

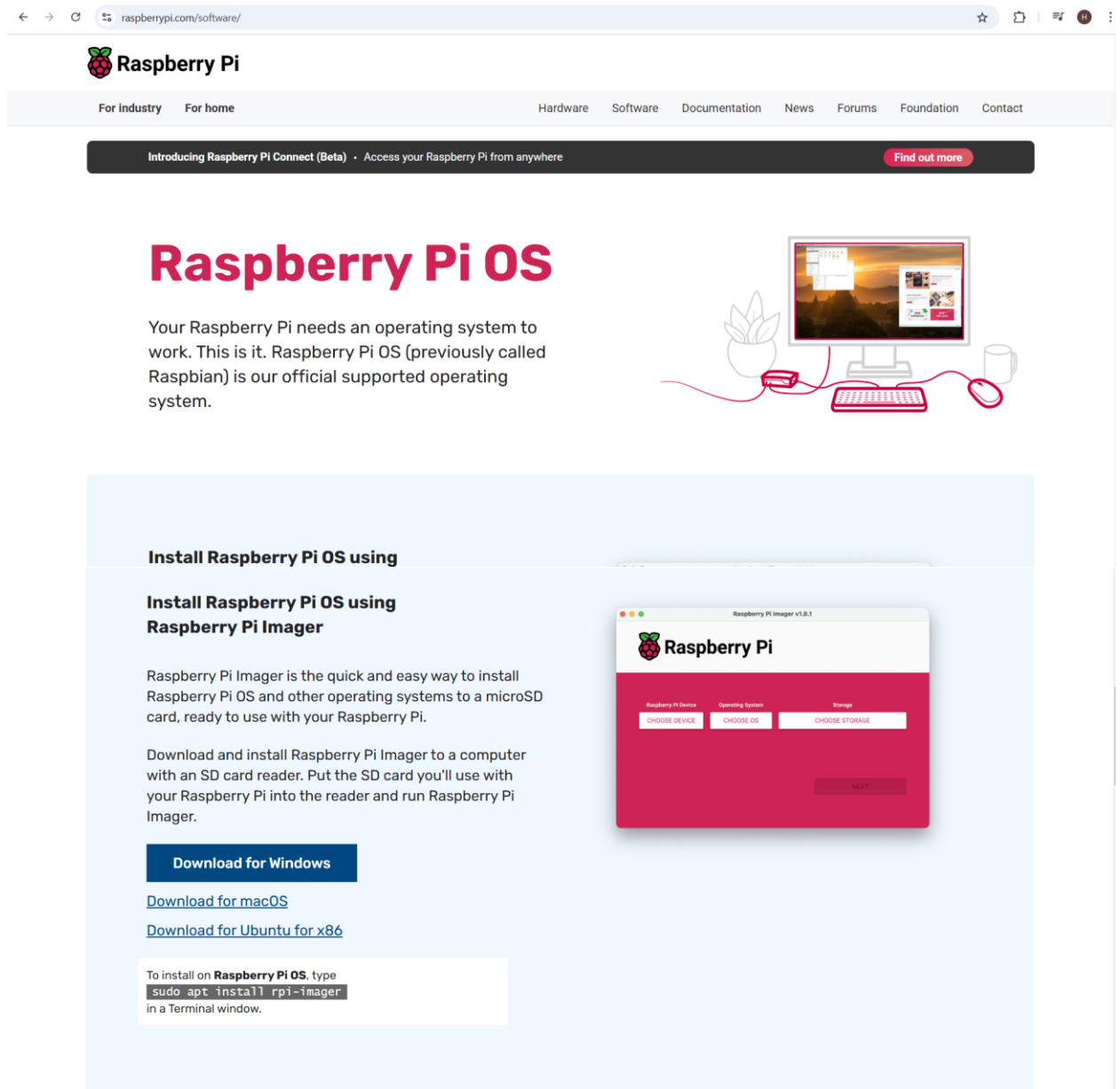
Hướng Dẫn Cài Đặt Raspberry Pi Đơn Giản

Chuẩn Bị

1. Máy tính của bạn
2. Thẻ nhớ SD (khuyến nghị 16GB trở lên)
3. Kết nối Internet
4. Raspberry Pi 4

Bước 1: Tải Phần Mềm Cần Thiết

- Tải Raspberry Pi Imager: <https://www.raspberrypi.com/software/>



The screenshot shows the Raspberry Pi website's software page. At the top, there's a navigation bar with links for Hardware, Software, Documentation, News, Forums, Foundation, and Contact. Below this is a banner for Raspberry Pi Connect (Beta). The main heading is "Raspberry Pi OS" in a large, bold, pink font. To the right of the heading is an illustration of a Raspberry Pi setup with a monitor, keyboard, and mouse. Below the heading, a paragraph explains that Raspberry Pi OS (formerly Raspbian) is the official supported operating system. Further down, there's a section titled "Install Raspberry Pi OS using Raspberry Pi Imager". This section includes a description of the imager, instructions on how to use it, and links to download it for Windows, macOS, and Ubuntu. A code block shows the terminal command to install the imager on Raspberry Pi OS. To the right of the text is a screenshot of the Raspberry Pi Imager v1.8.1 application window, which has a pink background and three main buttons: "CHOOSE DEVICE", "CHOOSE OS", and "CHOOSE STORAGE".

Raspberry Pi OS

Your Raspberry Pi needs an operating system to work. This is it. Raspberry Pi OS (previously called Raspbian) is our official supported operating system.

Install Raspberry Pi OS using Raspberry Pi Imager

Raspberry Pi Imager is the quick and easy way to install Raspberry Pi OS and other operating systems to a microSD card, ready to use with your Raspberry Pi.

Download and install Raspberry Pi Imager to a computer with an SD card reader. Put the SD card you'll use with your Raspberry Pi into the reader and run Raspberry Pi Imager.

[Download for Windows](#)

[Download for macOS](#)

[Download for Ubuntu for x86](#)

To install on **Raspberry Pi OS**, type `sudo apt install rpi-imager` in a Terminal window.

Raspberry Pi Imager v1.8.1

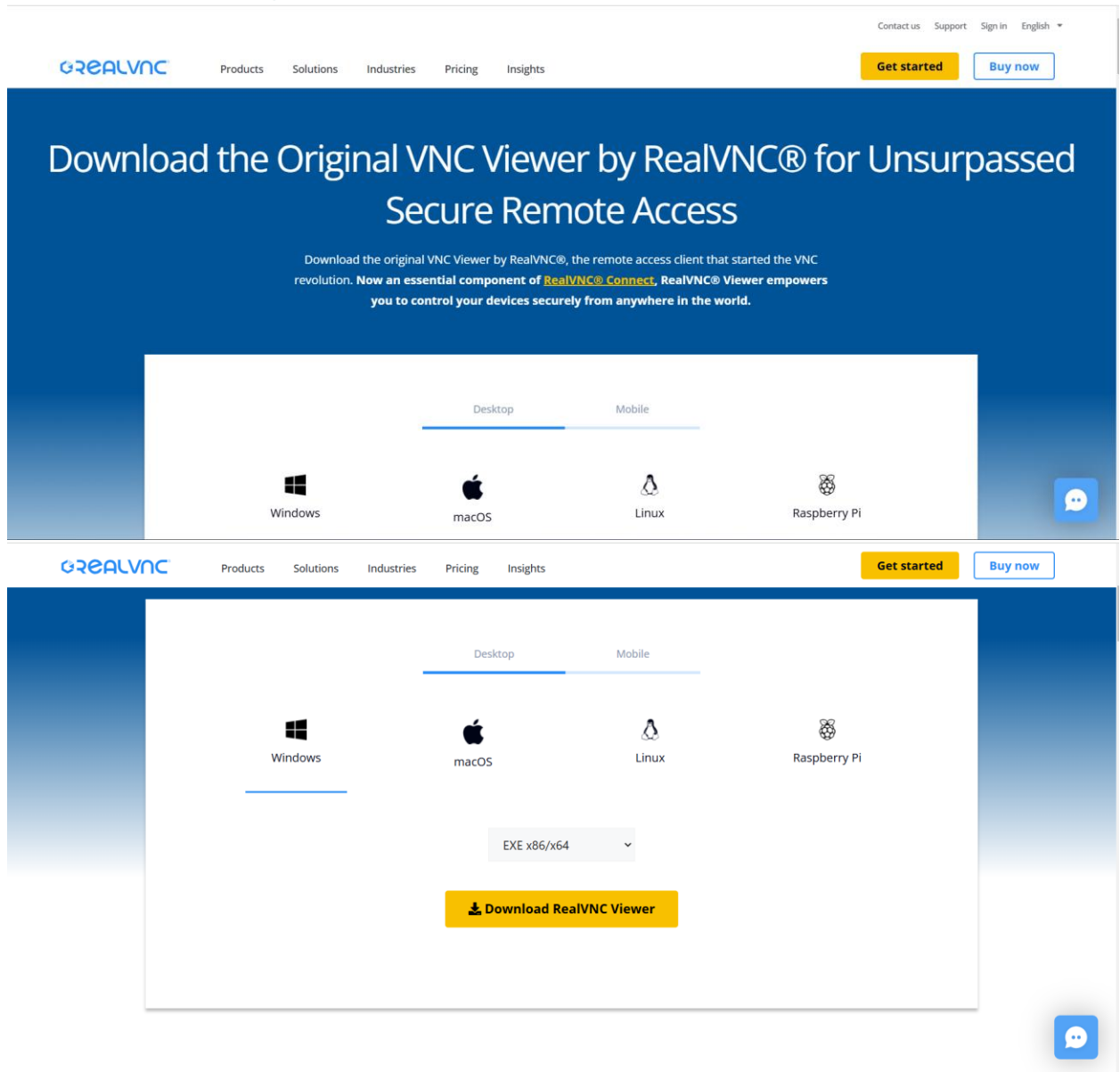
Raspberry Pi

Raspberry Pi Device | Operating System | Storage

CHOOSE DEVICE | CHOOSE OS | CHOOSE STORAGE

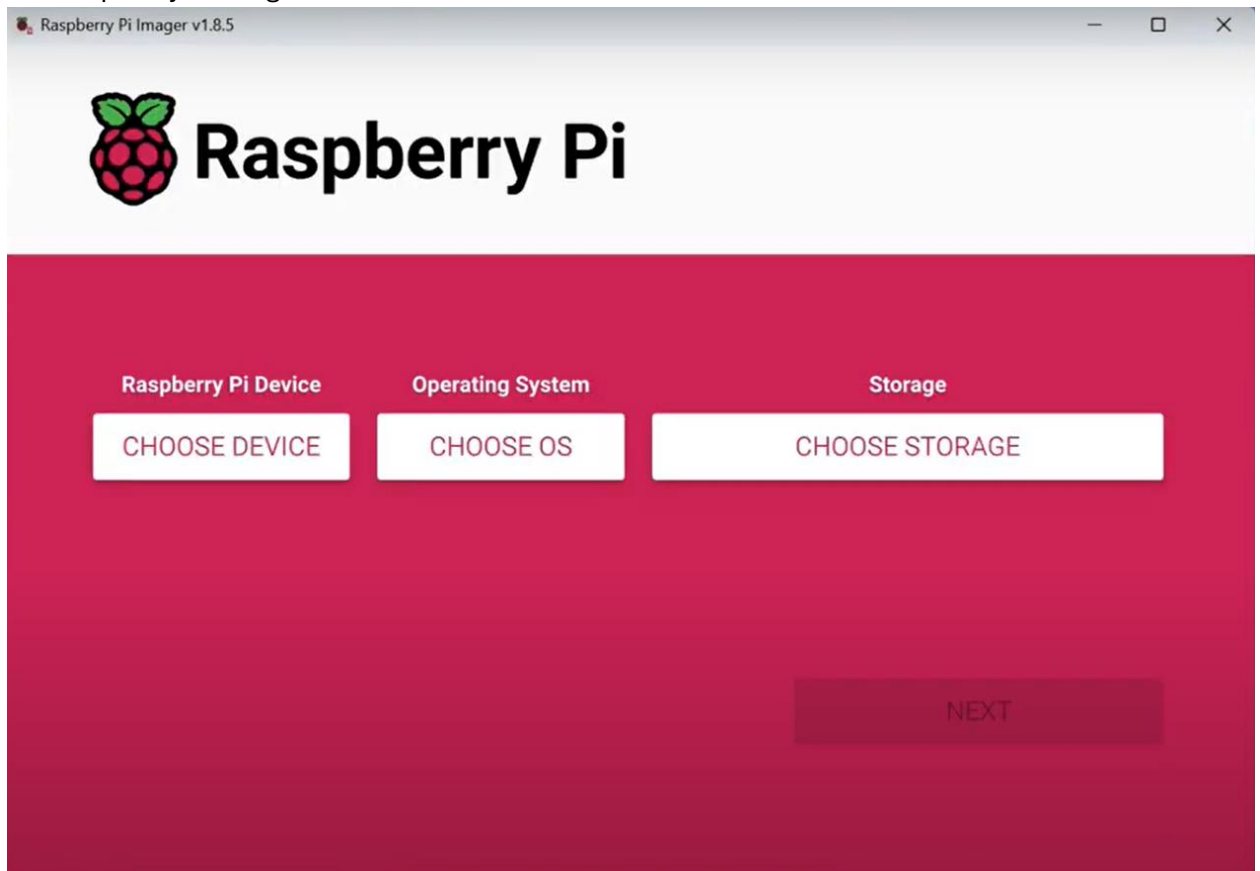
NEXT

- Tải RealVNC Viewer: <https://www.realvnc.com/en/connect/download/viewer/>



Bước 2: Cài Đặt Hệ Điều Hành

1. Mở Raspberry Pi Imager




2. Chọn thiết bị: Raspberry Pi 4

Raspberry Pi Device	X
No filtering Show every possible image	
Raspberry Pi 5 Raspberry Pi 5, 500, and Compute Module 5	
Raspberry Pi 4 Models B, 400, and Compute Modules 4, 4S	
Raspberry Pi Zero 2 W The Raspberry Pi Zero 2 W	


3. Chọn hệ điều hành phù hợp

Operating System


X




Raspberry Pi OS (64-bit)
A port of Debian Bookworm with the Raspberry Pi Desktop (Recommended) (Recommended)
Released: 2024-11-19
Cached on your computer



Raspberry Pi OS (32-bit)
A port of Debian Bookworm with the Raspberry Pi Desktop
Released: 2024-11-19
Online - 1.1 GB download



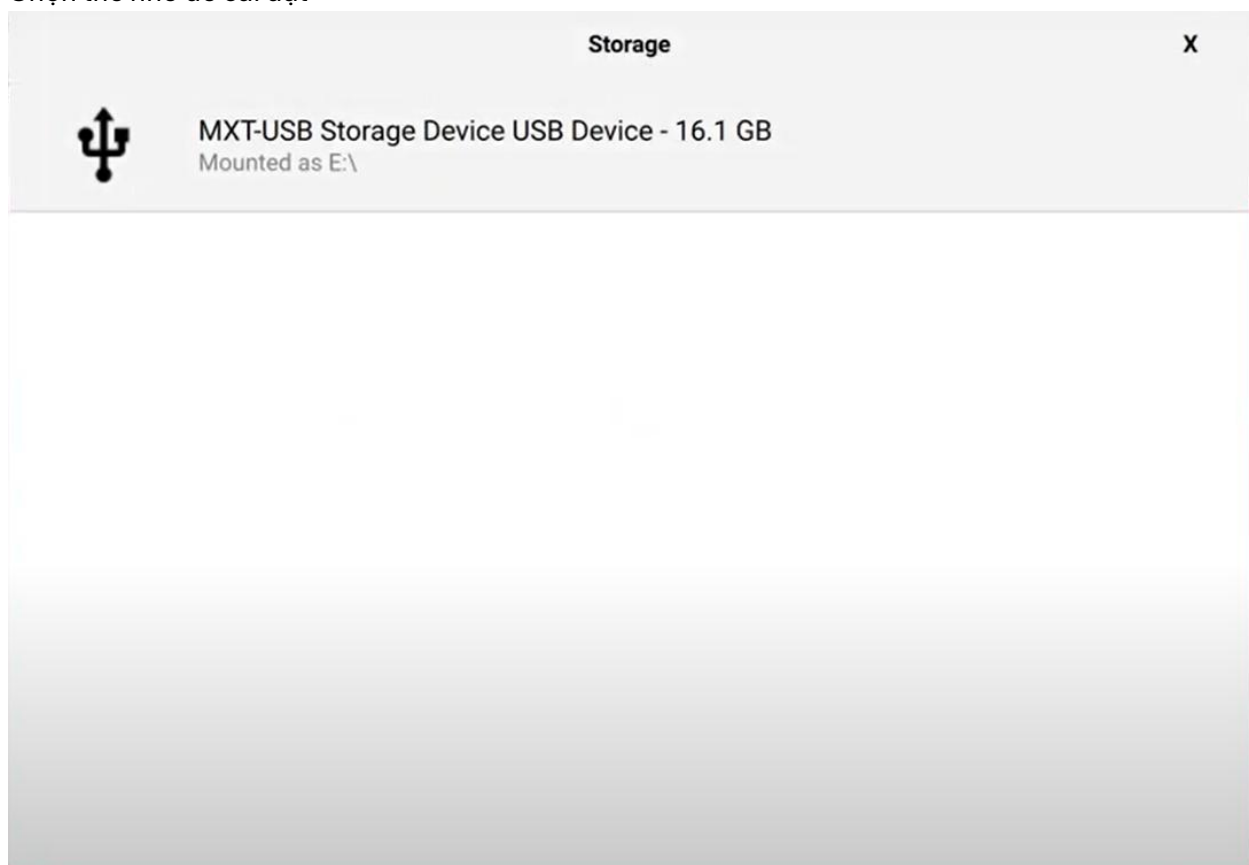
Raspberry Pi OS (Legacy, 32-bit)
A port of Debian Bullseye with security updates and desktop environment
Released: 2024-10-22
Online - 0.9 GB download



Raspberry Pi OS (other)
Other Raspberry Pi OS based images

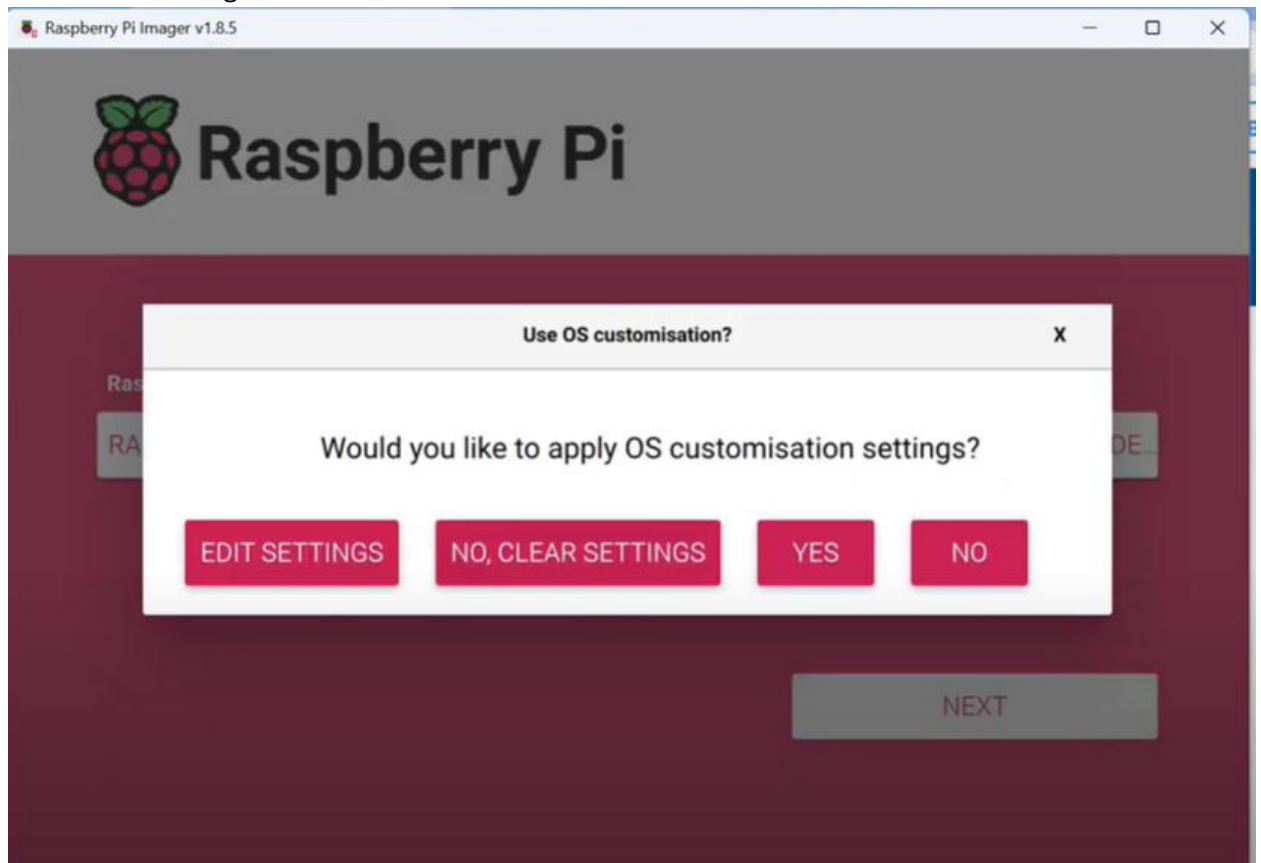
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4. Chọn thẻ nhớ để cài đặt



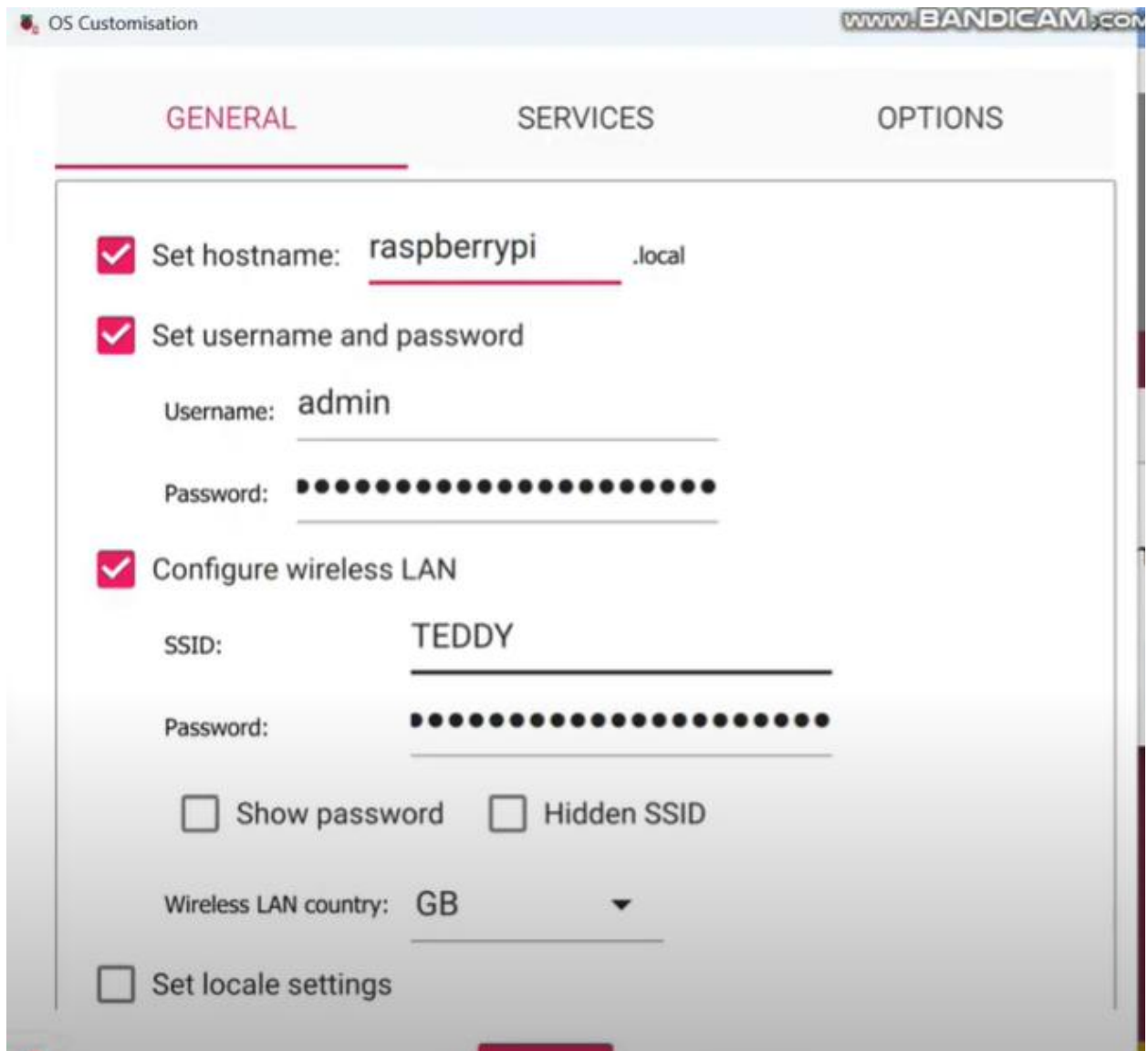
Bước 3: Cấu Hình Cài Đặt

1. Nhấn "Edit Settings"



2. Điền thông tin:

- Hostname (tên máy)
- Tên người dùng
- Mật khẩu
- Thông tin WiFi



3. Bật dịch vụ SSH:

- Chọn "Services"
- Tích chọn "Enable SSH"
- Chọn "Use password authentication"

GENERAL

SERVICES

OPTIONS

☒ Enable SSH

☒ Use password authentication

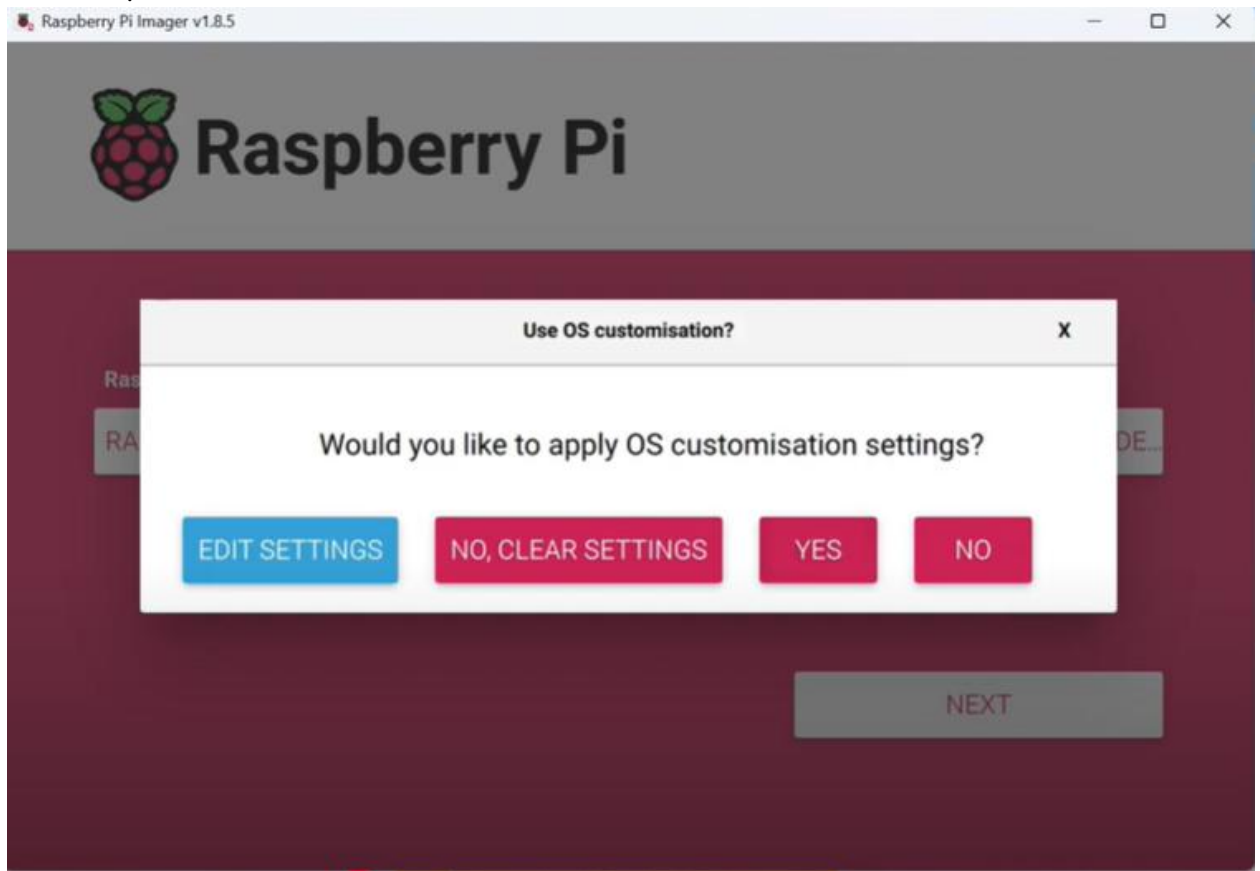
☐ Allow public-key authentication only

Set authorized_keys for 'admin':

```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAQDBeZ  
bRnb4XvFqjF6xp+6qLJiC+o6z9rxJmrzBhicZpmOxJIKRf  
R7YOs5hyvXlo/hJHEUm7G8A+uJn4c1ox1hQM47oanfZ  
gDQHmusSGEZUoA0w3hM1QM29EUyjfSuoKlrudCofEe5  
W5aJZzyxXqOt8fzswHjtgrJY4kckmPMvMEUAOmBj8Xf  
O+p21Cw5fde6bbprMP/OE+iiJHtgYNI0h1y7+iWv3qZ5t1  
CKJxq6ncGvS8U6v+xEjUHiXbhoPL3V3wobxaI7ZD85pV  
ZEURoQf6v8h1b1hJnpvCNxA+uNC7qD1mWvsY6pSQRp  
NhSwqd+26zeqmiv9Kv+Q8nSR0W8n6DW2Vc5M7d2Zq
```

SAVE

4. Lưu cài đặt



Bước 4: Phát Wifi Từ Máy Tính

Dành cho Windows:

1. Mở Cài Đặt (Settings)
2. Chọn "Network & Internet"
3. Chọn "Mobile Hotspot"
4. Chọn kết nối Internet để chia sẻ
5. Bật "Share my Internet connection with other devices"

6. Đặt tên mạng và mật khẩu



Dành cho MacOS:

1. Mở "System Preferences"
2. Chọn "Sharing"
3. Chọn "Internet Sharing"
4. Chọn nguồn kết nối Internet
5. Tích chọn "Wi-Fi"
6. Cấu hình tên mạng và mật khẩu

Bước 5: Kết Nối Raspberry Pi

1. Rút thẻ nhớ và gắn vào Raspberry Pi
2. Kiểm tra kết nối WiFi:
 - Mở Command Prompt (CMD) và nhập: `ping raspberrypi`
 - Hoặc sử dụng địa chỉ IP được hiển thị khi phát Wifi

```
Command Prompt
Microsoft Windows [Version 10.0.26100.3194]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADMIN>ping -4 raspberrypi

Pinging raspberrypi.local [192.168.137.188] with 32 bytes of data:
Reply from 192.168.137.188: bytes=32 time=2ms TTL=64
Reply from 192.168.137.188: bytes=32 time=6ms TTL=64
Reply from 192.168.137.188: bytes=32 time=4ms TTL=64
Reply from 192.168.137.188: bytes=32 time=7ms TTL=64

Ping statistics for 192.168.137.188:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 7ms, Average = 4ms

C:\Users\ADMIN>
```

Bước 6: Kết Nối Từ Xa (SSH)

1. Mở Command Prompt
2. Nhập: `ssh username@ip_address`

```
C:\Users\ADMIN>ssh admin@192.168.137.188
Linux raspberrypi 6.6.74+rpt-rpi-v8 #1 SMP PREEMPT Debian 1:6.6.74-1+rpt1 (2025-01-27) aarch64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

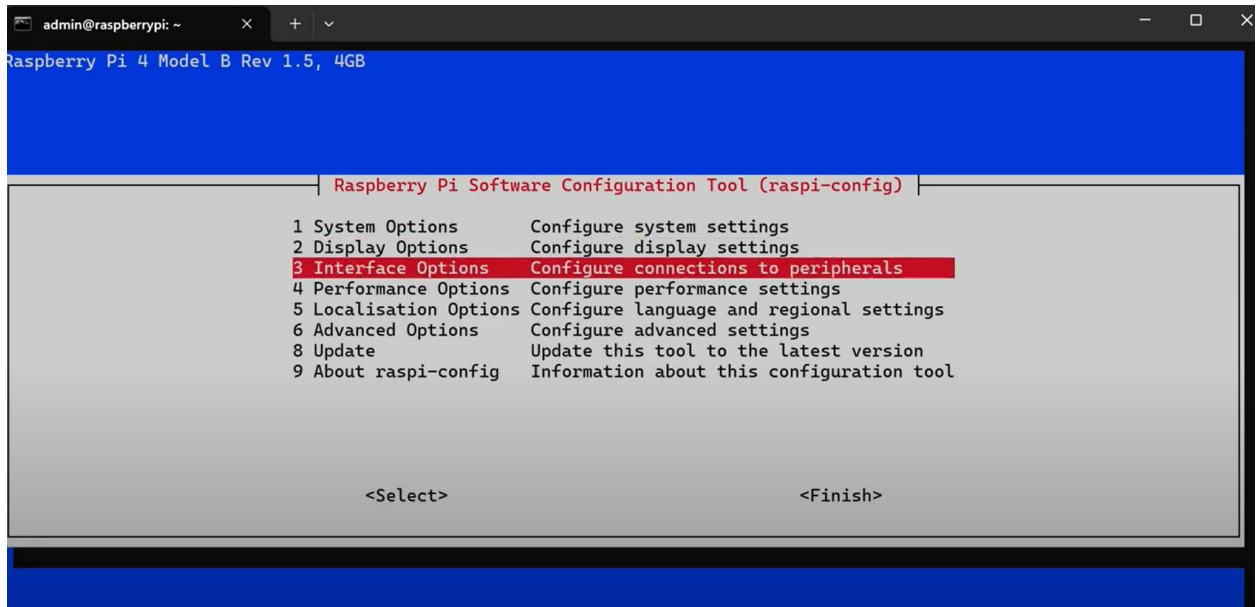
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed Feb 19 08:35:19 2025
admin@raspberrypi:~ $
```

Bước 7: Cài Đặt VNC

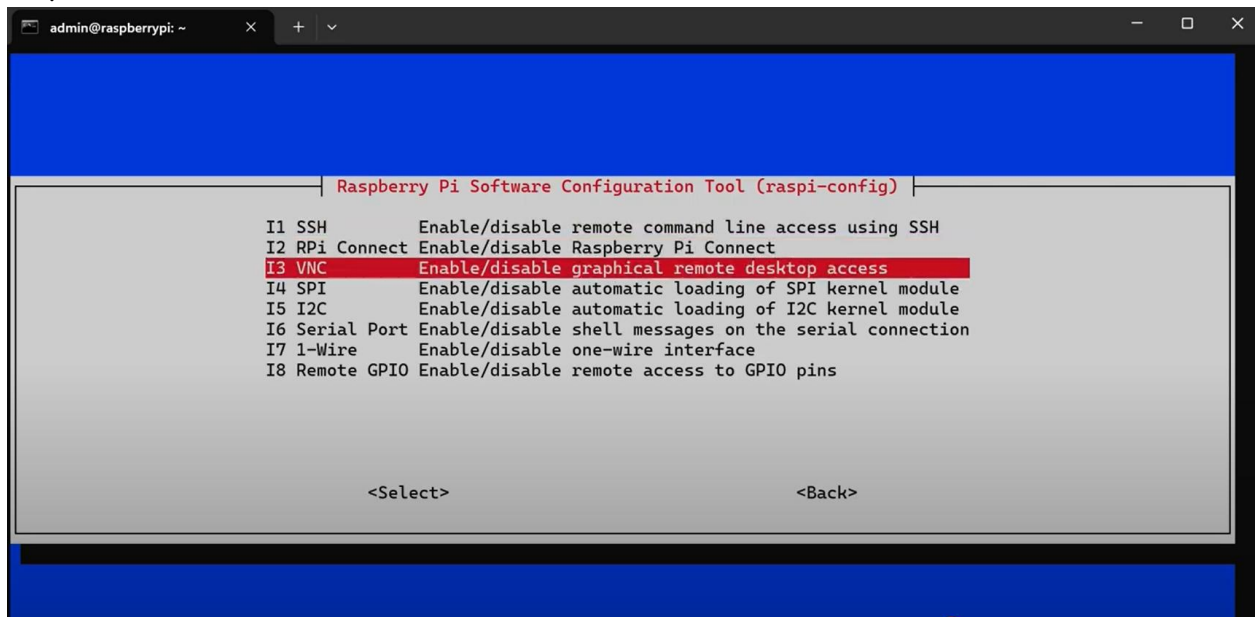
1. Mở Terminal trên Raspberry Pi
2. Nhập: `sudo raspi-config`

```
admin@raspberrypi:~ $ sudo raspi-config
```

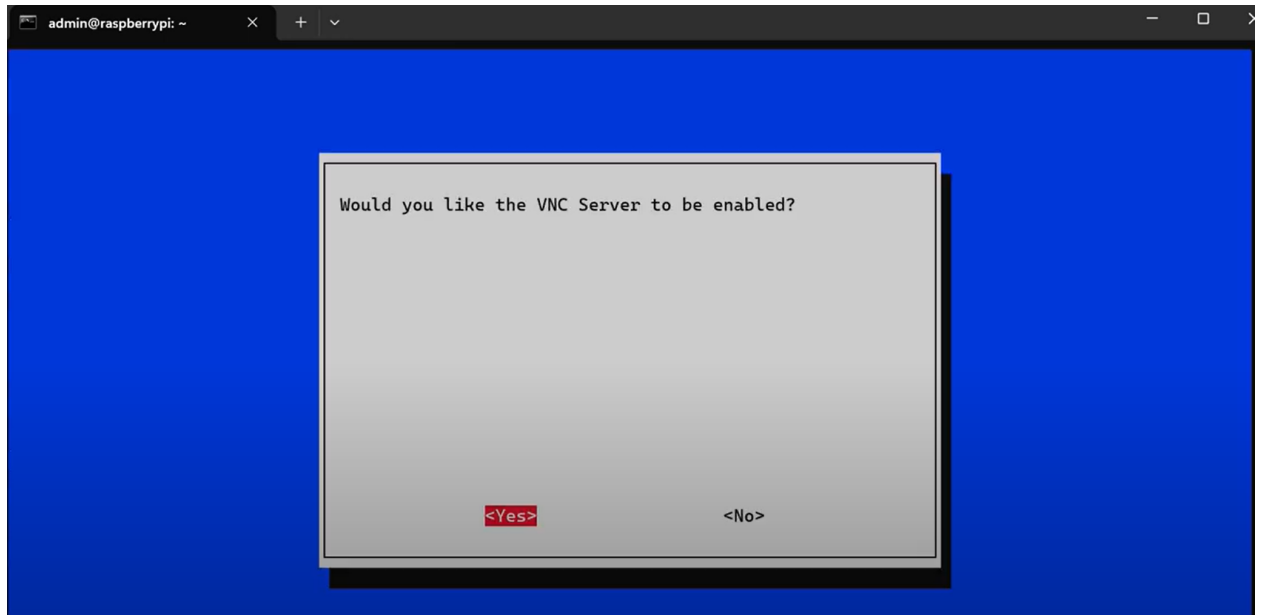
3. Chọn "Interface Options"



4. Chọn VNC

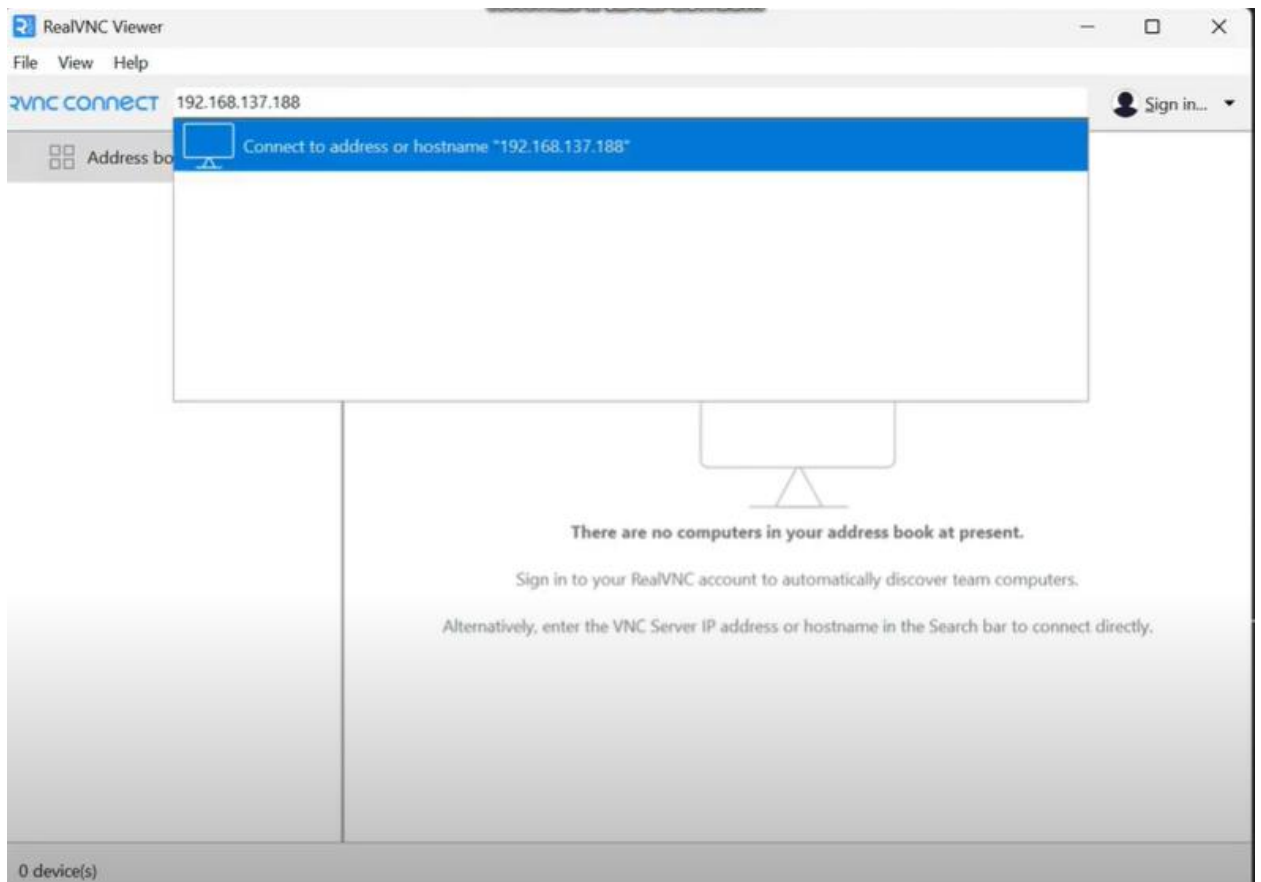


5. Chọn "Yes"



Bước 8: Truy Cập Từ Xa

1. Mở RealVNC Viewer



2. Nhập địa chỉ IP của Raspberry Pi

3. Nhập tên người dùng và mật khẩu

