工業物聯網

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一、 過程(PY. CODE)

server

```python
from opcua import Server

from random import randint

import time

import datetime

server = Server()

url = "opc.tcp://140.116.226.85:4840"

server.set_endpoint(url)

name = "OPCUA_SIMUALTION_SERVER"

addspace = server.register_namespace(name)


node = server.get_objects_node()

Param = node.add_object(addspace,"Parameters")

Temp = Param.add_variable(addspace,"Temperature",0)

Temp.set_writable()

server.start()

print("server at {}".format(url))

while True:
    Temperature = randint(0,150)
    print(datetime.datetime.now())
    print(Temperature)
    Temp.set_value(Temperature)
    time.sleep(2)
```

client

```
opcua_client.py  ✖
1    from opcua import Client
2    import time
3    import datetime
4    import RPi.GPIO as GPIO
5    GPIO.setmode(GPIO.BOARD)
6    GPIO.setup(11 , GPIO.OUT)
7
8    url = 'opc.tcp://140.116.226.85:4840'
9    client = Client(url)
10   client.connect()
11   print('Client connected')
12   while True:
13       Temp = client.get_node("ns=2;i=2")
14       tem = Temp.get_value()
15       print(datetime.datetime.now())
16       print(tem)
17       if int(tem) >= 50:
18               GPIO.output(11, True)
19       else:
20               GPIO.output(11, False)
21       time.sleep(1)
22
```

二.使用 UaExpert 和伺服器連線

Data Access View								
#	Server	Node Id	Display Name	Value	Datatype	ource Timestam	Server Timestam	Statuscode
1	server	NS2|Numeric|2	Temperature	47	Int64	PM 06:13:21.918	AM 08:00:00.0...	Good

三. 作業運行影片

影片連結：https://youtu.be/wTzSZhdtYos