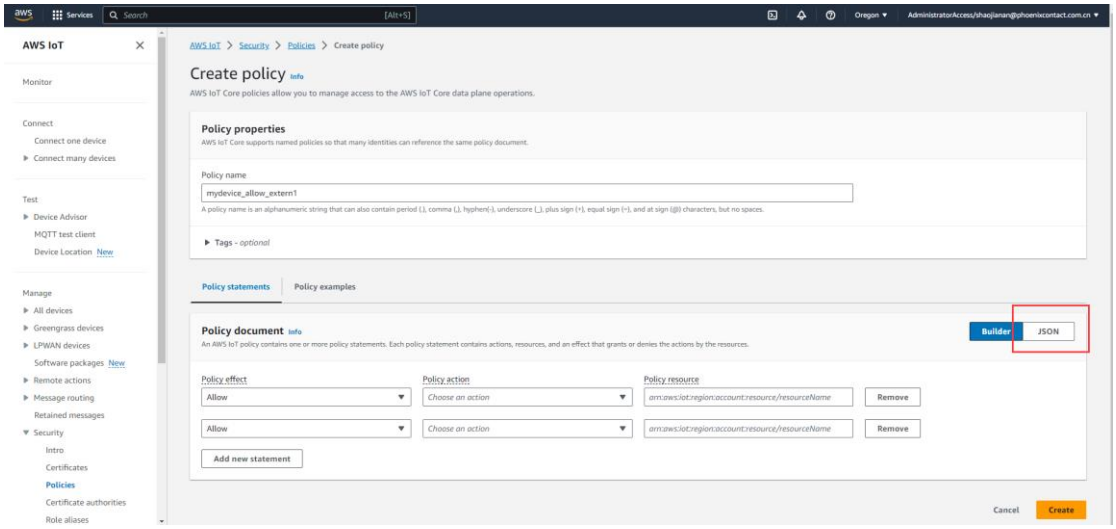
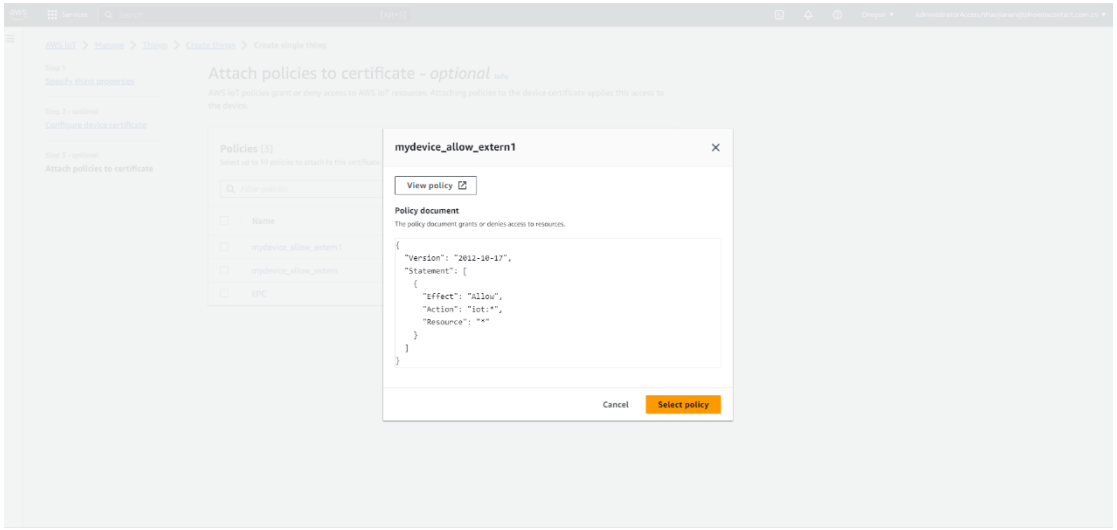
This is just an example, you must have to create a device and certificates with your AWS account to use it!

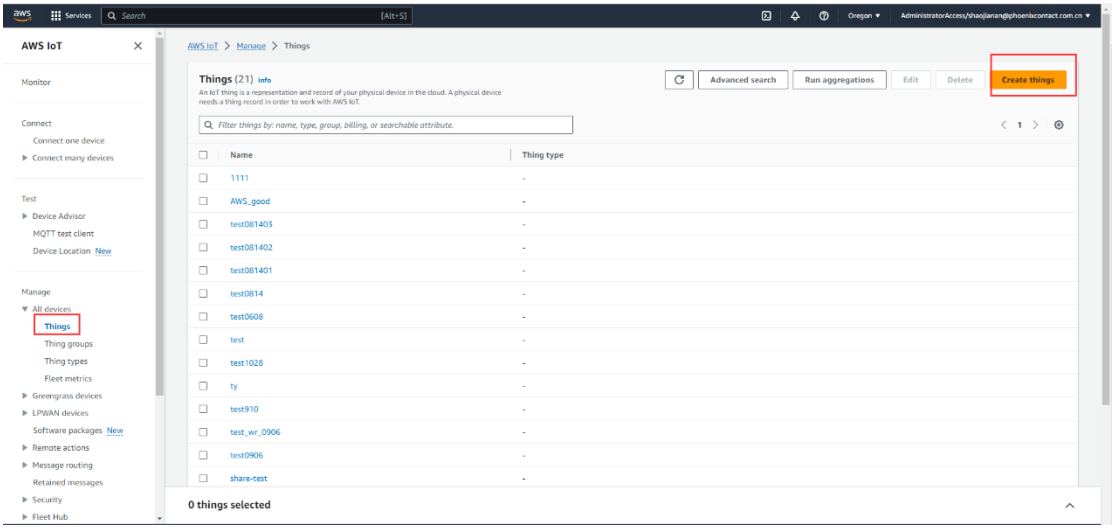
1. Log in AWS IoT, And create a goods.
   1) You should create a policy first.



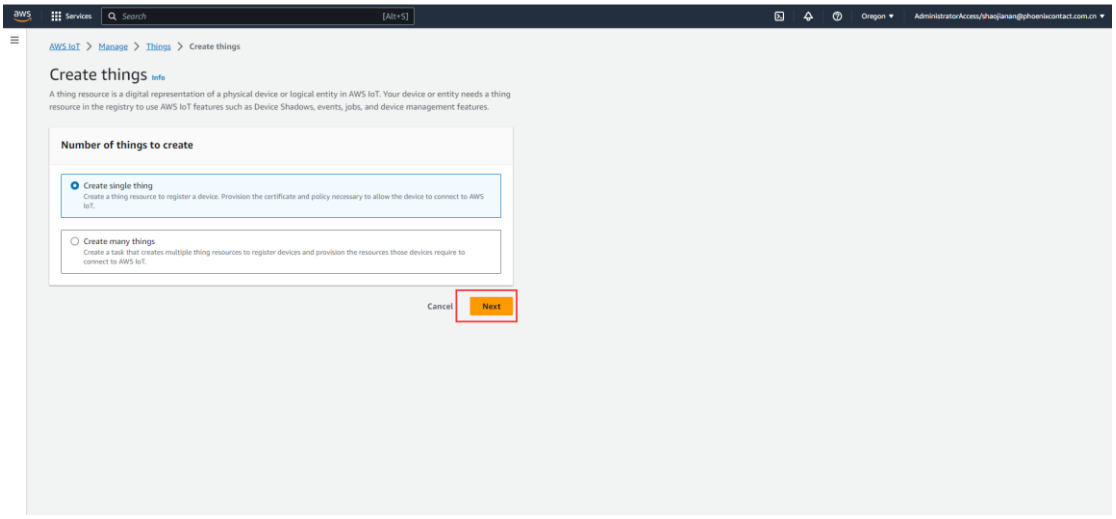
   2) The content of the policy



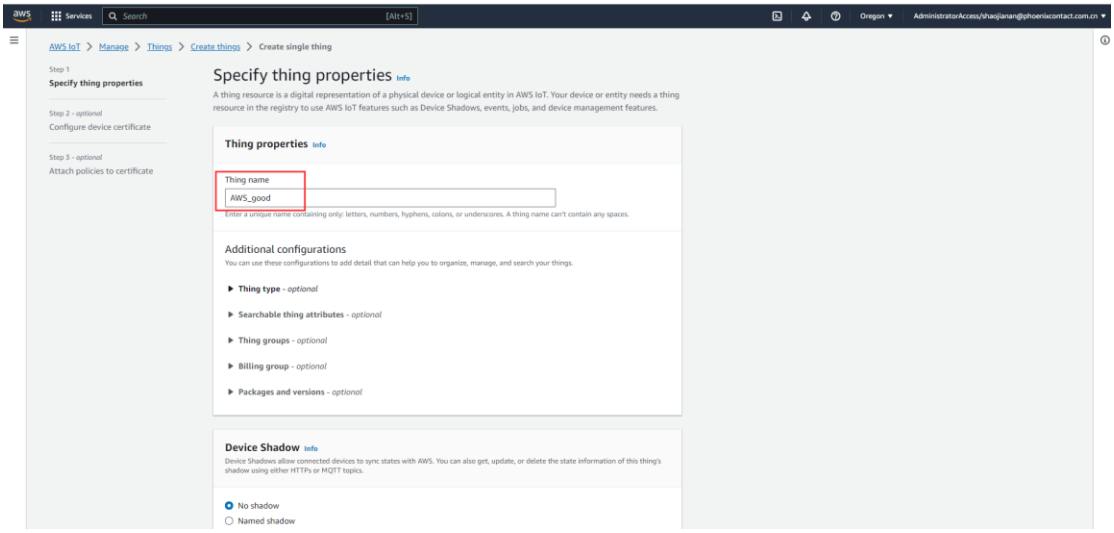
   3) Create a new good.



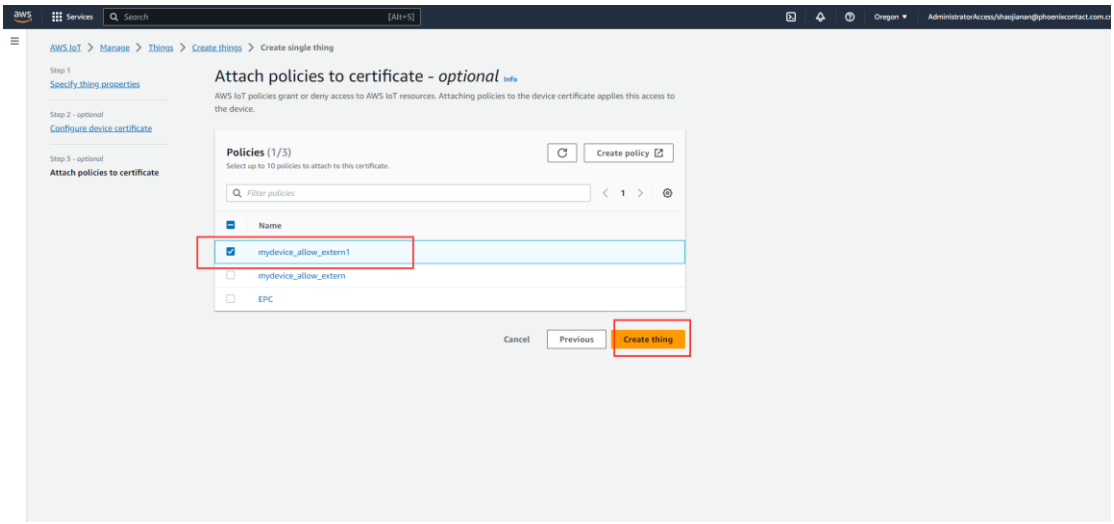
4) Choose the “Create single thing”,and then click the Next



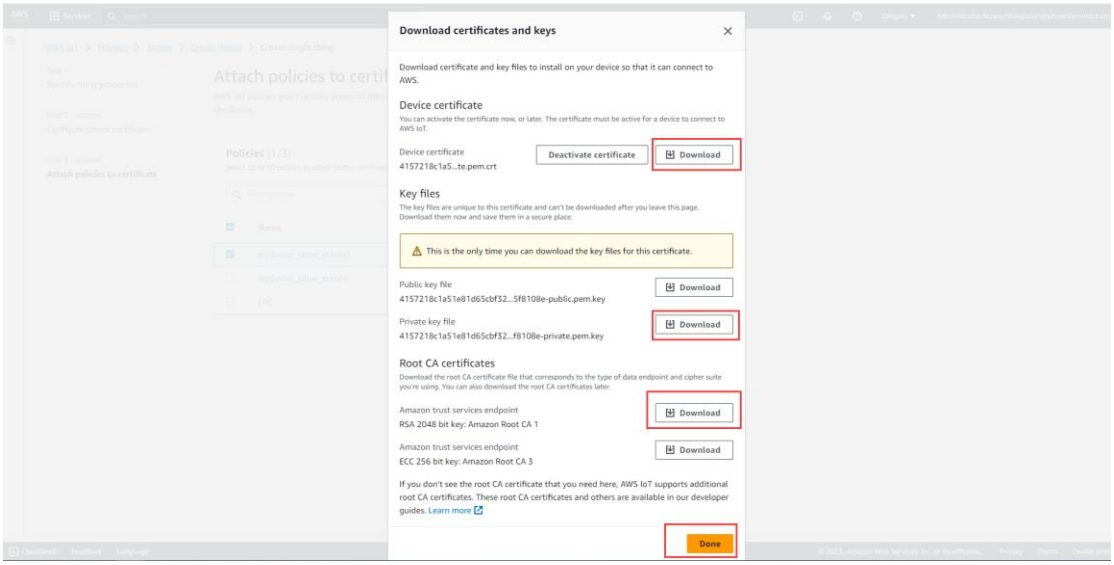
5)Then fill in the name of the goods (device_id in the example project), and then click the Next.



6)Select the policy you want to attach to the certificate,and click the “Create thing”.



7)Click Create a certificate to generate the certificate and key. And download The certificate for the item, Private key and The root CA of AWS IoT to local and rename them with a shorter name, then click activation. Attention: you should add the additional policies.



8)Open the project of PLCnext Engineer, Like IIOT_TEST_AWS_PUB_4.pcwex.open the programs variables list, you can see ca_path, cert_path and key_path. Please put these three files you downloaded before to /opt/plcnext/certs/ in PLCnext. And fill in the correct initial value in variables list, like STRING#'/opt/plcnext/certs/certificate.pem.crt'.

private.pem.key	2 KB	2023/8/14 9:54:28
certificate.pem.crt	2 KB	2023/8/14 9:54:29
AmazonRootCA1.pem	2 KB	2023/6/8 15:48:07

ca_path	STRING	本地	☐		STRING#'/opt/plcnext/certs/AmazonRootCA1.pem'
cert_path	STRING	本地	☐		STRING#'/opt/plcnext/certs/certificate.pem.crt'
key_path	STRING	本地	☐		STRING#'/opt/plcnext/certs/private.pem.key'

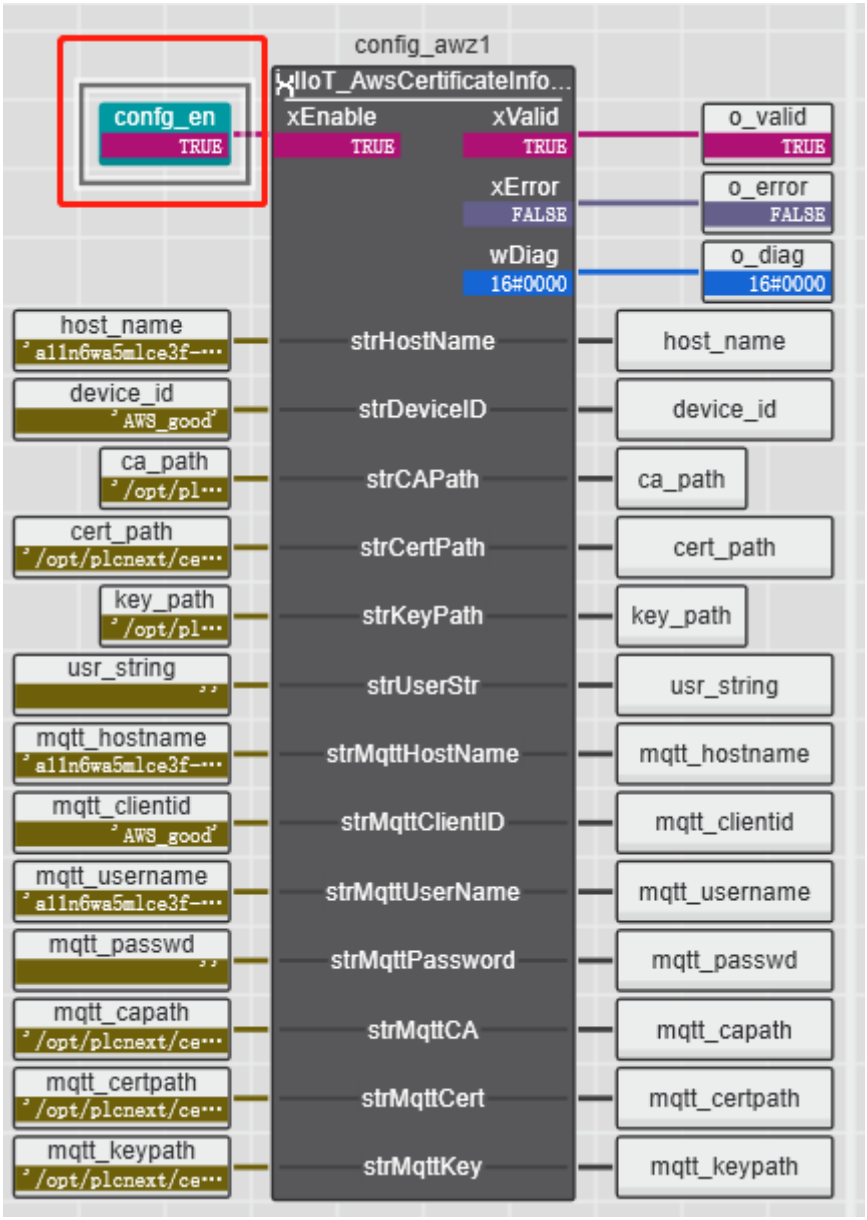
9)Replace the host_name by your own AWS account.

host_name	STRING	本地	☐		STRING#'a1ln6wa5mlce3f-ats.iot.us-west-2.amazonaws.com'
device_id	STRING	本地	☐		STRING#'AWS_good'
ca_path	STRING	本地	☐		STRING#'/opt/plcnext/certs/AmazonRootCA1.pem'
cert_path	STRING	本地	☐		STRING#'/opt/plcnext/certs/certificate.pem.crt'
key_path	STRING	本地	☐		STRING#'/opt/plcnext/certs/private.pem.key'

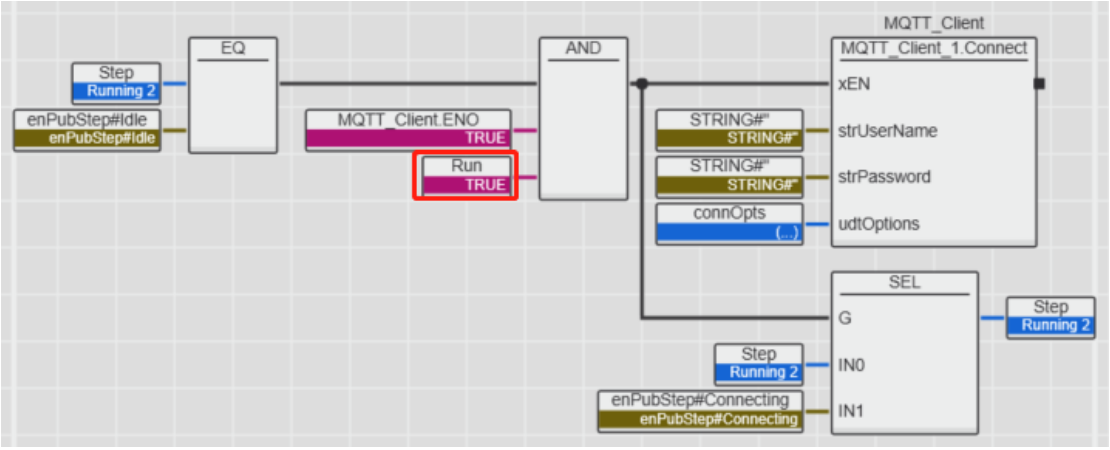
10)Connect to PLCnext and go into debug mode,

2、Connect AWS Cloud using Example Projects

1） Find the IIOT_AwsCertificateInfo_1 function block, set config_en as TRUE. If o_valid output TRUE, it means the certificate, key and ca is valid.

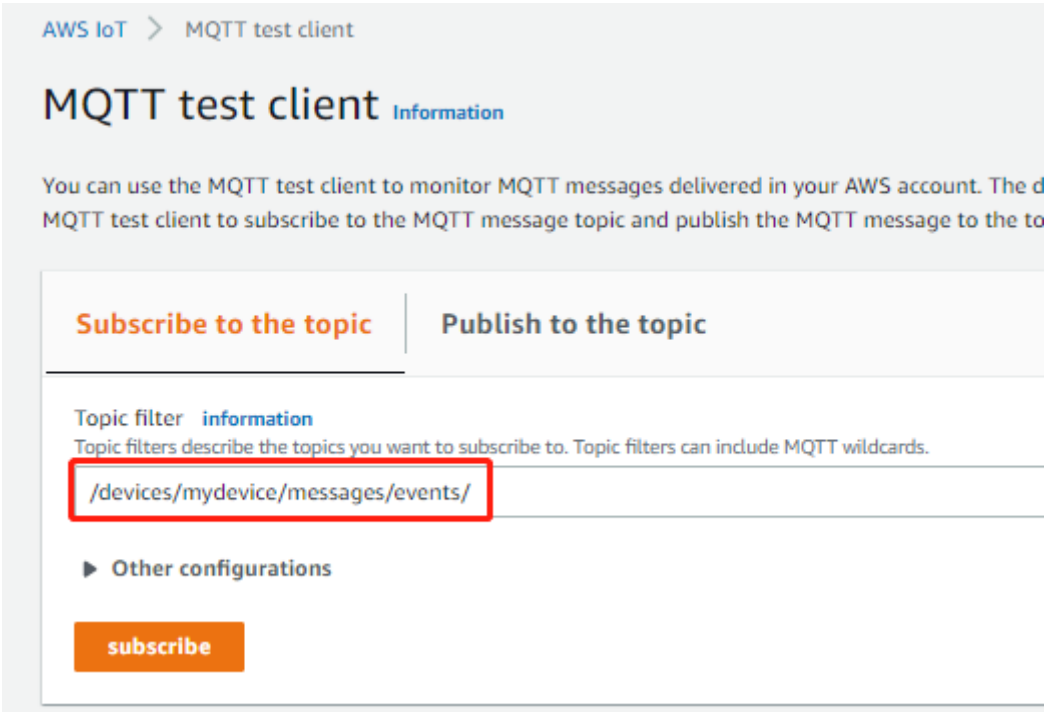


1) Then find the MOTT_Client_1.Connect function block, set Run as TRUE. If Step output Running 2, it means connect succeed.

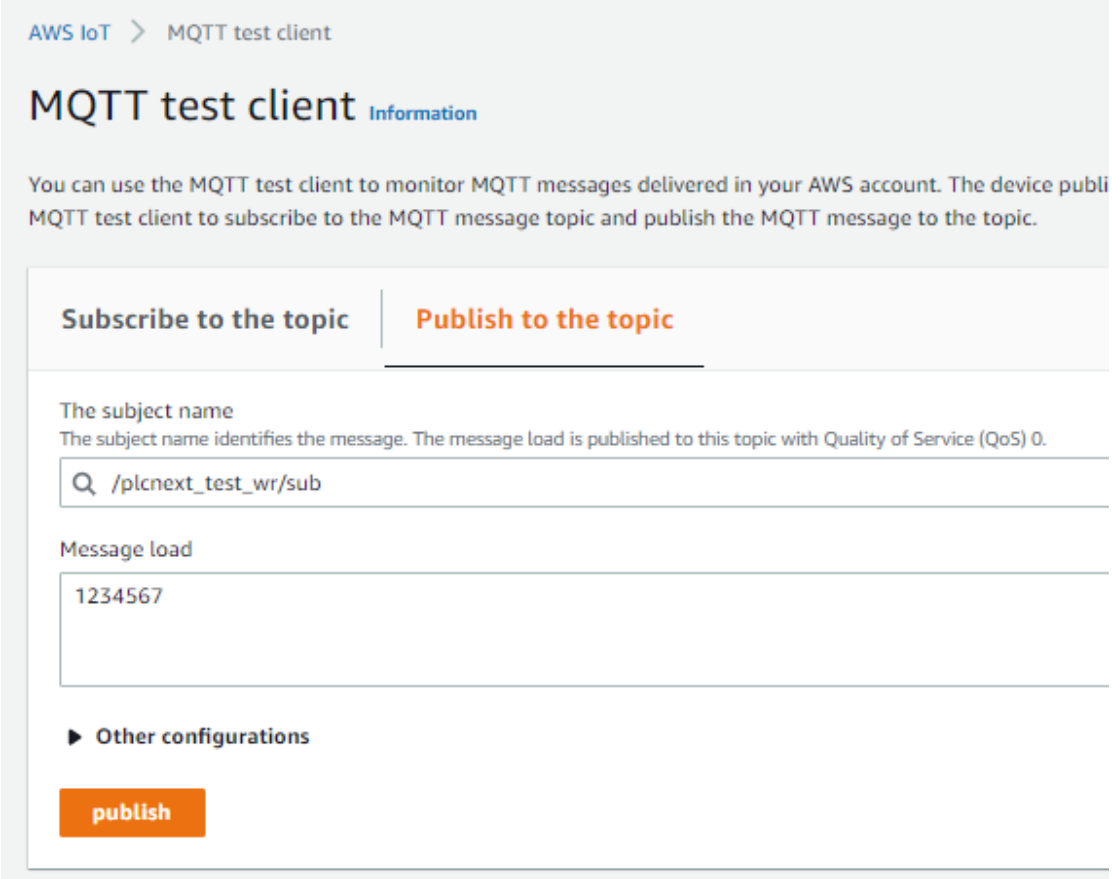


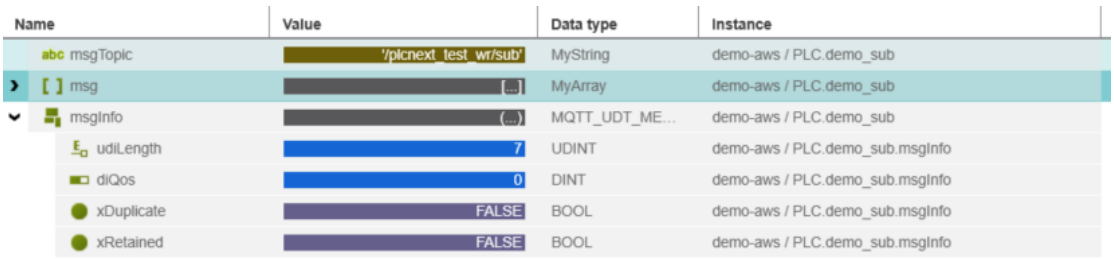
5) Open the MQTT test client in AWS IoT. Copy the TOPIC value of project to AWS IoT. Subscribe the topic and you can receive the message from PLCnext.

TOPIC	STRING	Local	☐		STRING#'/devices/mydevice/messages/events/'



If you want to realize subscribe function in PLCnext, you can open IIOT_TEST_AWS_SUB_2.pcwex project. Steps are the same. And you can see the message topic, meaasge contents and message information from msgTopic, msg, msgInfo these three variables.





Attention: Make sure your PC time is correct, or the certificate you download is invalid.