

Installing and Setting up Ubuntu

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Installation

1. Download the Ubuntu Server image from <https://ubuntu.com/download/iot/raspberry-pi-2-3>

```
$ wget -P /tmp/ http://cdimage.ubuntu.com/releases/bionic/release/ubuntu-18.04.3-preinstalled-server-arm64+raspi3.img.xz
```

2. Then write the disk image to your SD card

```
$ xzcat /tmp/ubuntu-18.04.3-preinstalled-server-arm64+raspi3.img.xz | sudo dd of=/dev/mmcblk0 bs=32M
```

Be careful when using **dd**, if you specify the wrong output (**of=...**), it'll overwrite everything on that device, so it's easy to accidentally destroy your computer.

3. Install the SD card into the Raspberry Pi, connect it to a network using Ethernet, and power it up.
4. Use your favorite method to find its IP address. You can find it in your router's settings, with an app like Fing, or by using a command line tool like **nmap**.
5. Connect to the Raspberry Pi over SSH

```
$ ssh ubuntu@192.168.1.100
```

Replace the IP address with the one you found in the previous step.
You'll be prompted a password, the default one is **ubuntu**.

6. Follow the instructions to change the default password and connect again.

SSH Configuration

1. Set the hostname:

```
pi $ sudo hostnamectl set-hostname rpi-3
```

2. Install the **avahi-daemon** package to enable mDNS:

```
pi $ sudo apt install avahi-daemon
```

3. If you already had the **avahi-daemon** installed, you have to restart it to use the new hostname:

```
pi $ sudo service avahi-daemon restart
```

4. Close the SSH connection:

```
pi $ exit
```

5. You should now be able to reach the Pi using its mDNS hostname:

```
$ ping rpi-3.local -c3
```

6. Add your public key to the Pi's **authorized_keys**, so you can connect to it without entering the password each time:

```
$ cat .ssh/id_rsa.pub | ssh ubuntu@rpi-3.local -T "cat >> .ssh/authorized_keys"
```

7. Create an SSH configuration for the Pi on your computer:

```
$ cat >> ~/.ssh/config << 'EOF'
Host RPi3
  HostName rpi-3.local
  User ubuntu
EOF
```

8. You can now connect to it without having to specify the hostname or username:

```
$ ssh RPi3
```

