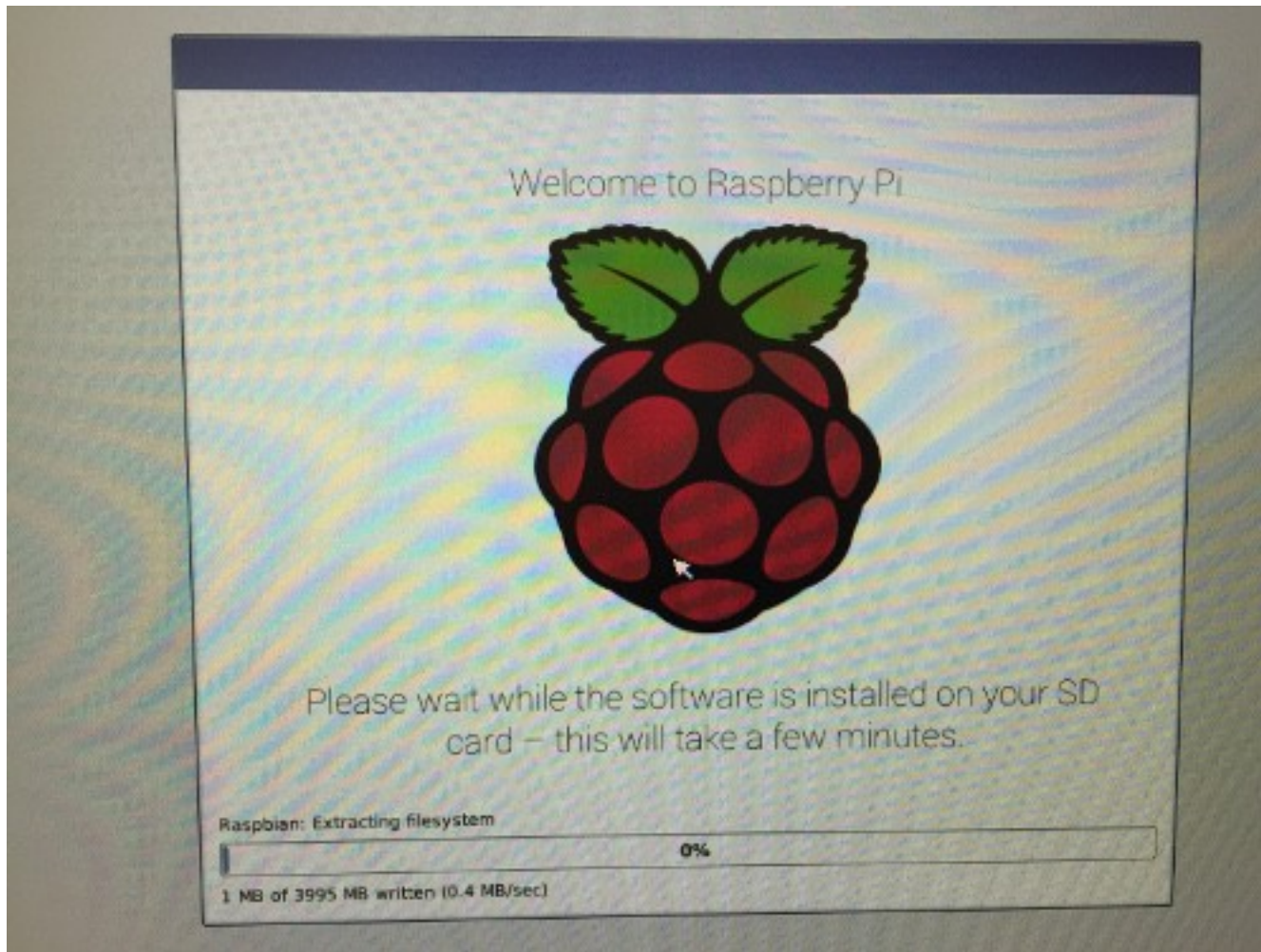
Raspbian

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



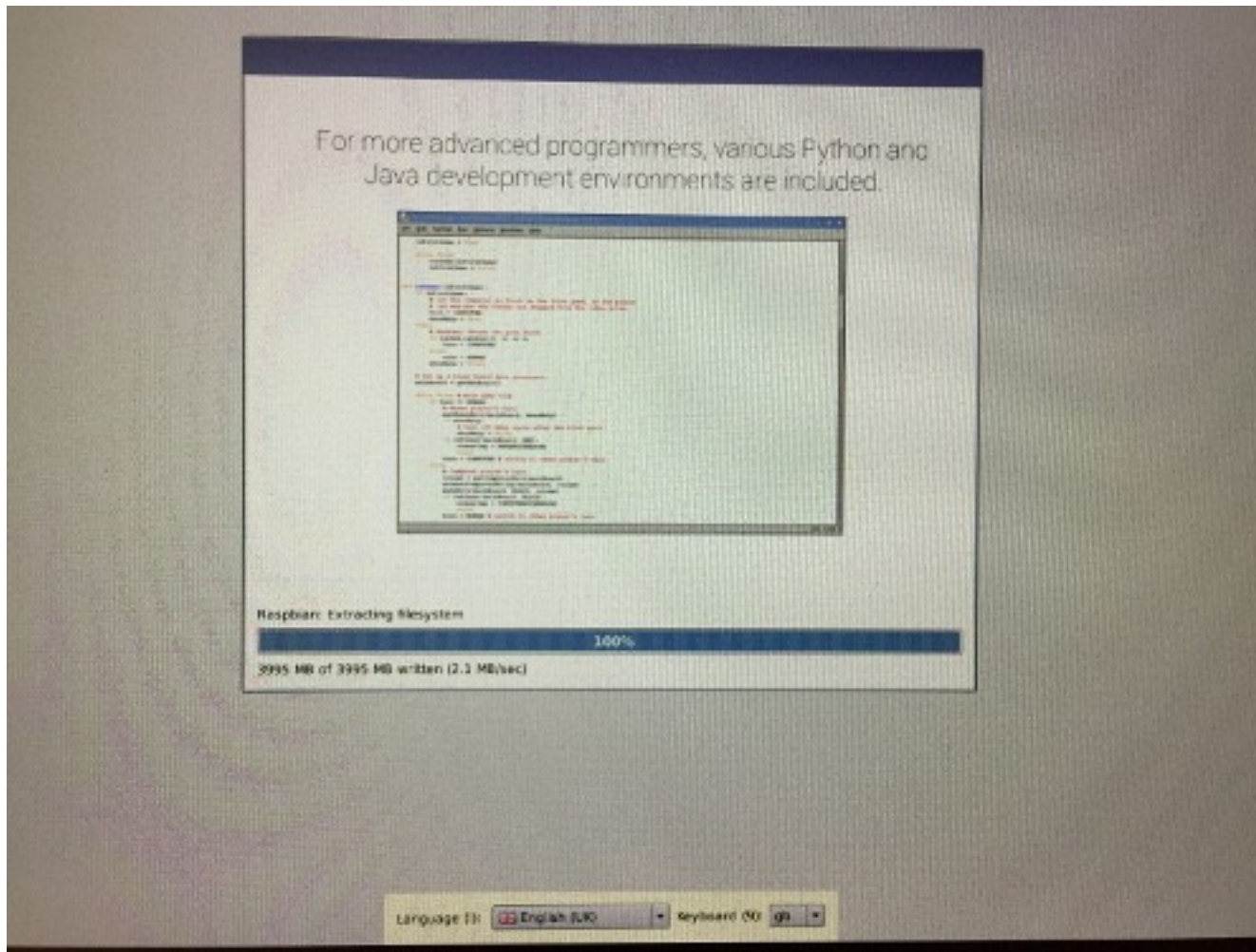
Instalación

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



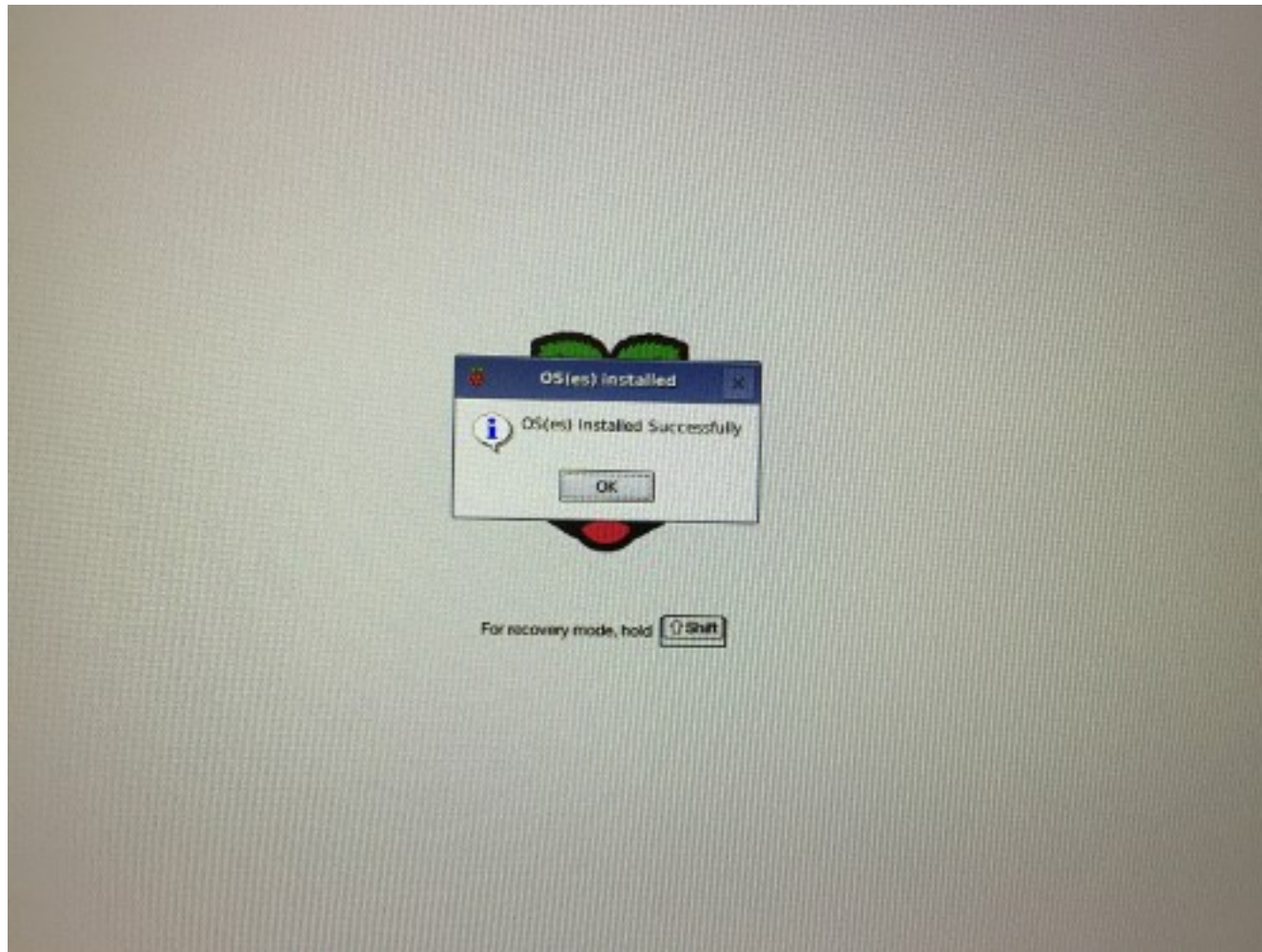
Instalación

- Pantalla indicando el 100% de la instalación:



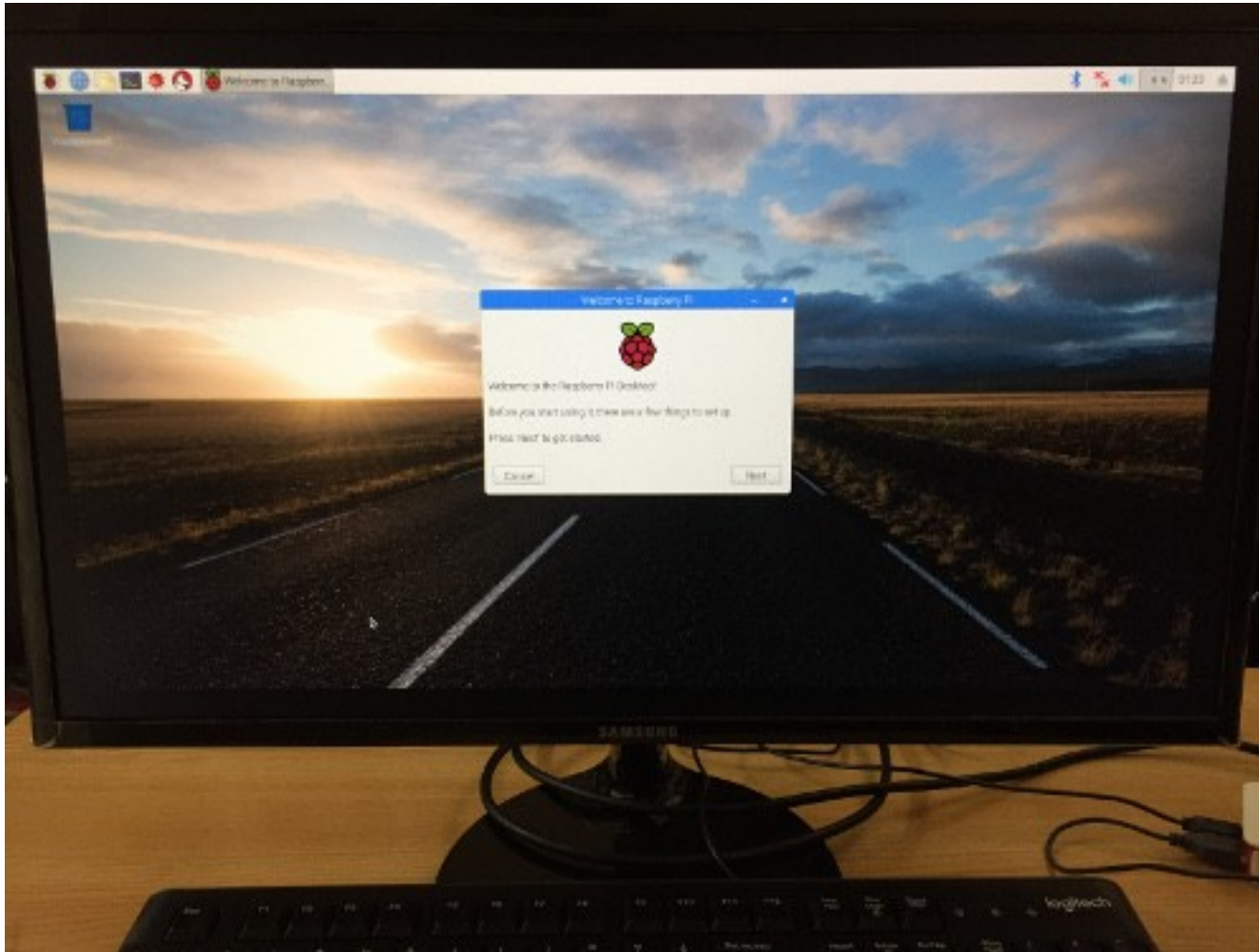
Instalación

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



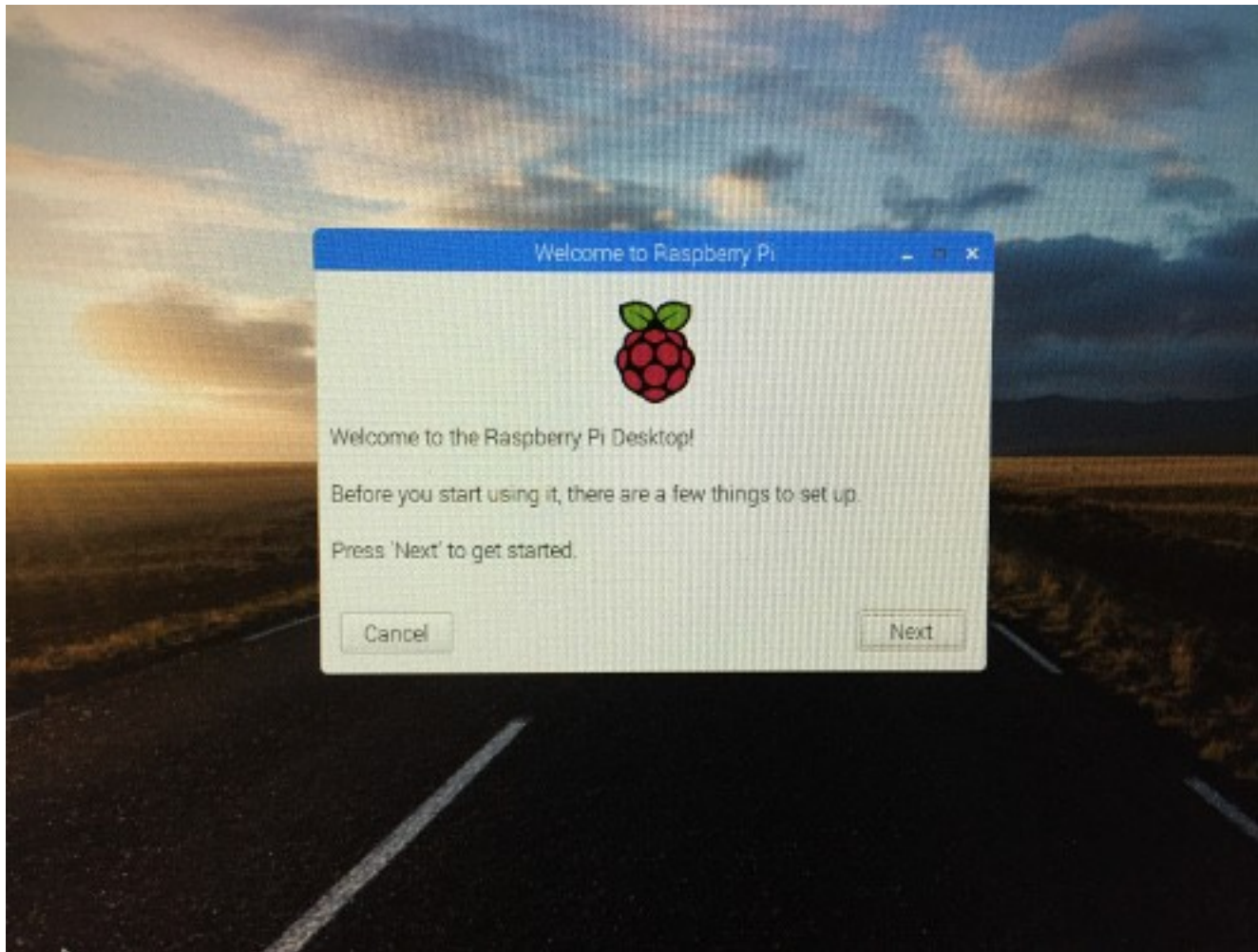
Pantalla

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



Configuración

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



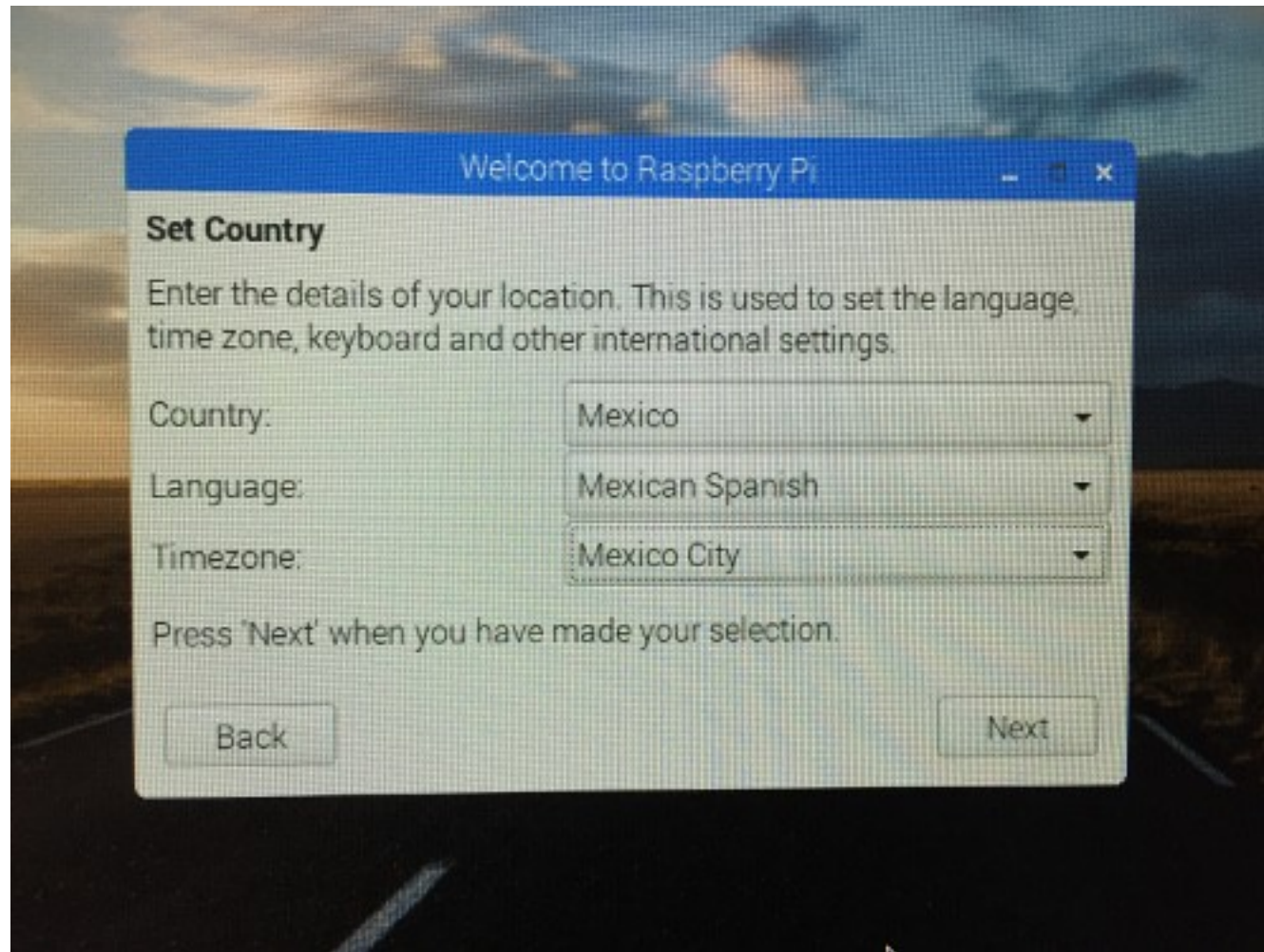
Teclado

- **Seleccionar teclado:**



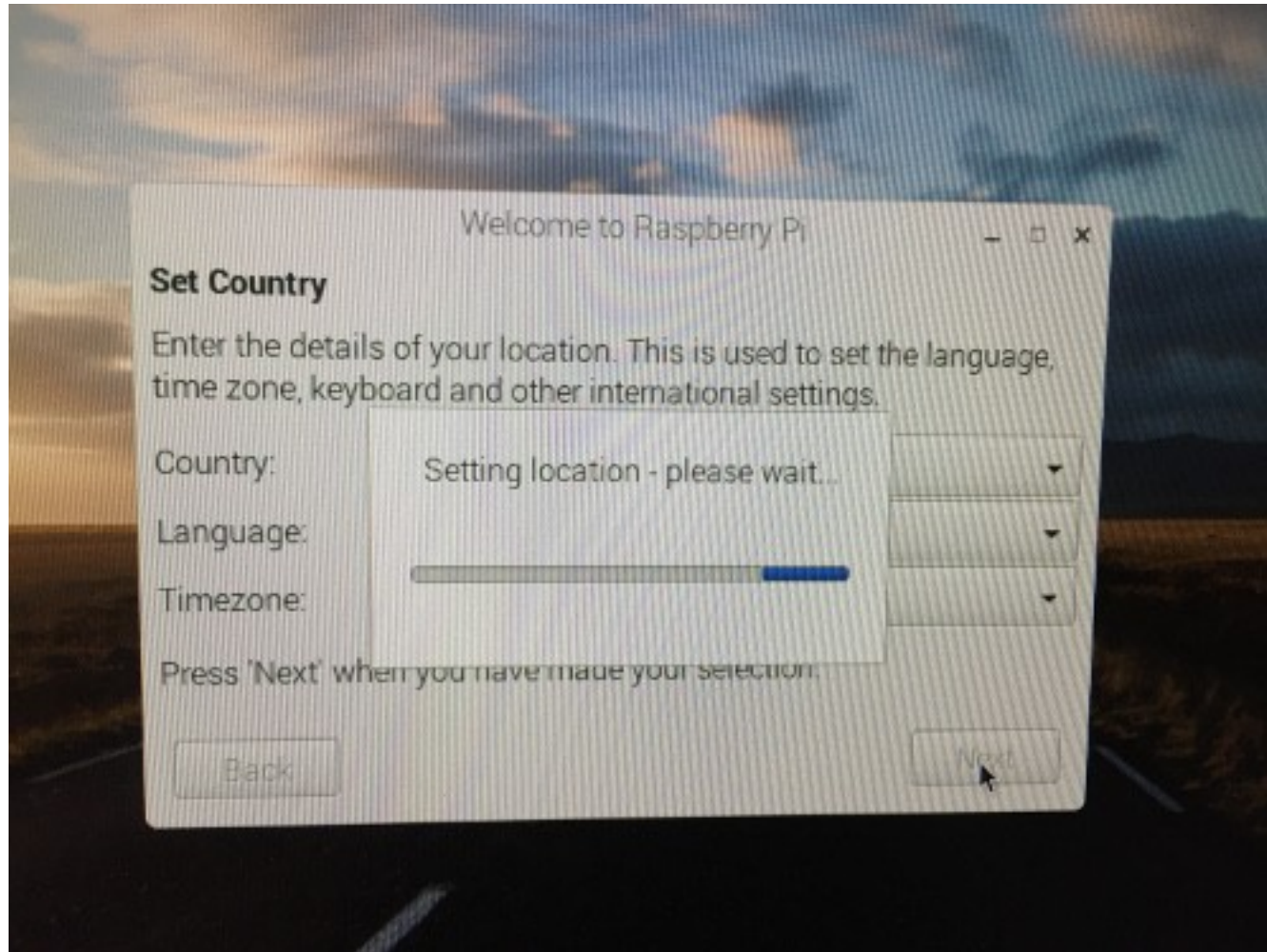
País

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



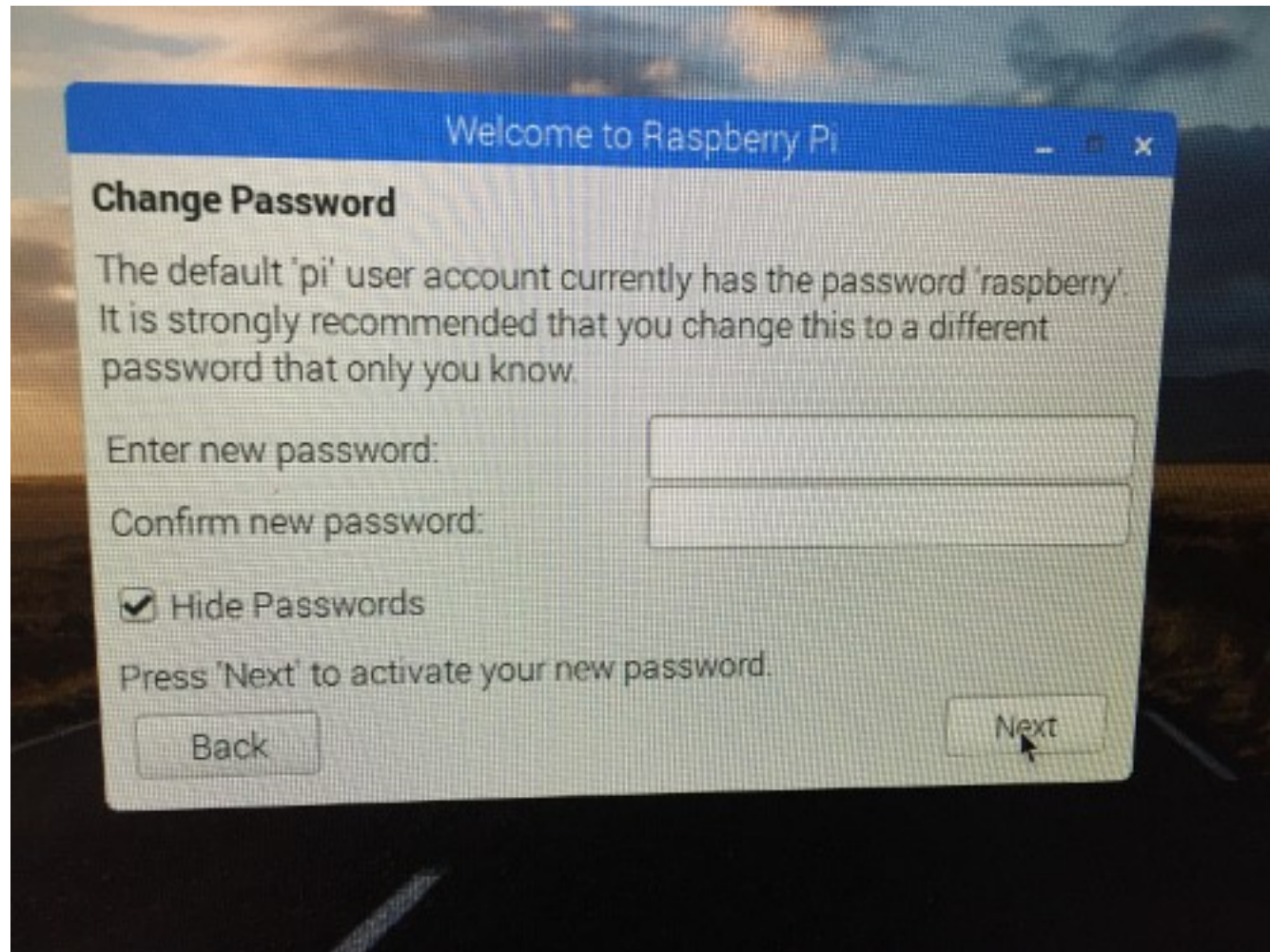
País

- **Actualizando los datos:**



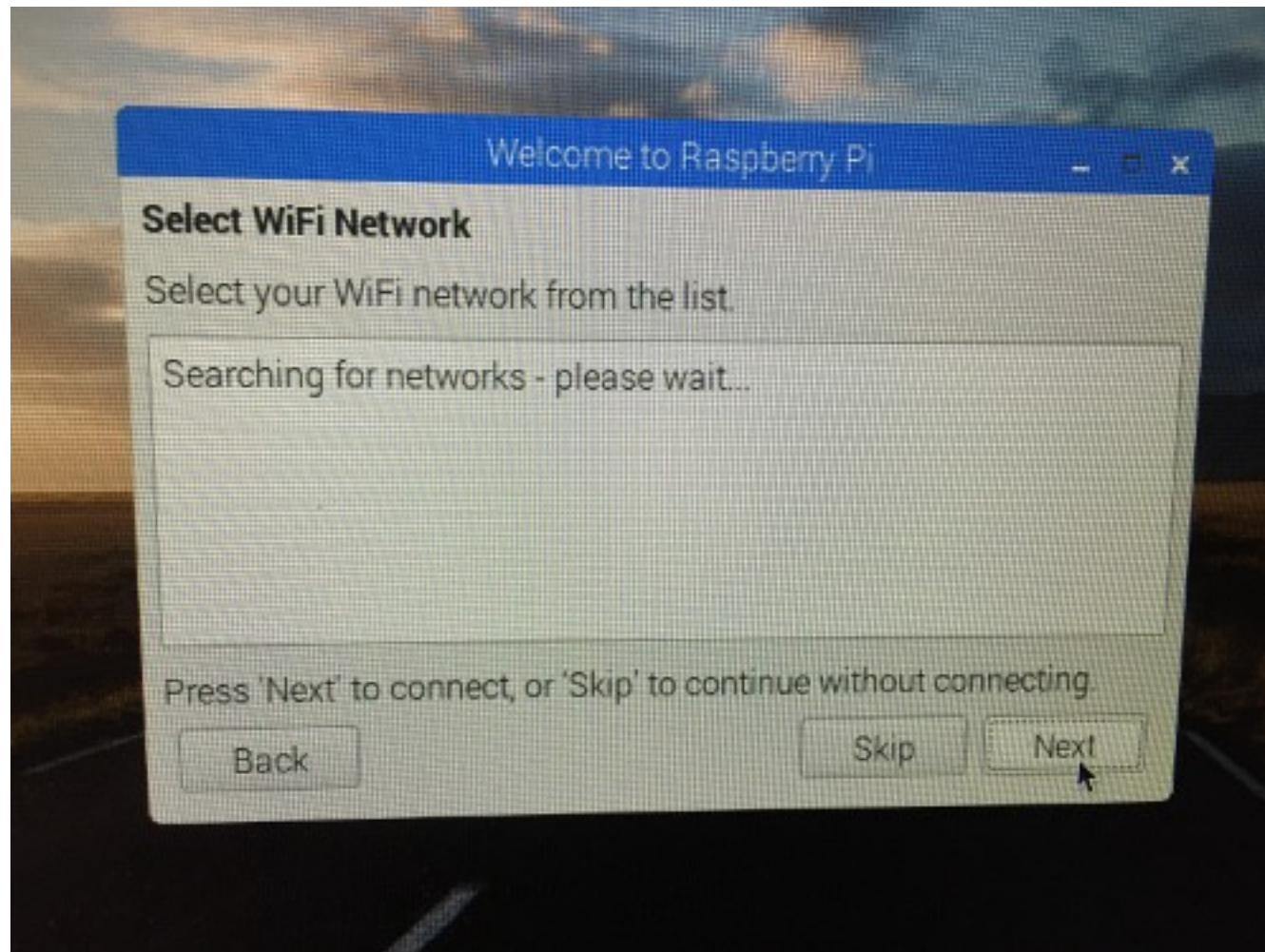
Clave

- **Pregunta la clave de acceso:**



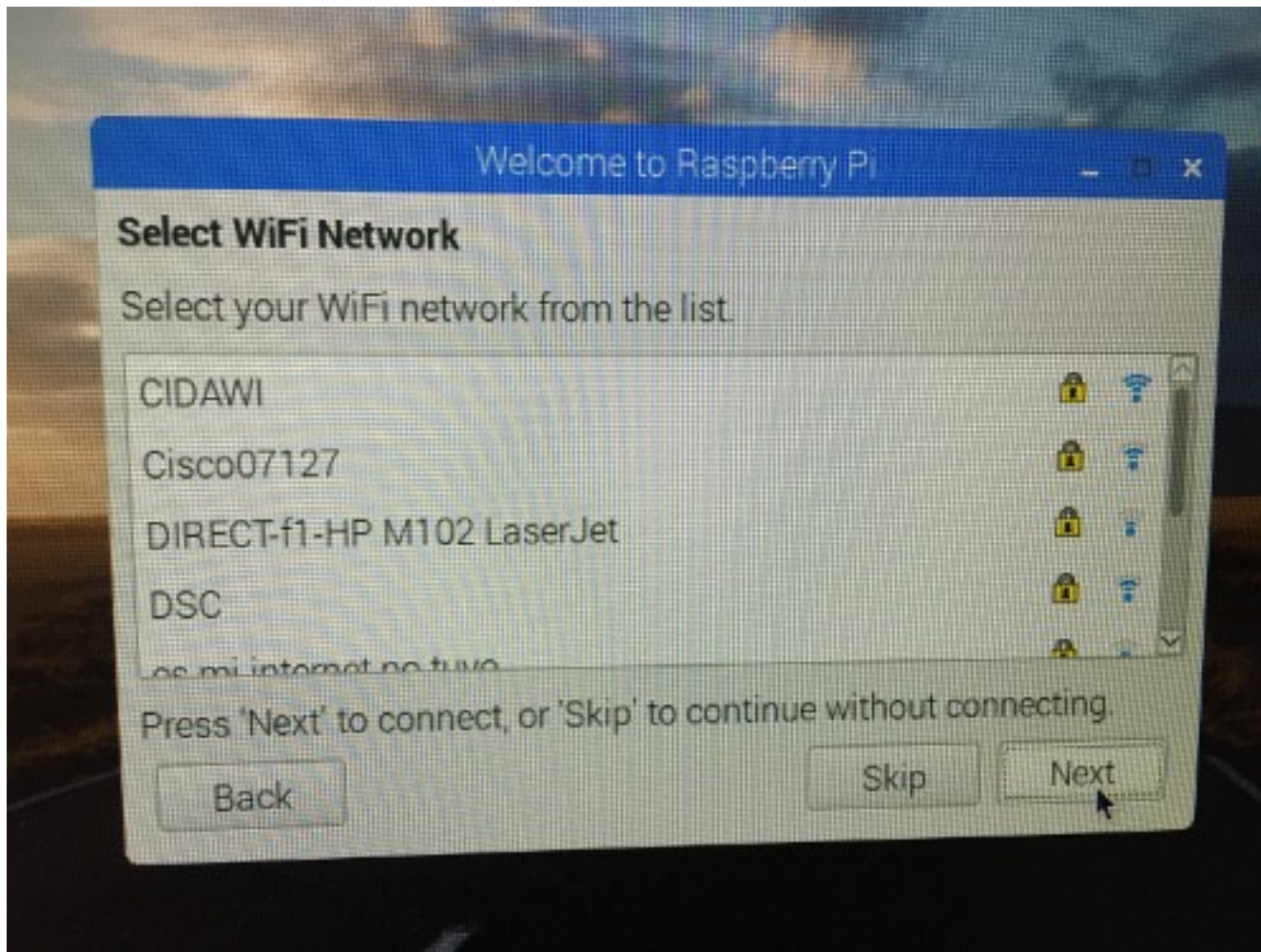
Internet

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



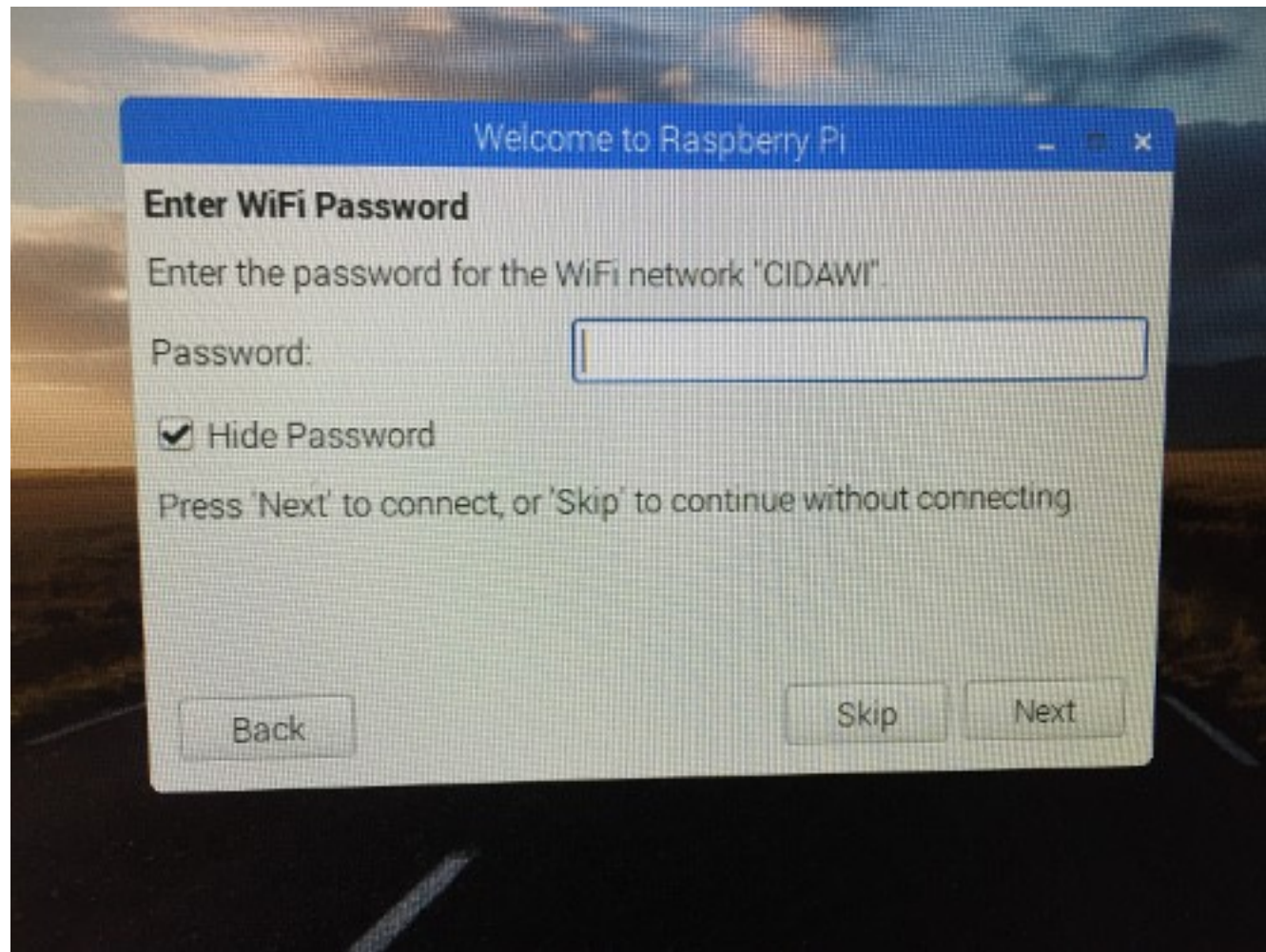
Internet

- **Redes encontradas:**



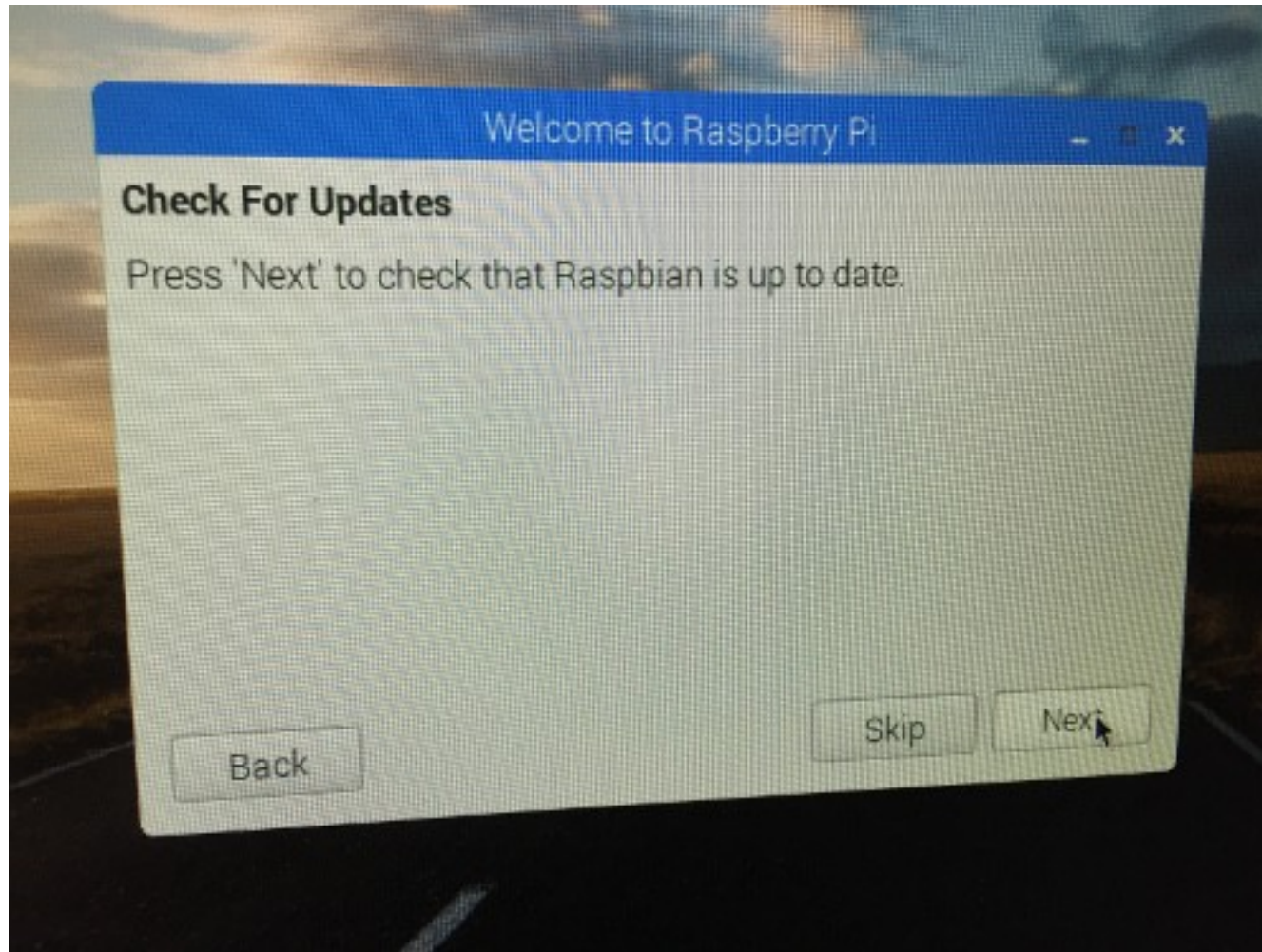
Internet

- **Clave para acceder la red:**



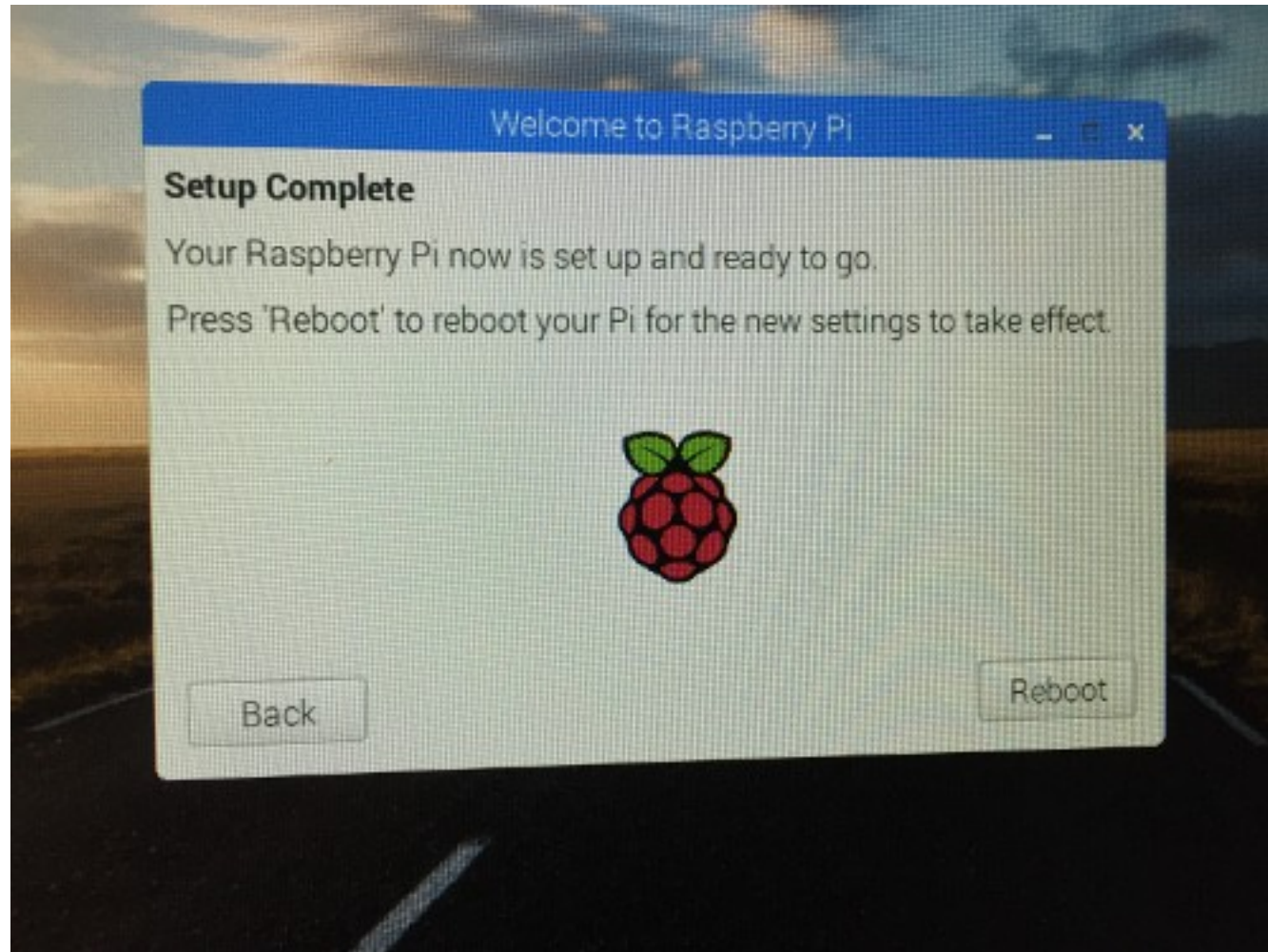
Actualización

- **Buscar actualización de paquetes:**



Finalizar

- Terminando la configuración:



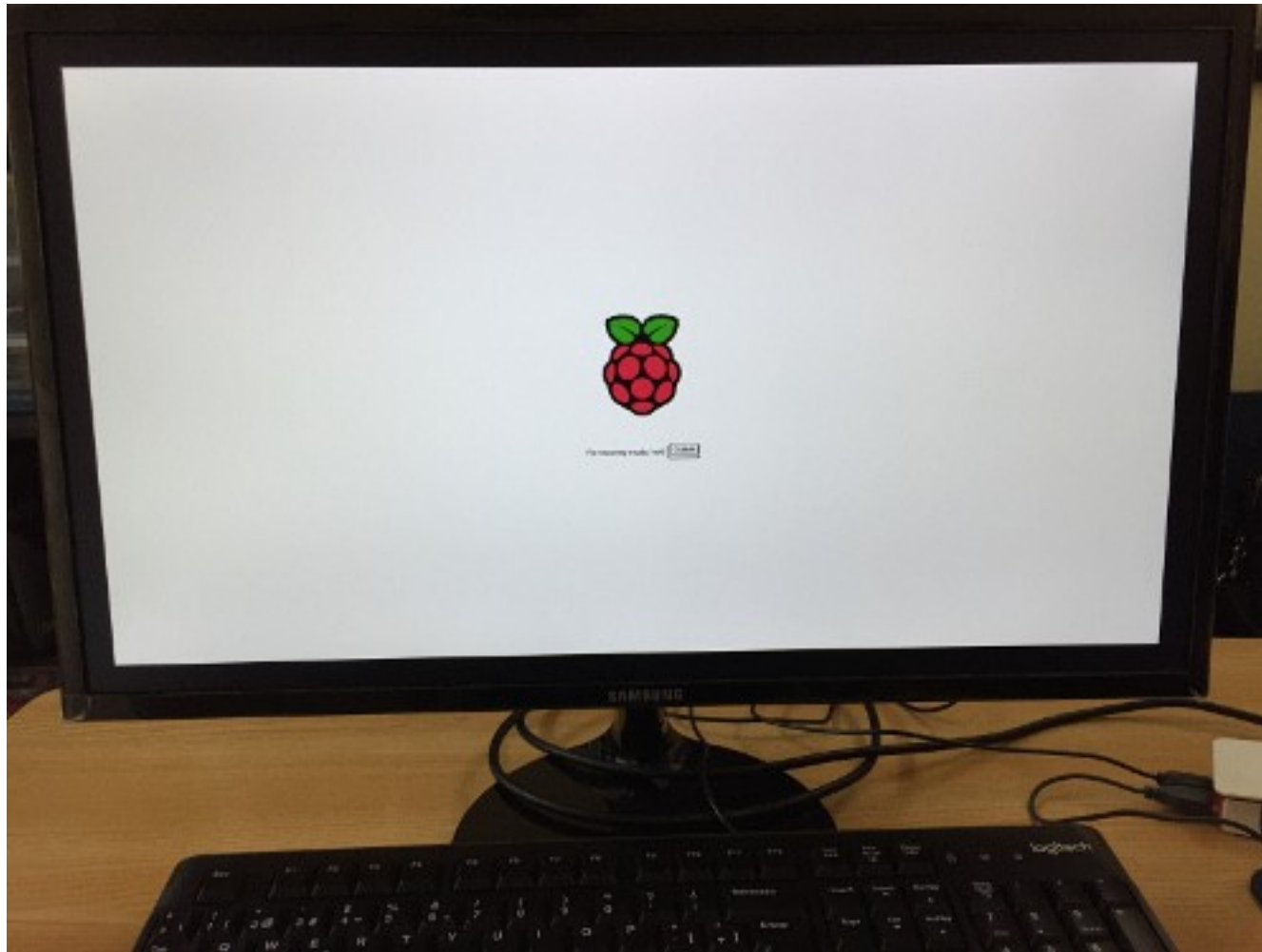
Re-Inicio

- **Pantalla al volver a arrancar:**



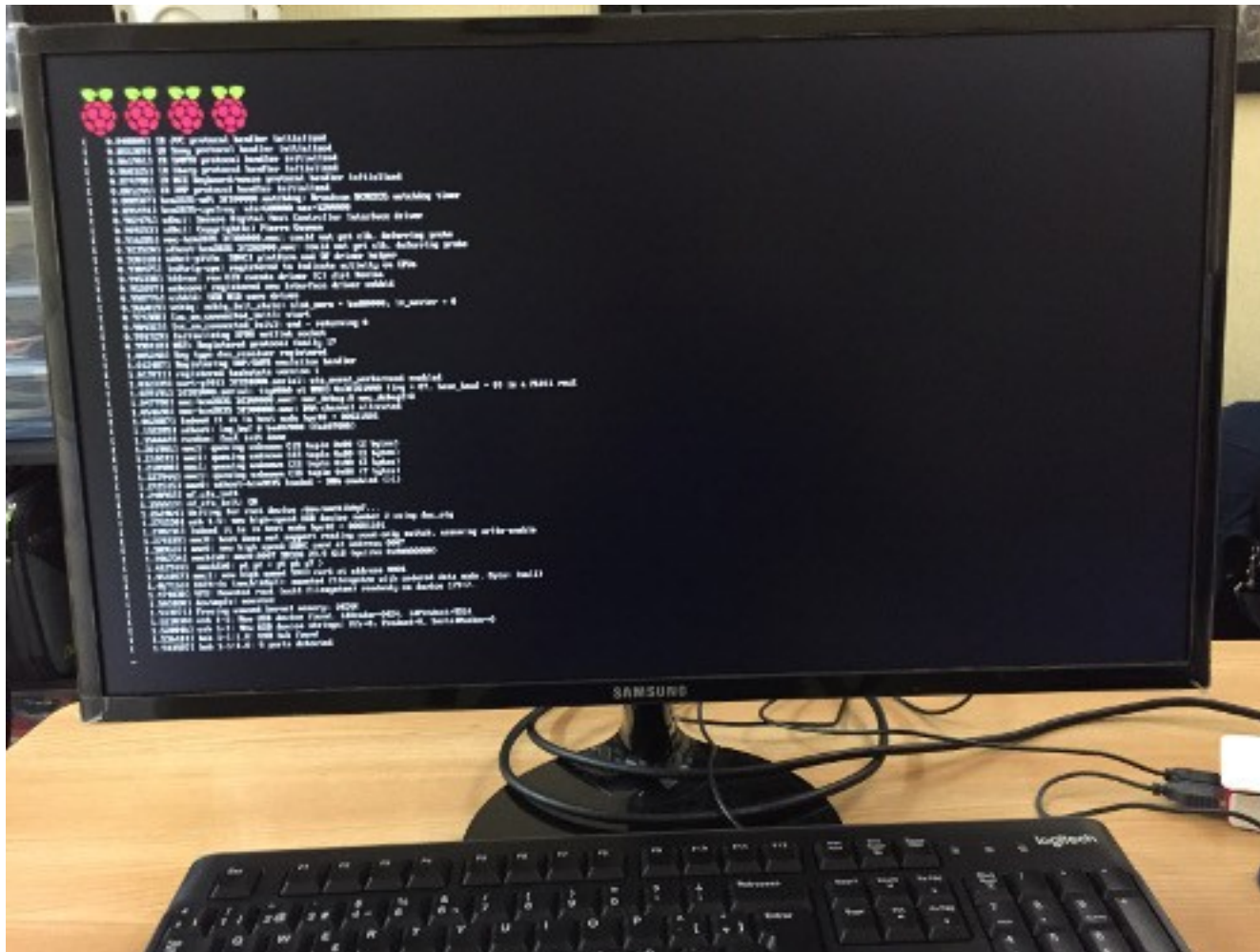
Re-Inicio

- **Pantalla al volver a arrancar:**



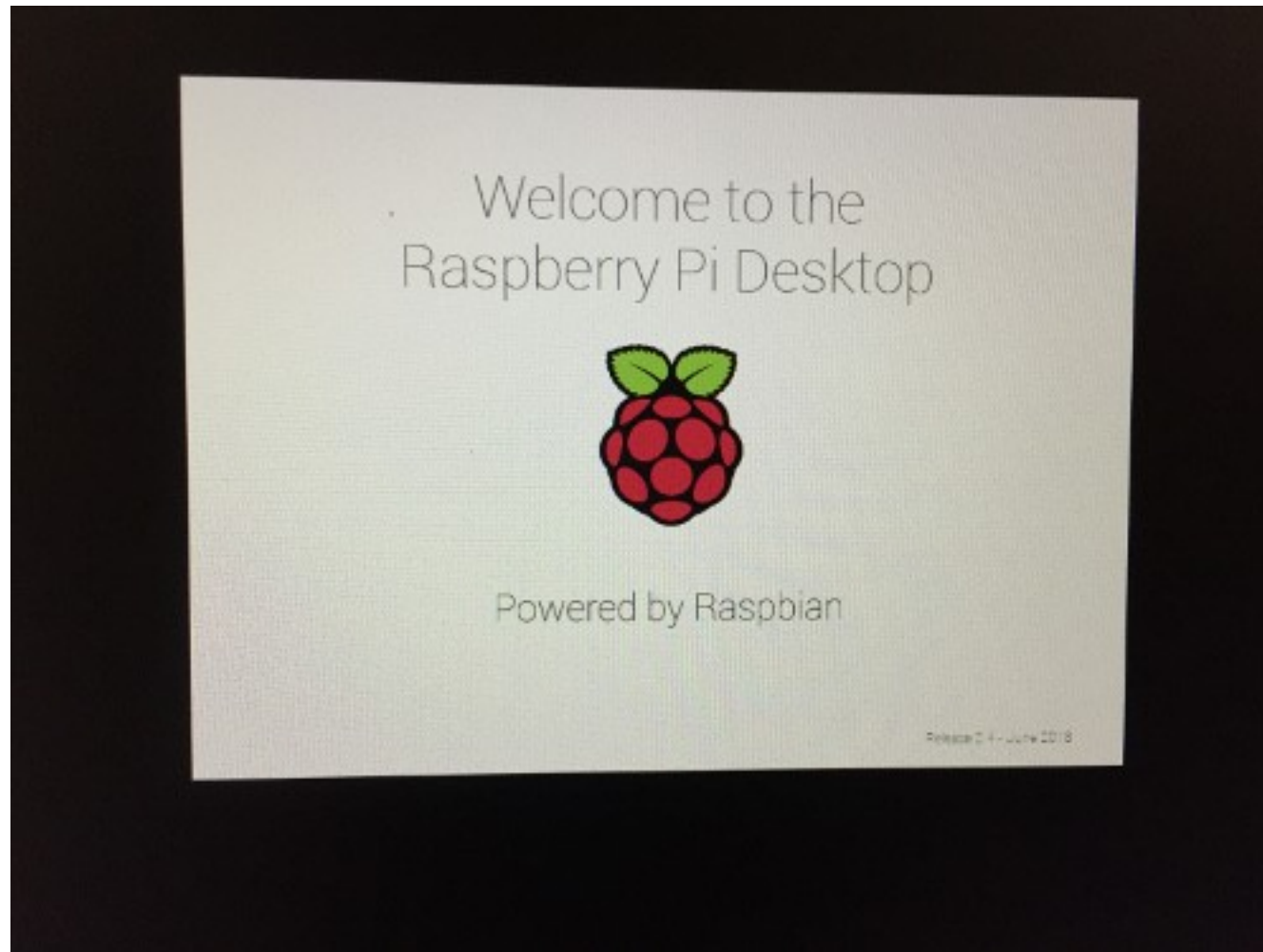
Carga del Sistema

- Cargando los paquetes iniciales del sistema operativo:



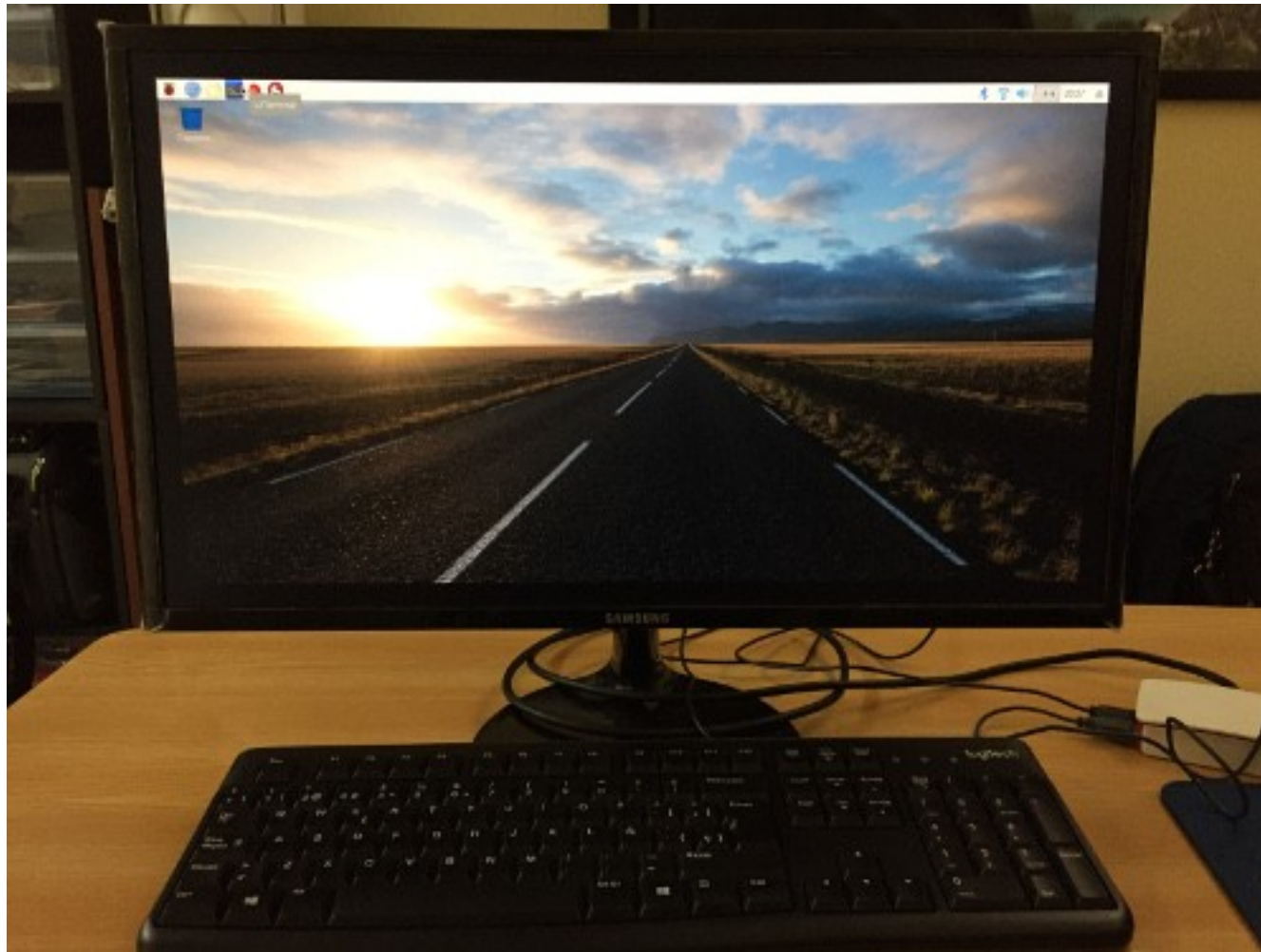
Pantalla inicial

- **Pantalla de bienvenida al sistema:**



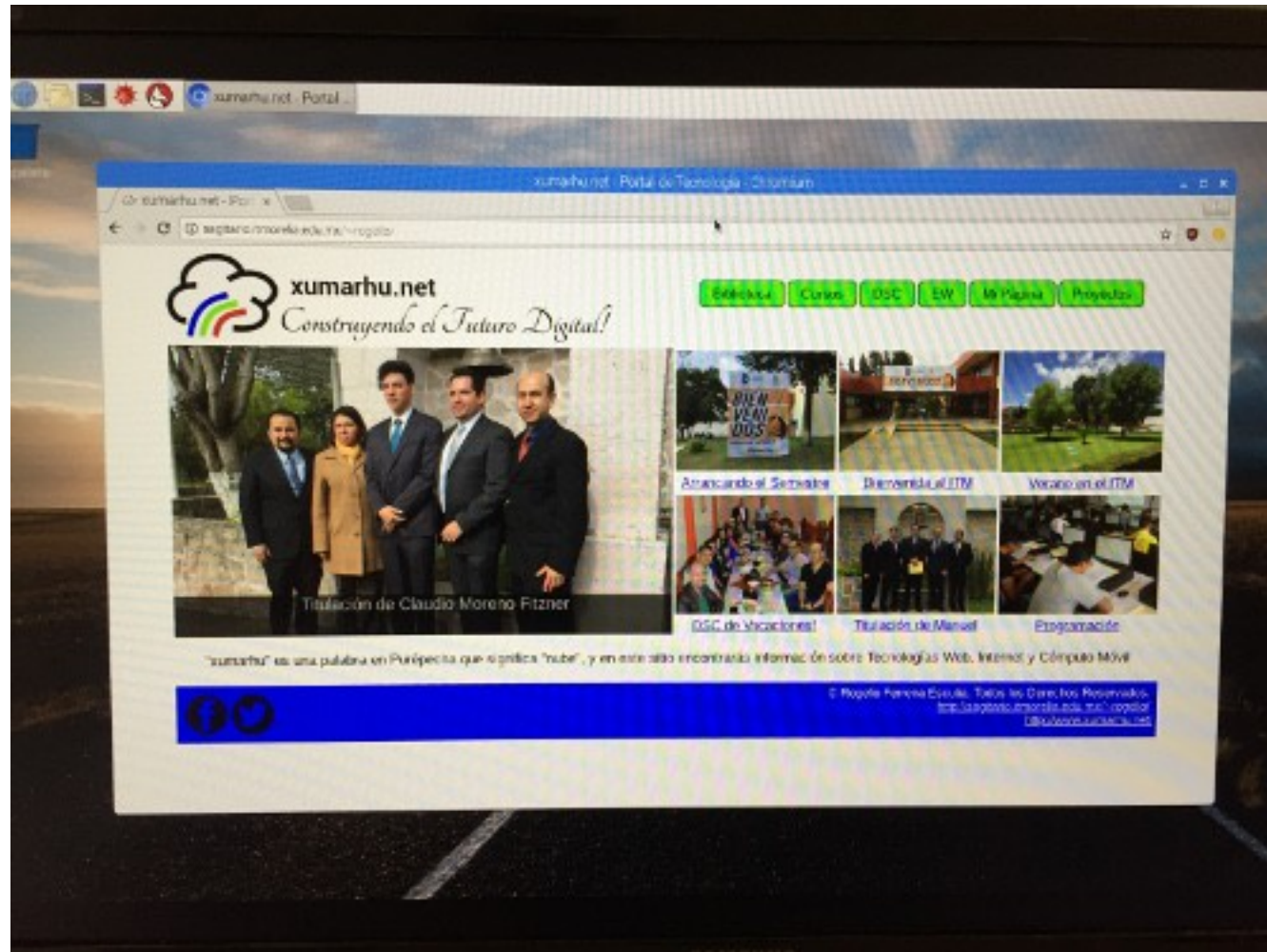
Escritorio

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



Navegador

- Navegador Chromium en funcionamiento:





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