Advantech SE Technical Share Document

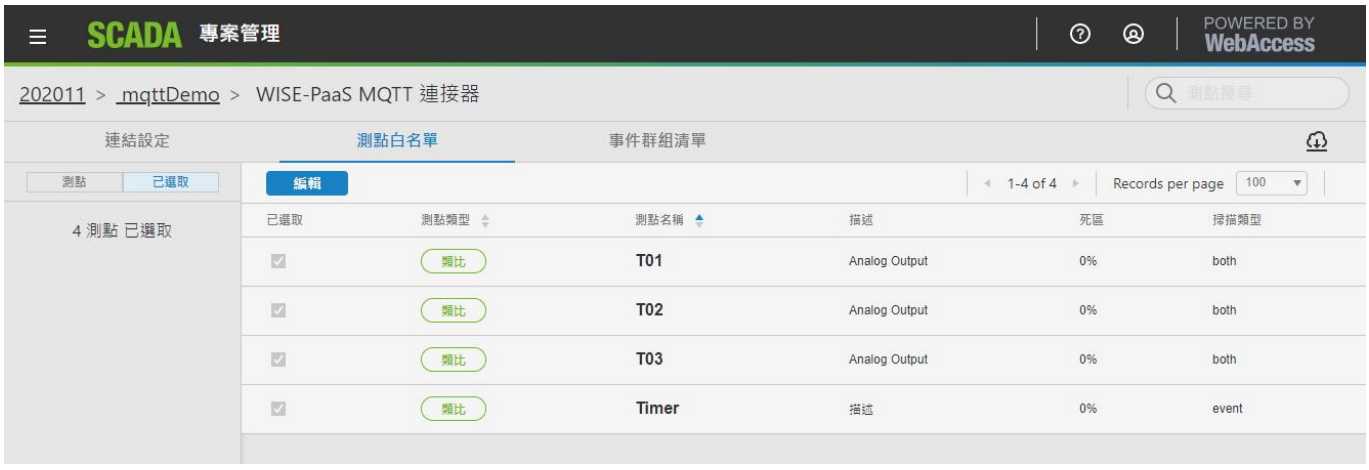
Date	2020 / 11 / 20		
Category	□ FAQ ■ SOP □ Driver Tech Note	**Related Product**	EnSaaS4.0, Datahub, RabbitMQ
Abstract	如何同時使用定時上傳與變化上傳 MQTT 封包到 WISE-PaaS		
Keyword	WISE-PaaS, EnSaaS4.0, Datahub, RabbitMQ, MQTT		
Related OS			

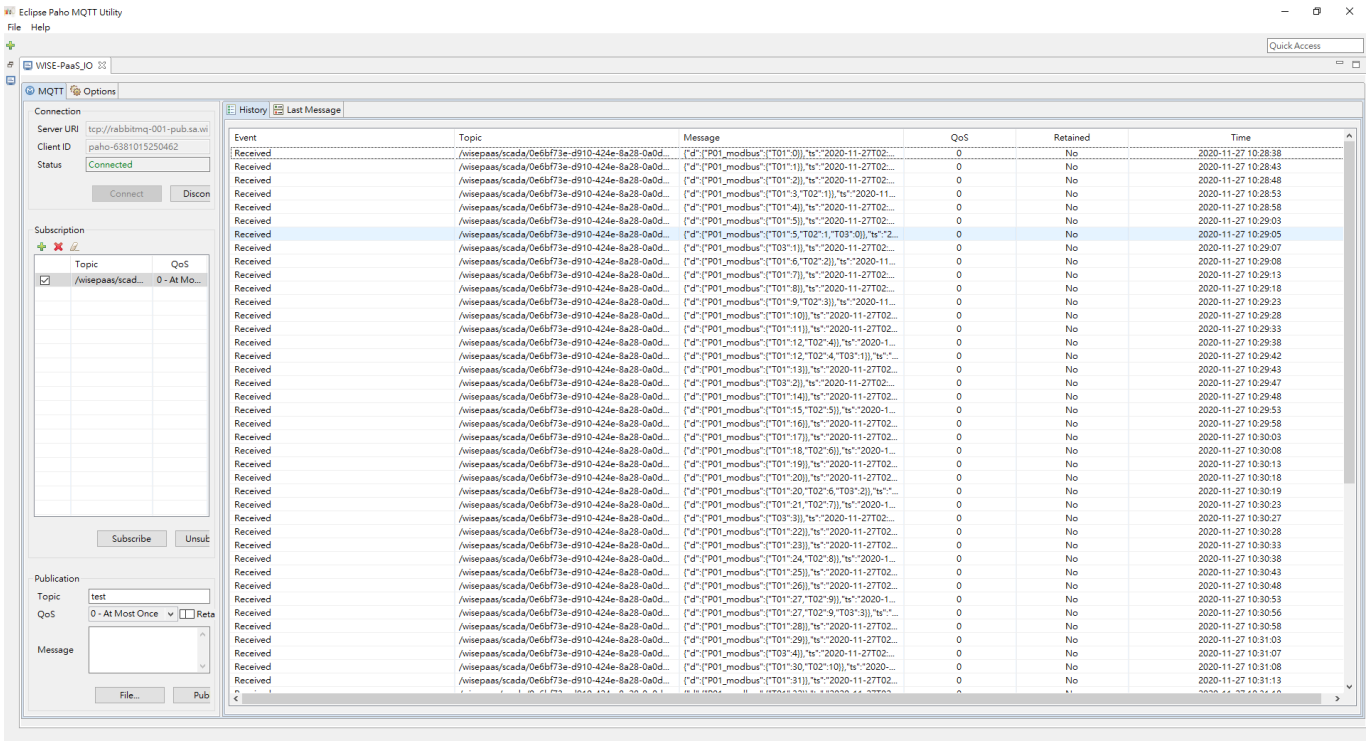
Revision History

Date	Version	Author	Reviewer	Description
2020/11/20	V1.0	Eden.Sun	Nick.Liu	First Edit.*(By WebAccess 9.0.2)*

■ **Problem Description & Architecture:**

如何同時使用定時上傳與變化上傳 MQTT 封包到 WISE-PaaS。

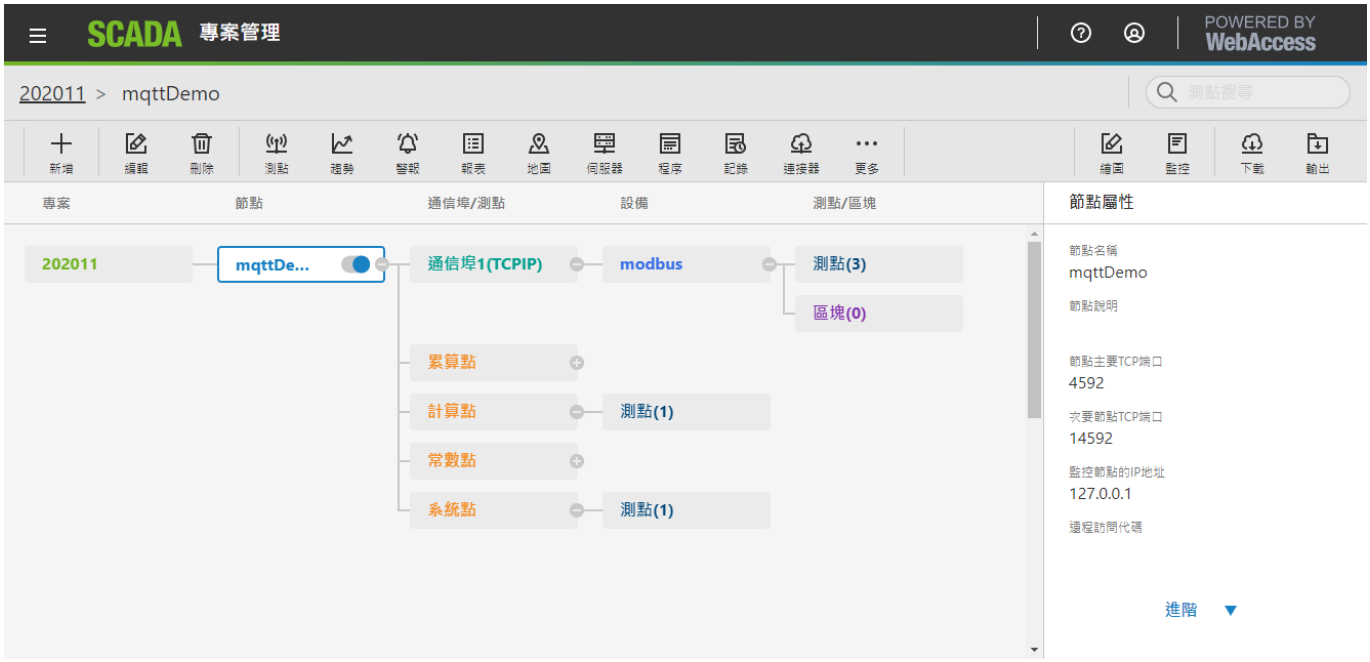




Brief Solution - Step by Step:

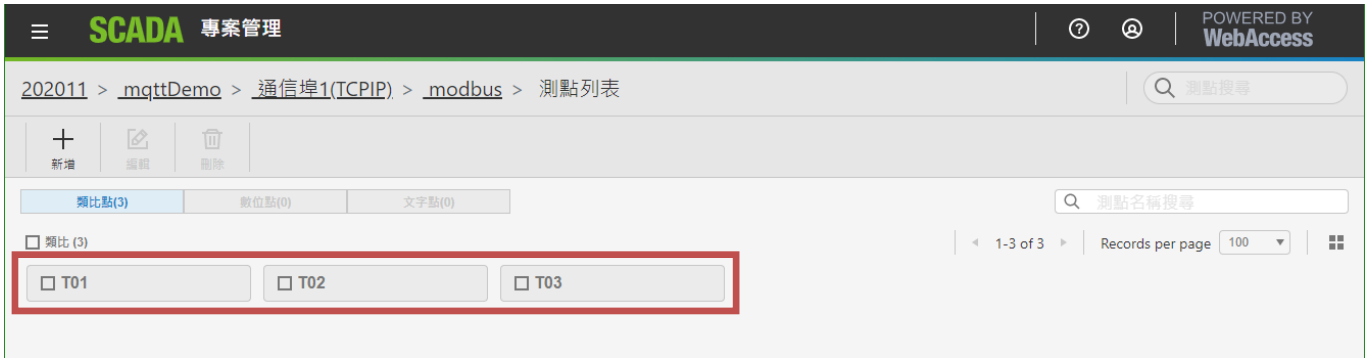
※請先確認 WebAccess/SCADA 版本，需於 WebAccess 9.0.2 版本之後

1. 登入 WebAccess 工程首頁，建立專案節點(Project Node)與監控節點(SCADA Node)，接著依據需求建立通信埠(Com Port)、設備(Device)與測點(Tag)

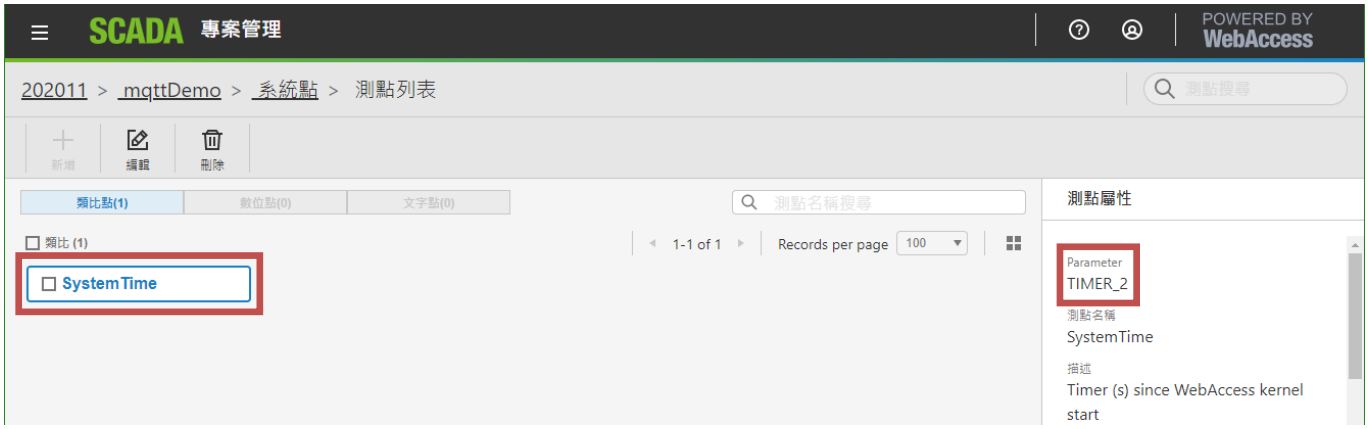


※ 於本範例中，共計建立 5 個測點(3 個設備點、1 個系統點、1 個計算點)

➢ 設備點，抓取設備數值 (**本範例 T01：每 5 秒變化、T02：每 30 秒變化、T03：每 40 秒變化**)



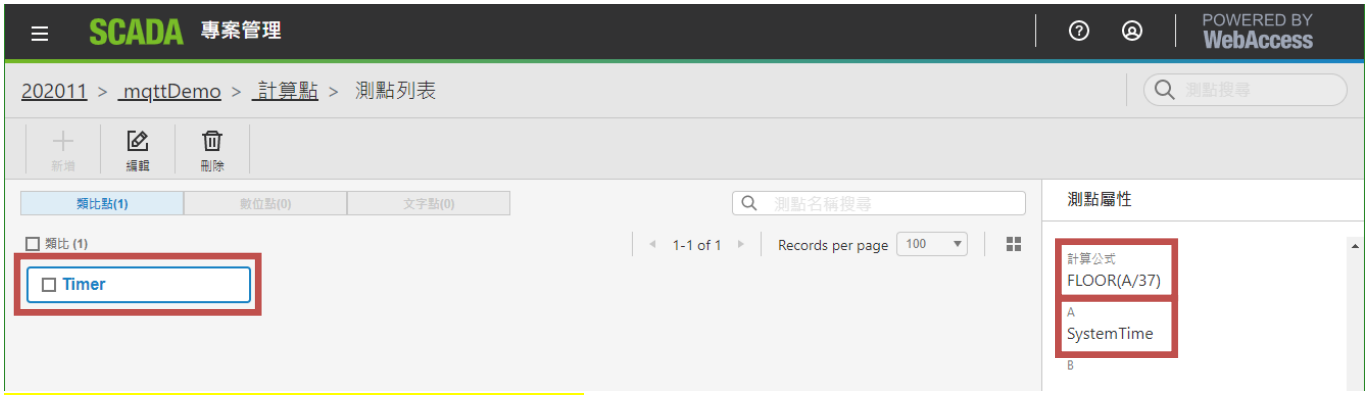
➢ 系統點，使用 **TIMER_2**，抓取 WebAccess 運行的秒數



➢ 計算點，使用 **FLOOR()**，計算 WebAccess 定時上傳的時間點 (**本範例每 37 秒定時上傳**)

✧ A 參數：帶入系統點(**SystemTime**)

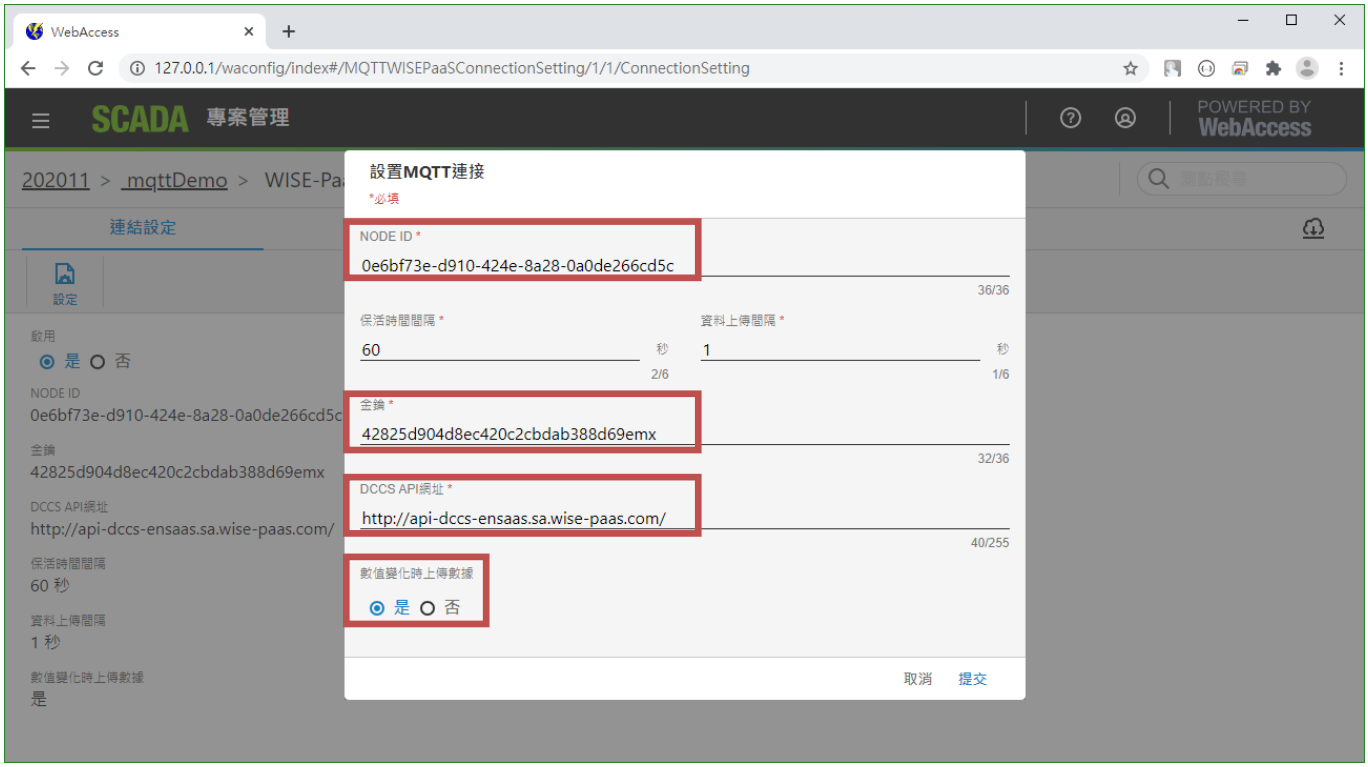
✧ 計算公式：A 參數除以定時上傳的秒數並使用無條件捨去法 (**FLOOR(A/37)**)



※ 分母即為上傳所需的固定間隔時間(秒)

2. 進入編輯 WISE-PaaS MQTT 連接器設定。

※ 請依據 WISE-PaaS Datahub 上面建立的資訊來填寫

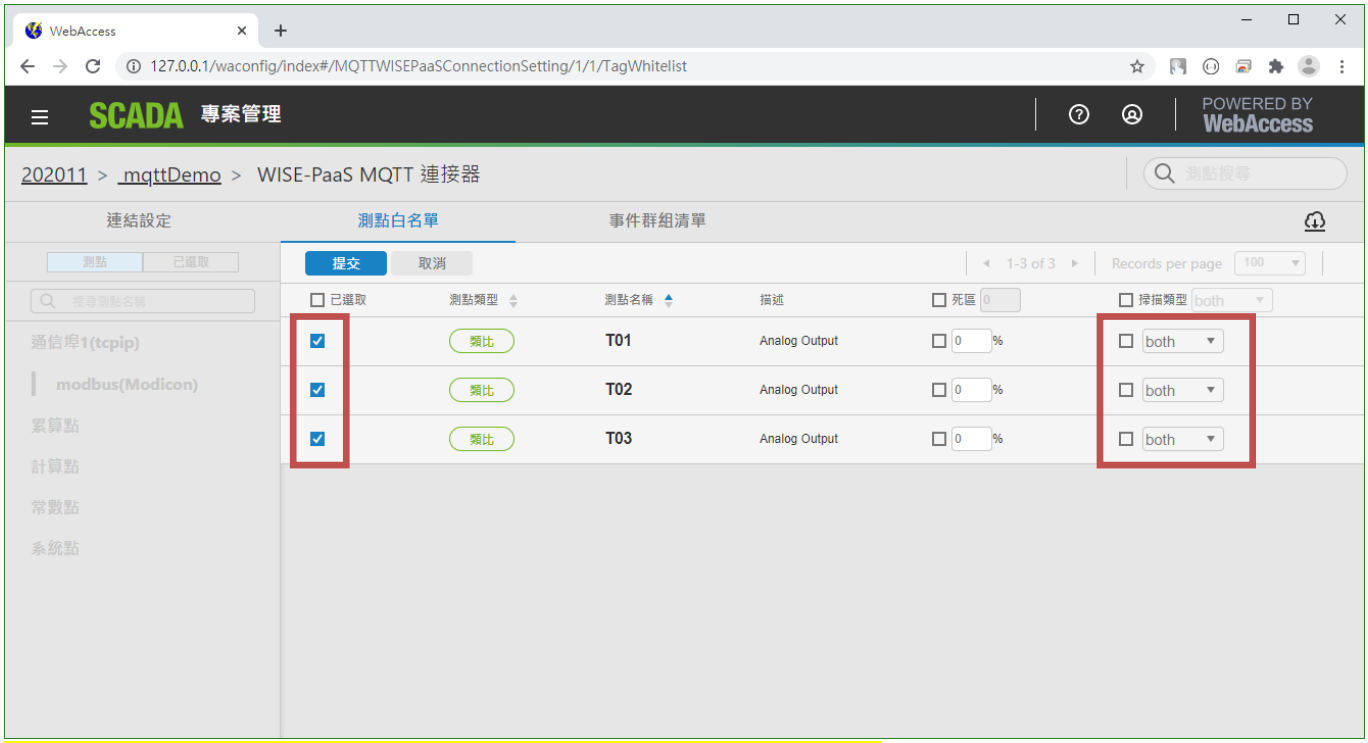


※ 請選擇『數值變化時上傳數據』為是

3. 設定上傳 WISE-PaaS MQTT 測點白名單

➢ 設備點

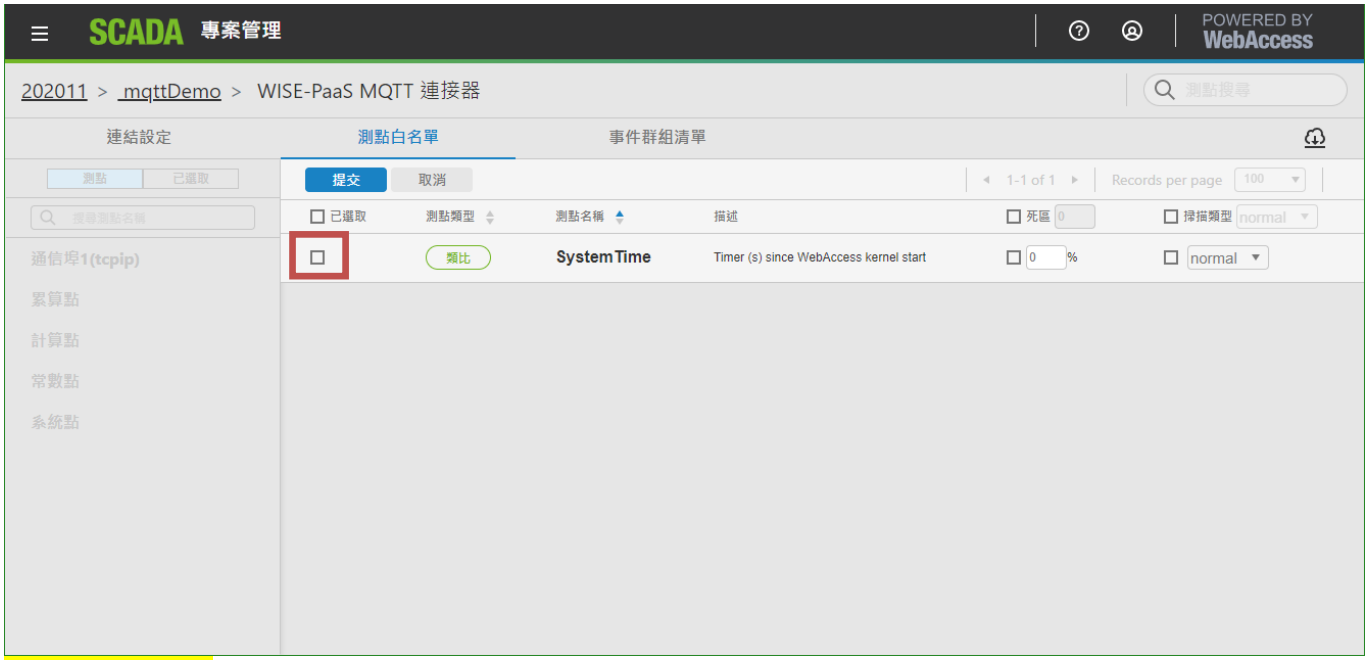
- 勾選需要上傳的測點
- 設定死區數值 *(可勾選表頭死區，快速修改被勾選中的死區數值)*
- 掃描類型選擇 both *(可勾選表頭掃描類型，快速修改被勾選中的掃描類型)*



※ 將需要『定時上傳』與『變動上傳』的測點，選擇『both』

➢ 系統點

- 不勾選系統點 (僅做為計算固定時間用)



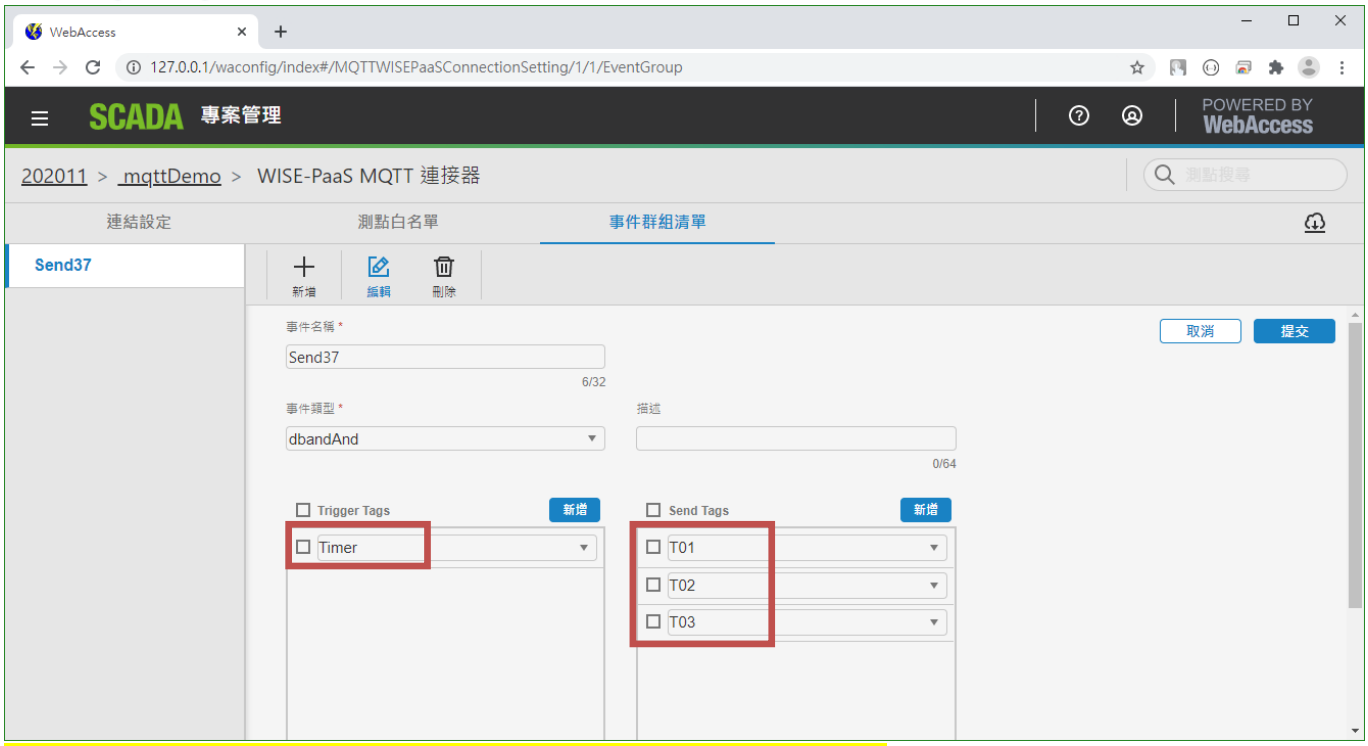
※ 不需要勾選

➢ 計算點

- 勾選計算點
- 設定死區數值 *(可勾選表頭死區，快速修改被勾選中的死區數值)*
- 掃描類型選擇 event

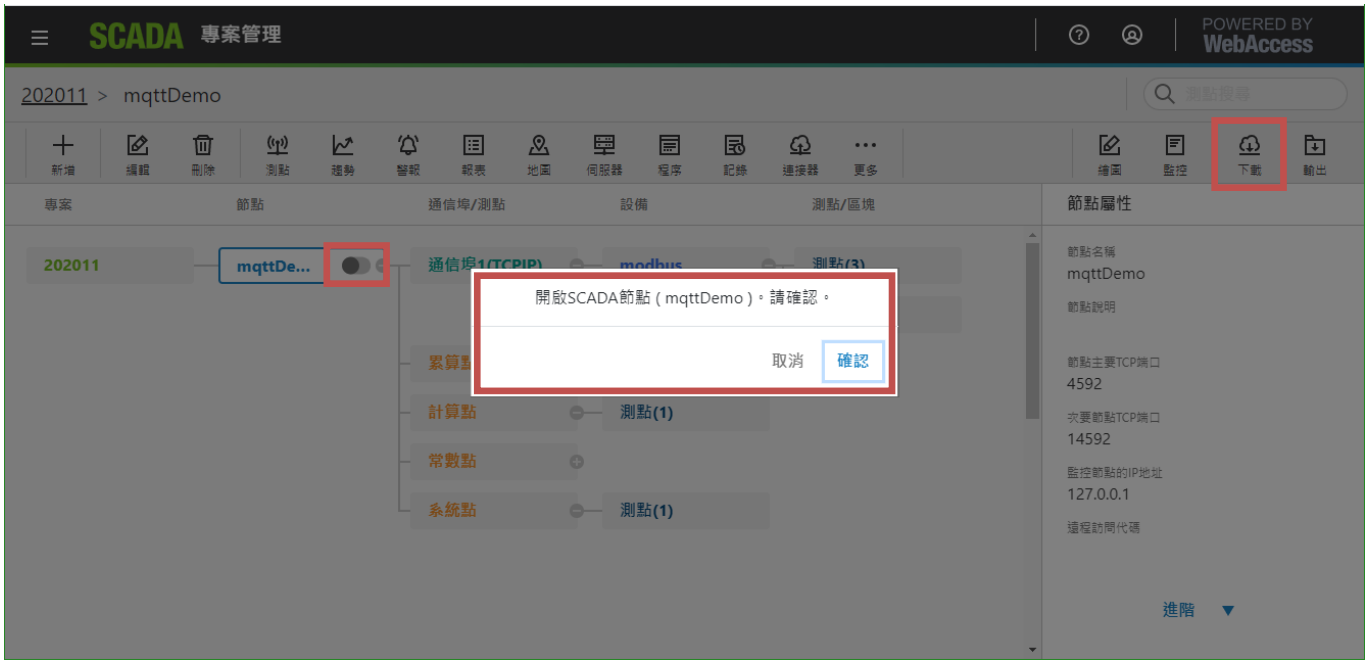
4. 設定上傳 WISE-PaaS MQTT 事件群組清單

- 增加事件群組，利用計算點當作 Trigger Tags，觸發後上傳設備點(不包含觸發的系統點)
- 事件群組類型，因為單點觸發，所以 dbandAnd 或是 dbandOr 沒有差異



※ Trigger Tags 選擇計算點(Timer)，但不把此點加入上傳名單中

5. 下載專案，並啟動核心



6. 訂閱 WISE-PaaS DataHub RabbitMQ 來查看 MQTT 上傳狀況

- 紅色框內的為**定時上傳** MQTT 數據
- 其餘的測點為**變動上傳** MQTT 數據

Message	Time
{"d":{"P01_modbus":{"T01":0}},"ts":"2020-11-27T02:28:38.64...	2020-11-27 10:28:38
{"d":{"P01_modbus":{"T01":1}},"ts":"2020-11-27T02:28:43.66...	2020-11-27 10:28:43
{"d":{"P01_modbus":{"T01":2}},"ts":"2020-11-27T02:28:48.67...	2020-11-27 10:28:48
{"d":{"P01_modbus":{"T01":3,"T02":1}},"ts":"2020-11-27T02:2...	2020-11-27 10:28:53
{"d":{"P01_modbus":{"T01":4}},"ts":"2020-11-27T02:28:58.51...	2020-11-27 10:28:58
{"d":{"P01_modbus":{"T01":5}},"ts":"2020-11-27T02:29:03.54...	2020-11-27 10:29:03
{"d":{"P01_modbus":{"T01":5,"T02":1,"T03":0}},"ts":"2020-11-...	2020-11-27 10:29:05
{"d":{"P01_modbus":{"T03":1}},"ts":"2020-11-27T02:29:07.55...	2020-11-27 10:29:07
{"d":{"P01_modbus":{"T01":6,"T02":2}},"ts":"2020-11-27T02:2...	2020-11-27 10:29:08
{"d":{"P01_modbus":{"T01":7}},"ts":"2020-11-27T02:29:13.58...	2020-11-27 10:29:13
{"d":{"P01_modbus":{"T01":8}},"ts":"2020-11-27T02:29:18.60...	2020-11-27 10:29:18
{"d":{"P01_modbus":{"T01":9,"T02":3}},"ts":"2020-11-27T02:2...	2020-11-27 10:29:23
{"d":{"P01_modbus":{"T01":10}},"ts":"2020-11-27T02:29:28.6...	2020-11-27 10:29:28
{"d":{"P01_modbus":{"T01":11}},"ts":"2020-11-27T02:29:33.6...	2020-11-27 10:29:33
{"d":{"P01_modbus":{"T01":12,"T02":4}},"ts":"2020-11-27T02:...	2020-11-27 10:29:38
{"d":{"P01_modbus":{"T01":12,"T02":4,"T03":1}},"ts":"2020-11...	2020-11-27 10:29:42
{"d":{"P01_modbus":{"T01":13}},"ts":"2020-11-27T02:29:43.5...	2020-11-27 10:29:43
{"d":{"P01_modbus":{"T03":2}},"ts":"2020-11-27T02:29:47.56...	2020-11-27 10:29:47
{"d":{"P01_modbus":{"T01":14}},"ts":"2020-11-27T02:29:48.5...	2020-11-27 10:29:48
{"d":{"P01_modbus":{"T01":15,"T02":5}},"ts":"2020-11-27T02:...	2020-11-27 10:29:53
{"d":{"P01_modbus":{"T01":16}},"ts":"2020-11-27T02:29:58.5...	2020-11-27 10:29:58
{"d":{"P01_modbus":{"T01":17}},"ts":"2020-11-27T02:30:03.6...	2020-11-27 10:30:03
{"d":{"P01_modbus":{"T01":18,"T02":6}},"ts":"2020-11-27T02:...	2020-11-27 10:30:08
{"d":{"P01_modbus":{"T01":19}},"ts":"2020-11-27T02:30:13.6...	2020-11-27 10:30:13
{"d":{"P01_modbus":{"T01":20}},"ts":"2020-11-27T02:30:18.6...	2020-11-27 10:30:18
{"d":{"P01_modbus":{"T01":20,"T02":6,"T03":2}},"ts":"2020-11...	2020-11-27 10:30:19
{"d":{"P01_modbus":{"T01":21,"T02":7}},"ts":"2020-11-27T02:...	2020-11-27 10:30:23
{"d":{"P01_modbus":{"T03":3}},"ts":"2020-11-27T02:30:27.69...	2020-11-27 10:30:27
{"d":{"P01_modbus":{"T01":22}},"ts":"2020-11-27T02:30:28.5...	2020-11-27 10:30:28
{"d":{"P01_modbus":{"T01":23}},"ts":"2020-11-27T02:30:33.5...	2020-11-27 10:30:33
{"d":{"P01_modbus":{"T01":24,"T02":8}},"ts":"2020-11-27T02:...	2020-11-27 10:30:38
{"d":{"P01_modbus":{"T01":25}},"ts":"2020-11-27T02:30:43.5...	2020-11-27 10:30:43
{"d":{"P01_modbus":{"T01":26}},"ts":"2020-11-27T02:30:48.5...	2020-11-27 10:30:48
{"d":{"P01_modbus":{"T01":27,"T02":9}},"ts":"2020-11-27T02:...	2020-11-27 10:30:53
{"d":{"P01_modbus":{"T01":27,"T02":9,"T03":3}},"ts":"2020-11...	2020-11-27 10:30:56
{"d":{"P01_modbus":{"T01":28}},"ts":"2020-11-27T02:30:58.5...	2020-11-27 10:30:58
{"d":{"P01_modbus":{"T01":29}},"ts":"2020-11-27T02:31:03.6...	2020-11-27 10:31:03
{"d":{"P01_modbus":{"T03":4}},"ts":"2020-11-27T02:31:07.61...	2020-11-27 10:31:07

- **Pin Definition (in case of serial connection):**

- **Reference:**