

Using username "ubuntu".
Authenticating with public key "imported-openssh-key"
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 5.4.0-1060-aws x86_64)

* Documentation: <https://help.ubuntu.com>
* Management: <https://landscape.canonical.com>
* Support: <https://ubuntu.com/advantage>

System information as of Thu Mar 10 13:46:20 UTC 2022

System load:	0.0	Processes:	93
Usage of /:	15.2% of 7.69GB	Users logged in:	0
Memory usage:	19%	IP address for eth0:	172.31.36.53
Swap usage:	0%		

0 updates can be applied immediately.

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

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-31-36-53:~$ ls
ubuntu@ip-172-31-36-53:~$ mkdir iot
ubuntu@ip-172-31-36-53:~$ ls
iot
```

```
ubuntu@ip-172-31-36-53:~$ cd iot
ubuntu@ip-172-31-36-53:~/iot$ cd ..
ubuntu@ip-172-31-36-53:~$ cd iot
ubuntu@ip-172-31-36-53:~/iot$ sudo apt-get update
Hit:1 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic InRelease
Get:3 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:4 http://security.ubuntu.com/ubuntu bionic-security InRelease [74.6 kB]
Get:5 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-backports InRelease [88.7 kB]
Get:6 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
Get:7 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
Get:8 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
Get:9 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
Get:10 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [2465 kB]
Get:11 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main Translation-en [465 kB]
Get:12 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/restricted amd64 Packages [671 kB]
Get:13 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/restricted Translation-en [92.1 kB]
Get:14 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 Packages [1793 kB]
```



```
Get:13 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 Packages [1793 kB]
Get:14 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe Translation-en [388 kB]
Get:15 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 Packages [24.2 kB]
Get:16 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/multiverse Translation-en [5980 B]
Get:17 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/main amd64 Packages [10.3 kB]
Get:18 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/main Translation-en [4824 B]
Get:19 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 Packages [11.3 kB]
Get:20 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe Translation-en [5772 B]
Get:21 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages [2117 kB]
Get:22 http://security.ubuntu.com/ubuntu bionic-security/main Translation-en [373 kB]
Get:23 http://security.ubuntu.com/ubuntu bionic-security/restricted amd64 Packages [646 kB]
Get:24 http://security.ubuntu.com/ubuntu bionic-security/restricted Translation-en [88.3 kB]
Get:25 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [1179 kB]
Get:26 http://security.ubuntu.com/ubuntu bionic-security/universe Translation-en [271 kB]
Get:27 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 Packages [17.6 kB]
Get:28 http://security.ubuntu.com/ubuntu bionic-security/multiverse Translation-en [3660 B]
Fetched 24.7 MB in 5s (4911 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-36-53:~/iot$ sudo apt-get upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following packages have been kept back:
  linux-aws linux-headers-aws linux-image-aws snapd
The following packages will be upgraded:
  busybox-initramfs busybox-static libc-bin libc6 libexpat1 libglib2.0-0 libglib2.0-data libnss-systemd libpam-systemd libpolkit-agent-1-0 libpolkit-backend-1-0 libpolkit-gobject-1-0
  libpython3.6 libpython3.6-minimal libpython3.6-stdlib libsass12-2 libsass12-modules libsass12-modules-db libseccomp2 libssl1.1 libsystemd0 libudev1 locales login multiarch-support
  openssl-client openssl-server openssl-sftp-server openssl passwd policykit-1 python3.6 python3.6-minimal rsync systemd systemd-sysv ubuntu-advantage-tools udev uidmap vim vim-common
  vim-runtime vim-tiny xxd
44 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
30 standard security updates
Need to get 32.0 MB of archives.
After this operation, 48.1 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 login amd64 1:4.5-1ubuntu2.2 [308 kB]
Get:2 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libc6 amd64 2.27-3ubuntu1.5 [2830 kB]
Get:3 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 locales all 2.27-3ubuntu1.5 [3613 kB]
Get:4 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libc-bin amd64 2.27-3ubuntu1.5 [638 kB]
Get:5 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnss-systemd amd64 237-3ubuntu10.53 [105 kB]
Get:6 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libsystemd0 amd64 237-3ubuntu10.53 [206 kB]
Get:7 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpam-systemd amd64 237-3ubuntu10.53 [107 kB]
Get:8 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 systemd amd64 237-3ubuntu10.53 [2915 kB]
Get:9 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 udev amd64 237-3ubuntu10.53 [1102 kB]
Get:10 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libudev1 amd64 237-3ubuntu10.53 [55.6 kB]
Get:11 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 systemd-sysv amd64 237-3ubuntu10.53 [13.2 kB]
Get:12 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libexpat1 amd64 2.2.5-3ubuntu0.4 [81.7 kB]
Get:13 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpython3.6 amd64 3.6.9-1-18.04ubuntu1.6 [1414 kB]
Get:14 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libssl1.1 amd64 1.1.1-1ubuntu2.1-18.04.14 [1302 kB]
Get:15 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python3.6 amd64 3.6.9-1-18.04ubuntu1.6 [203 kB]
```



```

Get:13 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python3.6 amd64 3.6.9-1-18.04ubuntu1.6 [203 kB]
Get:16 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpython3.6-stdlib amd64 3.6.9-1-18.04ubuntu1.6 [1712 kB]
Get:17 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python3.6-minimal amd64 3.6.9-1-18.04ubuntu1.6 [1609 kB]
Get:18 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpython3.6-minimal amd64 3.6.9-1-18.04ubuntu1.6 [534 kB]
Get:19 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 passwd amd64 1:4.5-1ubuntu2.2 [818 kB]
Get:20 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libseccomp2 amd64 2.5.1-1ubuntu1-18.04.2 [43.0 kB]
Get:21 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 busybox-initramfs amd64 1:1.27.2-2ubuntu3.4 [166 kB]
Get:22 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libglib2.0-0 amd64 2.56.4-0ubuntu0.18.04.9 [1169 kB]
Get:23 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libglib2.0-data all 2.56.4-0ubuntu0.18.04.9 [4728 B]
Get:24 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssl amd64 1.1.1-1ubuntu2.1-18.04.14 [613 kB]
Get:25 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 ubuntu-advantage-tools amd64 27.6-18.04.1 [705 kB]
Get:26 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim amd64 2:8.0.1453-1ubuntu1.8 [1154 kB]
Get:27 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim-tiny amd64 2:8.0.1453-1ubuntu1.8 [476 kB]
Get:28 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim-runtime all 2:8.0.1453-1ubuntu1.8 [5435 kB]
Get:29 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 hxd amd64 2:8.0.1453-1ubuntu1.8 [49.9 kB]
Get:30 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim-common all 2:8.0.1453-1ubuntu1.8 [71.1 kB]
Get:31 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 busybox-static amd64 1:1.27.2-2ubuntu3.4 [918 kB]
Get:32 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 policykit-1 amd64 0.105-20ubuntu0.18.04.6 [53.6 kB]
Get:33 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpolkit-backend-1-0 amd64 0.105-20ubuntu0.18.04.6 [36.6 kB]
Get:34 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpolkit-agent-1-0 amd64 0.105-20ubuntu0.18.04.6 [14.9 kB]
Get:35 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libpolkit-gobject-1-0 amd64 0.105-20ubuntu0.18.04.6 [36.4 kB]
Get:36 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 multiarch-support amd64 2.27-3ubuntu1.5 [6960 B]
Get:37 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-sftp-server amd64 1:7.6p1-4ubuntu0.6 [45.5 kB]
Get:38 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-server amd64 1:7.6p1-4ubuntu0.6 [332 kB]
Get:39 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-client amd64 1:7.6p1-4ubuntu0.6 [612 kB]
Get:40 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 rsync amd64 3.1.2-2.1ubuntu1.3 [335 kB]
Get:41 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libssl2-modules-db amd64 2.1.27-101-g0780600+dfsg-3ubuntu2.4 [15.0 kB]
Get:42 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libssl2-2 amd64 2.1.27-101-g0780600+dfsg-3ubuntu2.4 [49.2 kB]
Get:43 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libssl2-modules amd64 2.1.27-101-g0780600+dfsg-3ubuntu2.4 [48.9 kB]
Get:44 http://eu-west-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 uidmap amd64 1:4.5-1ubuntu2.2 [68.3 kB]
Fetched 32.0 MB in 1s (41.3 MB/s)
Extracting templates from packages: 100%
Preconfiguring packages ...
(Reading database ... 57598 files and directories currently installed.)
Preparing to unpack .../login 1:4.5-1ubuntu2.2_amd64.deb ...
Unpacking login (1:4.5-1ubuntu2.2) over (1:4.5-1ubuntu2) ...
Setting up login (1:4.5-1ubuntu2.2) ...
(Reading database ... 57598 files and directories currently installed.)
Preparing to unpack .../libc6 2.27-3ubuntu1.5_amd64.deb ...
Unpacking libc6:amd64 (2.27-3ubuntu1.5) over (2.27-3ubuntu1.4) ...
Setting up libc6:amd64 (2.27-3ubuntu1.5) ...
(Reading database ... 57598 files and directories currently installed.)
Preparing to unpack .../locales 2.27-3ubuntu1.5_all.deb ...
Unpacking locales (2.27-3ubuntu1.5) over (2.27-3ubuntu1.4) ...
Preparing to unpack .../libc-bin 2.27-3ubuntu1.5_amd64.deb ...
Unpacking libc-bin (2.27-3ubuntu1.5) over (2.27-3ubuntu1.4) ...
Setting up libc-bin (2.27-3ubuntu1.5) ...
(Reading database ... 57598 files and directories currently installed.)
Preparing to unpack .../libnss-systemd 237-3ubuntu10.53_amd64.deb ...
Unpacking libnss-systemd:amd64 (237-3ubuntu10.53) over (237-3ubuntu10.52) ...

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Setting up python-enum34 (1.1.6-2) ...
Setting up binutils (2.30-2ubuntu1~18.04.7) ...
Setting up python-dbus (1.2.6-1) ...
Setting up python-ipaddress (1.0.17-1) ...
Setting up python-pip (9.0.1-2.3~ubuntu1.18.04.5) ...
Setting up python-all (2.7.15~rc1-1) ...
Setting up python-setuptools (39.0.1-2) ...
Setting up gcc-7 (7.5.0-3ubuntu1~18.04) ...
Setting up g++-7 (7.5.0-3ubuntu1~18.04) ...
Setting up gcc (4:7.4.0-1ubuntu2.3) ...
Setting up python-keyrings.alt (3.0-1) ...
Setting up dpkg-dev (1.19.0.5ubuntu2.3) ...
Setting up python-all-dev (2.7.15~rc1-1) ...
Setting up python-cryptography (2.1.4-1ubuntu1.4) ...
Setting up g++ (4:7.4.0-1ubuntu2.3) ...
update-alternatives: using /usr/bin/g++ to provide /usr/bin/c++ (c++) in auto mode
Setting up python-secretstorage (2.3.1-2) ...
Setting up python-keyring (10.6.0-1) ...
Setting up build-essential (12.4ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for libc-bin (2.27-3ubuntu1.5) ...

```

```

ubuntu@ip-172-31-36-53:~/iot$ sudo pip install madblocks

```

The directory '/home/ubuntu/.cache/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

The directory '/home/ubuntu/.cache/pip' or its parent directory is not owned by the current user and caching wheels has been disabled. check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

Collecting madblocks

Downloading <https://files.pythonhosted.org/packages/cc/e7/7ae8e0ff1bdb344d445573808391d0048803f9f1fbc97410b379ead3d4f2/madblocks-0.2.tar.gz>

Using username "ubuntu".
Authenticating with public key "imported-openssh-key"
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 5.4.0-1060-aws x86_64)

* Documentation: <https://help.ubuntu.com>
* Management: <https://landscape.canonical.com>
* Support: <https://ubuntu.com/advantage>

System information as of Thu Mar 10 15:34:23 UTC 2022

System load:	0.0	Processes:	96
Usage of /:	22.1% of 7.69GB	Users logged in:	1
Memory usage:	22%	IP address for eth0:	172.31.36.53
Swap usage:	0%		

9 updates can be applied immediately.
9 of these updates are standard security updates.
To see these additional updates run: `apt list --upgradable`

New release '20.04.4 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

*** System restart required ***

Last login: Thu Mar 10 13:46:22 2022 from 160.238.74.35

ubuntu@ip-172-31-36-53:~\$ sudo pip install paho-mqtt

The directory '/home/ubuntu/.cache/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

The directory '/home/ubuntu/.cache/pip' or its parent directory is not owned by the current user and caching wheels has been disabled. check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

Collecting paho-mqtt

Downloading <https://files.pythonhosted.org/packages/f8/dd/4b75dcba025f8647bc9862ac17299e0d7d12d3beadb026d8c8d74215c12/paho-mqtt-1.6.1.tar.gz> (99kB)

100% |██| 102kB 7.7MB/s

Installing collected packages: paho-mqtt

Running setup.py install for paho-mqtt ... done

Successfully installed paho-mqtt-1.6.1

ubuntu@ip-172-31-36-53:~\$ sudo nano demo.py

ubuntu@ip-172-31-36-53:~\$ sudo python demo.py

Devika

ubuntu@ip-172-31-36-53:~\$

*** System restart required ***

Last login: Thu Mar 10 15:34:24 2022 from 160.238.74.54

ubuntu@ip-172-31-36-53:~\$ sudo pip install paho-mqtt

The directory '/home/ubuntu/.cache/pip/http' or its parent directory is not owned by the current user and the cache has been disabled. Please check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

The directory '/home/ubuntu/.cache/pip' or its parent directory is not owned by the current user and caching wheels has been disabled. check the permissions and owner of that directory. If executing pip with sudo, you may want sudo's -H flag.

Requirement already satisfied: paho-mqtt in /usr/local/lib/python2.7/dist-packages

ubuntu@ip-172-31-36-53:~\$ sudo nano demo.py

ubuntu@ip-172-31-36-53:~\$ sudo python demo.py

Devika

ubuntu@ip-172-31-36-53:~\$ sudo nano mqtt_sub.py

ubuntu@ip-172-31-36-53:~\$ sudo python mqtt_sub.py

Broker connected

Broker Connected

(23.0, 45.0)

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