



life.augmented

STSAFE – Online certificates distribution

USER MANUAL v3



Agenda

1 Accessing the platform

2 The platform

3 Attachment to AWS account

4 Attachment to Azure account

Accessing the platform





Step 1 - Scan QR Code

1. Open the **camera app** on your smartphone or tablet.
2. Point the camera at the **QR code** on the STSAFE chips reel.
3. Tap on the notification or link to open the **landing page for the product**.



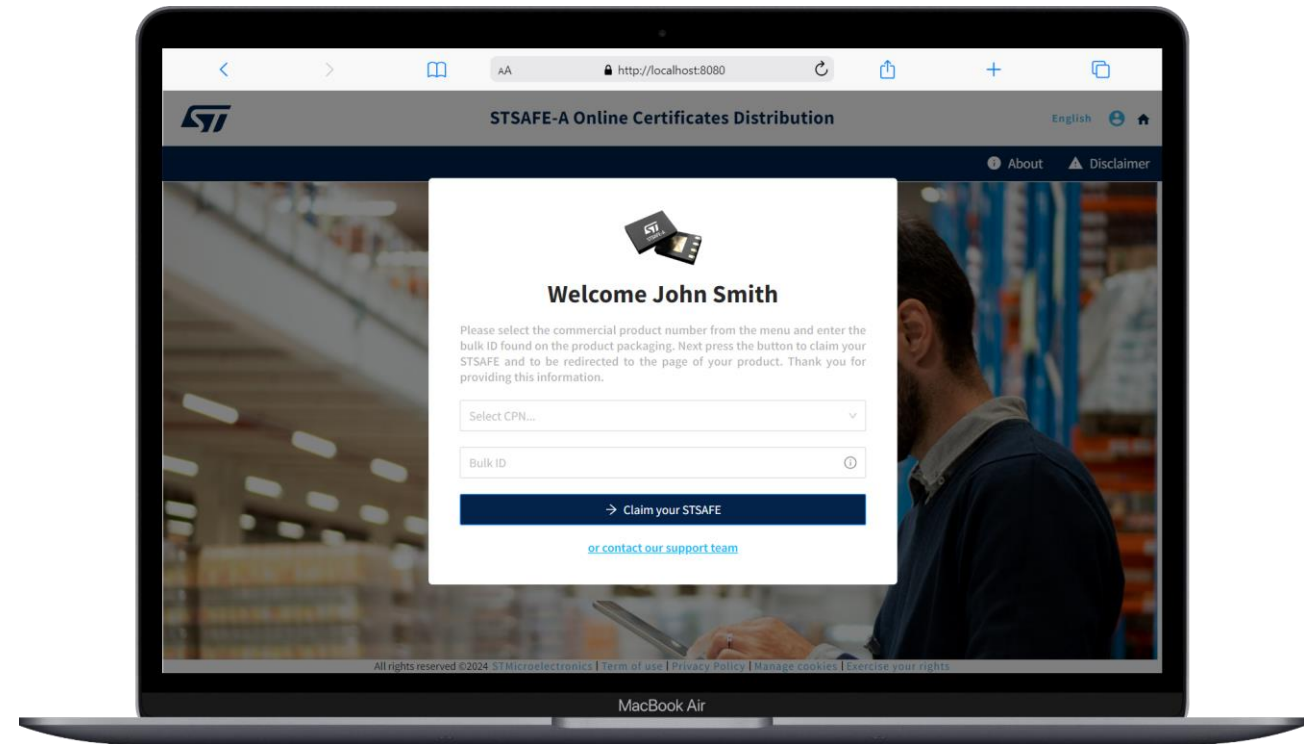
This is a QR code sample – do not use it



Step 2 – Or claim directly

- You can **claim your product directly** using the form available on:

<https://eds.st.com/stsafe/?claim=1>





Step 3 – Log onto st.com

- After tapping on the link, you will be **redirected to the landing page** for the product on st.com
- To access the full range of features and resources on the landing page, you will need to **create a new account or login** if you already have an account.

The screenshot shows the ST login page with the following elements:

- ST logo and "life.augmented" text in the top left.
- "Contact Us" and "English" links in the top right.
- "Already registered?" section with the instruction "Enter your e-mail address and password to login your myST user." and input fields for "E-mail address" and "Password".
- A "Remember me on this computer" checkbox with an information icon.
- A blue "Login" button.
- A "Forgot password?" link.
- "New user?" section with the heading "myST brings you a set of personalized features:" and a list of features: "Participate to ST Events", "Stay informed with ST eNewsletters", "Get help with ST Online Support", "Discuss on the ST Community", "Benefit from our Online Design Tools", "Download Software", "Order free samples", "Manage your weekly product updates", and "Buy ST Products & Tools".
- A blue "Create Account" button with a red arrow pointing to it.

Online certificate distribution platform

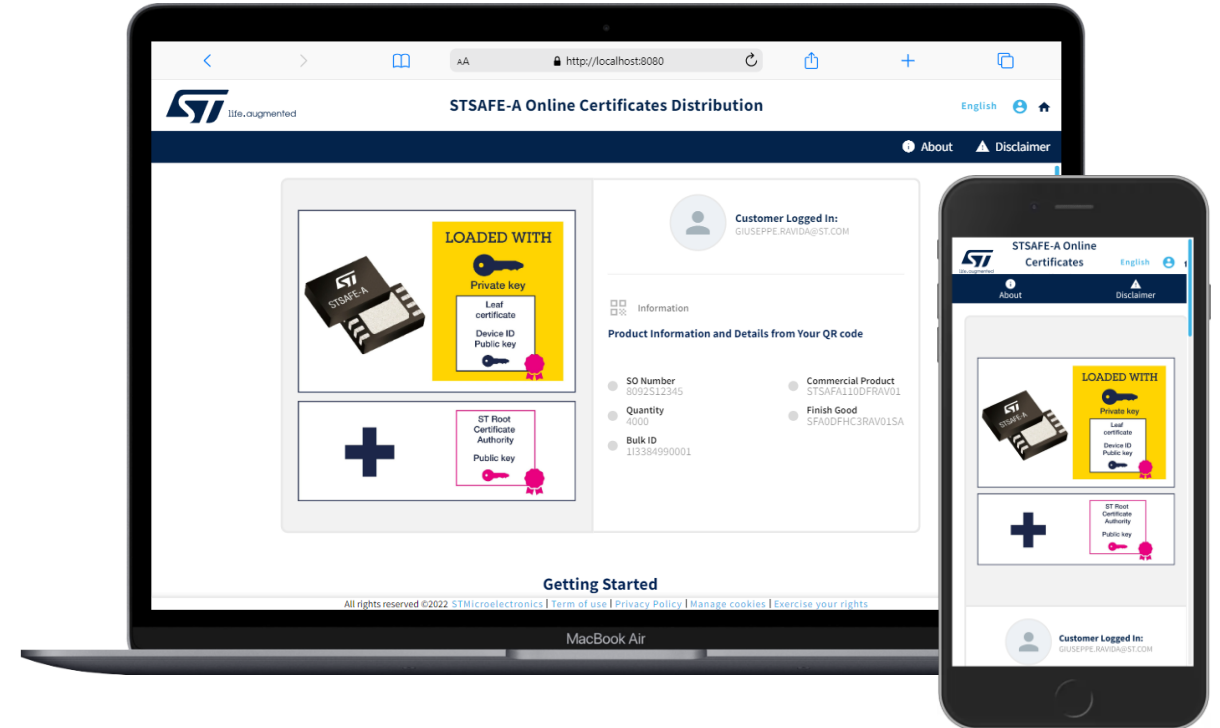


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Overview of the platform

- The product landing page (desktop or mobile) is divided into **four main sections**:
 - QR code information details
 - Getting started guide
 - Certificates downloads and email sending
 - Downloads history





QR Code information

This section shows specific details regarding your product, including:

- SO Number
- Commercial Product
- Quantity
- Bulk ID

The screenshot displays a user interface for QR code information. On the left, there are two panels: the top one shows an STSAFE-A chip and a yellow box labeled 'LOADED WITH' containing a private key, leaf certificate, device ID, and public key; the bottom one shows a plus sign and a pink box containing an ST Root Certificate Authority public key. On the right, a user profile for 'Customer Logged In: MARIO.ROSSI@ST.COM' is shown. Below this is a section titled 'Information' with a QR code icon, followed by 'Product Information and Details from Your QRCode' which lists: SO Number (8092S12345), Commercial Product (STSafa110DFRAV01), Quantity (4000), Finish good (SFA0DFHC3RAV01SA), and Bulk ID (113384990003).

Customer Logged In:
MARIO.ROSSI@ST.COM

Information

Product Information and Details from Your QRCode

- SO Number: 8092S12345
- Commercial Product: STSafa110DFRAV01
- Quantity: 4000
- Finish good: SFA0DFHC3RAV01SA
- Bulk ID: 113384990003



Getting started

- This section shows a starting point and valuable insights on **A110** and **SPL03**
- Here, the user can **download** our comprehensive **PDF** guide

Getting Started

For guidance on how to start using STSAFE, download our comprehensive PDF guide from our website to learn how to:

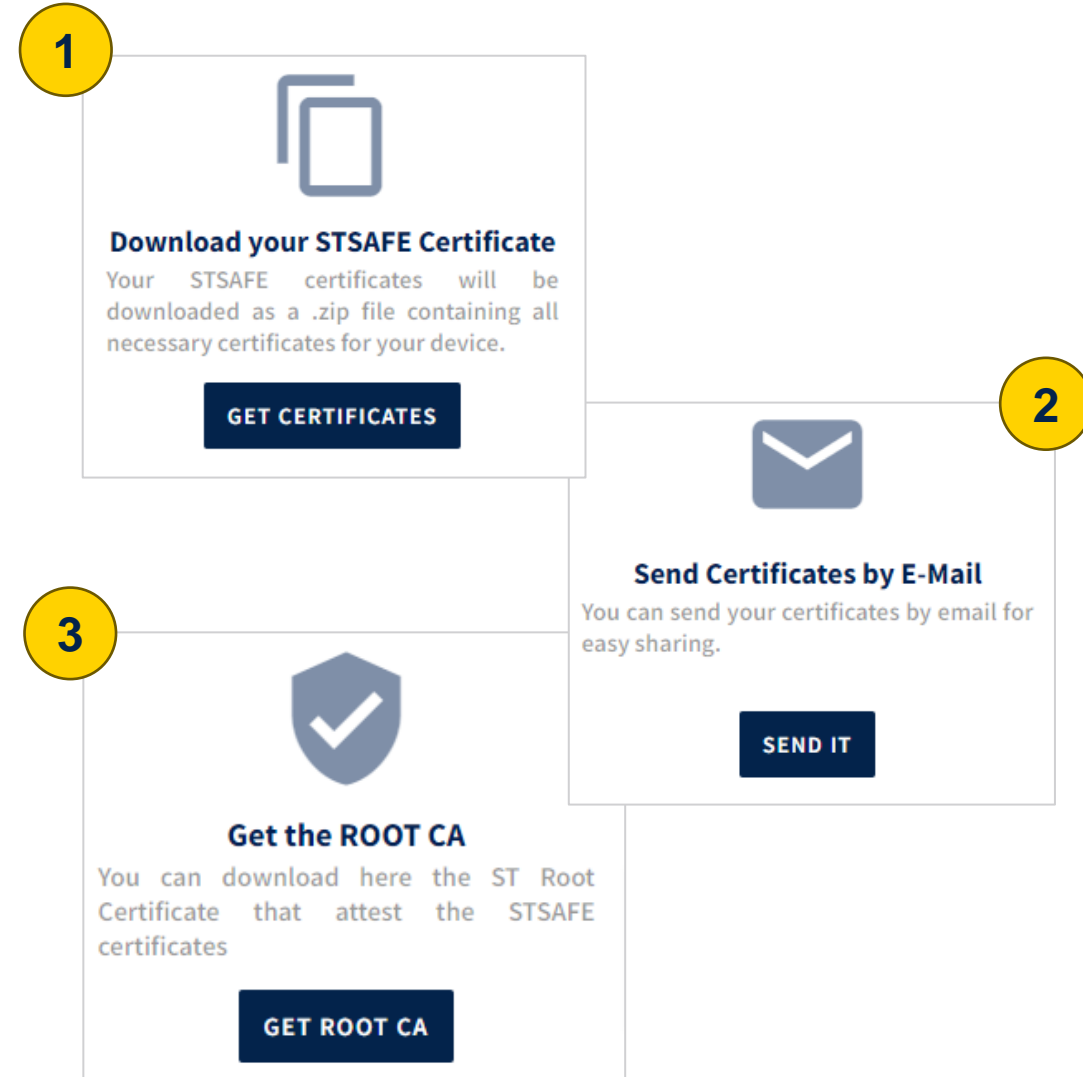
- Download X.509 Leaf Certificates of your STSAFE reel
- Download ST Root CA Certificate
- Get description of STSAFE OCD03 personalization
- Pre-attach connected devices to Cloud by associating X.509 Leaf Certificates with your accounts

[USER MANUAL](#) [OCD03 DESCRIPTION](#)



- In this interactive section of the page, you can:
 1. Download the certificates .zip file
 2. Send it to your email address
 3. Download the Root Certification Authority for STSAFE certificates

Download certificates





Downloads History

- The Downloads History section displays a record of **all downloads** completed for a specific part number
- Each item in the Downloads History section includes the **user reference and the date** of the download, displayed in days since the download occurred

Downloads History

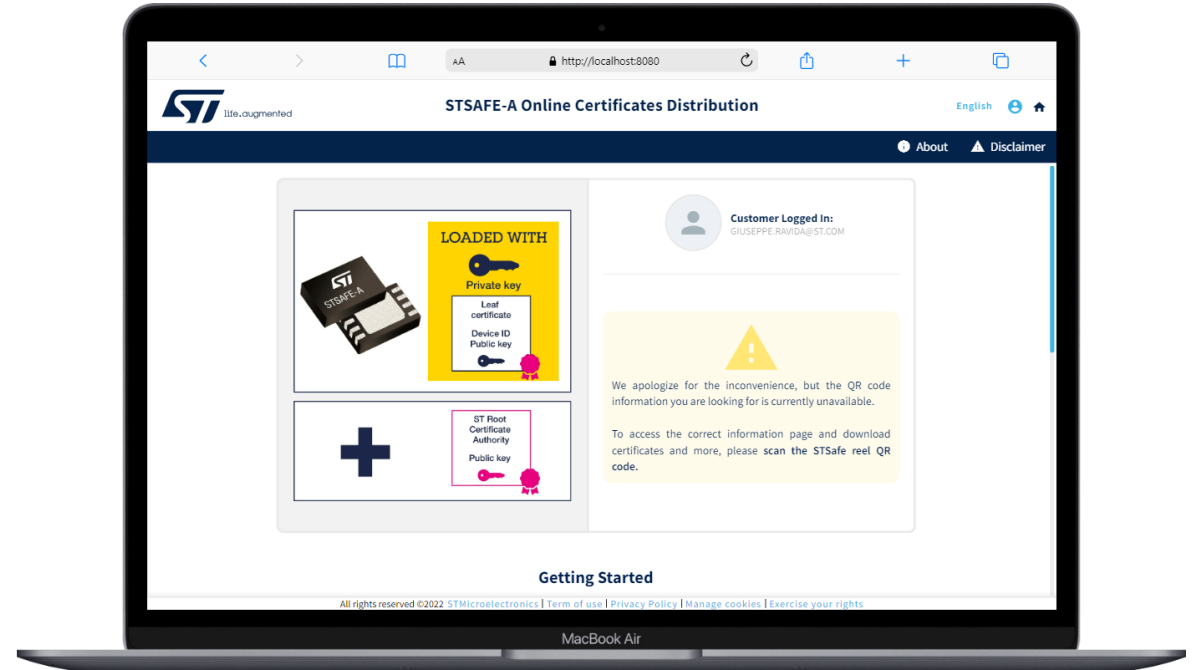
You have **30 downloads** before the **06 May 2024**

You	2 days ago
Downloaded the certificate for STSAFA110DFRAV01	
You	21 days ago
Downloaded the certificate for STSAFA110DFRAV01	
Another one	21 days ago
Downloaded the certificate for STSAFA110DFRAV01	



Errors Page

- If the URL coming from **QR code is corrupted** or something regarding the STSAFE reel is missing, you will land on a generic product page
- You can **download PDF** documentation or **check downloads history** as well



Attachment to AWS account



How to attach objects to AWS IoT Core

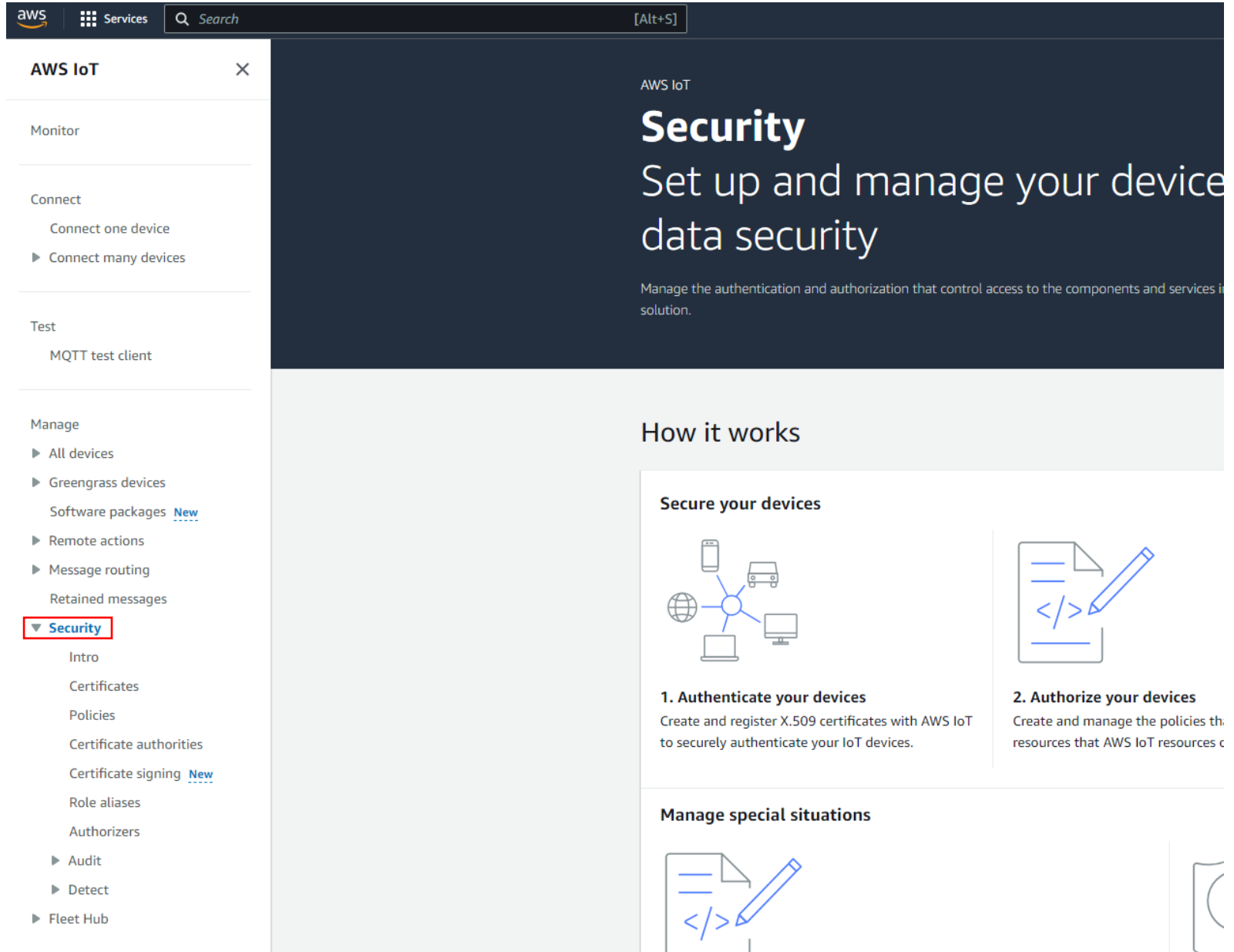
Introduction

- AWS IoT Core manages the “things” (objects) in the Cloud
- Before accepting the connection of an object, AWS IoT Core needs to authentication this object
- This object authentication is based on an X.509 certificate and an ECDSA handshake process

STSAFE-A contribution

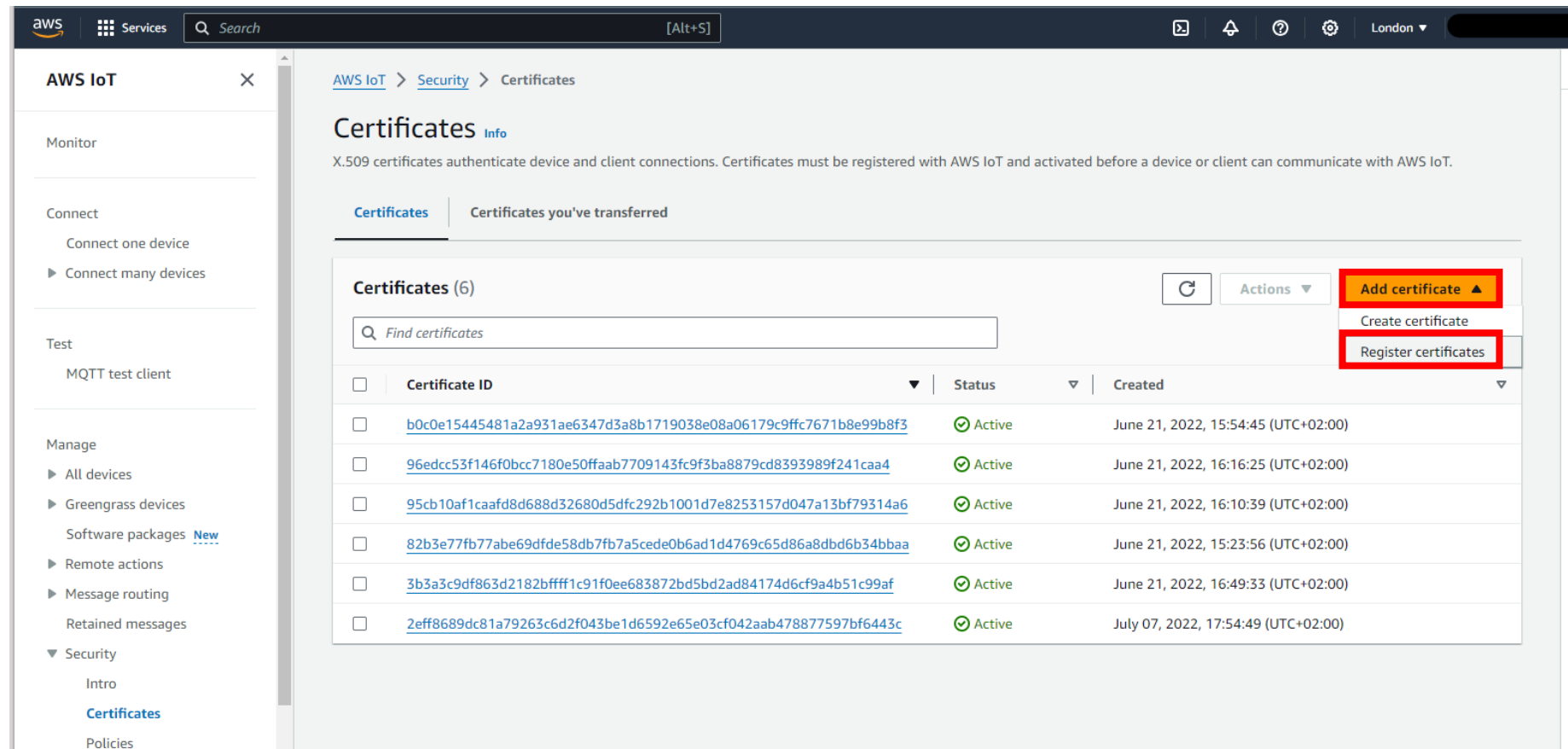
- STSAFE-A offers an ECDSA handshake authentication and comes loaded with an X.509 certificate that can be reused by a connected object
- To make this connected object accepted by an AWS IoT Core, the X.509 certificate must first be loaded within AWS IoT Core

- In IoT Core, expand the security submenu
- Then click on [Certificates]



The screenshot shows the AWS IoT Core console interface. On the left, a navigation sidebar is visible with the following sections: Monitor, Connect (with sub-items 'Connect one device' and 'Connect many devices'), Test (with 'MQTT test client'), and Manage (with sub-items 'All devices', 'Greengrass devices', 'Software packages', 'Remote actions', 'Message routing', 'Retained messages', 'Security', 'Intro', 'Certificates', 'Policies', 'Certificate authorities', 'Certificate signing', 'Role aliases', 'Authorizers', 'Audit', 'Detect', and 'Fleet Hub'). The 'Security' item is highlighted with a red box. The main content area displays the 'Security' page header with the text 'Set up and manage your device data security' and a sub-header 'How it works'. Below this, there are two main steps: '1. Authenticate your devices' and '2. Authorize your devices', each accompanied by an icon and a brief description. The 'Authenticate your devices' step includes the text 'Create and register X.509 certificates with AWS IoT to securely authenticate your IoT devices.' The 'Authorize your devices' step includes the text 'Create and manage the policies the resources that AWS IoT resources c'.

- The list of current certificates is displayed
- Expand [Add Certificate]
- Click on [Register certificates]

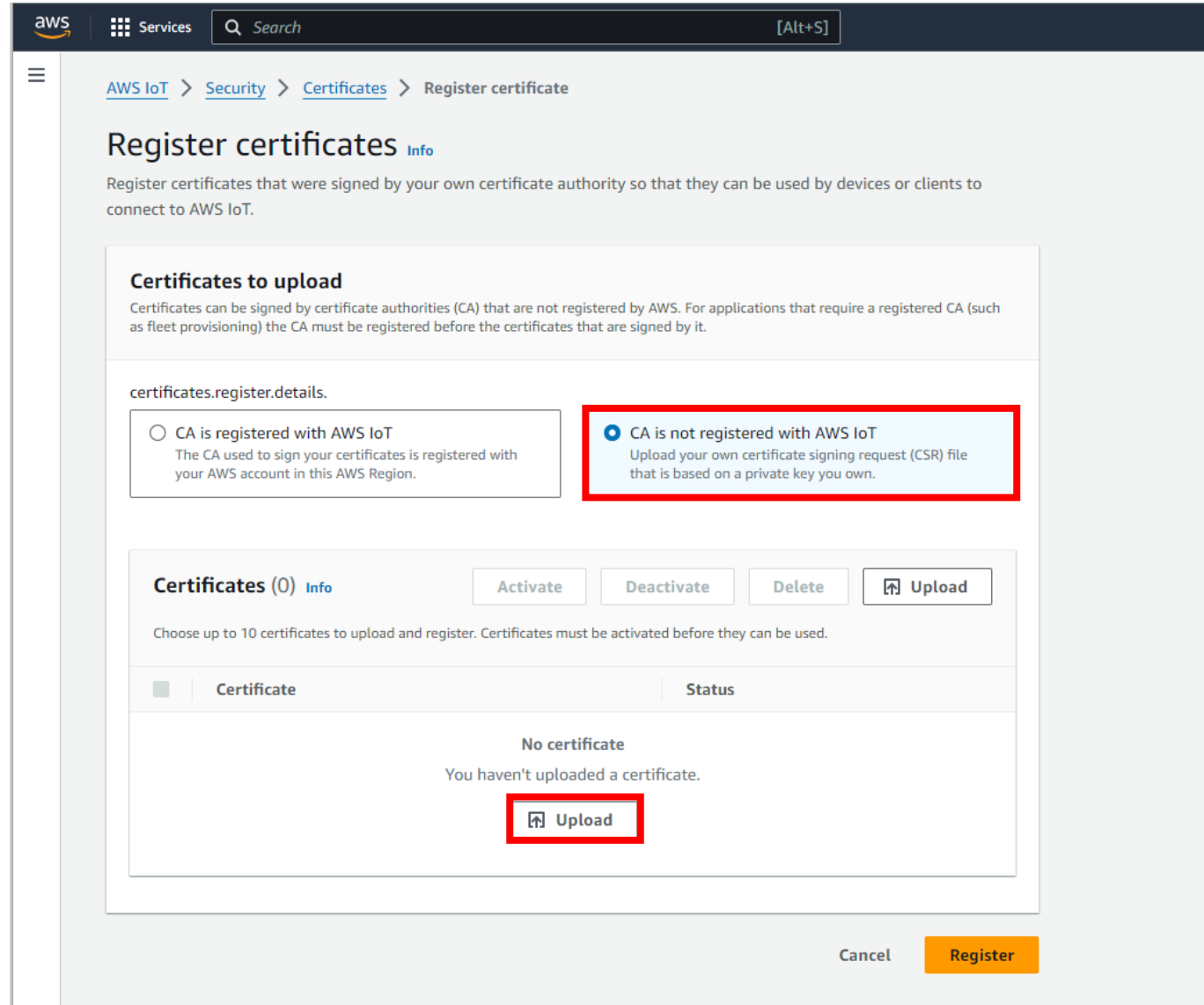


The screenshot shows the AWS IoT Core console interface for the 'Certificates' page. The breadcrumb navigation is 'AWS IoT > Security > Certificates'. The page title is 'Certificates' with an 'Info' link. Below the title, there is a summary: 'X.509 certificates authenticate device and client connections. Certificates must be registered with AWS IoT and activated before a device or client can communicate with AWS IoT.' There are two tabs: 'Certificates' (selected) and 'Certificates you've transferred'. The 'Certificates' tab shows a list of 6 certificates. At the top right of the list, there is an 'Add certificate' button (highlighted in red) with a dropdown menu containing 'Create certificate' and 'Register certificates' (both also highlighted in red). A search bar is present above the table.

<input type="checkbox"/>	Certificate ID	Status	Created
<input type="checkbox"/>	b0c0e15445481a2a931ae6347d3a8b1719038e08a06179c9ffc7671b8e99b8f3	Active	June 21, 2022, 15:54:45 (UTC+02:00)
<input type="checkbox"/>	96edcc53f146f0bcc7180e50ffaab7709143fc9f3ba8879cd8393989f241caa4	Active	June 21, 2022, 16:16:25 (UTC+02:00)
<input type="checkbox"/>	95cb10af1caafd8d688d32680d5dfc292b1001d7e8253157d047a13bf79314a6	Active	June 21, 2022, 16:10:39 (UTC+02:00)
<input type="checkbox"/>	82b3e77fb77abe69dfde58db7fb7a5ced0b6ad1d4769c65d86a8dbd6b34bbaa	Active	June 21, 2022, 15:23:56 (UTC+02:00)
<input type="checkbox"/>	3b3a3c9df863d2182bffff1c91f0ee683872bd5bd2ad84174d6cf9a4b51c99af	Active	June 21, 2022, 16:49:33 (UTC+02:00)
<input type="checkbox"/>	2eff8689dc81a79263c6d2f043be1d6592e65e03cf042aab478877597bf6443c	Active	July 07, 2022, 17:54:49 (UTC+02:00)

AWS IoT Core > Security > Certificates > Register certificate

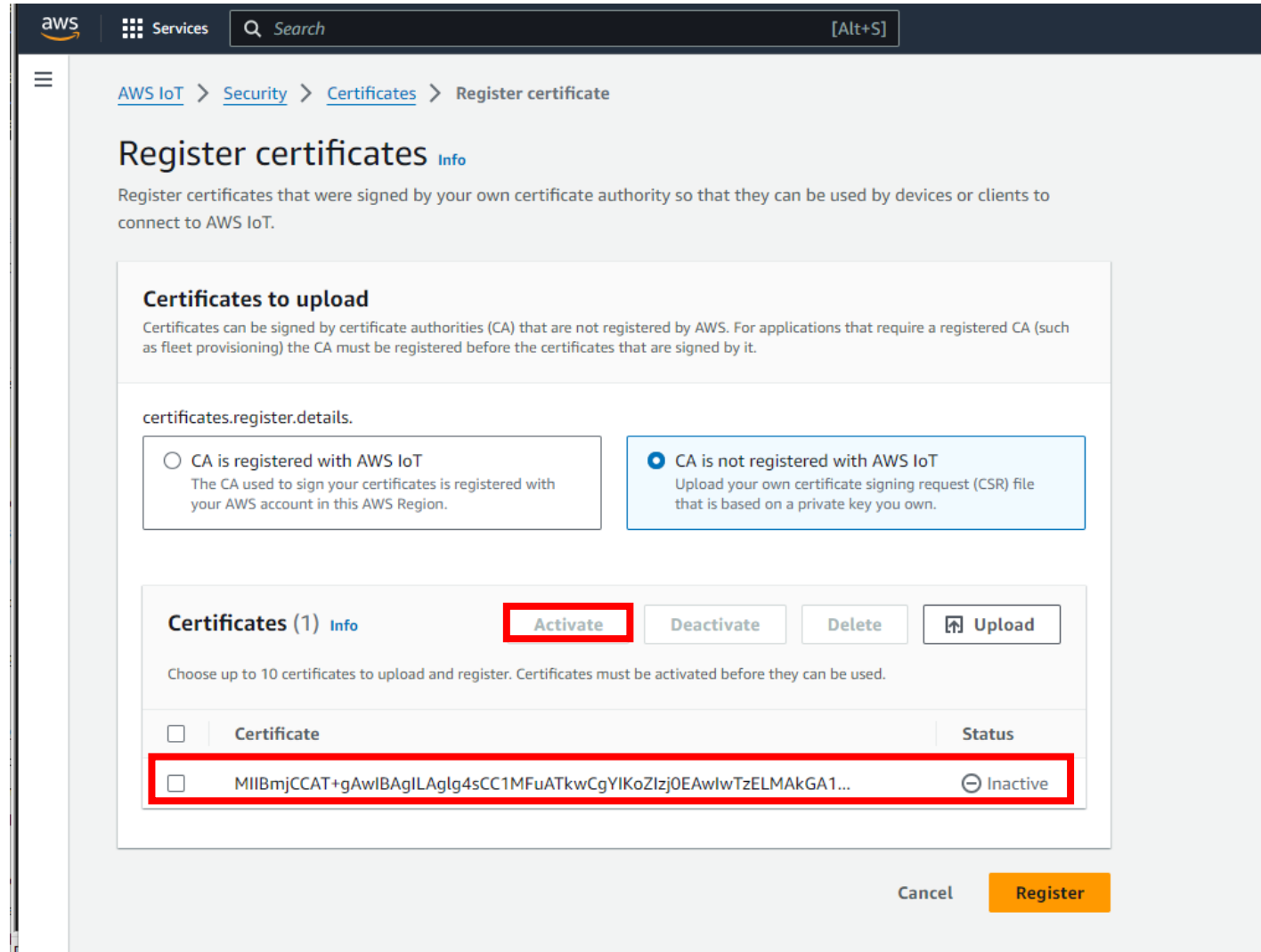
- The list of current certificates is displayed
- Expand [Add Certificate]
- Click on [Register certificates]



The screenshot shows the AWS IoT console interface for the 'Register certificate' page. The breadcrumb navigation is 'AWS IoT > Security > Certificates > Register certificate'. The main heading is 'Register certificates' with an 'Info' link. Below the heading is a descriptive paragraph: 'Register certificates that were signed by your own certificate authority so that they can be used by devices or clients to connect to AWS IoT.' There are two radio button options under the heading 'Certificates to upload': 'CA is registered with AWS IoT' (unselected) and 'CA is not registered with AWS IoT' (selected, highlighted with a red box). The selected option includes the instruction: 'Upload your own certificate signing request (CSR) file that is based on a private key you own.' Below this is a table with columns 'Certificate' and 'Status', currently showing 'No certificate' and a message 'You haven't uploaded a certificate.' with an 'Upload' button highlighted in red. At the bottom right, there are 'Cancel' and 'Register' buttons.

AWS IoT Core > Security > Certificates > Register certificate

- Select the certificate and click [Activate]



Register certificates [Info](#)

Register certificates that were signed by your own certificate authority so that they can be used by devices or clients to connect to AWS IoT.

Certificates to upload

Certificates can be signed by certificate authorities (CA) that are not registered by AWS. For applications that require a registered CA (such as fleet provisioning) the CA must be registered before the certificates that are signed by it.

certificates.register.details.

CA is registered with AWS IoT
The CA used to sign your certificates is registered with your AWS account in this AWS Region.

CA is not registered with AWS IoT
Upload your own certificate signing request (CSR) file that is based on a private key you own.

Certificates (1) [Info](#) **Activate** Deactivate Delete Upload

Choose up to 10 certificates to upload and register. Certificates must be activated before they can be used.

<input type="checkbox"/>	Certificate	Status
<input type="checkbox"/>	MIIBmjCCAT+gAwIBAgILAgI4sCC1MFuATkwCgYIKoZlZjOEAwIwTzELMAkGA1...	Inactive

Cancel Register



AWS IoT Core > Security > Certificates > Register certificate

- Now click on [Register]

Register certificates [Info](#)

Register certificates that were signed by your own certificate authority so that they can be used by devices or clients to connect to AWS IoT.

Certificates to upload

Certificates can be signed by certificate authorities (CA) that are not registered by AWS. For applications that require a registered CA (such as fleet provisioning) the CA must be registered before the certificates that are signed by it.

certificates.register.details.

CA is registered with AWS IoT
The CA used to sign your certificates is registered with your AWS account in this AWS Region.

CA is not registered with AWS IoT
Upload your own certificate signing request (CSR) file that is based on a private key you own.

Certificates (1/1) [Info](#) Activate Deactivate Delete Upload

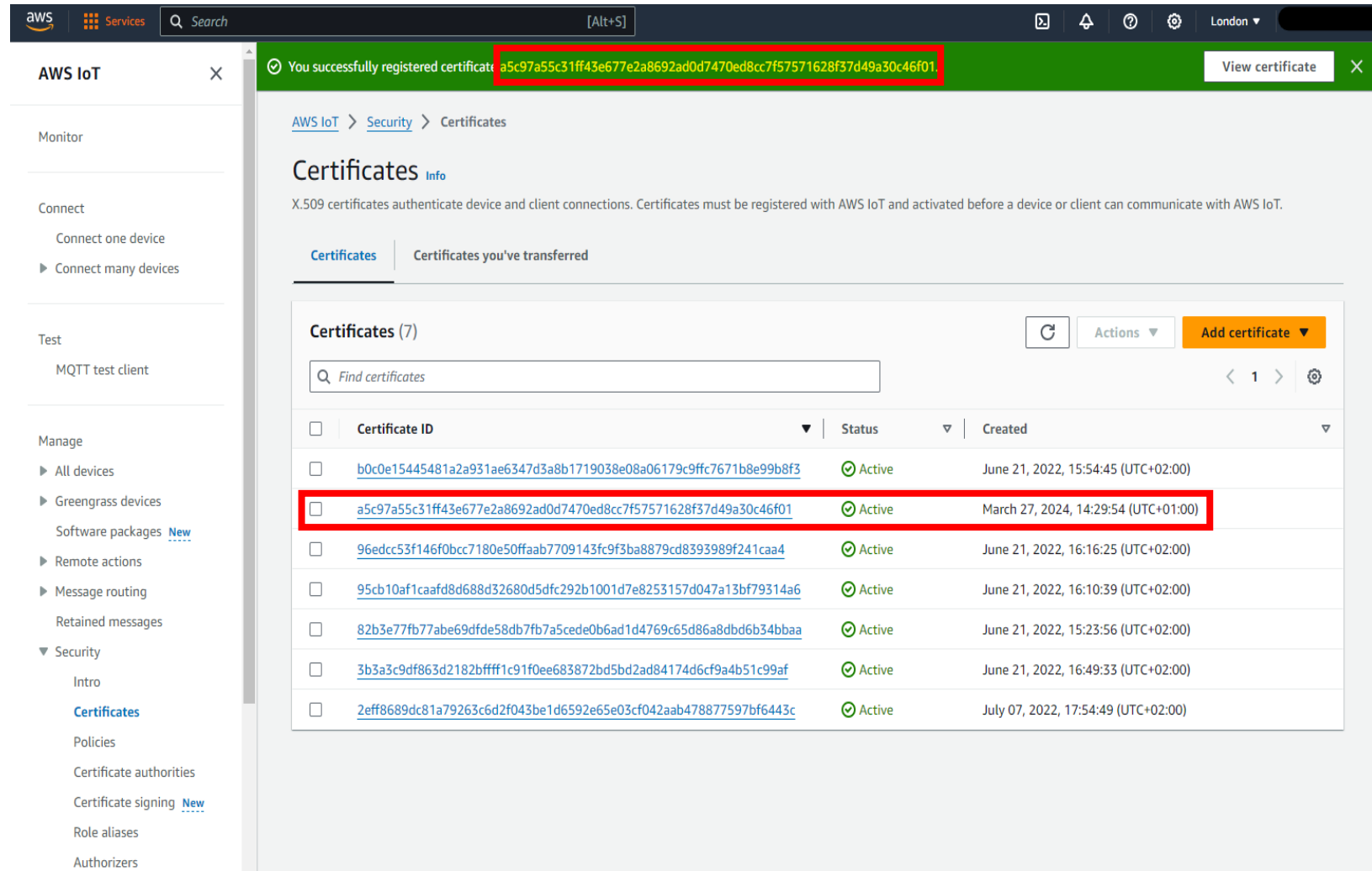
Choose up to 10 certificates to upload and register. Certificates must be activated before they can be used.

<input checked="" type="checkbox"/>	Certificate	Status
<input checked="" type="checkbox"/>	MIIbMjCCAT+gAwIBAgILAglg4sCC1MFuATkwCgYIKoZlZjOEAwIwTzELMAkGA1...	Active

Cancel **Register**

AWS IoT Core > Security > Certificates

- The ID of the new certificate is display in the green banner
- And you can find the newly added certificate in the list
- The ID is the SHA256 fingerprint of your certificate



You successfully registered certificate `a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01` [View certificate](#)

[AWS IoT](#) > [Security](#) > [Certificates](#)

Certificates Info

X.509 certificates authenticate device and client connections. Certificates must be registered with AWS IoT and activated before a device or client can communicate with AWS IoT.

[Certificates](#) | Certificates you've transferred

Certificates (7) [Refresh](#) [Actions](#) [Add certificate](#)

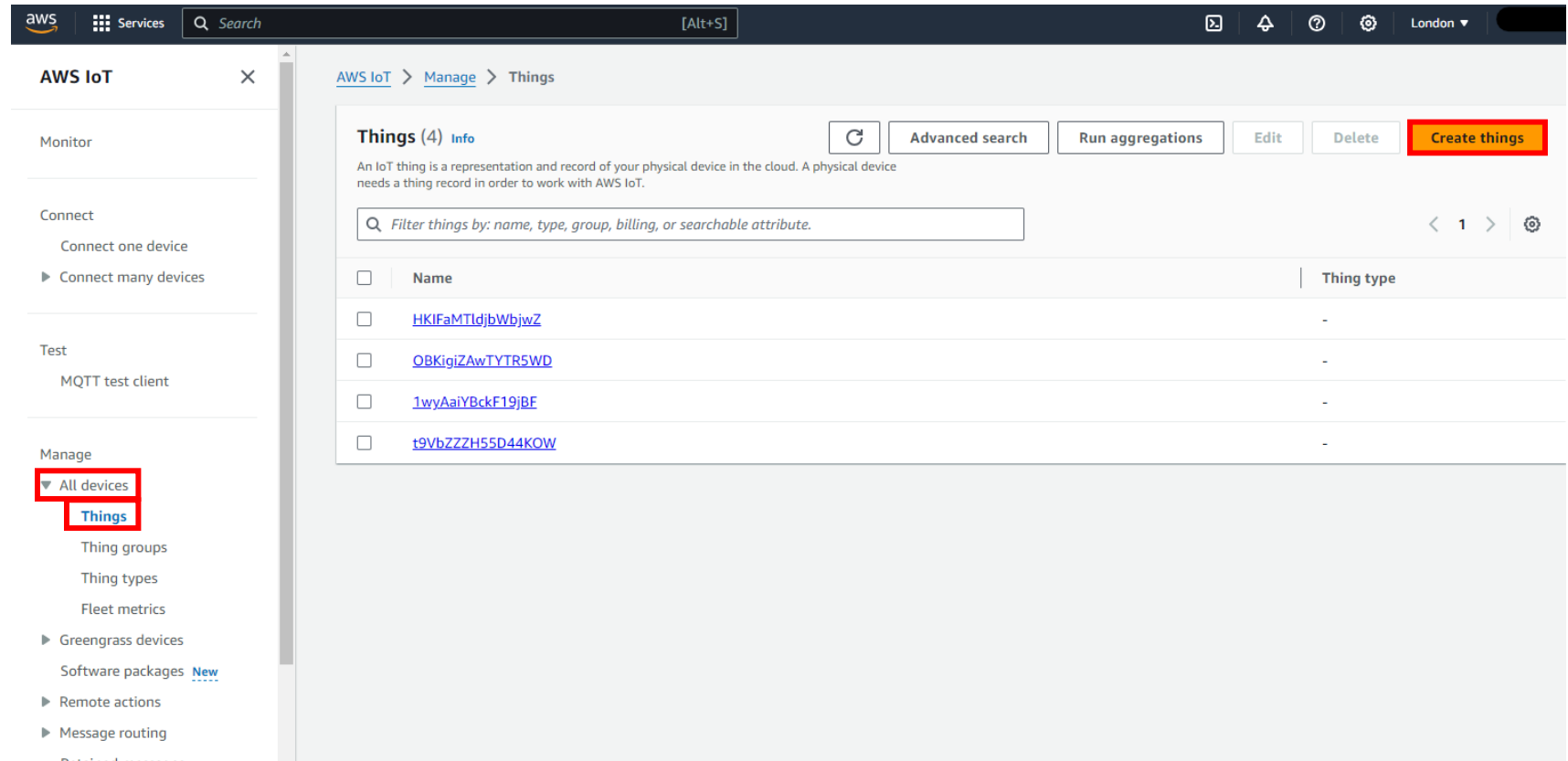
<input type="checkbox"/>	Certificate ID	Status	Created
<input type="checkbox"/>	b0c0e15445481a2a931ae6347d3a8b1719038e08a06179c9ffc7671b8e99b8f3	Active	June 21, 2022, 15:54:45 (UTC+02:00)
<input type="checkbox"/>	a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01	Active	March 27, 2024, 14:29:54 (UTC+01:00)
<input type="checkbox"/>	96edcc53f146f0bcc7180e50ffaab7709143fc9f3ba8879cd8393989f241caa4	Active	June 21, 2022, 16:16:25 (UTC+02:00)
<input type="checkbox"/>	95cb10af1caafd8d688d32680d5dfc292b1001d7e8253157d047a13bf79314a6	Active	June 21, 2022, 16:10:39 (UTC+02:00)
<input type="checkbox"/>	82b3e77fb77abe69dfde58db7fb7a5cede0b6ad1d4769c65d86a8dbd6b34bbaa	Active	June 21, 2022, 15:23:56 (UTC+02:00)
<input type="checkbox"/>	3b3a3c9df863d2182bffff1c91f0ee683872bd5bd2ad84174d6cf9a4b51c99af	Active	June 21, 2022, 16:49:33 (UTC+02:00)
<input type="checkbox"/>	2eff8689dc81a79263c6d2f043be1d6592e65e03cf042aab478877597bf6443c	Active	July 07, 2022, 17:54:49 (UTC+02:00)

```
> openssl x509 -fingerprint -in 60E2C082D4C16E0139.pem -sha256 -noout
```

SHA256 Fingerprint=A5:C9:7A:55:C3:1F:F4:3E:67:7E:2A:86:92:AD:0D:74:70:ED:8C:C7:F5:75:71:62:8F:37:D4:9A:30:C4:6F:01

AWS IoT Core > Manage > Things

- Now Create a Thing
- Expand [All Devices] and click [Things]
- Then click on [Create things]

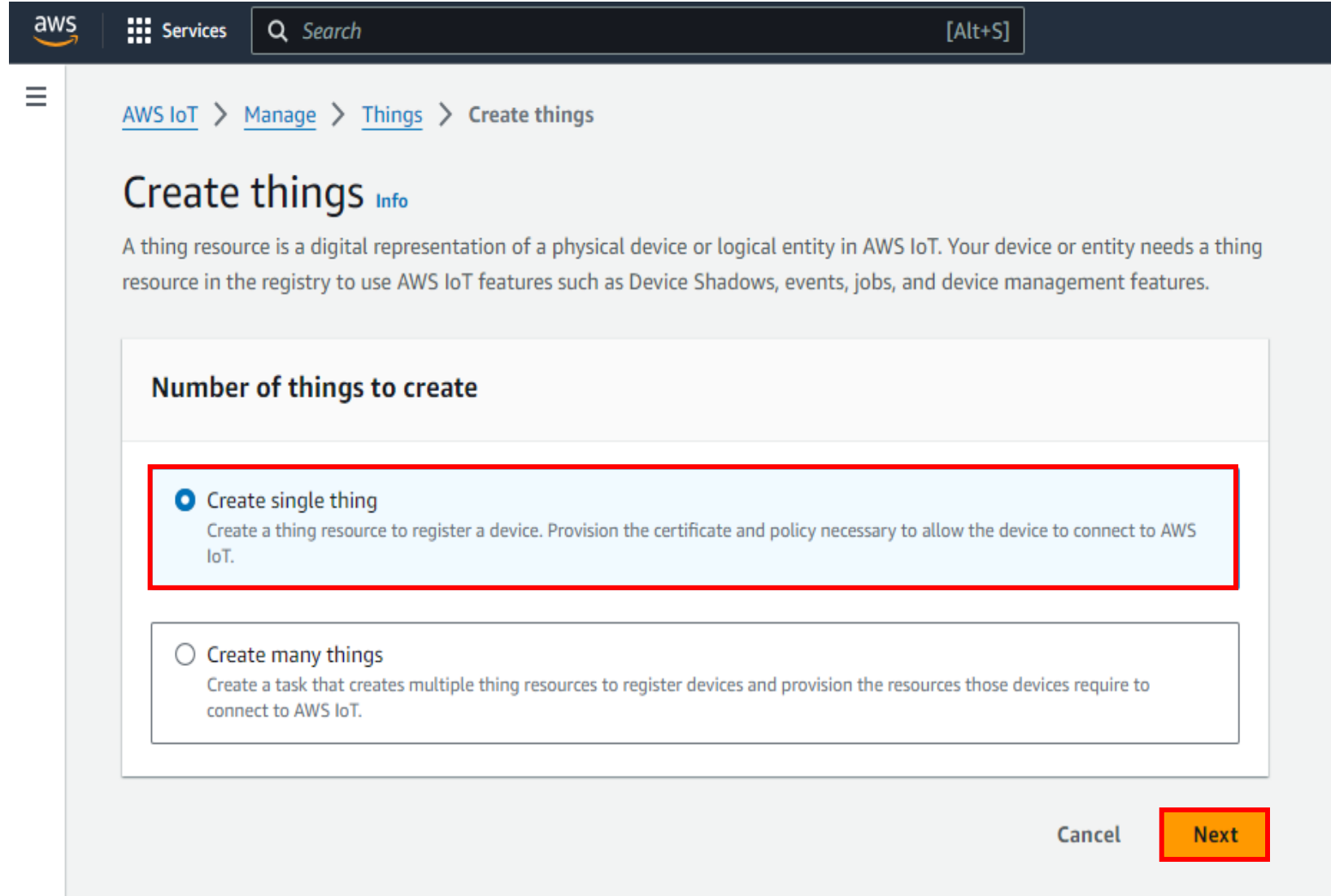


The screenshot shows the AWS IoT Core console interface. The left-hand navigation pane is open to the 'Manage' section, where 'All devices' is expanded and 'Things' is selected. The main content area displays the 'Things (4) Info' page. At the top right of this page, the 'Create things' button is highlighted with a red border. Below the header, there is a search bar and a table listing four IoT things. The table has columns for 'Name' and 'Thing type'. The things listed are:

Name	Thing type
HKlFaMTldjbWbjwZ	-
OBKigiZAwTYTR5WD	-
1wyAaiYBckF19jBF	-
t9VbZZZH55D44KOW	-

AWS IoT Core > Manage > Things > Create things

- Select [Create single thing]
- Click [Next]



aws Services Search [Alt+S]

[AWS IoT](#) > [Manage](#) > [Things](#) > Create things

Create things [Info](#)

A thing resource is a digital representation of a physical device or logical entity in AWS IoT. Your device or entity needs a thing resource in the registry to use AWS IoT features such as Device Shadows, events, jobs, and device management features.

Number of things to create

- Create single thing**
Create a thing resource to register a device. Provision the certificate and policy necessary to allow the device to connect to AWS IoT.
- Create many things**
Create a task that creates multiple thing resources to register devices and provision the resources those devices require to connect to AWS IoT.

Cancel **Next**



AWS IoT Core > Manage > Things > Create things

- Provide a [Thing name]
- Add your custom Thing configuration
- Then click [Next]

The screenshot shows the AWS IoT Core console interface for creating a new thing. The breadcrumb navigation at the top reads: AWS IoT > Manage > Things > Create things > Create single thing. The main heading is 'Specify thing properties' with an 'Info' link. Below the heading is a descriptive paragraph: 'A thing resource is a digital representation of a physical device or logical entity in AWS IoT. Your device or entity needs a thing resource in the registry to use AWS IoT features such as Device Shadows, events, jobs, and device management features.'

The 'Thing properties' section includes a 'Thing name' input field containing 'AWS_Test_STSAFE-A110', which is highlighted with a red box. Below the input field is a note: 'Enter a unique name containing only: letters, numbers, hyphens, colons, or underscores. A thing name can't contain any spaces.'

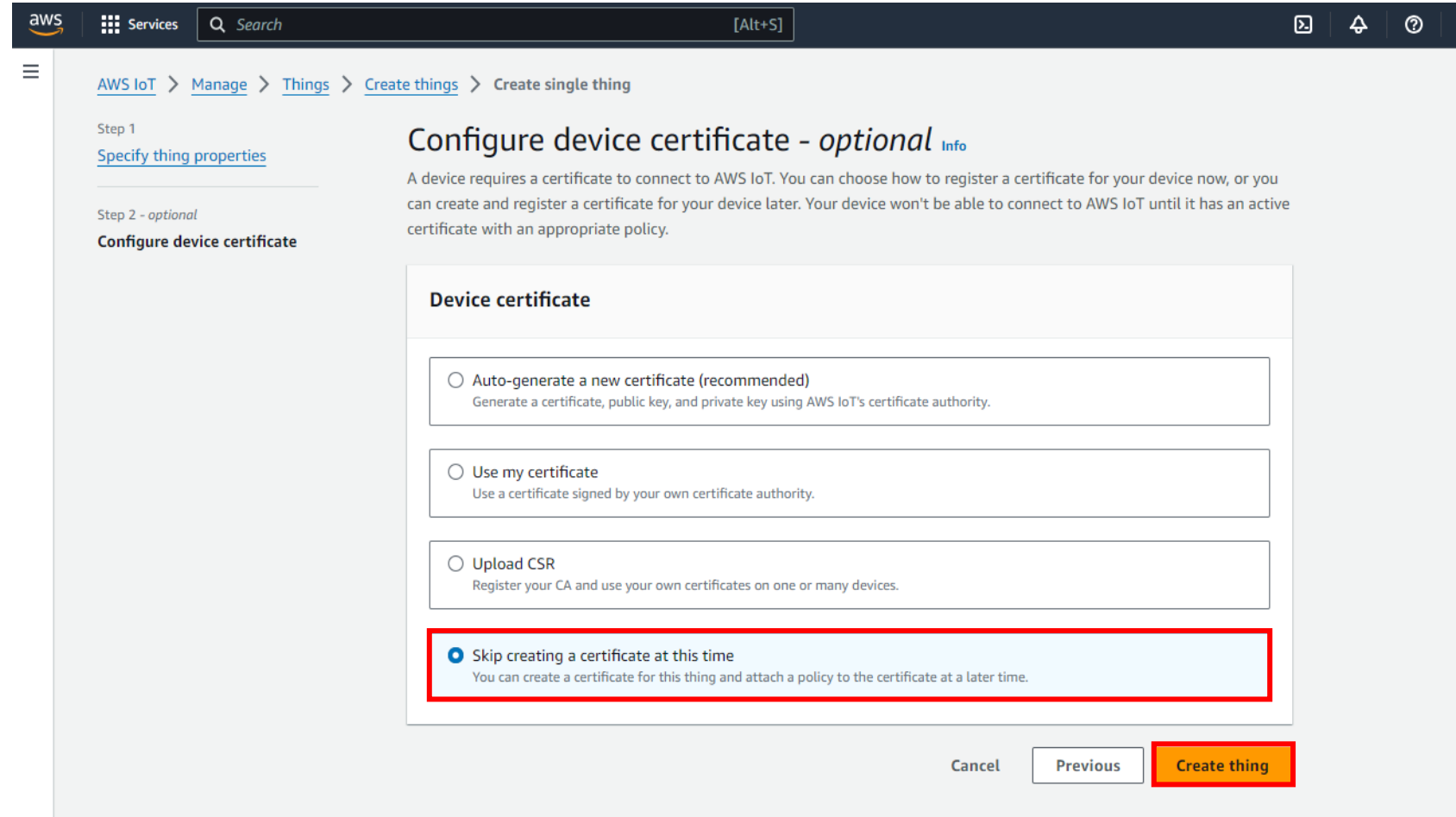
The 'Additional configurations' section lists several optional settings, each with a right-pointing arrow: 'Thing type - optional', 'Searchable thing attributes - optional', 'Thing groups - optional', 'Billing group - optional', and 'Packages and versions - optional'.

The 'Device Shadow' section is also visible, with an 'Info' link and a description: 'Device Shadows allow connected devices to sync states with AWS. You can also get, update, or delete the state information of this thing's shadow using either HTTPs or MQTT topics.' It features three radio button options: 'No shadow' (selected), 'Named shadow' (with subtext: 'Create multiple shadows with different names to manage access to properties, and logically group your devices properties.'), and 'Unnamed shadow (classic)' (with subtext: 'A thing can have only one unnamed shadow.').

At the bottom right of the page, there are two buttons: 'Cancel' and 'Next', with the 'Next' button highlighted by a red box.

AWS IoT Core > Manage > Things > Create things

- Select [Skip creating a certificate at this time]
- Click [Create thing]



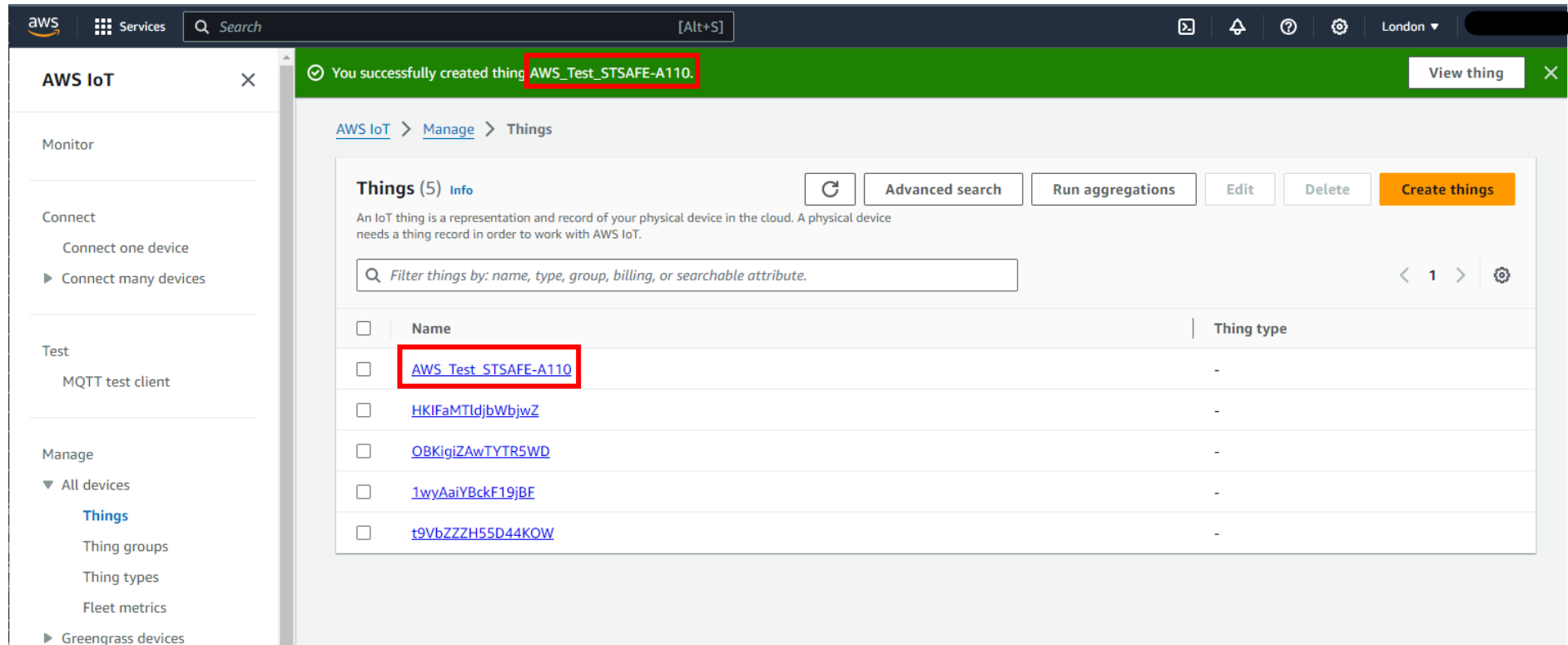
The screenshot shows the AWS IoT Core console interface. The breadcrumb navigation is [AWS IoT](#) > [Manage](#) > [Things](#) > [Create things](#) > [Create single thing](#). The current step is **Step 2 - optional**, **Configure device certificate**. The main heading is **Configure device certificate - optional** with an [Info](#) link. Below the heading is a descriptive paragraph: "A device requires a certificate to connect to AWS IoT. You can choose how to register a certificate for your device now, or you can create and register a certificate for your device later. Your device won't be able to connect to AWS IoT until it has an active certificate with an appropriate policy." There are three radio button options under the heading **Device certificate**:

- Auto-generate a new certificate (recommended)**
Generate a certificate, public key, and private key using AWS IoT's certificate authority.
- Use my certificate**
Use a certificate signed by your own certificate authority.
- Upload CSR**
Register your CA and use your own certificates on one or many devices.
- Skip creating a certificate at this time**
You can create a certificate for this thing and attach a policy to the certificate at a later time.

The "Skip creating a certificate at this time" option is highlighted with a red border. At the bottom right, there are three buttons: **Cancel**, **Previous**, and **Create thing** (which is highlighted in orange).

AWS IoT Core > Manage > Things > Create things

- Your Thing is now created
- Go back to Security > Certificates

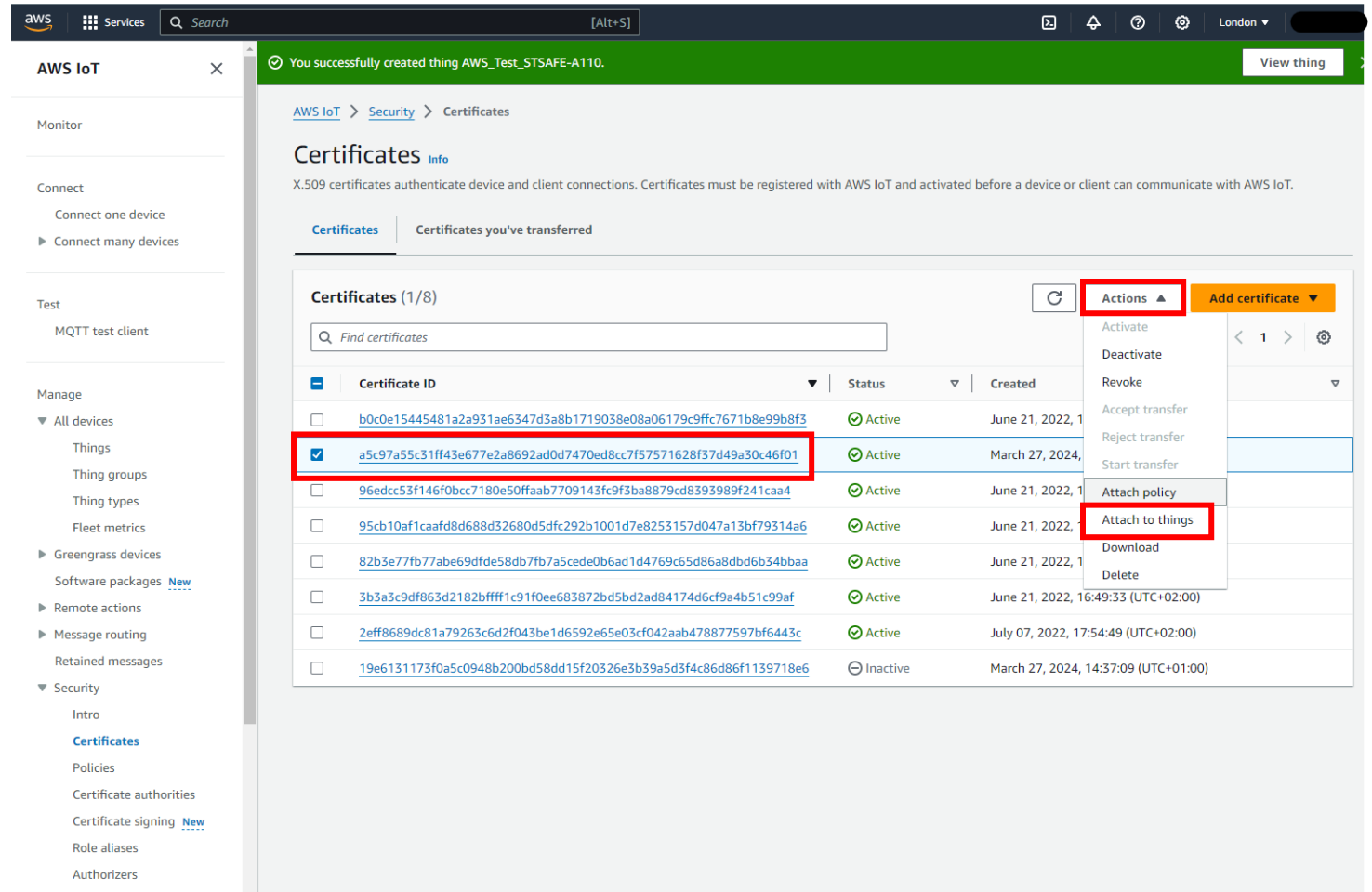


The screenshot shows the AWS IoT console interface. At the top, a green notification banner states: "You successfully created thing **AWS_Test_STSAFE-A110**". Below this, the breadcrumb navigation reads "AWS IoT > Manage > Things". The main content area displays a table of IoT things. The first row in the table is highlighted with a red box and contains the name "AWS_Test_STSAFE-A110".

<input type="checkbox"/>	Name	Thing type
<input type="checkbox"/>	AWS_Test_STSAFE-A110	-
<input type="checkbox"/>	HKIFaMTldjbWbjwZ	-
<input type="checkbox"/>	QBKiqiZAwTYTR5WD	-
<input type="checkbox"/>	1wyAaiYBckF19jBF	-
<input type="checkbox"/>	t9VbZZZH55D44KOW	-

AWS IoT Core > Security > Certificates

- Select your certificate
- Expand [Actions]
- Click on [Attach to things]

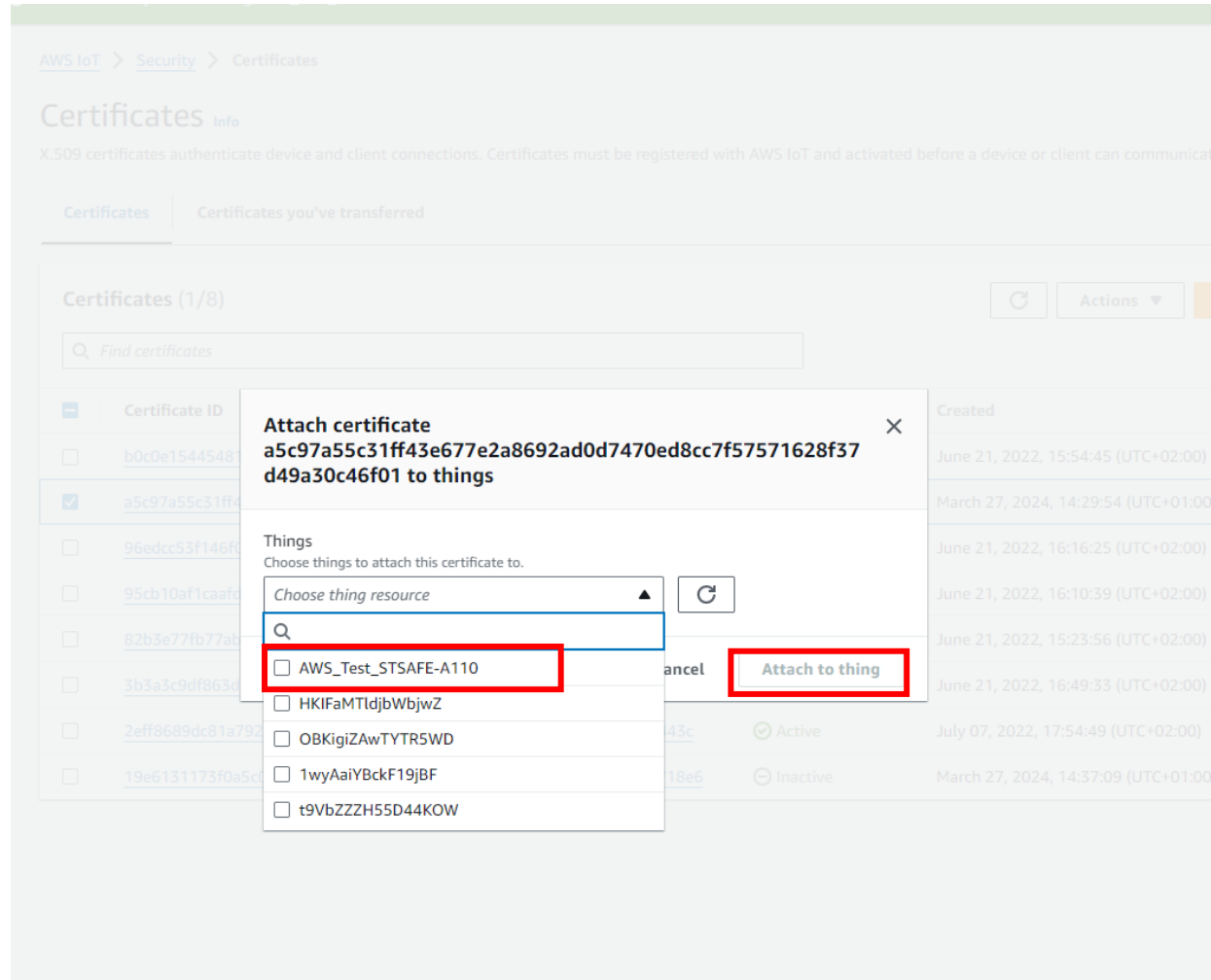


The screenshot shows the AWS IoT Core console interface. The left sidebar contains navigation options under 'Security', with 'Certificates' selected. The main content area displays a list of certificates. One certificate, with ID 'a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01', is selected. The 'Actions' menu for this certificate is expanded, and the 'Attach to things' option is highlighted.

Certificate ID	Status	Created
b0c0e15445481a2a931ae6347d3a8b1719038e08a06179c9ffc7671b8e99b8f3	Active	June 21, 2022, 1
<input checked="" type="checkbox"/> a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01	Active	March 27, 2024,
96edcc53f146f0bcc7180e50ffaab7709143fc9f3ba8879cd8393989f241caa4	Active	June 21, 2022, 1
95cb10af1caafd8d688d32680d5dfc292b1001d7e8253157d047a13bf79314a6	Active	June 21, 2022, 1
82b3e77fb77abe69dfde58db7fb7a5cede0b6ad1d4769c65d86a8dbd6b34bbaa	Active	June 21, 2022, 1
3b3a3c9df863d2182bffff1c91f0ee683872bd5bd2ad84174d6cf9a4b51c99af	Active	June 21, 2022, 16:49:33 (UTC+02:00)
2eff8689dc81a79263c6d2f043be1d6592e65e03cf042aab47887597bf6443c	Active	July 07, 2022, 17:54:49 (UTC+02:00)
19e6131173f0a5c0948b200bd58dd15f20326e3b39a5d3f4c86d86f1139718e6	Inactive	March 27, 2024, 14:37:09 (UTC+01:00)

AWS IoT Core > Security > Certificates

- Choose your Thing
- Click on [Attach to thing]
- Your thing and the certificate are now attached



AWS IoT > Security > Certificates

Certificates info

X.509 certificates authenticate device and client connections. Certificates must be registered with AWS IoT and activated before a device or client can communicate.

Certificates Certificates you've transferred

Certificates (1/8)

Find certificates

Attach certificate

a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01 to things

Things

Choose things to attach this certificate to.

Choose thing resource

Search

AWS_Test_STSAFE-A110

HKIFaMTldjbWbjwZ

OBKigiZAwTYTR5WD

1wyAaiYBckF19jBF

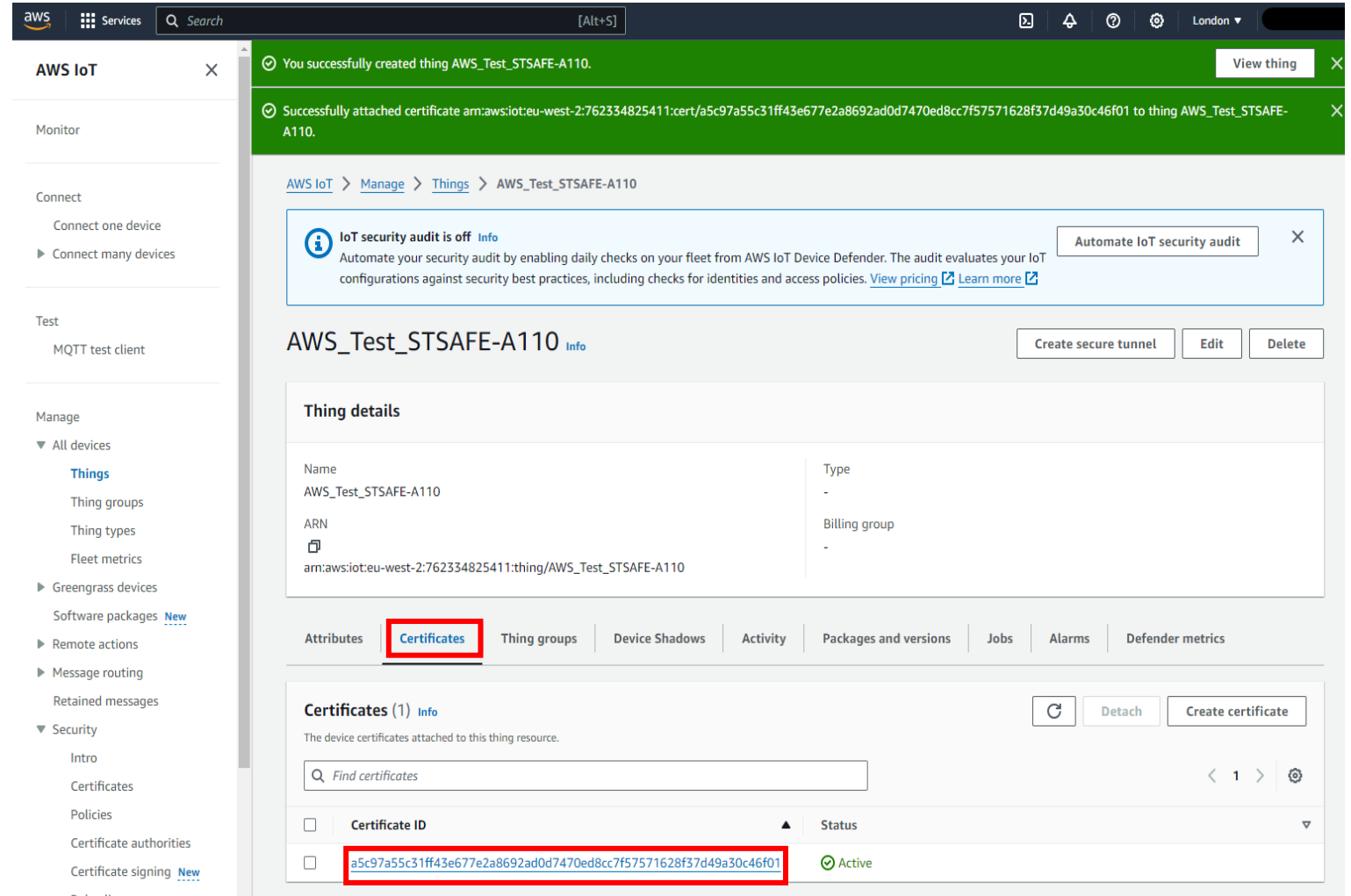
t9VbZZZH55D44KOW

Cancel Attach to thing

Certificate ID	Created
<input type="checkbox"/> b0c0e1544548...	June 21, 2022, 15:54:45 (UTC+02:00)
<input checked="" type="checkbox"/> a5c97a55c31ff4...	March 27, 2024, 14:29:54 (UTC+01:00)
<input type="checkbox"/> 96edcc53f146f...	June 21, 2022, 16:16:25 (UTC+02:00)
<input type="checkbox"/> 95cb10af1caaf...	June 21, 2022, 16:10:39 (UTC+02:00)
<input type="checkbox"/> 82b3e77fb77a...	June 21, 2022, 15:23:56 (UTC+02:00)
<input type="checkbox"/> 3b3a3c9df863...	June 21, 2022, 16:49:33 (UTC+02:00)
<input type="checkbox"/> 2eff8689dc81a792...	July 07, 2022, 17:54:49 (UTC+02:00)
<input type="checkbox"/> 19e6131173f0a5...	March 27, 2024, 14:37:09 (UTC+01:00)

AWS IoT Core > Manage > Things > AWS_Test_STSAFE-A110

- Go back to your thing in [Certificates]
- You can see the certificate attached to the Thing



The screenshot shows the AWS IoT Core console interface. At the top, there are two green notification banners: "You successfully created thing AWS_Test_STSAFE-A110." and "Successfully attached certificate am:aws:iot:eu-west-2:762334825411:cert/a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01 to thing AWS_Test_STSAFE-A110." Below these, a blue information banner states "IoT security audit is off" with an "Automate IoT security audit" button. The main content area shows the "AWS_Test_STSAFE-A110" details page, with the "Certificates" tab selected and highlighted with a red box. Under "Certificates (1)", a table lists one certificate with ID "a5c97a55c31ff43e677e2a8692ad0d7470ed8cc7f57571628f37d49a30c46f01" and status "Active", which is also highlighted with a red box. The left sidebar shows navigation options like "Monitor", "Connect", "Test", "Manage", and "Security".

Attachment to Azure account



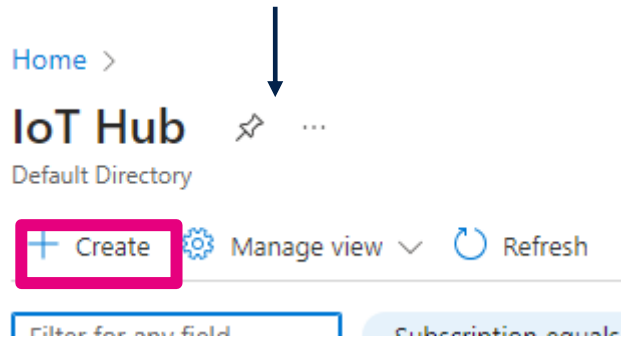
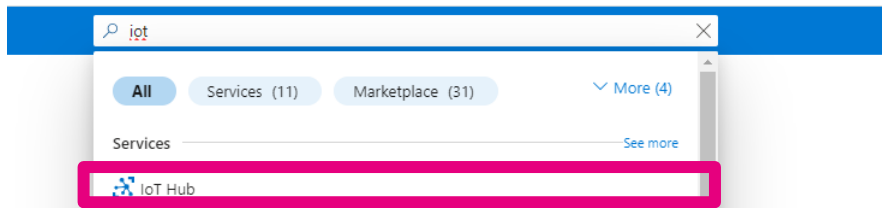
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Create a resource group in Azure

The screenshot illustrates the process of creating a resource group in the Azure portal. It starts with a search for 'resource', which leads to the 'Resource groups' section. The '+ Create' button is highlighted, leading to the 'Create a resource group' form. The form includes fields for Subscription (set to 'Azure subscription 1'), Resource group (set to 'testSTM'), and Region (set to '(US) East US').

Create an IoT Hub in Azure



Home > IoT Hub >

IoT hub

Microsoft

Basics Networking Management Add-ons Tags Review + create

Create an IoT hub to help you connect, monitor, and manage billions of your IoT assets. [Learn more](#)

Project details

Choose the subscription you'll use to manage deployments and costs. Use resource groups like folders to help you organize and manage resources.

Subscription *

Azure subscription 1

Resource group *

TestSTM

[Create new](#)

Instance details

IoT hub name *

testiothub1234

Region *

East US

Tier *

Standard (most popular)

[Compare tiers](#)

Daily message limit *

400,000 (\$25/month)

[See all options](#)

Review + create

< Previous

Next: Networking >

Link Resource Group and Set a Hub Name. Set hub specifics per use case



Create a Device Provisioning Service (DPS) in Azure

Microsoft Azure

device provisioning

All Services (6) Marketplace (2) More (4)

Azure IoT Hub Device Provisioning Services

Home >

Azure IoT Hub Device Provisioning Services

Detail Directory

+ Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field... Subscription equals all Resource group equals all Location equals all

Create a Device Provisioning Service (DPS) in Azure

[Home](#) > [Create a resource](#) > [Marketplace](#) > [IoT Hub Device Provisioning Service](#) >

Azure IoT Hub Device Provisioning Service

Microsoft

Basics Networking Management Tags Review + create

The Azure IoT Hub Device Provisioning Service is a helper service for IoT Hub that enables zero-touch, just-in-time provisioning to the right IoT hub without requiring human intervention, allowing customers to provision millions of devices in a secure and scalable manner. [Learn more](#)

Project details

Choose the subscription you'll use to manage deployments and costs. Use resource groups like folders to help you organize and manage resources.

Subscription * ⓘ Azure subscription 1

Resource group * ⓘ TestSTM

Instance details

Name * ⓘ dpsSTSAFE ✓

Region * ⓘ East US

Link Resource Group, Review and Create DPS

Open newly created DPS, Link IoT Hub to DPS

The screenshot shows the Azure portal interface for a Device Provisioning Service (DPS) instance named 'dpsSTSAFE'. The main area displays the 'Linked IoT hubs' section, which is currently empty. A dialog box titled 'Add link to IoT hub' is open on the right side of the screen. This dialog allows the user to select an IoT hub to link to the DPS. The 'Subscription' dropdown is set to 'Azure subscription 1', and the 'IoT hub' dropdown is set to 'stm32-...-hub'. The 'Access Policy' dropdown is set to 'iohubowner (RegistryWrite, ServiceConnect, DeviceConnect)'. Below the dropdowns, there is a note about access policies. The 'Hostname' field is populated with 'stm32-...-hub.azure-devices.net', the 'Status' is 'Active', the 'Pricing Tier' is 'F1', and the 'Location' is 'East US'. In the left sidebar, the 'Settings' menu item is highlighted with a red box, and the 'Linked IoT hubs' menu item is also highlighted with a red box. The 'Add' button in the top left of the main page is highlighted with a red box.



Add individual enrollment in DPS

Microsoft Azure

Search resources, services, and docs (G+)

Home > dpsSTSAFE

dpsSTSAFE | Manage enrollments

Azure IoT Hub Device Provisioning Service (DPS)

Search

Enrollment groups

Individual enrollments

View, add, and edit individual enrollments. [Learn more](#)

+ Add individual enrollment Refresh Delete

enter enrollment ID

Registration ID ↑	Attestation	Enabled	Created	Last updated
There are no entries to display.				

Settings

Manage enrollments

Add individual enrollment in DPS

Microsoft Azure Search resources, services, and docs (G+)

Home > Azure IoT Hub Device Provisioning Services > dpsSTSAFE | Manage enrollments >

Add enrollment

Registration + provisioning IoT hubs Device settings Review + create

Attestation
Attestation is the process of verifying a device's identity during registration. Devices must attest their identity using the enrollment's selected attestation mechanism.

X.509 client certificates

X.509 certificate settings
Using client X.509 certificate attestation, Device Provisioning Service verifies a device's certificate against enrollment certificates. Enrollments may have one or two certificates. Uploaded certificates must share a common name.

Primary certificate file
US_Cert.pem

Secondary certificate file
select certificate file

Registration ID
Each registered device is assigned unique registration ID in Device Provisioning Service. The ID format will vary by attestation mechanism.

The registration ID will match the subject common name on selected certificates.

Provisioning status
You can enable or disable this enrollment from provisioning and reprovisioning devices.

Enable this enrollment

Reprovision policy
Provisioned devices may trigger requests to be reprovisioned. Reprovision policy specifies whether to reprovision the device and how handle the device's existing state data.

Reprovision policy
Reprovision device and migrate current state

Review + create < Previous Next: IoT hubs >

Select X.509 client certificates, load Certificate copied/saved from U5 output



Link Hub to individual enrollment in DPS

Microsoft Azure Search resources, services, and docs (G+)


Home > dpsSTSAFE | Manage enrollments >

Add enrollment

dpsSTSAFE

Registration + provisioning **IoT hubs** Device settings Review + create

Target IoT hubs
You can specify a set of linked IoT hubs where device(s) will be provisioned. If no IoT hubs are selected, devices may be provisioned in any linked IoT hub.

Target IoT hubs
stm32--hub.azure-devices.net

[Add link to IoT hub](#)

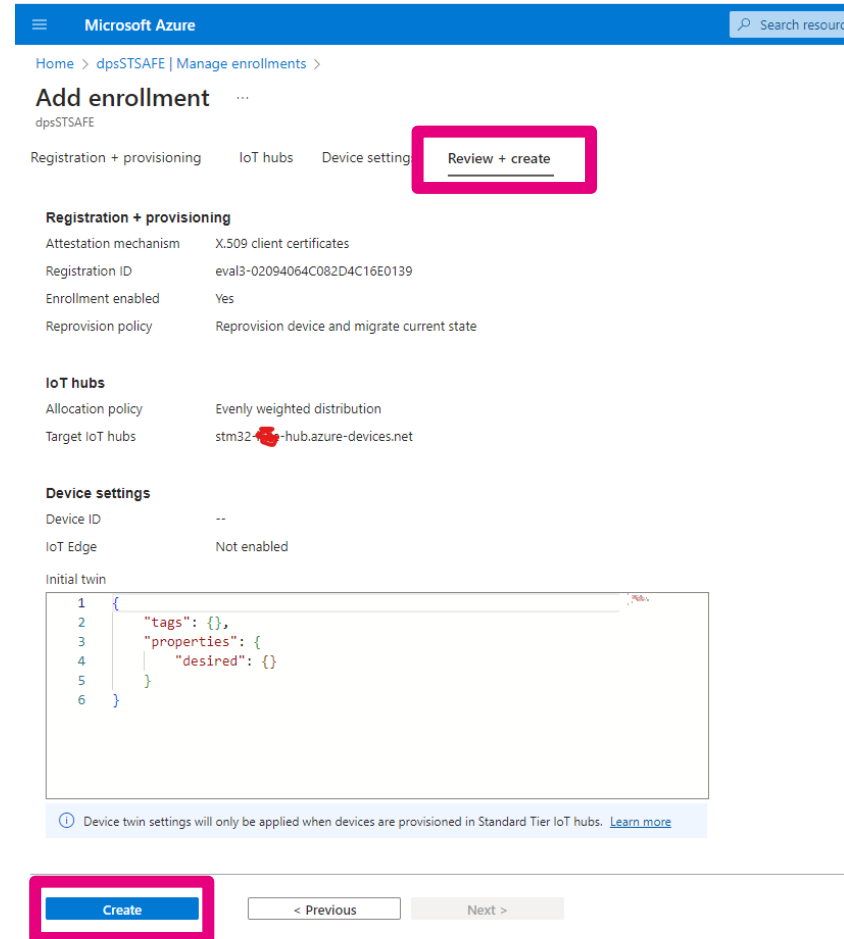
Allocation policy
Allocation policy determines which target IoT hub a device is assigned when provisioned. The default allocation policy is configured under 'Manage allocation policy.'

Allocation policy *

- Static
- Evenly weighted distribution
- Lowest latency
- Custom (use Azure Function)

Link IoT Hub in enrollment

Create individual enrollment in DPS



Microsoft Azure Search resources

Home > dpsSTSAFE | Manage enrollments >

Add enrollment


dpsSTSAFE

Registration + provisioning IoT hubs Device settings **Review + create**

Registration + provisioning

Attestation mechanism	X.509 client certificates
Registration ID	eval3-02094064C082D4C16E0139
Enrollment enabled	Yes
Reprovision policy	Reprovision device and migrate current state

IoT hubs

Allocation policy	Evenly weighted distribution
Target IoT hubs	stm32-  -hub.azure-devices.net

Device settings

Device ID	--
IoT Edge	Not enabled

Initial twin




```
1 {
2   "tags": {},
3   "properties": {
4     "desired": {}
5   }
6 }
```

Device twin settings will only be applied when devices are provisioned in Standard Tier IoT hubs. [Learn more](#)

Create < Previous Next >

Follow the package instructions to compile, program, and set Endpoint/WiFi/ID Scope details.
The Endpoint and ID Scope are found on the DPS Overview page

Home >

 **dpsSTSAFE**   ...

Azure IoT Hub Device Provisioning Service (DPS)

Search × << → Move ▾ 🗑️ Delete ↻ Refresh

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
- Quick Start

Essentials

Resource group (move) : [TestSTM](#)

Status : Active

Location : East US


Subscription (move) : [Azure subscription 1](#)

Subscription ID : c8aa4851-500e-4275-913e-fb2642a802c9

Tags (edit) : [Add tags](#)

Service endpoint : dpsSTSAFE.azure-devices-provisioning.net

Global device endpoint : global.azure-devices-provisioning.net

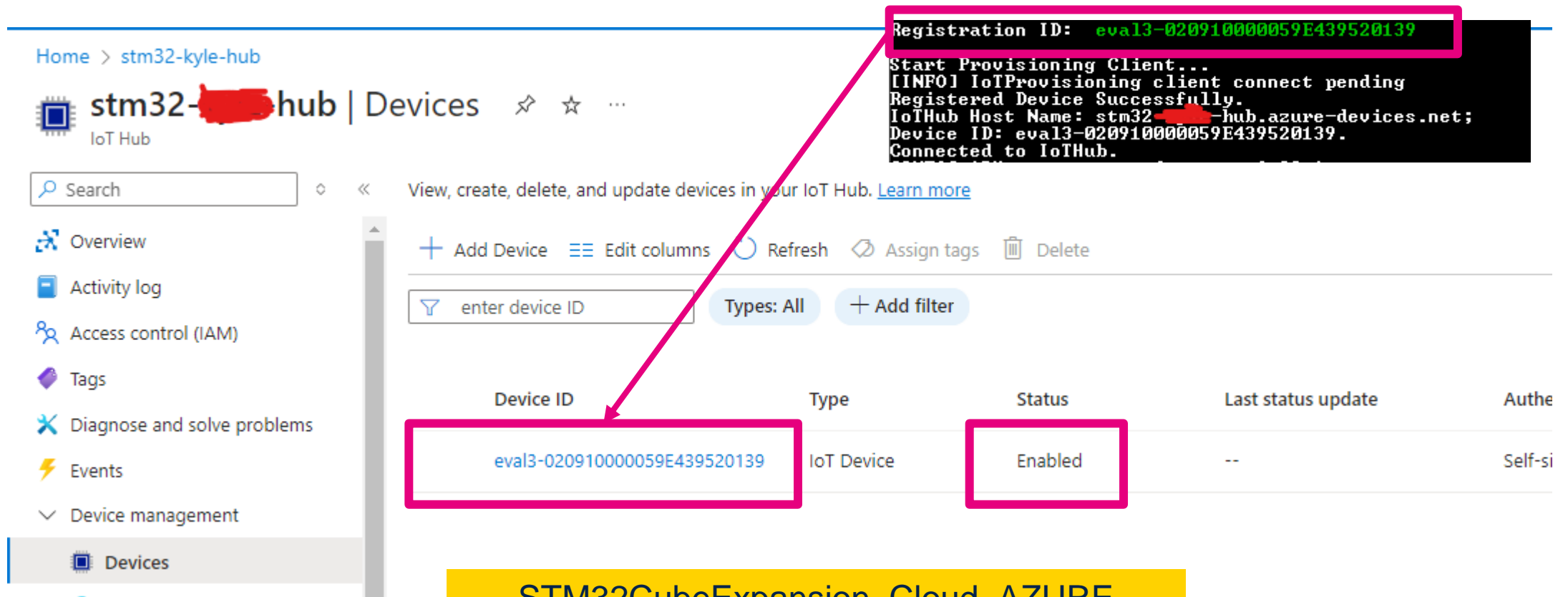
ID Scope : 

Pricing and scale tier : S1

Automatic failover enabled : Yes

STM32CubeExpansion_Cloud_AZURE
B-U585I-IOT02A Azure Demonstration Code

Once you have configured package, it should automatically connect, create, and enable a device using the certificate common name



Home > stm32-kyle-hub

stm32-[REDACTED] hub | Devices

Search

View, create, delete, and update devices in your IoT Hub. [Learn more](#)

+ Add Device Edit columns Refresh Assign tags Delete

enter device ID Types: All + Add filter

Device ID	Type	Status	Last status update	Authe
eval3-020910000059E439520139	IoT Device	Enabled	--	Self-si

```

Registration ID: eval3-020910000059E439520139
Start Provisioning Client...
[INFO] IoTProvisioning client connect pending
Registered Device Successfully.
IoTHub Host Name: stm32-[REDACTED]-hub.azure-devices.net;
Device ID: eval3-020910000059E439520139.
Connected to IoTHub.
    
```

STM32CubeExpansion_Cloud_AZURE
B-U585I-IOT02A Azure Demonstration Code

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