



利用 AWS IoT 服務 遠端控制物聯網裝置

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What to Expect from the Session

AWS IoT 服務介紹

Amazon Alexa 語音服務介紹

實作練習

AWS Platform For IoT



SDKs



Ingestion,
Protocols &
Security



Device
Shadows



Rules
Engine



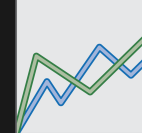
Data
Storage



Edge Service



Companion
Apps



Analytics



App
Backend



Machine
Learning



C, iOS
Android



Reference
Hardware



AWS IoT



S3



CloudFront



Mobile Hub



Kinesis



Lambda



Machine
Learning



RedShift



EMR



API
Gateway

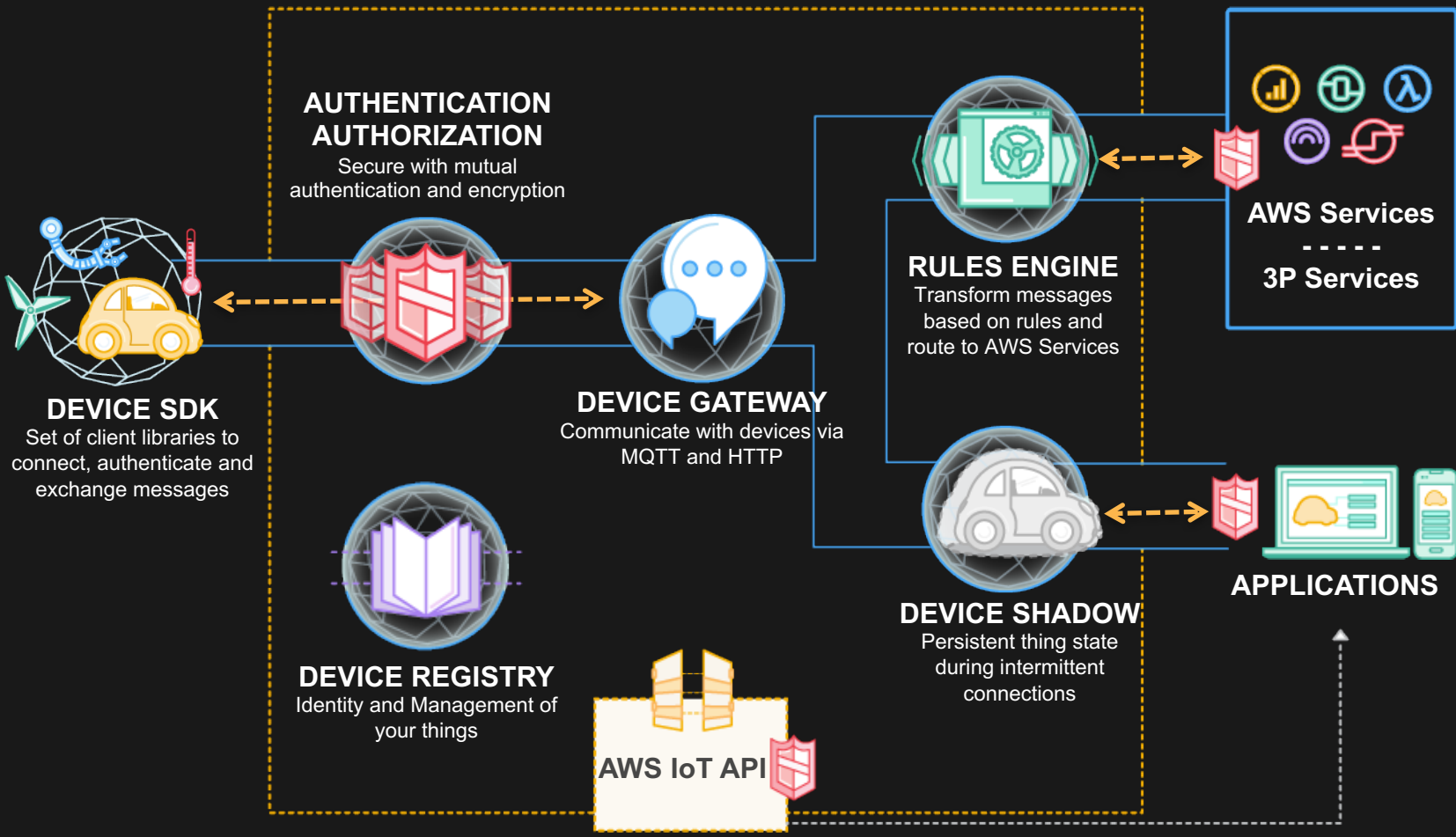


DynamoDB

AWS Global Infrastructure

APN Partner Solutions

AWS IoT



The Power Of Speech: Alexa

- **Alexa** - With the Alexa Skills Kit, you can easily build and add your own skills to Alexa.
- **AWS IoT** manages the connection devices and integration with ASK, as well as other backend systems and companion apps.
- Build skills for Alexa using **AWS Lambda**. Simply write the code using and upload it as a Lambda function.
- **Alexa Voice Service** brings voice-powered experiences to any connected devices.



練習情境

Alexa Voice Service and AWS IoT



練習情境

Alexa Voice Service and AWS IoT



步驟 1 - 在 AWS IoT 建立物件

Alexa Voice Service and AWS IoT



步驟 1 - 在 AWS IoT 註冊裝置

- 登入 AWS 管理主控台
- 選取 N. Virginia Region
- 選取 AWS IoT 服務
- 選取 Create a thing
- 輸入名稱 'myLight'
- 選取 myLight物件

步驟 2 -設定 AWS IoT Device Shadow

Alexa Voice Service and AWS IoT



步驟 2 -設定 AWS IoT Device Shadow

- 將物件的狀態記錄在雲端
- 選取右邊的 'update shadow'
- 設定Device Shadow初始狀態如下

```
{  
  "desired": {},  
  "reported": {"light":0}  
}
```

- 設定並下載憑證檔案
- 設定Policy

步驟 3 - 在AWS Lambda 建立Alexa Skill

Alexa Voice Service and AWS IoT

Alexa
測試環境



MQTT
Client

步驟3-在AWS Lambda 建立Alexa Skill

- **Scripts: <http://bit.ly/IoT-Workshop-Scripts>**
- 下載 Alexa Skill Lambda 樣板
 - **<http://bit.ly/Alexa-Mini-Lambda>**
- 在AWS Lambda 中建立新函示，並貼上Alexa Skill 樣板程式碼
- 加入存取 AWS IoT 環境參數資料
- 建立啟動物件的程式碼，在 onIntent 方法中呼叫啟動物件的程式
 - **請移除下面這一段程式碼**

```
// Dispatch to your skill's intent handlers
if ("TestIntent" === intentName) {      testResponse(intent,
session, callback); } else {          throw "Invalid intent"; }
```
- 設定 Role
- 設定 Event Source

步驟 4 – 登入 Amazon Developer Console

- <https://developer.amazon.com/>
- 選取 Alexa



Alexa Skills Kit

Easily add new skills to Alexa

Get Started >



Alexa Voice Service

Bring voice capabilities to
your connected device

Get Started >

步驟 5 –設定 Alexa Skill Kit

Alexa Voice Service and AWS IoT

Alexa
測試環境



MQTT
Client

步驟 5 – 設定 Alexa Skill Kit

- 建立一個 custom skill
- Invocation Name : my pump
- Interaction Model
 - Intent Schema
 - Sample Utterances
- Configuration
 - Lambda ARN (Amazon Resource Name)
- Test
 - AWS IoT Device Shadow
 - MQTT Client

步驟 6 – 設定 MQTT Client

Alexa Voice Service and AWS IoT



步驟 6 – 設定 MQTT Client

- 開啟AWS IoT Console
- Device Getway connection
 - At the top of the screen, go to the 'MQTT Client' tab
 - Click on 'Generate client ID'
 - Click on 'Connect'
- Subscribe to topic
 - Click on 'Subscribe to topic'
 - Type the value '\$aws/things/**thingName**/shadow/update/delta'
 - Click 'Subscribe'