# ESP8266 + ADAFRUIT.IO筆記

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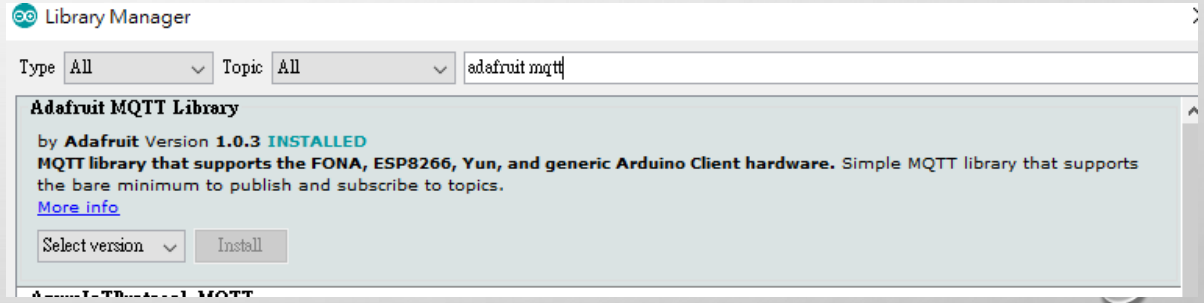
# 需要LIBRARY

- esp8266 (在Boards Manager裡面安裝)
- adafruit MQTT Library (在Library Manager裡面安裝)

# 連結方式

- 1.透過MQTT (一種用在硬體性能受限的消息傳遞協議)
- 2.透過IFTTT(一個網路平台(全名"IF This Then That")，可以用來當訊息的中繼站)

# 透過MQTT

- 使用adafruit MQTT Library
- 使用https://github.com/shooter2062424/ArduinoFunction/tree/master/MQTT 的包裝
  - 將Adafruit MQTT包裝在Connector class中
  - 以下將透過範例code來解說

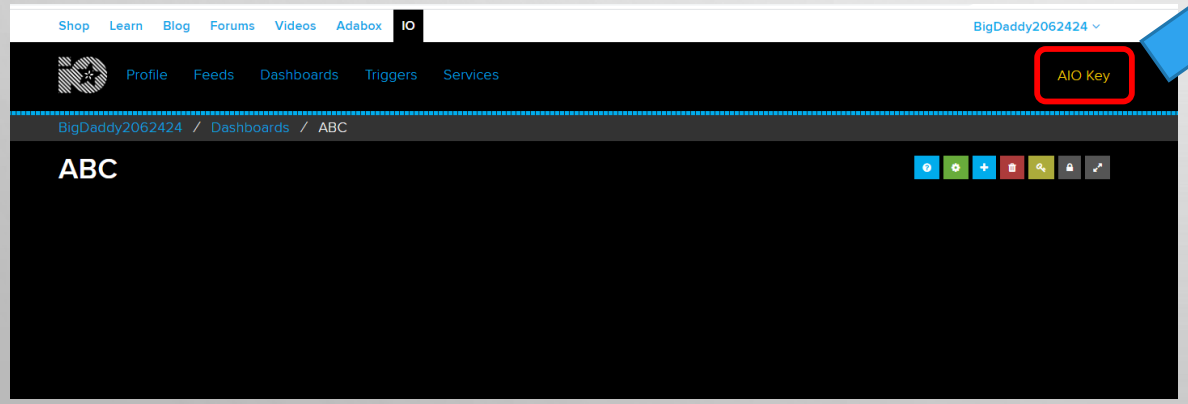
# 透過MQTT

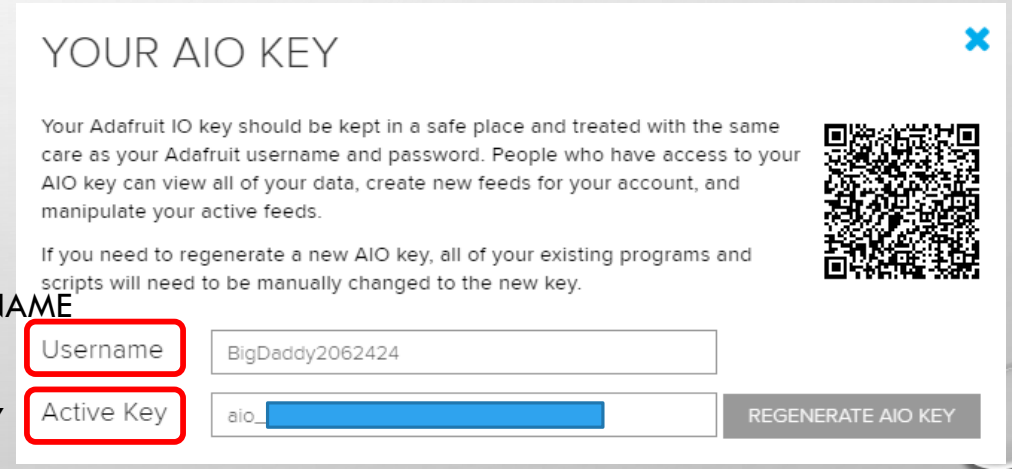
- 在ADAFRUIT.IO上建立帳號
- 設定範例程式的資料
- 建立儀錶板
- 建立變數
- 在儀錶板上面顯示變數

# 透過MQTT – 範例程式需要額外填寫的必要資訊(1/2)

```
18  #define WLAN_SSID
19  #define WLAN_PASS
20
21  /************************
22
23  #define AIO_SERVER
24  #define AIO_SERVERPORT
25  #define AIO_USERNAME
26  #define AIO_KEY
```

WLAN_SSID : 輸入欲連接wifi的名稱
WLAN_PASS : 輸入欲連接wifi的密碼
AIO_USERNAME : adafruit.io的帳號名稱
AIO_KEY : adafruit.io的秘密金鑰



# 透過MQTT – 範例程式需要額外填寫的必要資訊(2/2)

```
47    mqtt->Subscribe("BigDaddy2062424/feeds/Toggle", rcvValue);
```

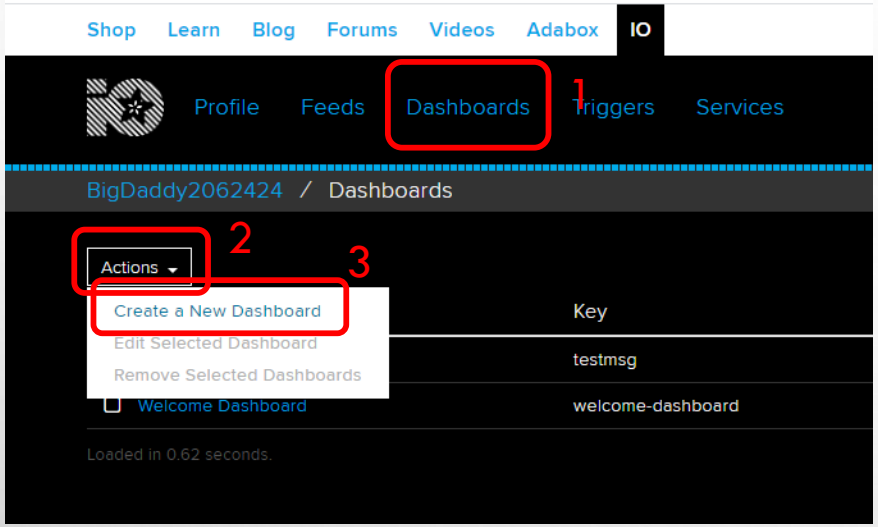
範例程式第47行藍色字串：訂閱的訊息

```
61    if (!mqtt->Publish("BigDaddy2062424/feeds/Value", 101)) {
```

範例程式第61行藍色字串：傳送的訊息

稍後設定完Adafruit.io的介面後就會有自己的訊息!

# 透過MQTT – 建立儀錶板




1.點選上方Dashboards標籤

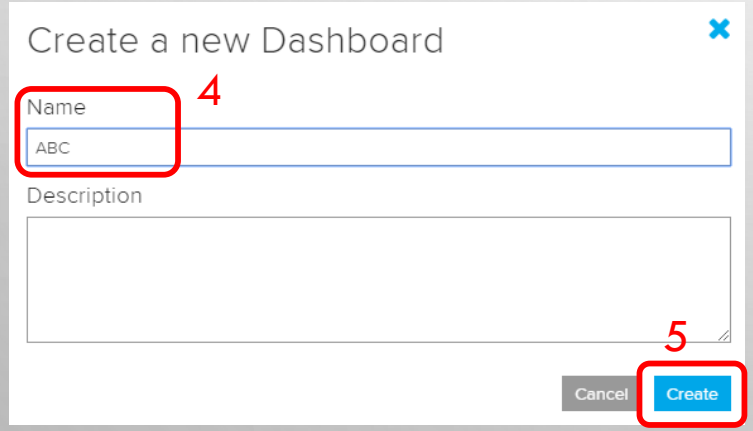
2.點選Actions

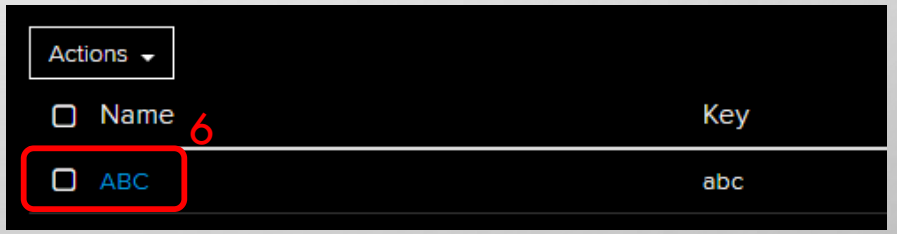
3.點選Create a New Dashboard

4.輸入儀錶板名稱

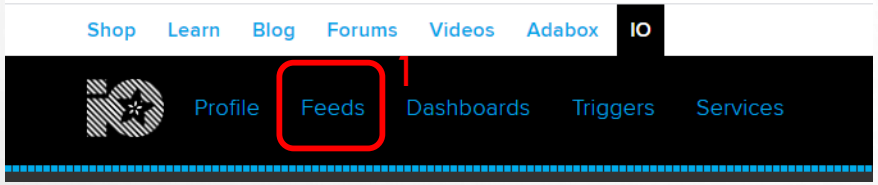
5.點選Create建立

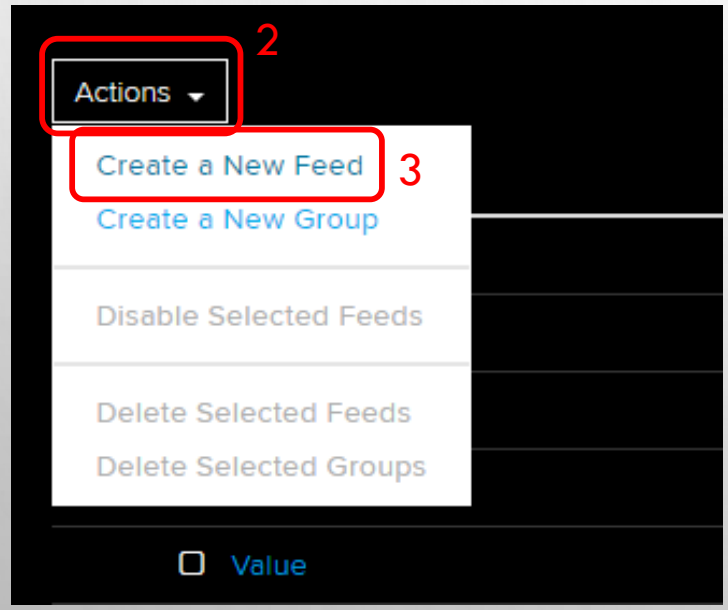
6.檢查是否建立成功



# 透過MQTT – 建立變數




1.點選Feeds

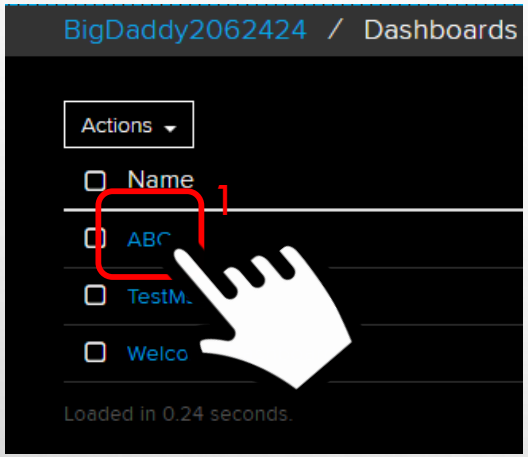
2.點選Actions

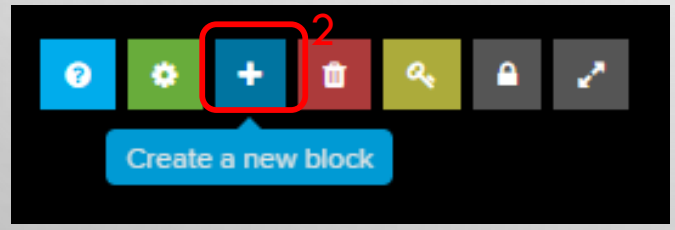
3.點選Create a New Feed

4.接著建立Value變數

5.重複3、4建立Toggle變數


# 透過MQTT –在儀錶板上面顯示變數(1/3)

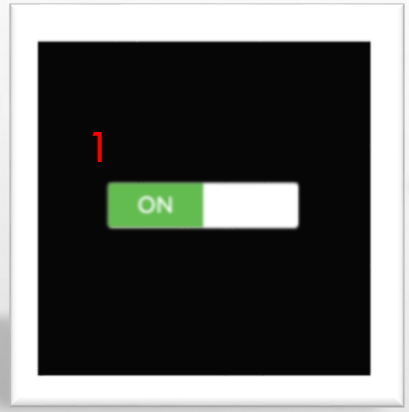


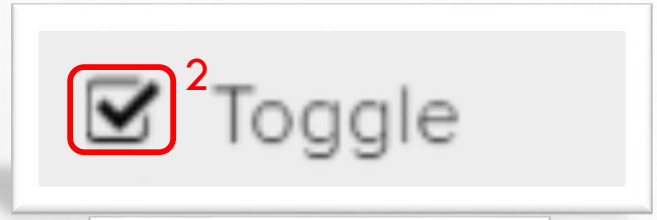



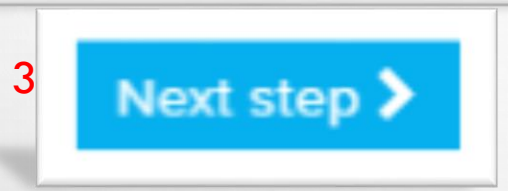

1.回到Dashboards並且點選剛剛建立的儀表板

2.點選 + 來建立新的UI

# 透過MQTT –在儀錶板上面顯示變數(2/3)



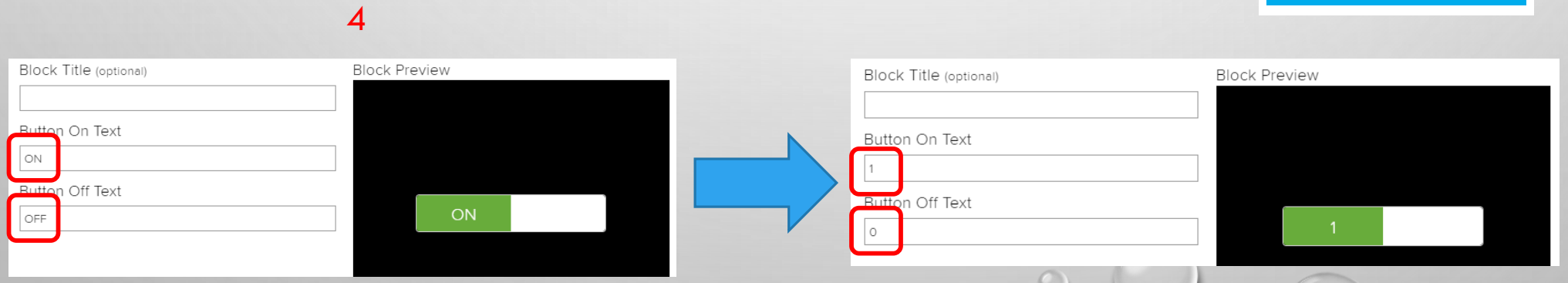

1.點選左圖類似開關的按鍵

2.將Toggle變數左邊的框框點選勾起來

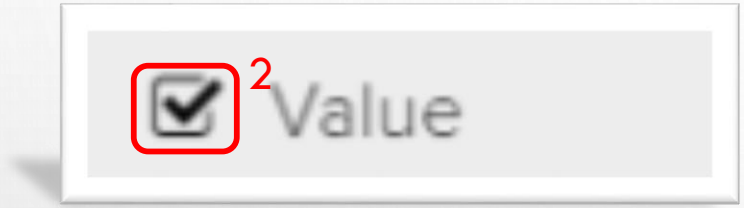
3.點選Next step進入下一步

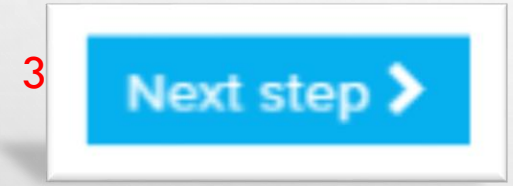
4.將開關的資訊更改為1(On)與0(Off)

5.點選Create block完成建立

# 透過MQTT –在儀錶板上面顯示變數(3/3)



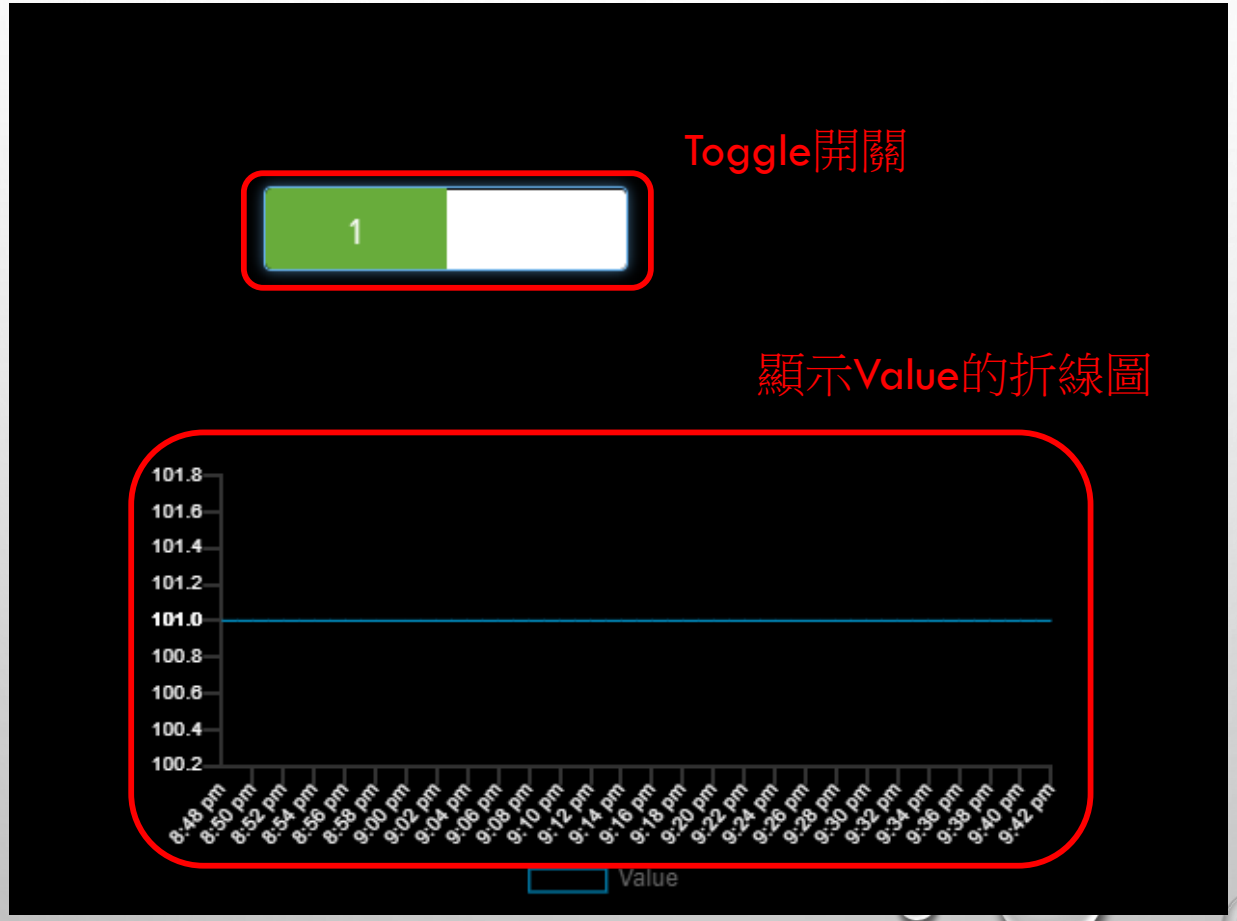
1.點選左圖類似折線圖的按鍵

2.將Value變數左邊的框框點選勾起來

3.點選Next step進入下一步

4.點選Create block完成建立

# 透過MQTT – 完成後的DASHBOARD介面



# 透過MQTT – 訂閱、發布訊息的ID

**Adafruit的訊息ID格式為**

<使用者帳戶>/feeds/<變數名稱>

因此本範例第47行與第61行該填入的為

<你的Adafruit使用者帳戶名稱>/feeds/Toggle

<你的Adafruit使用者帳戶名稱>/feeds/Value

此外Adafruit官方有提供的時間訊息為

1. time/seconds：以秒當作單位
2. time/millis：以毫秒當作單位
3. time/hours：以小時當作單位

# 透過MQTT – 執行程式

- 跑起來!
- 看程式的註解來觀察怎麼使用~

# 透過IFTTT

- 使用IFTTT網站設定訊息的來源與該送去哪
- 好麻煩Q 晚點再看看怎麼搞