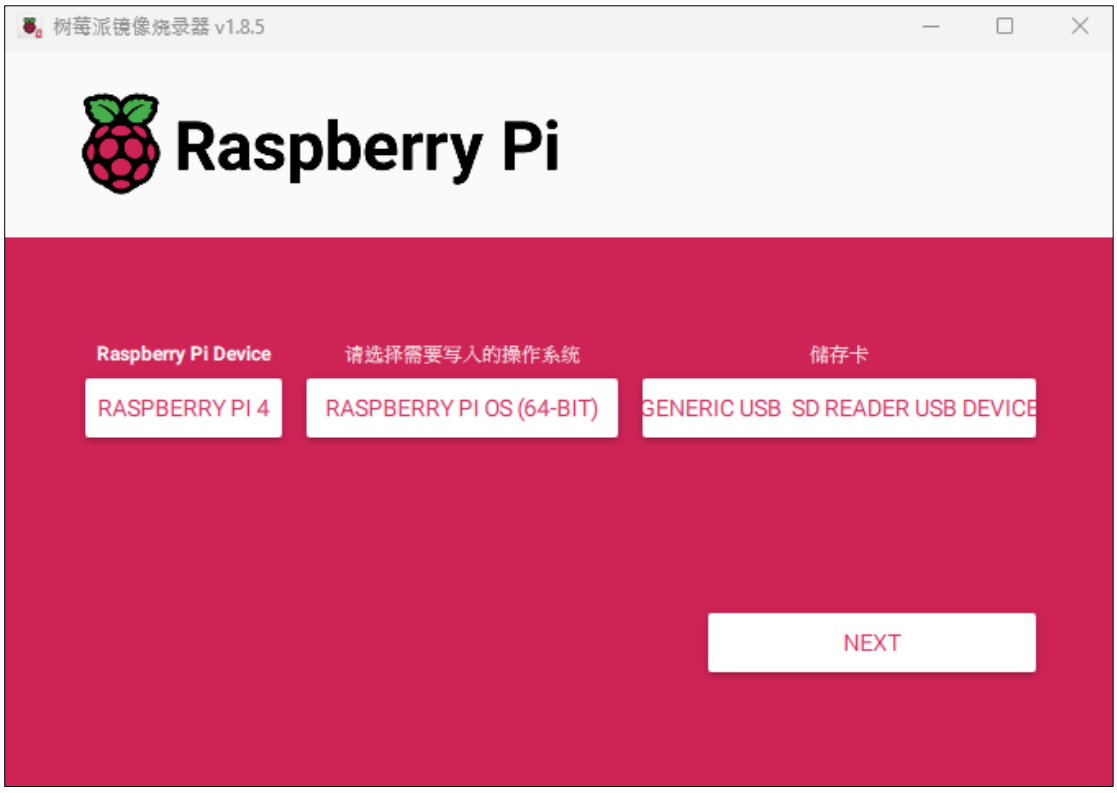
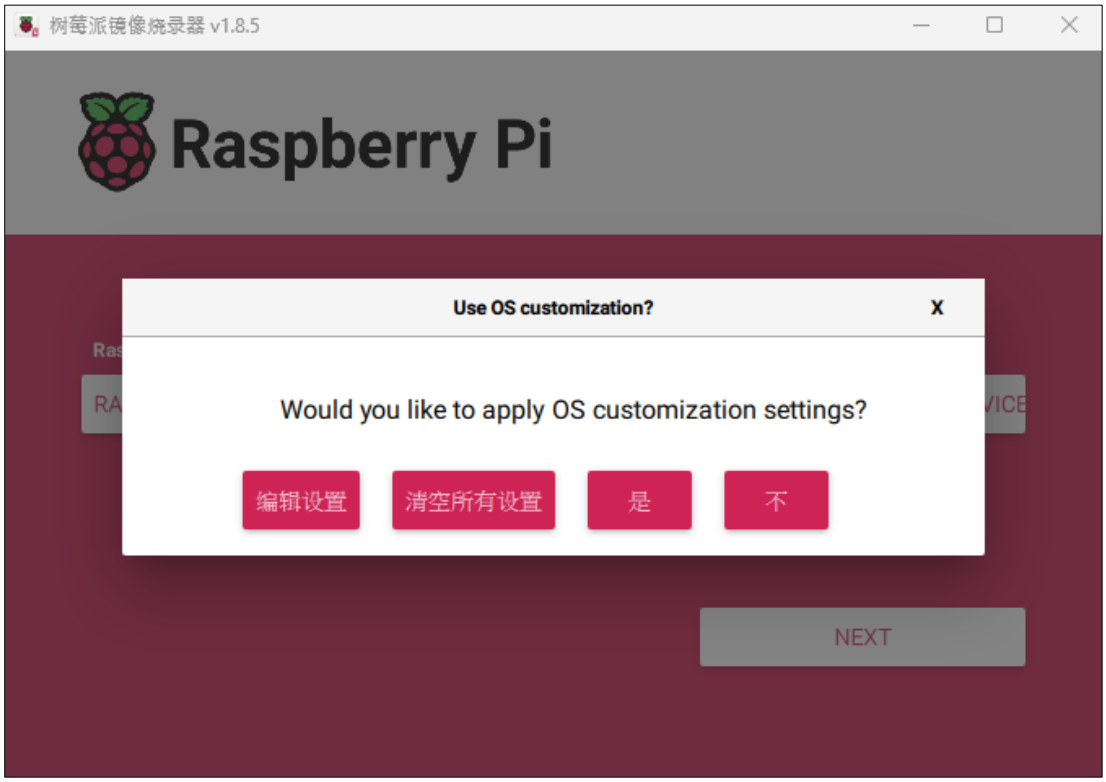
Pi4 with DHT22

Raspberry Pi Imager 軟體

https://www.raspberrypi.com/software/

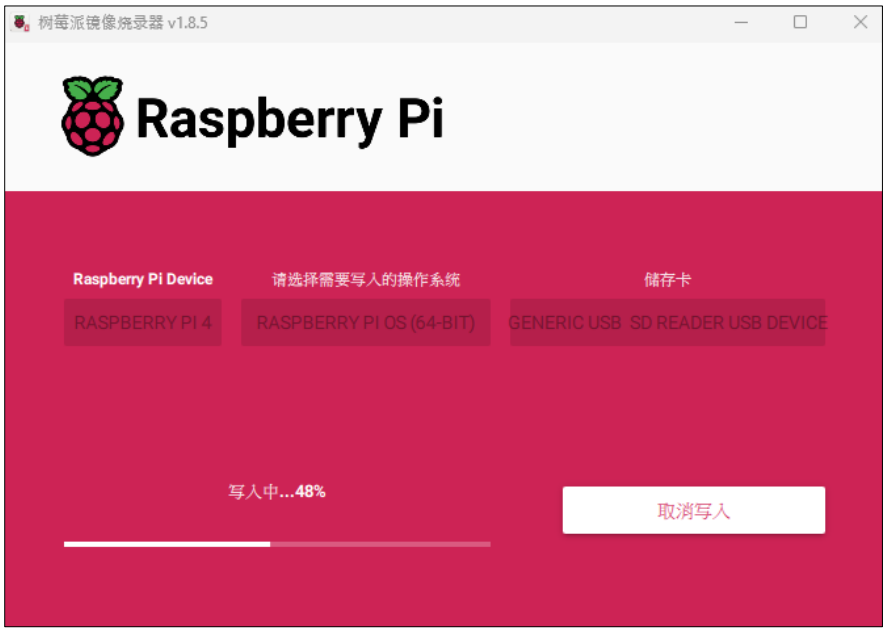





OS Customization
GENERAL
SERVICES
OPTIONS
设置主机名：
raspberrypi
.local
Set username and password
Username:
pi
密码：
配置WiFi
热点名：
ivy
密码：
显示密码
Hidden SSID
WIFI国家：
TW
语言设置
时区：
Asia/Taipei
键盘布局：
us
保存


OS Customization
GENERAL
SERVICES
OPTIONS
开启SSH服务
使用密码登录
只允许使用公匙登录
设置pi用户的登录密匙：
RUN SSH-KEYGEN
保存

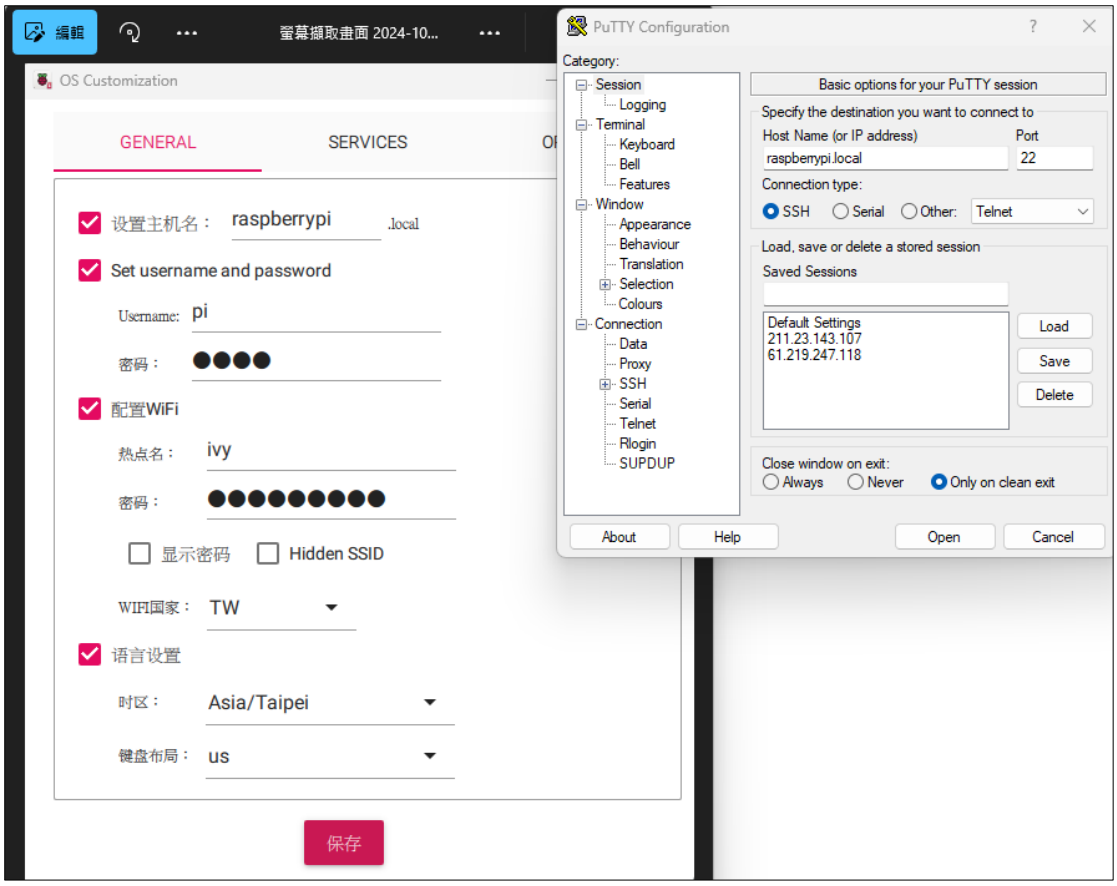

树莓派镜像烧录器 v1.8.5
Raspberry Pi
警告
'Generic USB SD Reader USB Device'上的所有现有数据将被删除。
确定要继续吗？
不
是
NEXT

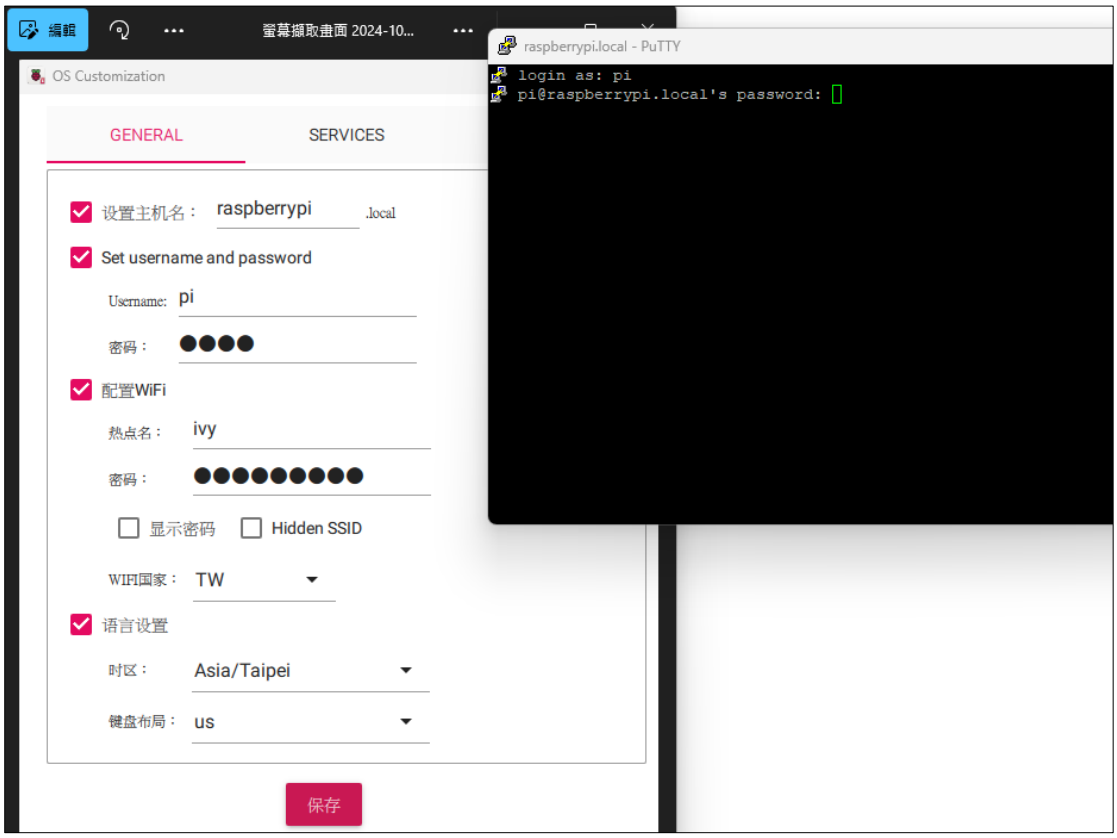

树莓派镜像烧录器 v1.8.5
Raspberry Pi
Raspberry Pi Device
请选择需要写入的操作系统
储存卡
RASPBERRY PI 4
RASPBERRY PI OS (64-BIT)
GENERIC USB SD READER USB DEVICE
写入中...48%
取消写入


树莓派镜像烧录器 v1.8.5
Raspberry Pi
烧录成功
Raspberry Pi OS (64-bit) 已经成功烧录到 Generic USB SD Reader USB Device
上了，你可以卸载SD卡了
继续
NEXT

PuTTy 軟體

https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

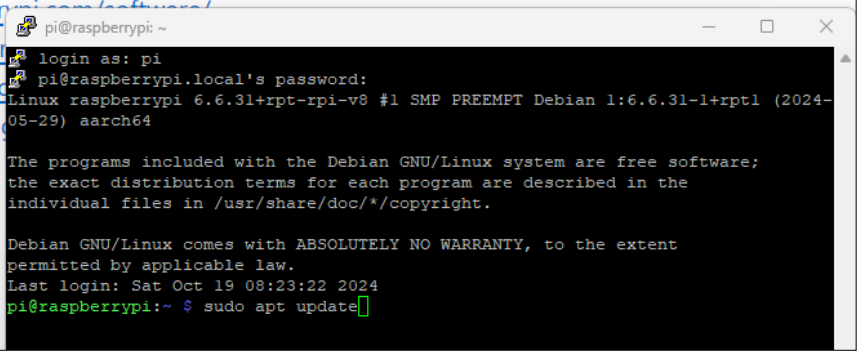


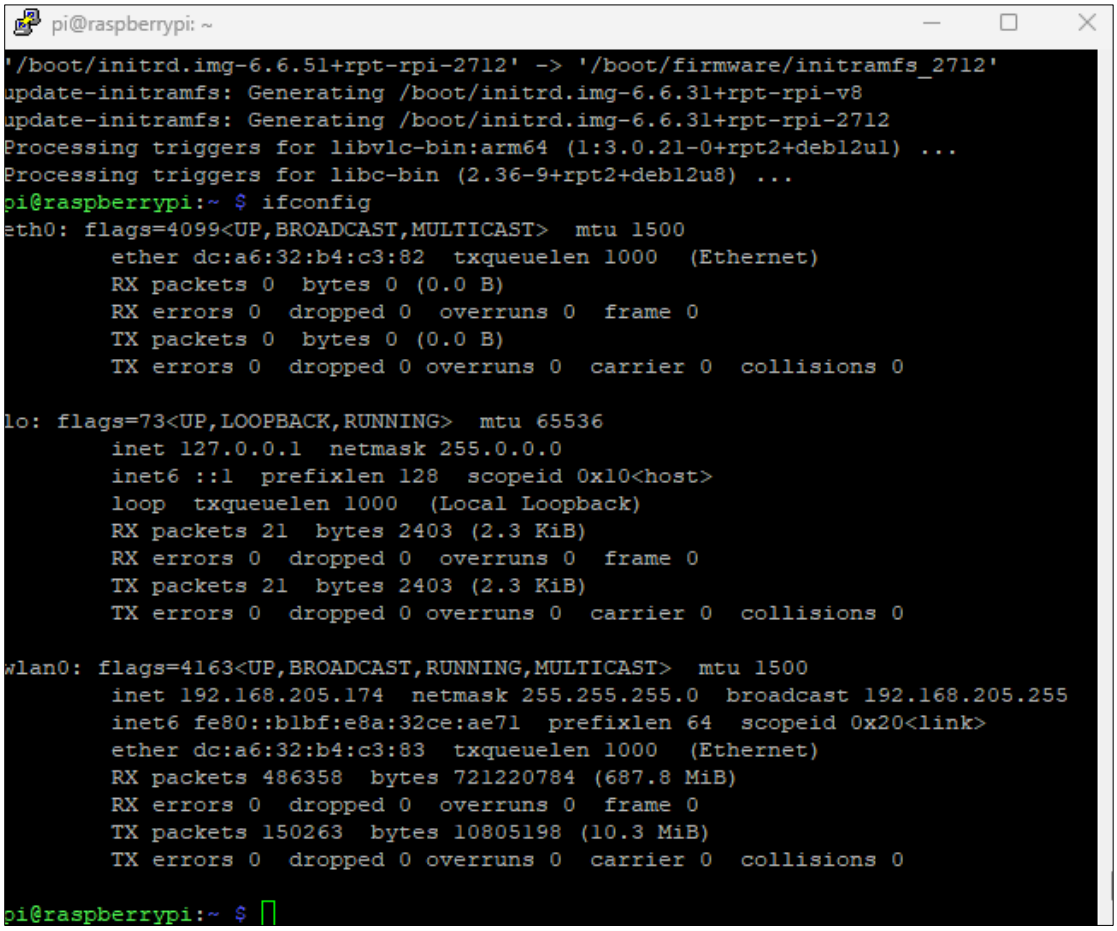


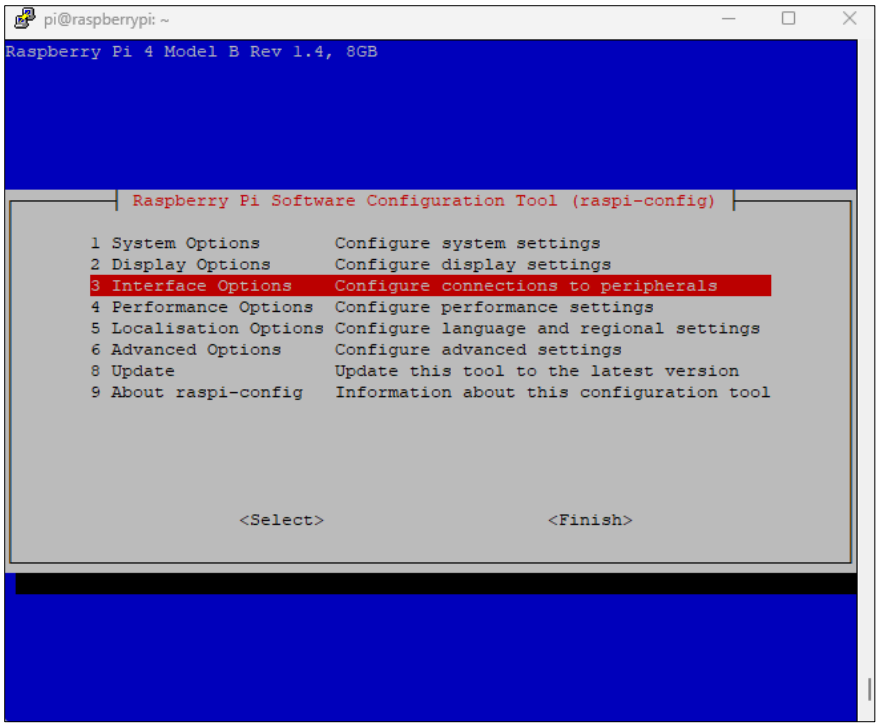
相關指令

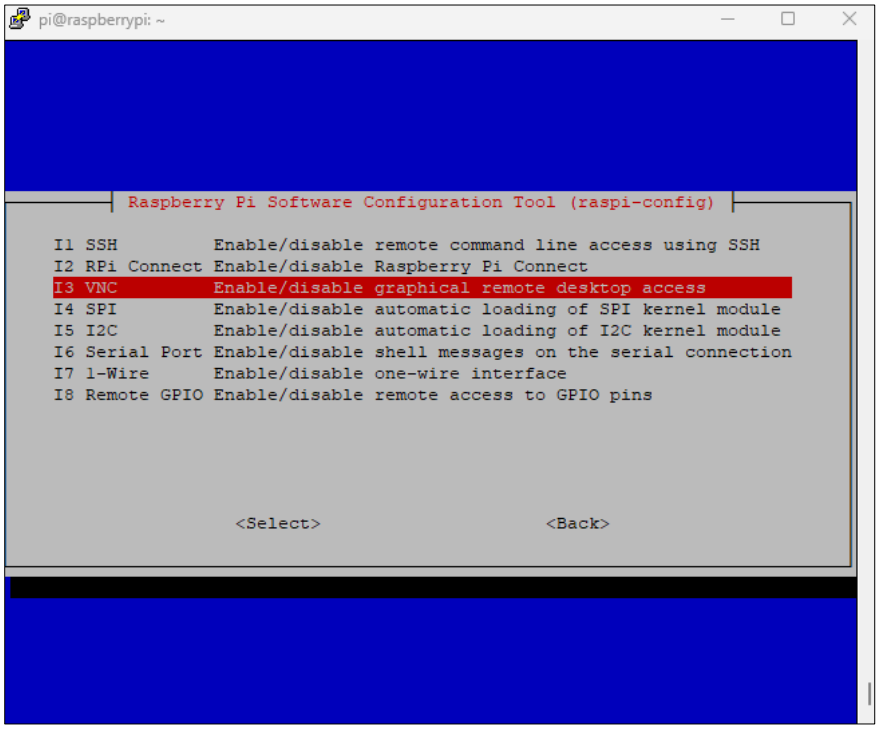
-pi4 with dht22-

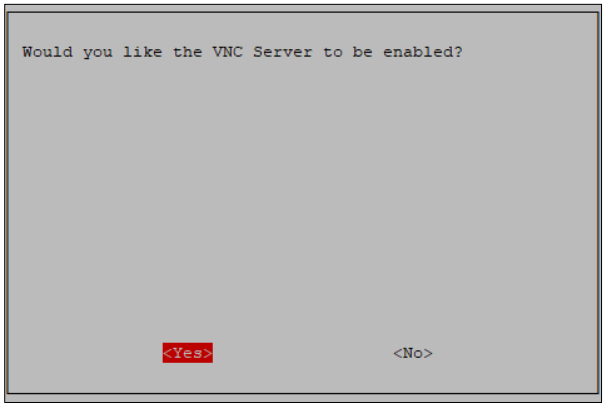
https://www.raspberr
https://www.chiark.g
https://www.realvnc.c
https://images.theen
sudo apt update
sudo apt upgrade
sudo raspi-config
ifconfig
sudo reboot





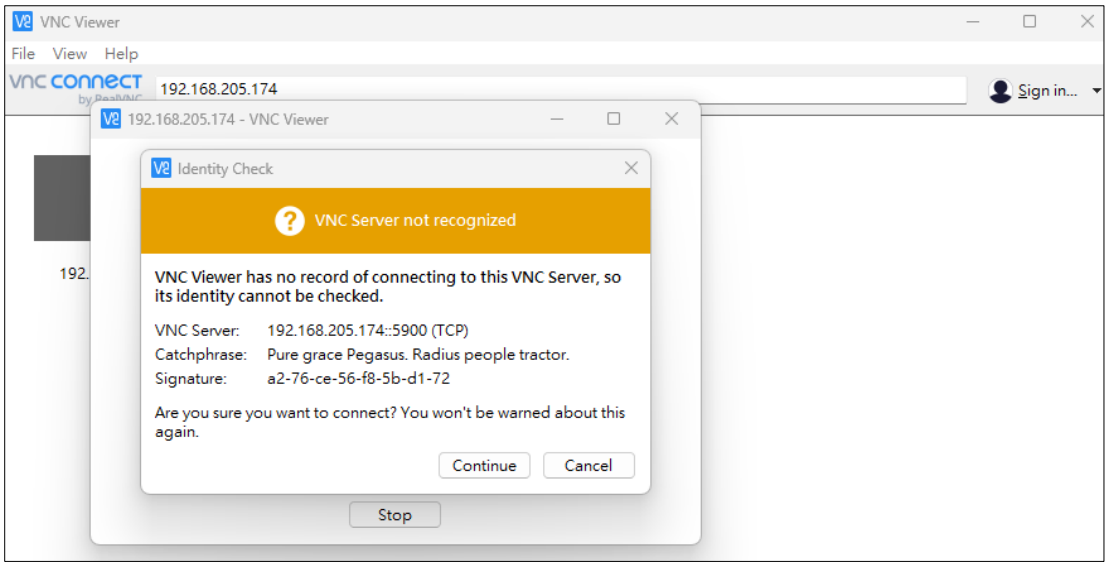

pi@raspberrypi: ~
Raspberry Pi 4 Model B Rev 1.4, 8GB
Raspberry Pi Software Configuration Tool (raspi-config)
1 System Options Configure system settings
2 Display Options Configure display settings
3 Interface Options Configure connections to peripherals
4 Performance Options Configure performance settings
5 Localisation Options Configure language and regional settings
6 Advanced Options Configure advanced settings
8 Update Update this tool to the latest version
9 About raspi-config Information about this configuration tool
<Select>
<Finish>

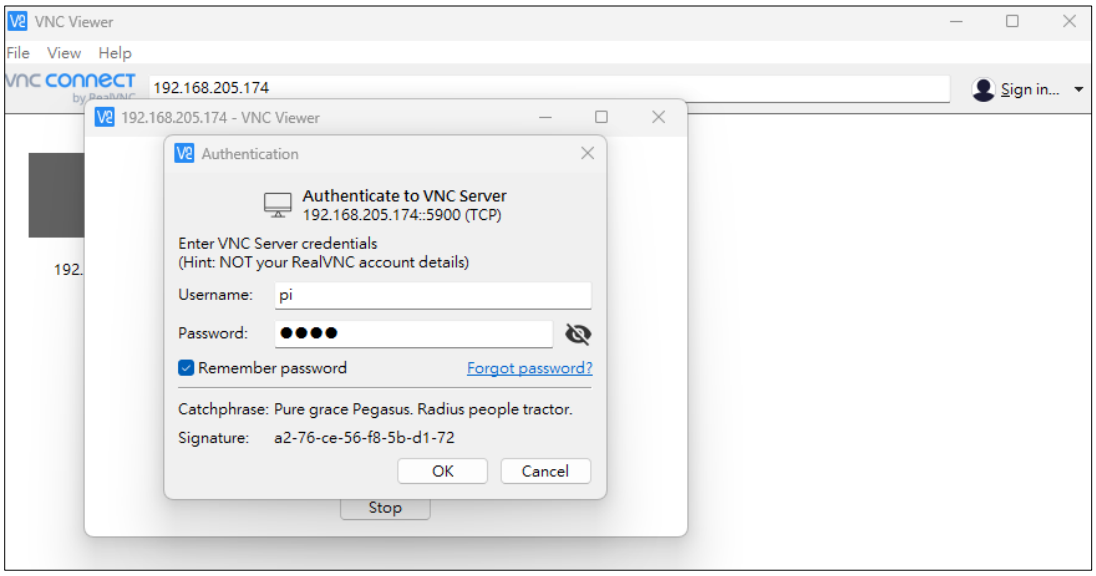

pi@raspberrypi: ~
Raspberry Pi Software Configuration Tool (raspi-config)
I1 SSH Enable/disable remote command line access using SSH
I2 RPi Connect Enable/disable Raspberry Pi Connect
I3 VNC Enable/disable graphical remote desktop access
I4 SPI Enable/disable automatic loading of SPI kernel module
I5 I2C Enable/disable automatic loading of I2C kernel module
I6 Serial Port Enable/disable shell messages on the serial connection
I7 1-Wire Enable/disable one-wire interface
I8 Remote GPIO Enable/disable remote access to GPIO pins
<Select>
<Back>

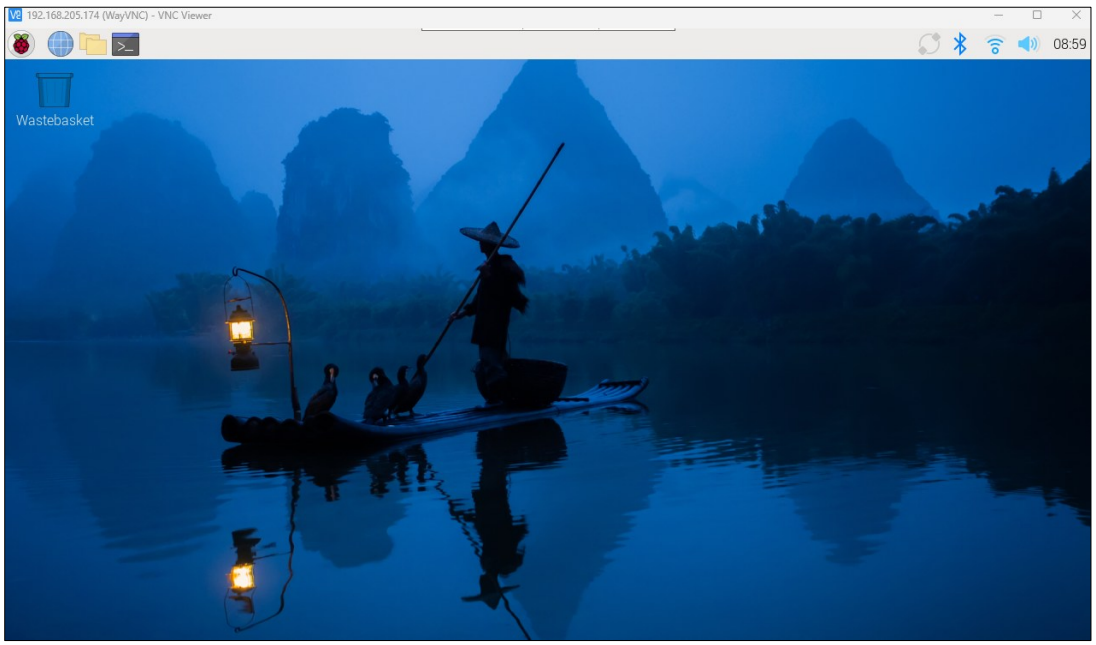

Would you like the VNC Server to be enabled?
<Yes>
<No>

Vnc 軟體

https://www.realvnc.com/en/connect/download/viewer/?lai_sr=5-9&lai_sl=l&lai_vid=OXp3JqyaLTlOB&lai_p=1







DHT22

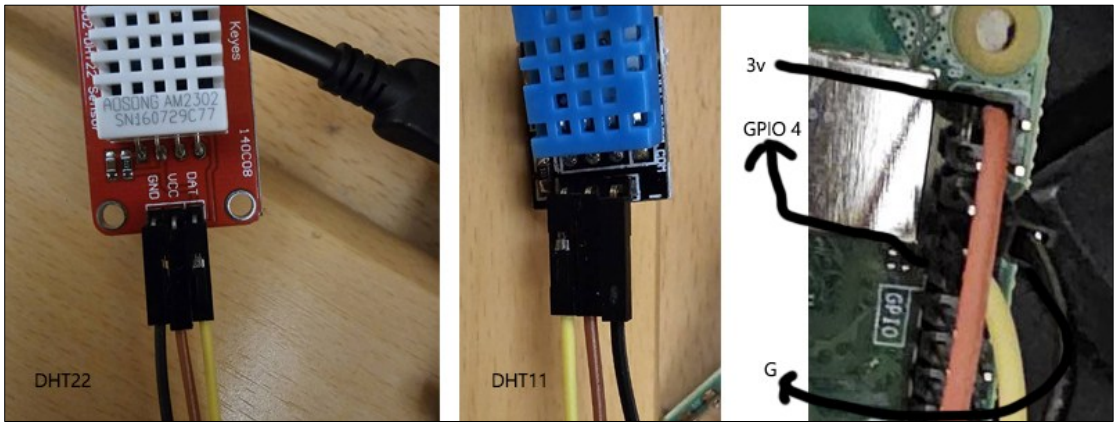
https://learn.adafruit.com/dht-humidity-sensing-on-raspberry-pi-with-gdocs-logging/python-setup

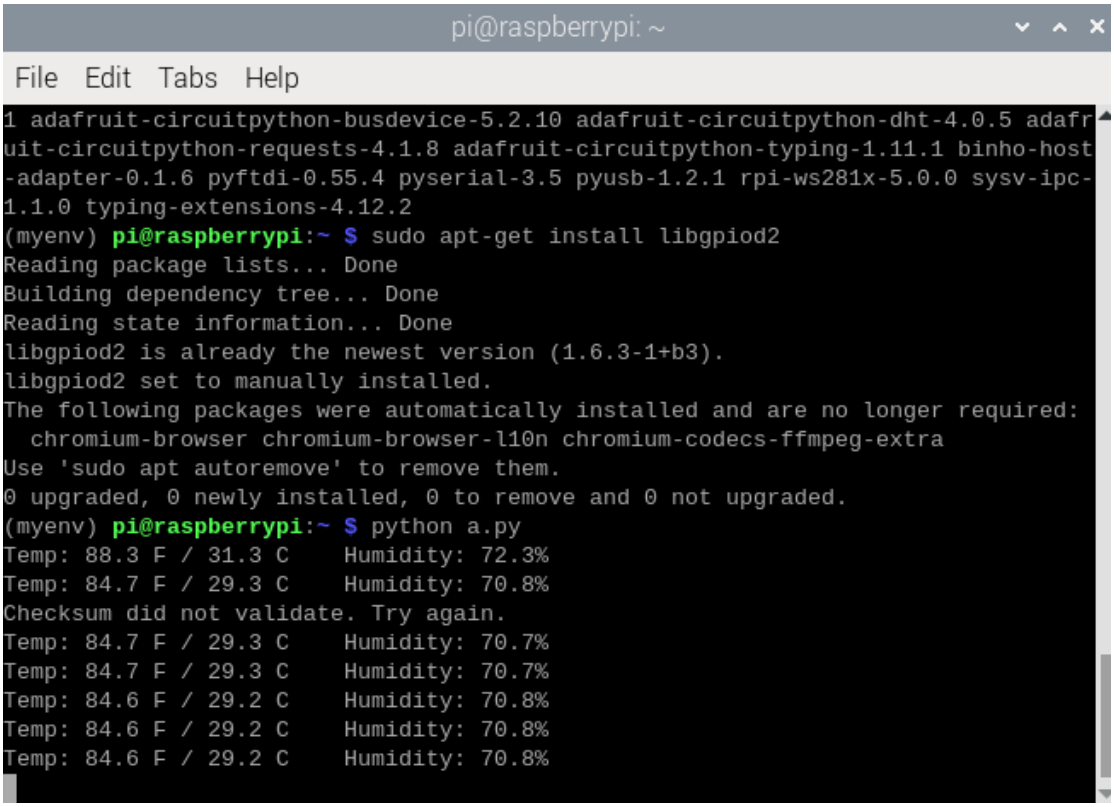
pip3 install adafruit-circuitpython-dht

sudo apt-get install libgpiod2

```
# SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
# SPDX-License-Identifier: MIT

import time
import board
import adafruit_dht

# Initial the dht device, with data pin connected to:
dhtDevice = adafruit_dht.DHT22(board.D18)

# you can pass DHT22 use_pulseio=False if you wouldn't like to use pulseio.
# This may be necessary on a Linux single board computer like the Raspberry Pi,
# but it will not work in CircuitPython.
# dhtDevice = adafruit_dht.DHT22(board.D18, use_pulseio=False)

while True:
    try:
        # Print the values to the serial port
        temperature_c = dhtDevice.temperature
        temperature_f = temperature_c * (9 / 5) + 32
        humidity = dhtDevice.humidity
        print(
            "Temp: {:.1f} F / {:.1f} C    Humidity: {}% ".format(
                temperature_f, temperature_c, humidity
            )
        )

    except RuntimeError as error:
        # Errors happen fairly often, DHT's are hard to read, just keep going
        print(error.args[0])
        time.sleep(2.0)
        continue
    except Exception as error:
        dhtDevice.exit()
        raise error

    time.sleep(2.0)
```

View on GitHub




pi@raspberrypi: ~
File Edit Tabs Help
1 adafruit-circuitpython-busdevice-5.2.10 adafruit-circuitpython-dht-4.0.5 adafruit-circuitpython-requests-4.1.8 adafruit-circuitpython-typing-1.11.1 binho-host-adapter-0.1.6 pyftdi-0.55.4 pyserial-3.5 pyusb-1.2.1 rpi-ws281x-5.0.0 sysv-ipc-1.1.0 typing-extensions-4.12.2
(myenv) pi@raspberrypi:~ $ sudo apt-get install libgpiod2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libgpiod2 is already the newest version (1.6.3-1+b3).
libgpiod2 set to manually installed.
The following packages were automatically installed and are no longer required:
chromium-browser chromium-browser-l10n chromium-codecs-ffmpeg-extra
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
(myenv) pi@raspberrypi:~ $ python a.py
Temp: 88.3 F / 31.3 C Humidity: 72.3%
Temp: 84.7 F / 29.3 C Humidity: 70.8%
Checksum did not validate. Try again.
Temp: 84.7 F / 29.3 C Humidity: 70.7%
Temp: 84.7 F / 29.3 C Humidity: 70.7%
Temp: 84.6 F / 29.2 C Humidity: 70.8%
Temp: 84.6 F / 29.2 C Humidity: 70.8%
Temp: 84.6 F / 29.2 C Humidity: 70.8%