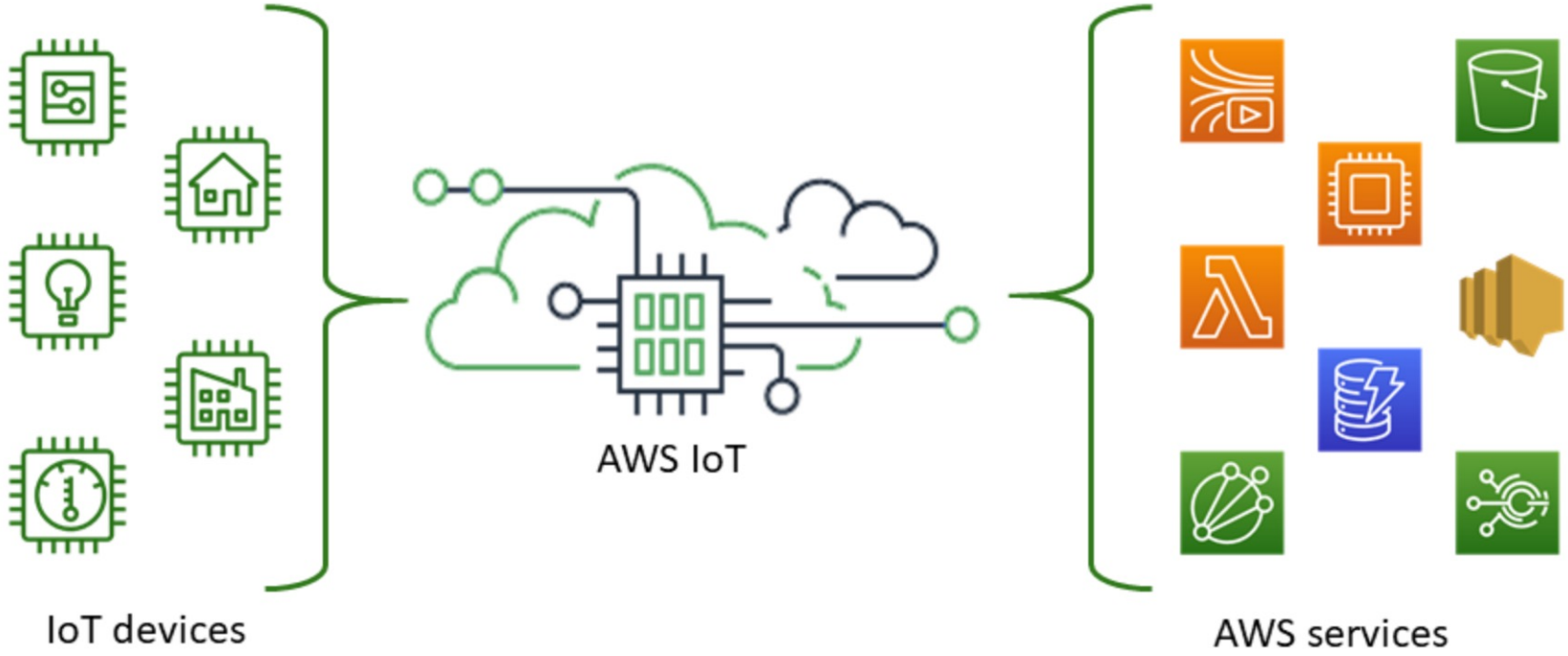
AWS-IoT

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Publish to a **topic**

Subscribe to a **topic**



Publisher
Sensor

Subscriber
AWS IoT

Topic is used to identify the message

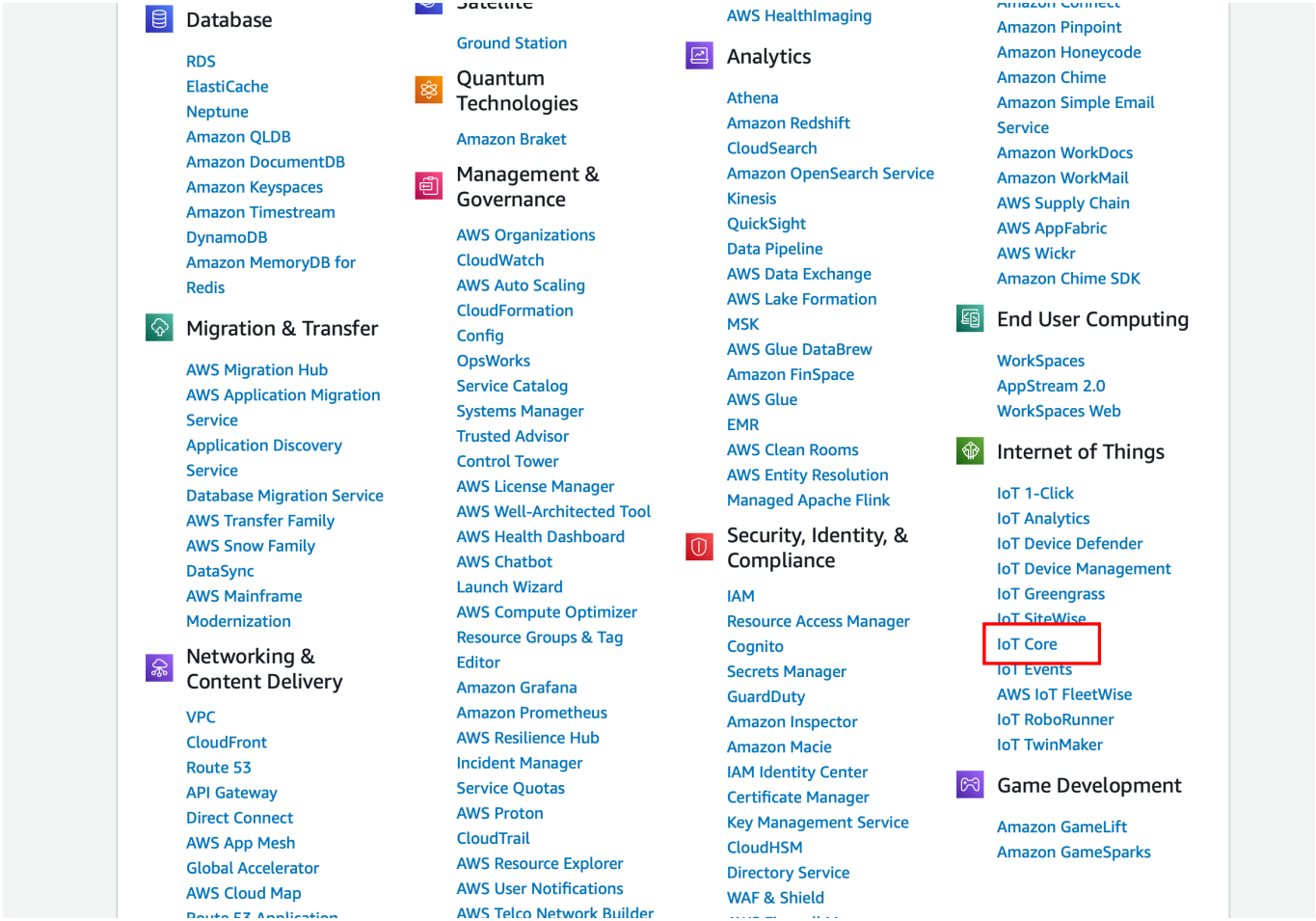
AWS-IoT

- Create AWS account
- Free Credits:

https://aws.amazon.com/blogs/aws/aws-educate-credits-training-content-and-collaboration-for-students-educators/

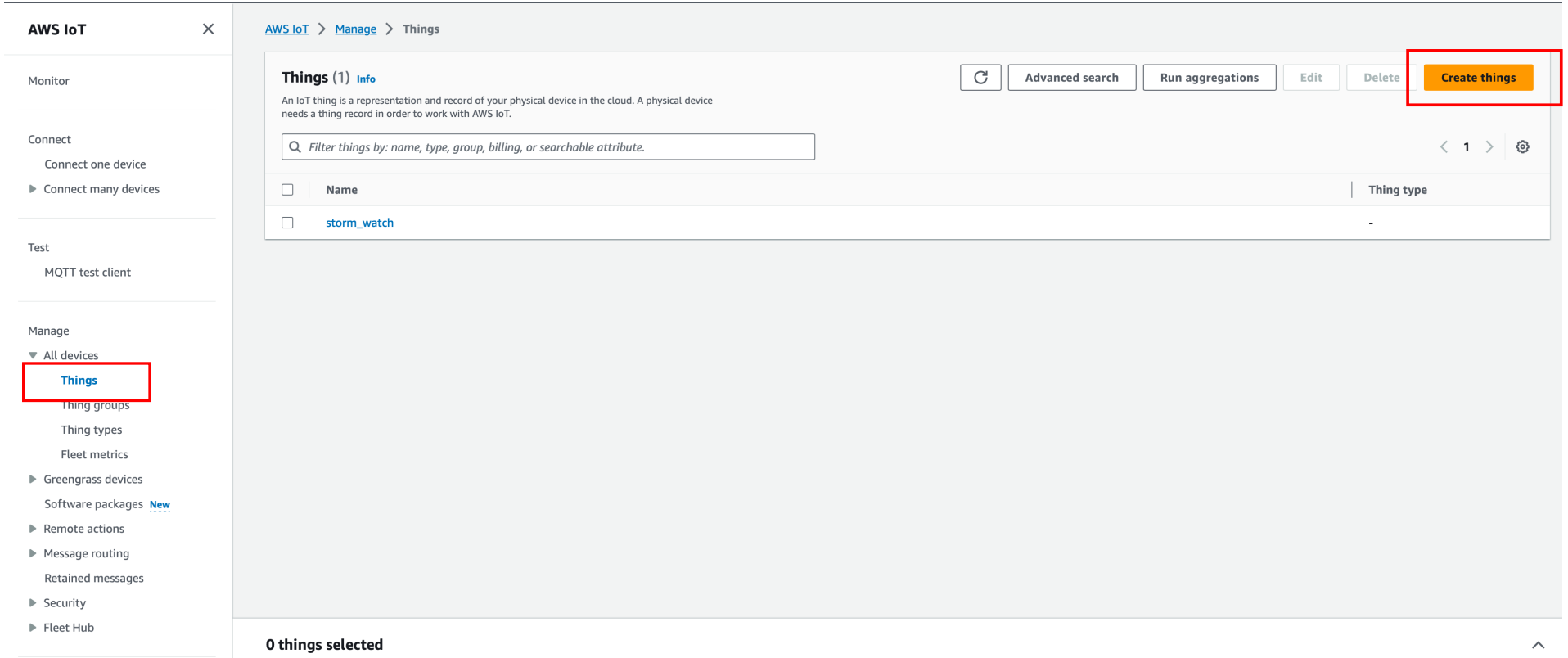
https://aws.amazon.com/education/awseducate/

- Go to AWS IoT



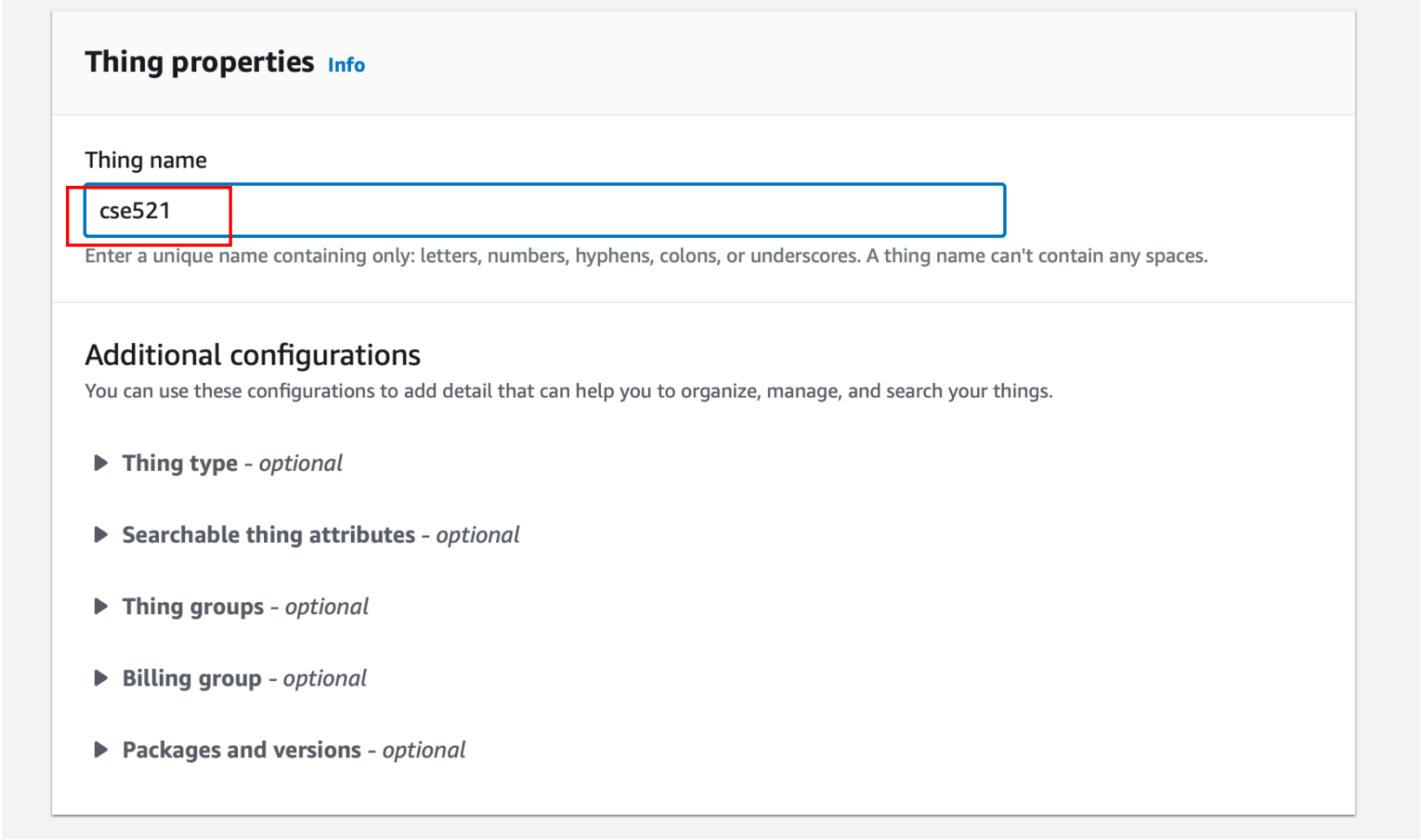
Create Things

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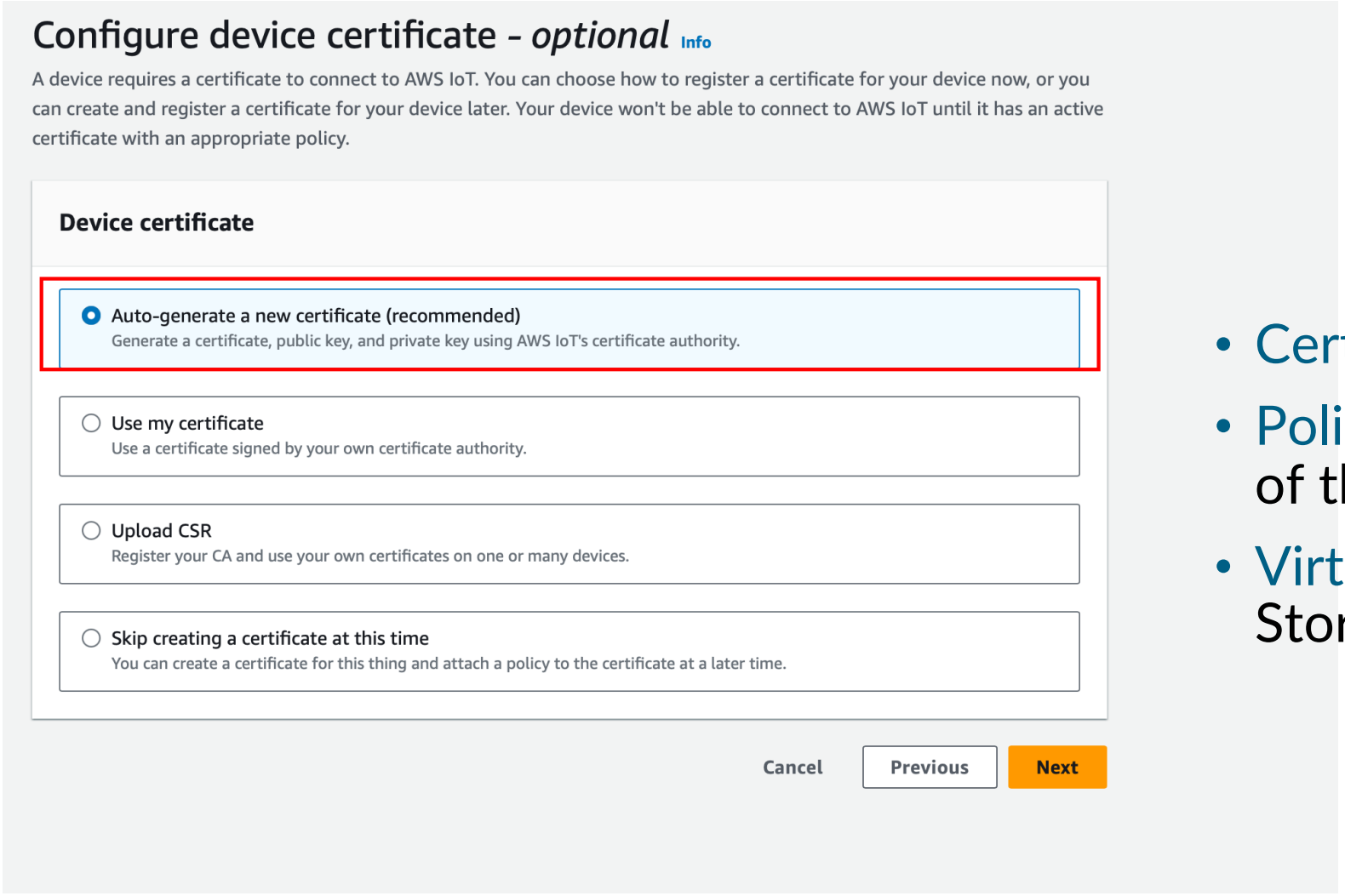
Create Things

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Certificate

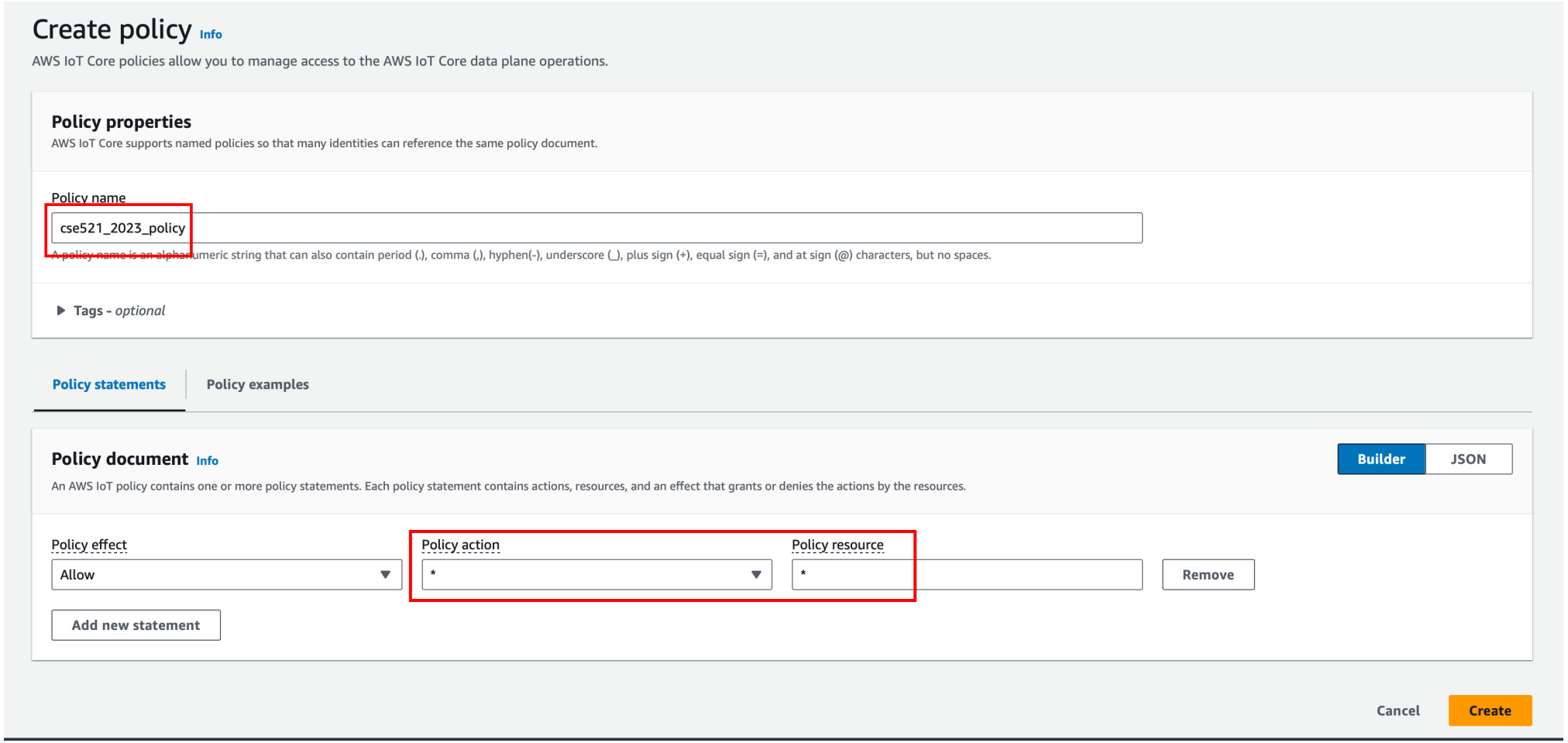
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- Certificate: authenticate the device
- Policy: define the roles/permissions of the certificate
- Virtual copy of the thing (Shadow): Store/retrieve some information

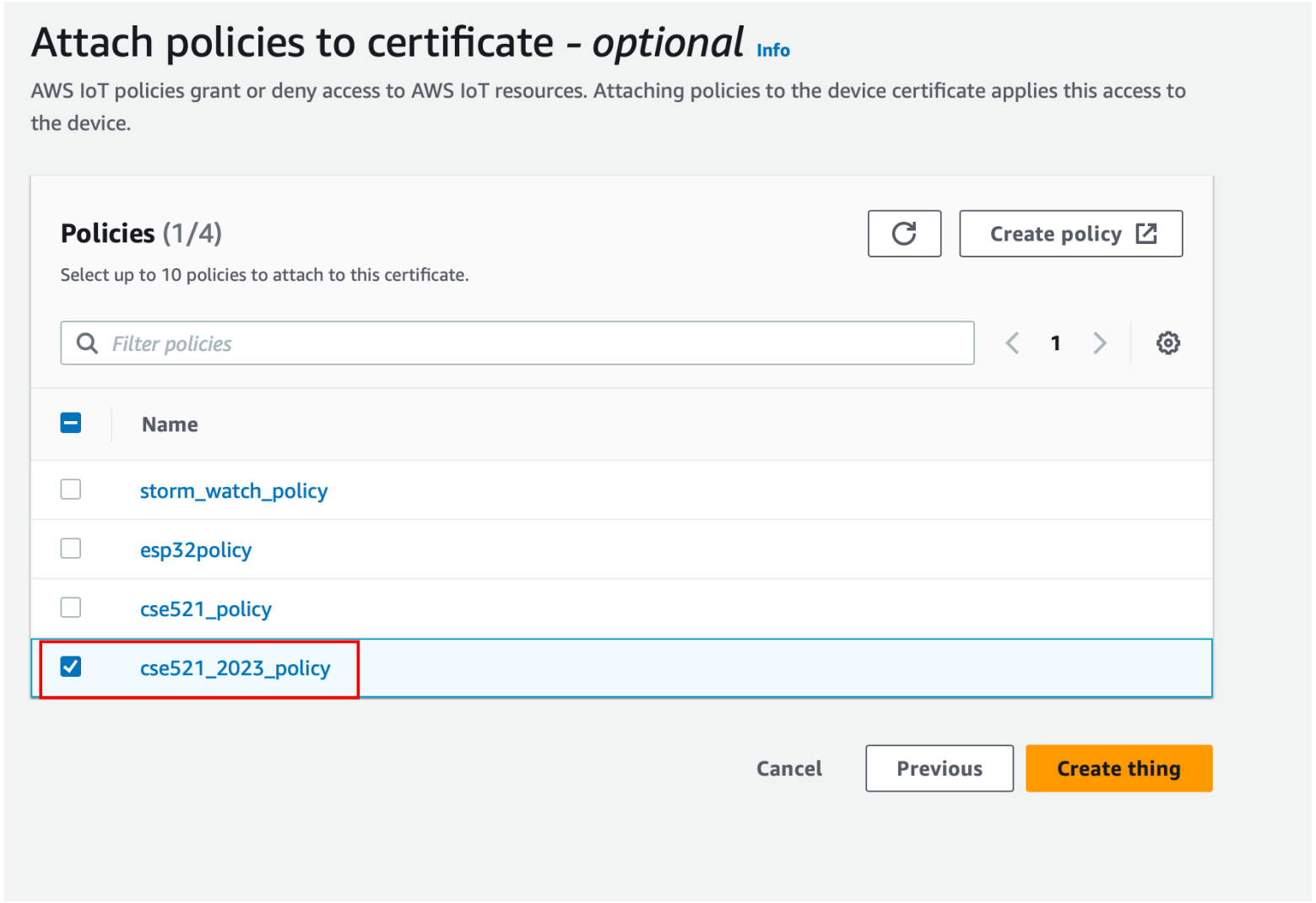
Create Policy

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Create Policy

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Download Certificates

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Download and save (**one-time opportunity**)

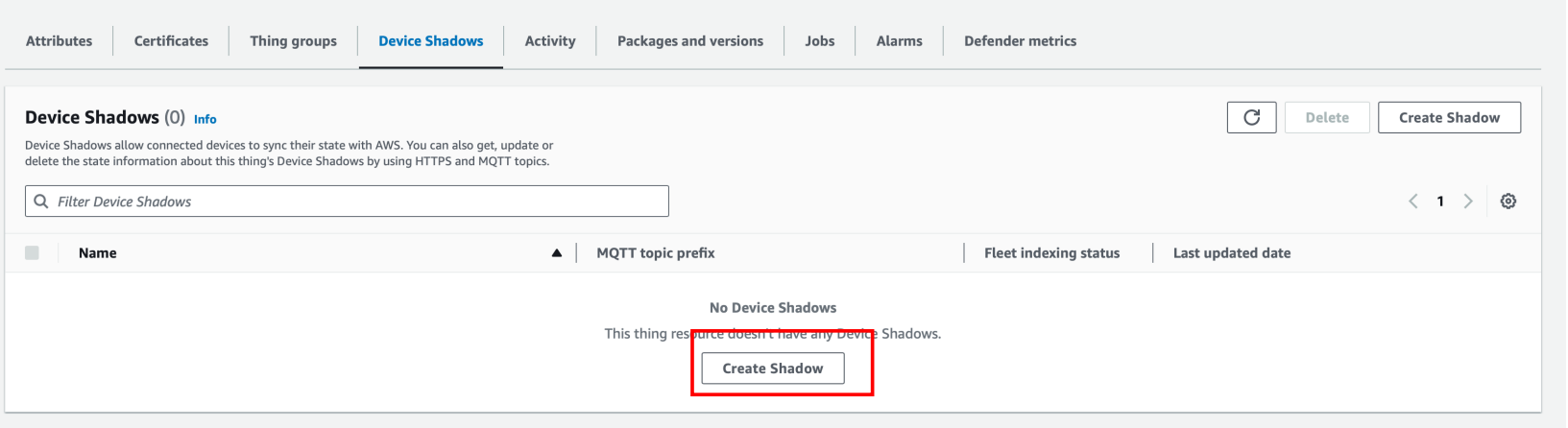
- Private key
- Public key
- Device certificate
- Root CA certificate

Need these for physical things

- Certificate: authenticate the device
- Policy: define the roles/permissions of the certificate
- Virtual copy of the thing (Shadow): Store/retrieve some information

Shadow

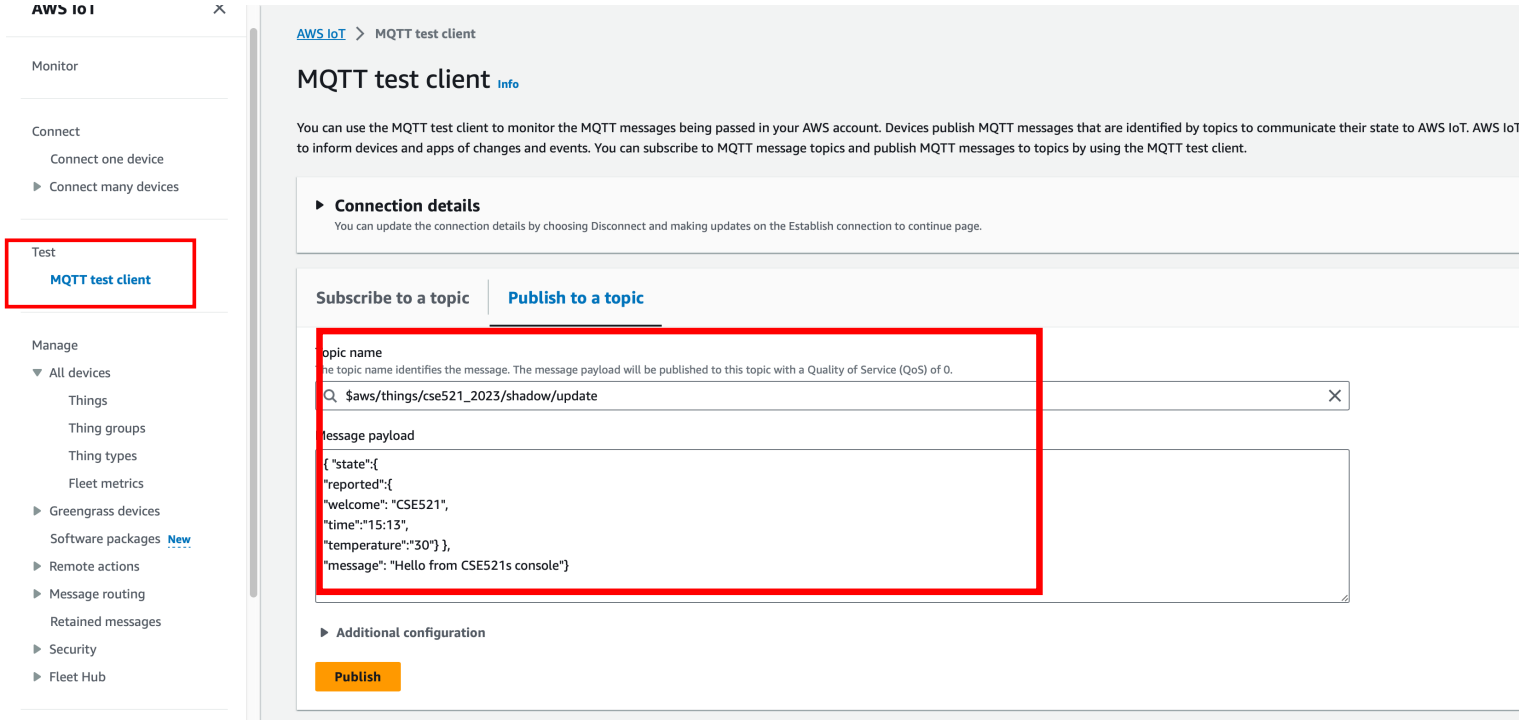
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Shadow is a special topic in AWS IoT

Test

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JSON file:

{ "state":{
"reported":{
"welcome": "CSE521",
"time":"15:13",
"temperature":"30"} },
"message": "Hello from CSE521s console"}

https://docs.aws.amazon.com/iot/latest/developerguide/device-shadow-document.html

Test

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Device Shadow document Info

The Device Shadow document contains the reported, desired, and delta values of the device's state. You can edit the state values here or programmatically. Your device can sync its state while it's connected to AWS IoT.

Device Shadow state


```
{
  "state": {
    "desired": {
      "welcome": "aws-iot"
    },
    "reported": {
      "welcome": "CSE521",
      "time": "15:13",
      "temperature": "30"
    },
    "delta": {
      "welcome": "aws-iot"
    }
  }
}
```


In “Things” page → “shadow”

Connect Your Device

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Prepare your device

1. Turn on your device and make sure it's connected to the internet.
2. Choose how you want to load files onto your device.
    1. If your device supports a browser, open the AWS IoT console on your device and run this wizard. You can download the files directly to your device from the browser.
    2. If your device doesn't support a browser, choose the best way to transfer files from the computer with the browser to your device. Some options to transfer files include using the file transfer protocol (FTP) and using a USB memory stick.
3. Make sure that you can access a command-line interface on your device.
    1. If you're running this wizard on your IoT device, open a terminal window on your device to access a command-line interface.
    2. If you're not running this on your IoT device, open an SSH terminal window on this device and connect it to your IoT device.