

Solution Center Americas

Quick Start Guide

Product name: Ewon Flexy AWS IoT Core Connector

Version 1.0



Version history

Version	History	Author	Date D-M-Y
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1 Introduction

The HMS Networks MU Americas Solution Center has produced a connector application for linking the Ewon Flexy to AWS IoT Core. This quick start guide details the minimal steps required to setup an Ewon Flexy to connect to AWS IoT Core.

2 Configuration

2.1 Configure AWS IoT Core

IoT Core needs to be configured before an Ewon Flexy can be connected. The process consists of creating a policy, creating a device, downloading the device certificates, and attaching the created policy to the device.

2.1.1 Create a policy

A policy defines a device's access permissions to IoT Core. To create a policy, navigate to **Secure** -> **Policies** in the left-hand navigation menu. Then click **Create** in the top right of the page.

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Settings			
Learn			
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A new policy must be given a name and policy statements. For more about IoT Core policies see:

https://docs.aws.amazon.com/iot/latest/developerguide/iot-policies.html.

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	Create a policy		4 0 0
	Create a policy to define a set of authorized acts mean about to? policies go to the ANTS or Police Name	orn. You can authorize actions on one or more reasonas Otingo. In discontation page.	ταρκα, παρίε fithers). Το iwarm
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Sample Policy

For getting started this sample policy document will provide an Ewon Flexy with the ability to connect to IoT Core as well as publish, receive, and subscribe to all topics. The resource will have to be modified to match the unique Amazon Resource Name (ARN) of the device.

Note: This policy should be used for testing only. A policy used in production should only allow topics required by the application.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "iot:Publish",
        "iot:Receive",
        "iot:Subscribe"
      ],
      "Resource": [
       "*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "iot:Connect"
      ],
      "Resource": [
        "arn:aws:iot:XXXXXXX:YYYYYYYYY:client/*"
      ]
    }
 ]
}
```



2.1.2 Create a New Device

To create a new device, navigate to **Manage** -> **Things** in the left-hand navigation menu. Then click **Create** in the top right of the page.

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Then click Create a single thing.

aws Services - Resource Groups - 🖌 🗘	Support *
Creating AWS IoT things	с. Ф
An IoT thing is a representation and record of your phylisical device in the cloud. Any physical device needs a thing record in order to work with ABS IoT. Learn more.	
Register a single AWS IoT thing Create a thing in your registry	Create a single thing
Bulk register many AWS IoT things Create things in your registry for a large number of devices already using AWS IoT, or register devices so they are ready to connect to AWS IoT.	Create many things
Cancel	Create a single thing
Feedback Q English (US) 0 2008 - 2020, Amazon Web Services, Inc. or its a	effication. All rights reserved. Privacy Policy Terms of Use



Then, name the new device. This example uses the name **newDevice**. Once named, click **Next** at the bottom right-hand section of the page.

Add your device to the thing registry		SHIP VA
This step creates an entry in the thing registry and a thing shade	ow fur your device.	
nexCerice		
Apply a type to this thing Using a thing type smallfles device management by providing o seminarises of attributes, which dearities the identity and capab Thing Type No type selected - Crit		ide things with a
Add this thing to a group		
Adding your thing to a group allows you to manage devices rem Thing Group	iotely using Jobs	
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Adding your thing to a group allows you to manage devices rem Thing Group	Creater	pmup Olanya
Adding your thing to a group allows you to manage devices rem Thing Group Groups / Set searchable thing attributes (optional) Enter a value for one or more of these attributes so that you can	Create to be and the registry.	group Change
Adding your thing to a group allows you to manage devices rain Thing Gesupe Groups: / Set searchable thing attributes (optional) Enter a value for one or more of these attributes so that you can Attribute key Provide an attribute key, e.g. Hanufacturer	Search flar your things in the registry. Value	



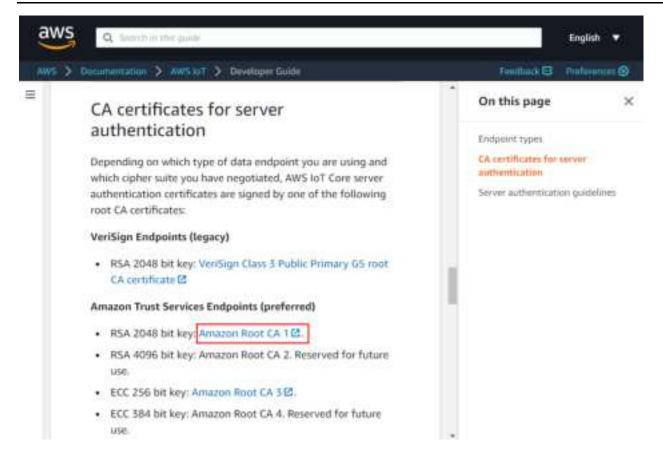
Create a unique certificate for the device by clicking **Create certificate**.

aws	Services - Resource Groups - 1	🗘 HMS Solution Center American + Oregon + Se	pport -
	GENTLATIONS Add a certificate for your thing	518* 23	ф Ф Ø
	A certificate is used to authenticate your device's connection to AWS IoT.		
	One-click certificate creation (recommended) This will generate a certificate, public key, and private key using AWS IoT's certificate authority.	Create certificate	
	Create with CSR Upload your own certificate signing request (CSR) based on a private key you own.	▲ Create with CSR	
	Use my certificate Register your CA certificate and use your own certificates for one or many devices.	Get started	
	Skip certificate and create thing You will need to add a certificate to your thing later before your device can connect to A IoT.	WS Create thing without certificate	
Feedback	© English (US) 0 2008 - 2020, Amazon W	io Services, Inc. or its affiliates. All rights reserved. Privacy Pakcy	Terms of Use

Download the certificate, public key, and private key for the device by clicking **Download** next to each item (Box 1). Next, download the root CA for AWS IoT by clicking to the **Download** link in Box 2 then clicking the link for **RSA 2048 bit key: Amazon Root CA 1**. Once all the certificate and keys have been downloaded, click **Activate** (Box 3). Finally, click **Done** (Box 4).

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Download these files and s after you close this page.	ave them in a safe place. Certificate	is can be retrieved at any	r time, but the private and pub	ic keys cannot be retrieved
in order to connect a devic	x, you need to download the follo	owing:		
A certificate for this thing	15155524c6.cert.pem	Download	D	
A public key	15155524c6.public.key	Download	_	
A private key	15155524c6.private.key	Download		
You also need to downloas A root CA for AlirS IoT Down Activate				9



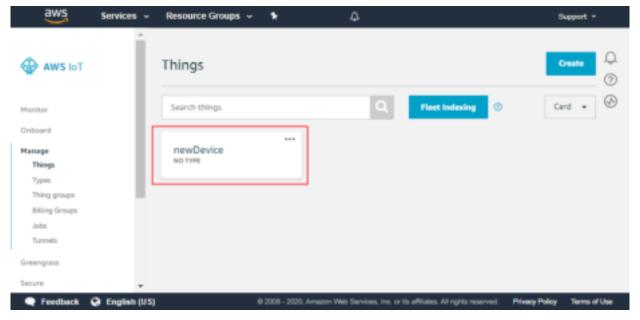


The device has now been created and activated.



2.1.3 Attach Policy to New Device

The last step to configuring the device is attaching a policy. To attach a policy to a new device, navigate to **Manage** -> **Things** in the left-hand navigation menu. Then click on the device that was just created.



On the left-hand navigation menu click **Security**, then click the certificate created in the previous steps.

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On the certificate page click on **Policies** in the left-hand navigation menu. Next, click the **Actions** drop down on the right of the page. In the **Actions** drop down menu click **Attach Policy**.

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treats Policies Treats Non-compliance	Policies There are no pailoles attached to this or thicate.	Descrively Research Inner Inner Attack pains Attack thing Description Description

Select the policy created in section 2.1.1, then click Attach.

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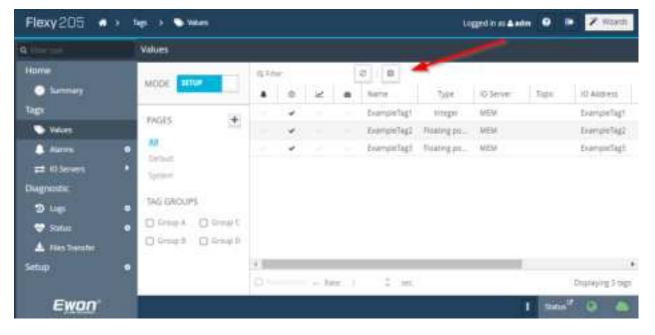
2.2 Configure Ewon Flexy

2.2.1 Configure Tags on the Ewon Flexy

Each tag that should be sent to AWS IoT Core must have historical logging enabled. The historical logging interval configured for a tag sets the interval it will be posted to IoT Core. For information on the Ewon's historical logging functionality, and how to set it up, please visit <u>https://www.ewon.biz/technical-support/pages/data-services/data-logging</u>.

In addition to historical logging being enabled, the Ewon AWS IoT Core Connector application uses tag groups to determine which tags are to be sent to IoT Core. There are four tag groups, A, B, C, and D. Any tag assigned to one of the four tag groups will be sent to IoT Core, but tags that have not been assigned a tag group will be ignored.

To create a new tag click the **+ / + Add** button above the tag list on the **Values** page of the Ewon Flexy webserver.





Create the tag following standard Ewon Flexy documentation. Make sure that **Historical Logging** is enabled and configured to the desired settings.

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Add the tag to a **Tag group** then click **Add Tag** at the bottom right-hand side of the page.

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2.2.2 Configure and Load the Connector Application

2.2.2.1 Modify AwsConnectorConfig.json

Replace the values for **IoTCoreURL** and **DeviceID** in the AwsConnectorConfig.json file to match the values being used.

IoTCoreURL – URL for IoT Core instance.

DeviceID – Must match name given to device during IoT Core device registration.

```
{
   "Connector": {
    "LogLevel": 1
    },
    "Aws": {
        "DeviceMode": 1,
        "IoTCoreURL": "xxxxxxxx.iot.yyyyyyy.amazonaws.com",
        "DeviceID": "newDevice"
    }
}
```

2.2.2.2 Transfer Application Files

Using an FTP client transfer the following files to the /usr directory of the Ewon Flexy.

- AwsConnectoConfig.json
- flexy-aws-connector.jar
- jvmrun

2.2.2.3 Transfer Certificates

- 1. Using an FTP client create a directory named "AwsCertificates" in the /usr directory of the Ewon Flexy.
- 2. Rename the root CA certificate to "rootCA.crt" and transfer it to the "AwsCertificates" directory on the Ewon Flexy.
- 3. Rename the device certificate to "device.cert.pem" and transfer it to the "AwsCertificates" directory on the Ewon Flexy.
- 4. Rename the private key to "device.private.key" and transfer it to the "AwsCertificates" directory on the Ewon Flexy.



3 Testing

Once the Ewon Flexy has been rebooted the application will automatically start and begin publishing data to IoT Core. Data publishing verified by subscribing to the "ewonTelemetry" topic using the Test page.

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