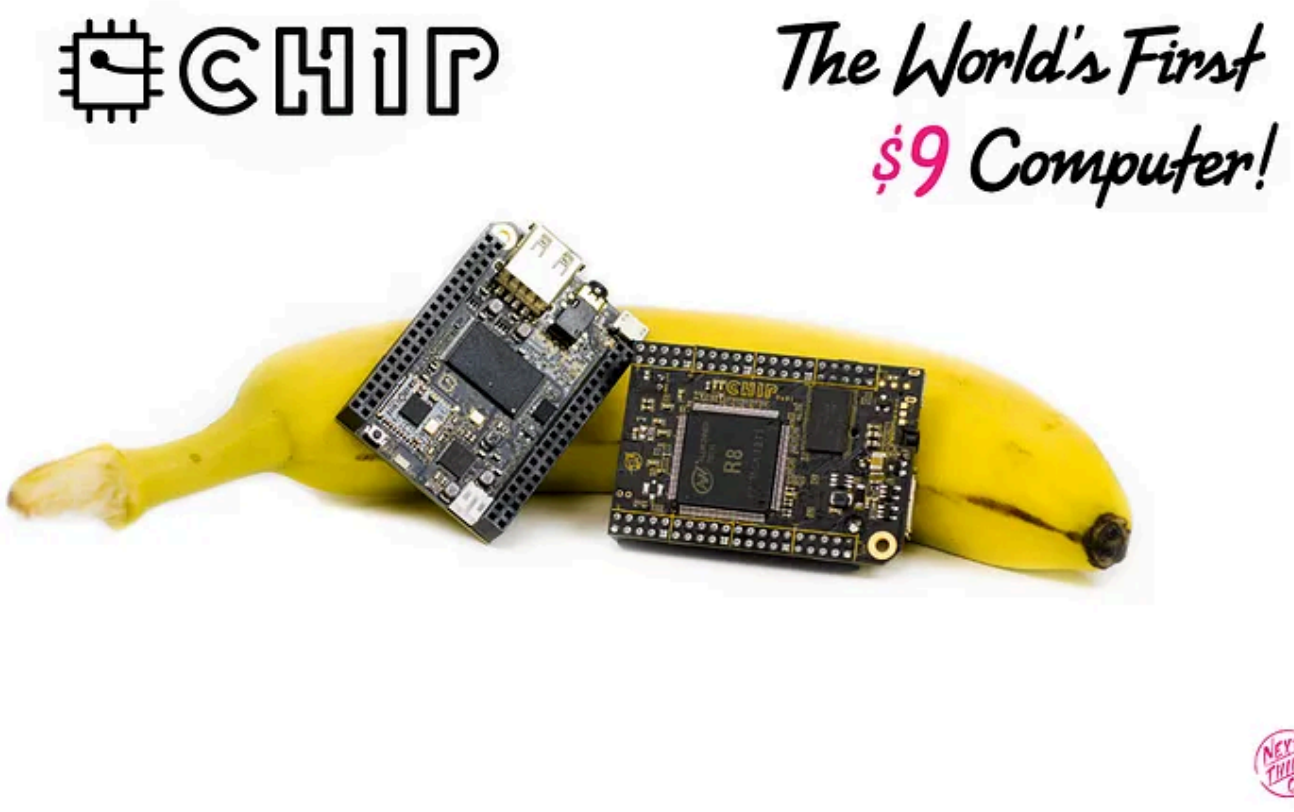
So I recently got a neat little C.H.I.P. device which is a tiny but surprisingly powerful machine running a flavour of Debian and thought I'd put it to work running a MQTT broker for all my devices at home, so here's the instructions to do just that.



Add the Mosquitto Debian repository

```
wget http://repo.mosquitto.org/debian/mosquitto-repo.gpg.key
sudo apt-key add mosquitto-repo.gpg.key
cd /etc/apt/sources.list.d/
sudo wget http://repo.mosquitto.org/debian/mosquitto-jessie.list
sudo apt-get update
```

Install Mosquitto and its command line clients

```
sudo apt-get install mosquitto
sudo apt-get install mosquitto-clients
```

Check it's running

```
sudo service mosquitto status
```

What you want to see is something like

```
chip@chip:/etc/apt/sources.list.d$ sudo service mosquitto status
● mosquitto.service - LSB: mosquitto MQTT v3.1 message broker
   Loaded: loaded (/etc/init.d/mosquitto)
   Active: active (running) since Sat 2017-01-14 23:56:42 UTC; 1min
21s ago
   CGroup: /system.slice/mosquitto.service
           └─17566 /usr/sbin/mosquitto -c
/etc/mosquitto/mosquitto.conf

Jan 14 23:56:41 chip mosquitto[17546]: Starting network daemon::
mosquitto.
```

```
Jan 14 23:56:42 chip systemd[1]: Started LSB: mosquitto MQTT v3.1
message broker.
```

To start, stop and restart the broker in future, use the commands

```
sudo service mosquitto start
sudo service mosquitto stop
sudo service mosquitto restart
```

Test that it's working

In your existing terminal, subscribe to the "testtopic" topic

```
mosquitto_sub -h localhost -t "testtopic" -v
```

Then open another terminal and send a message on that topic

```
mosquitto_pub -h localhost -t "testtopic" -m "Testing"
```

If all goes well then should see the message printed to the first terminal

```
chip@chip:~$ mosquitto_sub -h localhost -t "testtopic" -v
testtopic Testing
```

Success! You have a working MQTT broker running on the default port 1883.

Adding Websocket protocol support

Currently we only have MQTT protocol, so to enable Websockets on port 1884, we need to configure and restart Mosquitto. To do this, start by creating a configuration file in the appropriate location. I've called mine protocols.conf.

```
sudo vi /etc/mosquitto/conf.d/protocols.conf
```

Define the contents like so

```
listener 1883
protocol mqtt

listener 1884
protocol websockets
```

And again, restart with

```
sudo service mosquitto restart
```

Be aware

It's worth noting that by default there's no security, so if you wish to make your broker available from the web, you may want to consider locking it down a touch. There's a fair number of options, so I won't be covering them in this post, but see the mosquitto configuration for further information.

Debian Ubuntu Mqtt Mosquitto Chip

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