Project 1: RPi Setup

可能 100 分

2023/9/18

進行中

-個:提交作業 京 添加評論

允許無限制的嘗試

2023/9/19

∨ 詳細資料

Introduction

Your mission, should you choose to accept it (I guess you don't really have a choice), is to get your Raspberry Pi Zero W set up so that you can SSH into the device from your laptop over USB. Laptop is expected, as you will then be able to use your Pi in class. You will also connect your Pi to WiFi. You can get this all done anyway you like, but here is one method.

Method:

- 1. Download the Raspberry Pi image from here (https://www.raspberrypi.com/software/operating-systems/). I downloaded the Lite one, but you could also do with desktop.
- 2. Use <u>Etcher (https://etcher.balena.io/)</u> to write the image to your SD card. Remove the SD card from your computer (including the micro to regular SD card adapter, if using one), and insert it back into the computer. Otherwise, you may not be able to view the SD card in your file system.
- 3. Follow step 1 onwards of the Mac tutorial here (https://desertbot.io/blog/ssh-into-pi-zero-over-usb) (no need run the ssh-keygen -R raspberrypi.local command mentioned for Mac in step 7) to the end or step 1 through step 7 of the Windows tutorial here (https://desertbot.io/blog/headless-pi-zero-ssh-access-over-usb-windows) (then try to SSH in). NOTE 1: When performing step 5 for Mac or Windows, make sure that copying and pasting the new text in cmdline.txt does not cause other text to be put on a new line. NOTE 2: Before removing the SD card and putting it in the Pi, as per here (https://forums.raspberrypi.com/viewtopic.php?t=333248&p=1994926#p1994926) (citation: From user RonR on Raspberry Pi forums) be sure to also make a file in bootfs named userconf with the contents:

pi:\$6\$c70VpvPsVNCG0YR5\$15vWWLsLko9Kj65gcQ8qvMkuOoRkEagI90qi3F/Y7rm8eNYZHW8CY6B0IKwMH7a3YYzZYL9 0zf304cAHLFaZE0

This makes it so your username is pi and password is raspberry.

4. Once you have booted up your Raspberry Pi and used SSH to get into the device, run the command:

5. Edit the file so it only contains:

```
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1
network={
    ssid="Rice Visitor"
    key_mgmt=NONE
}
```

- 6. Reboot (note that the reboot may take two minutes; if it takes longer, you can unplug and plug back in the Pi)
- 7. SSH back in and make sure the command:

```
ping google.com
```

gets data from Google!

- 8. Make sure your device is up to date by running these commands:
 - 1. sudo apt update
 - 2. sudo apt upgrade
- 9. See the report instructions for finishing the project. You can use the command passwd to change your password if you would like. Don't forget it if you change it!

Report

Submit a short one page PDF report that specifies in 1-2 paragraphs the steps you took to complete the assignment, the challenges you encountered, and what kind of projects you would like to work on with the device. The report should include a screenshot that shows your netID@raspberrypi as the beginning of the command line prompt. The screenshot should also show you running sudo apt update and the resulting output being that basically nothing needs upgraded (this would be you running update after you already ran it as part of step 8 of the project). Finally, the screenshot should also show a few successful outputs of the command "ping google.com", which further verifies that you are online. You can hit ctl+c after a few outputs appear to kill the ping command, so that it doesn't run forever.

選擇提交項目類型



<u>!</u>



選擇要上傳的檔案

允許的檔案:PDF

或

☐ Canvas 檔案