

# How to connect a Raspberry Pi to UWS

## Assumptions

The Raspberry Pi has builtin WiFi (> version 3) or has a WiFi dongle connected to a USB port.

Wired networking is working. You are able to ping the Raspberry Pi.

`ssh` is enabled and working. To set it up, see the [raspberrypi.com documentation](https://www.raspberrypi.com/documentation/)

## Set up WiFi for UWS

1. Connect the Raspberry Pi (RPI) to the same wired network as your computer.
2. ssh into the RPI (e.g., `ssh pi@raspberry.local`)
3. Backup the `wpa_supplicant.conf` file

```
cd /etc/wpa_supplicant
sudo cp wpa_supplicant.conf wpa_supplicant.conf_old
```

4. Edit the `wpa_supplicant.conf` file to look similar to the listing below. Replace the CCID and password with your own for UWS.

```
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1
country=CA

network={
    ssid="UWS"
    proto=RSN
    key_mgmt=WPA-EAP
    pairwise=CCMP
    auth_alg=OPEN
    eap=PEAP
    identity "<your CCID>"
    password "<your password>"
    phase1="Peaplabel = 0"
    phase2="auth=MSCHAPV2"
```

```
priority=1  
scan_ssid=1  
}
```

5. Issue these commands to bring up the wireless interface

```
sudo wpa_supplicant -B -i wlan0 -c /etc/wpa_supplicant/wpa_supplicant.conf  
sudo dhcpcd wlan0
```

You will find that unless the RPi is set up as a dhcp client for the wired network, the wired connection may disappear. You can confirm WiFi connectivity using the RPi display.