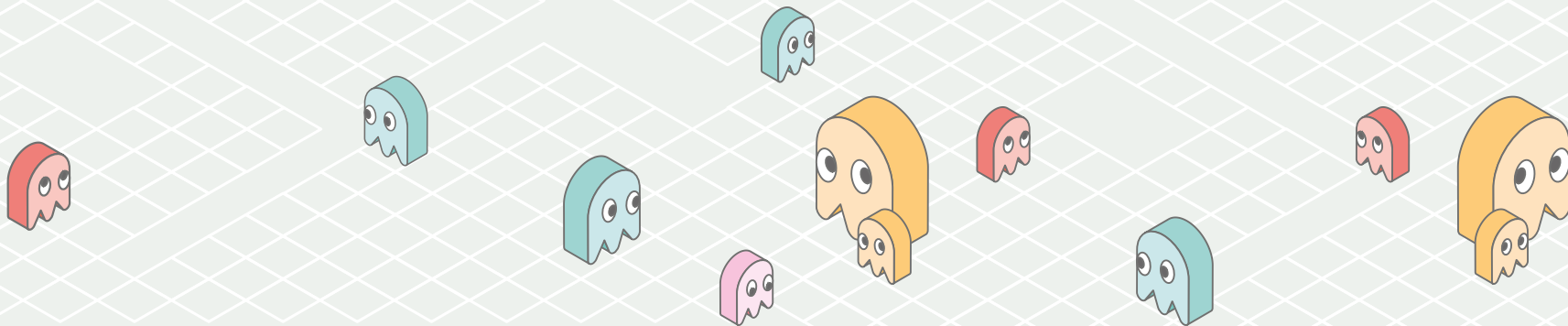




Pop-up Loft
LONDON

Internet of Things

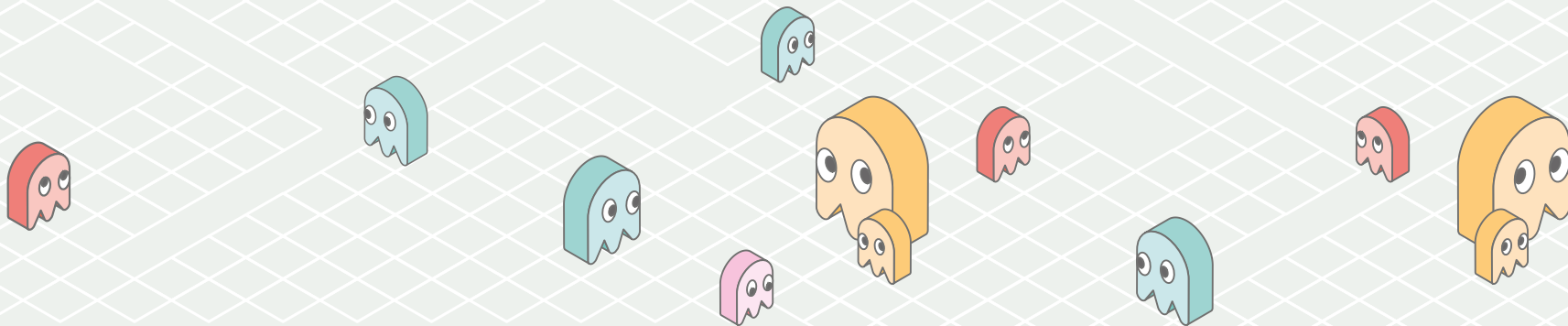




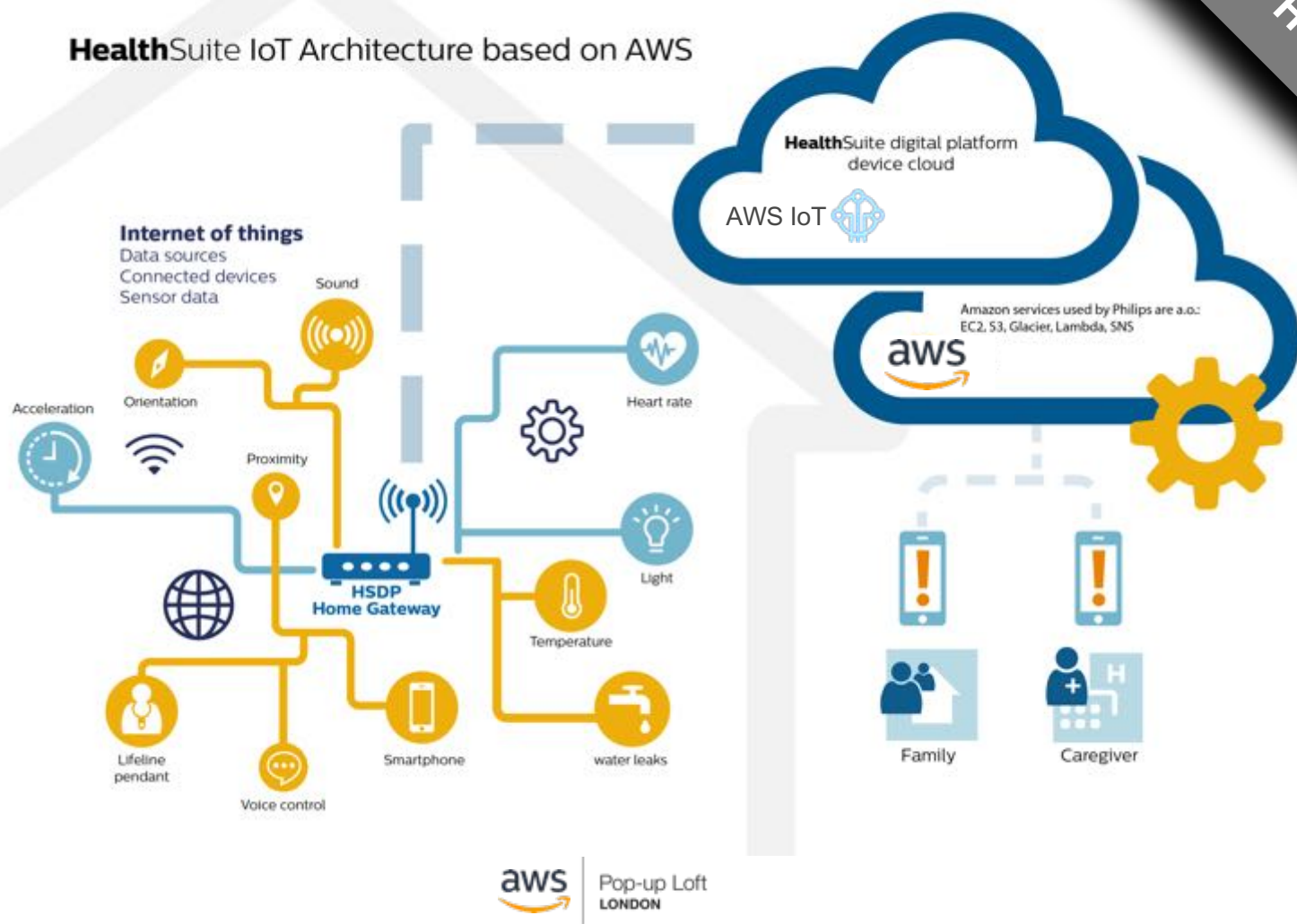
Pop-up Loft
LONDON

Internet of Things

Why there is so much interest?



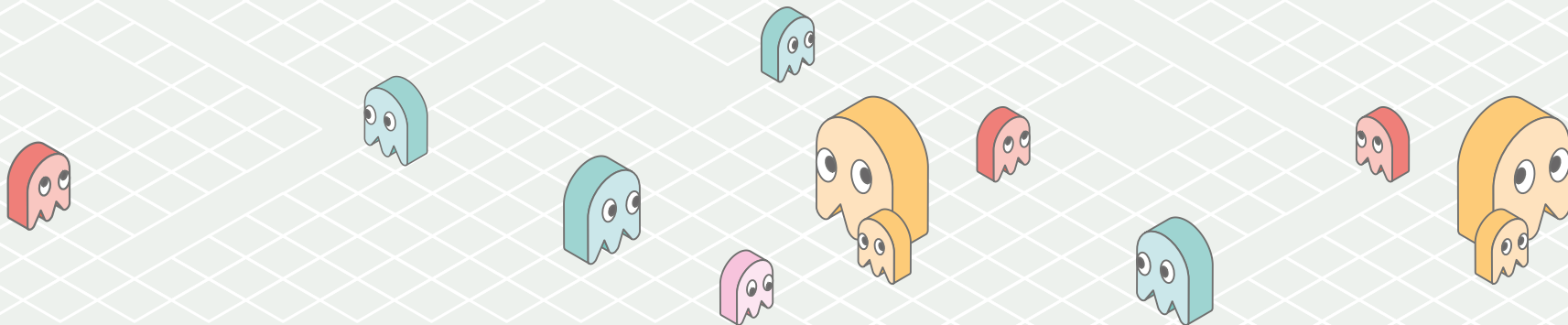
HealthSuite IoT Architecture based on AWS





Pop-up Loft
LONDON

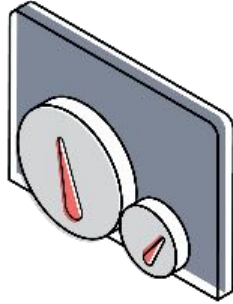
A Lot of Efforts Are Still Required...



Connecting devices to cloud applications requires undifferentiated heavy lifting.



**Alternate
Protocols**



Scalability



**Security &
Management**



**Integration with Cloud
and Mobile Applications**

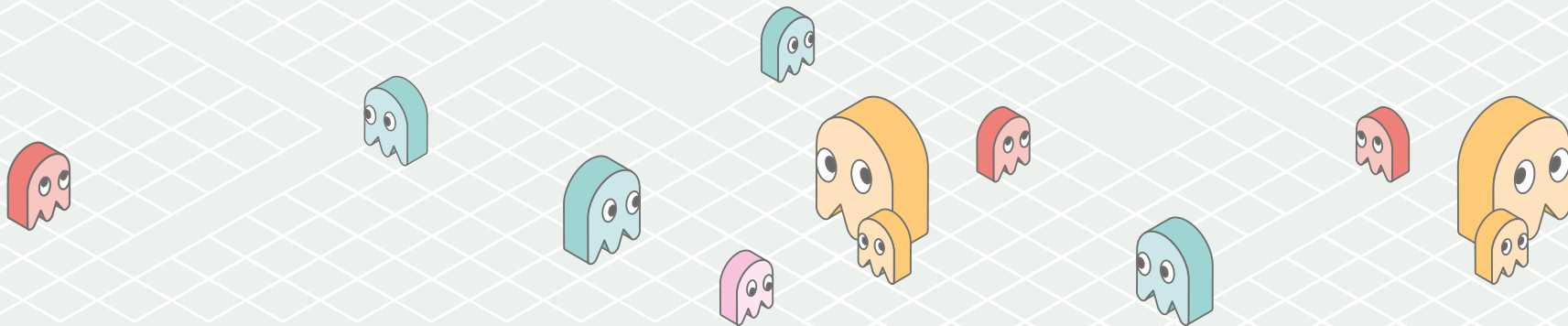


**Many SDKs
& Tools**



Pop-up Loft
LONDON

How to make IoT Simple ?

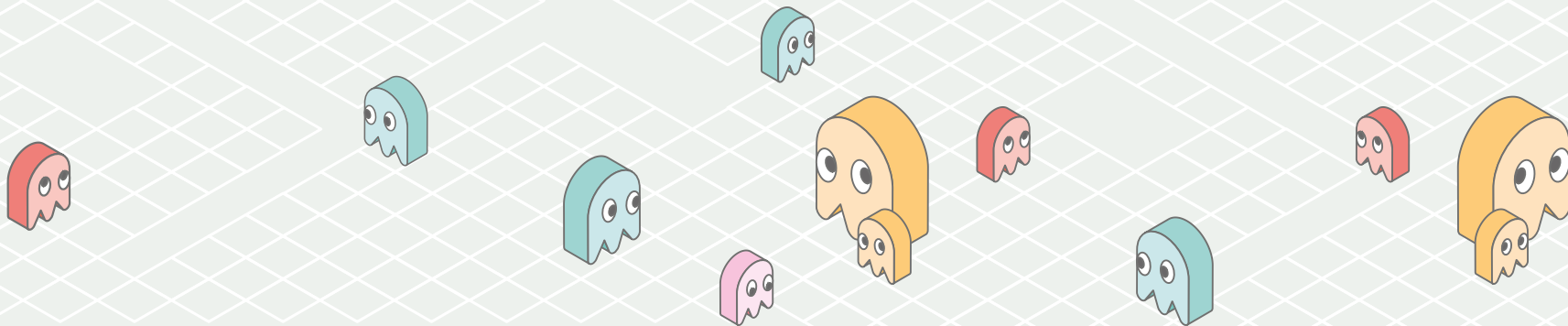


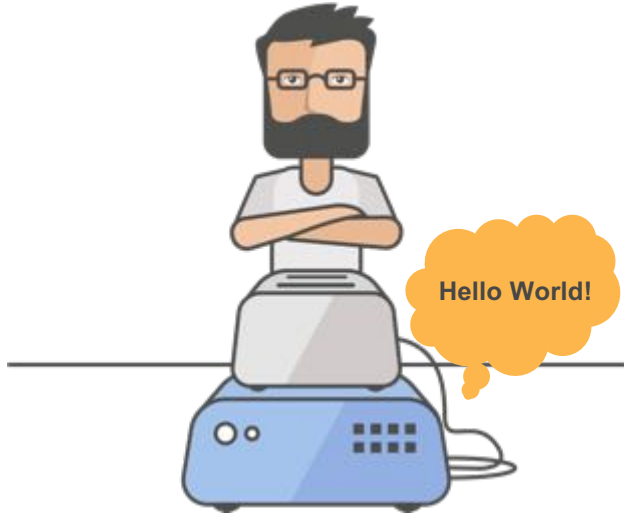


Pop-up Loft
LONDON

How to make IoT Simple ?

For Developers

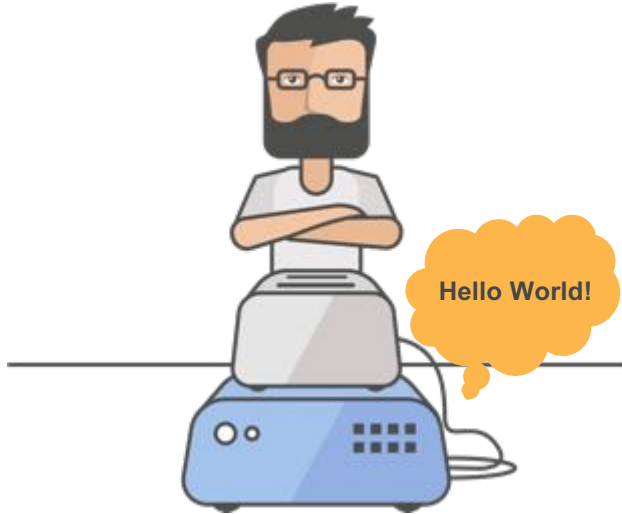




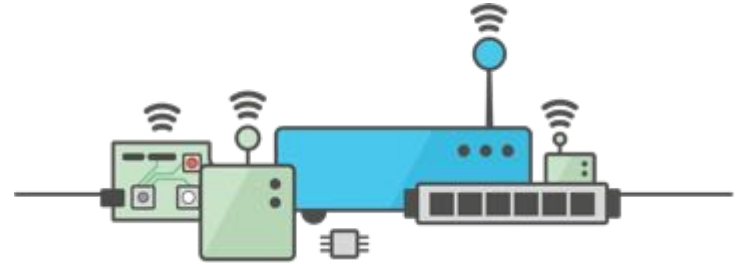
Security



Pop-up Loft
LONDON



Security



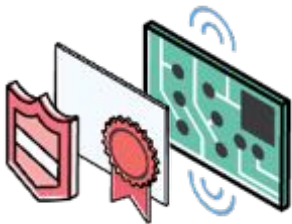
Scalability

Introducing AWS IoT

“Securely connect one or one-billion devices to AWS,
so they can interact with applications and other devices”

1

Securely connect any physical device to AWS



Connect any device via MQTT/HTTP securely. Quickly get started with AWS IoT Starter Kits and Scale to billions of messages across millions of devices

2

Respond to signals from your fleet of devices and take action with Rule Engine



Shift business logic from device to cloud and route data to AWS service of your choice for storage and analysis using rules engine.

3

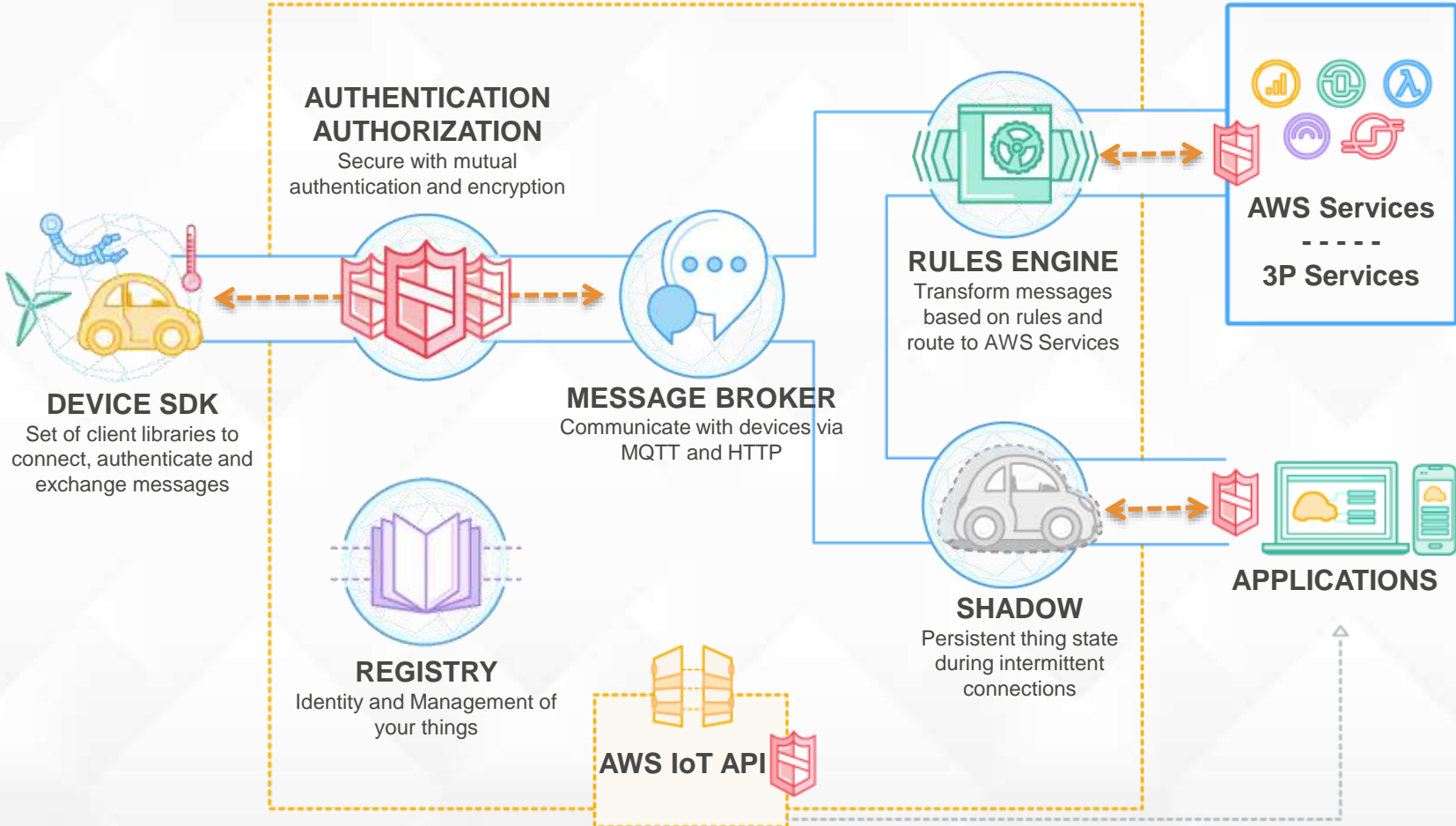
Create Web and Mobile Applications that Interact with Devices reliably at any time



Easily build applications on web and mobile that interact with devices, even when they are offline, with AWS SDK and Device Shadow.



Pop-up Loft
LONDON



AWS IoT Platform

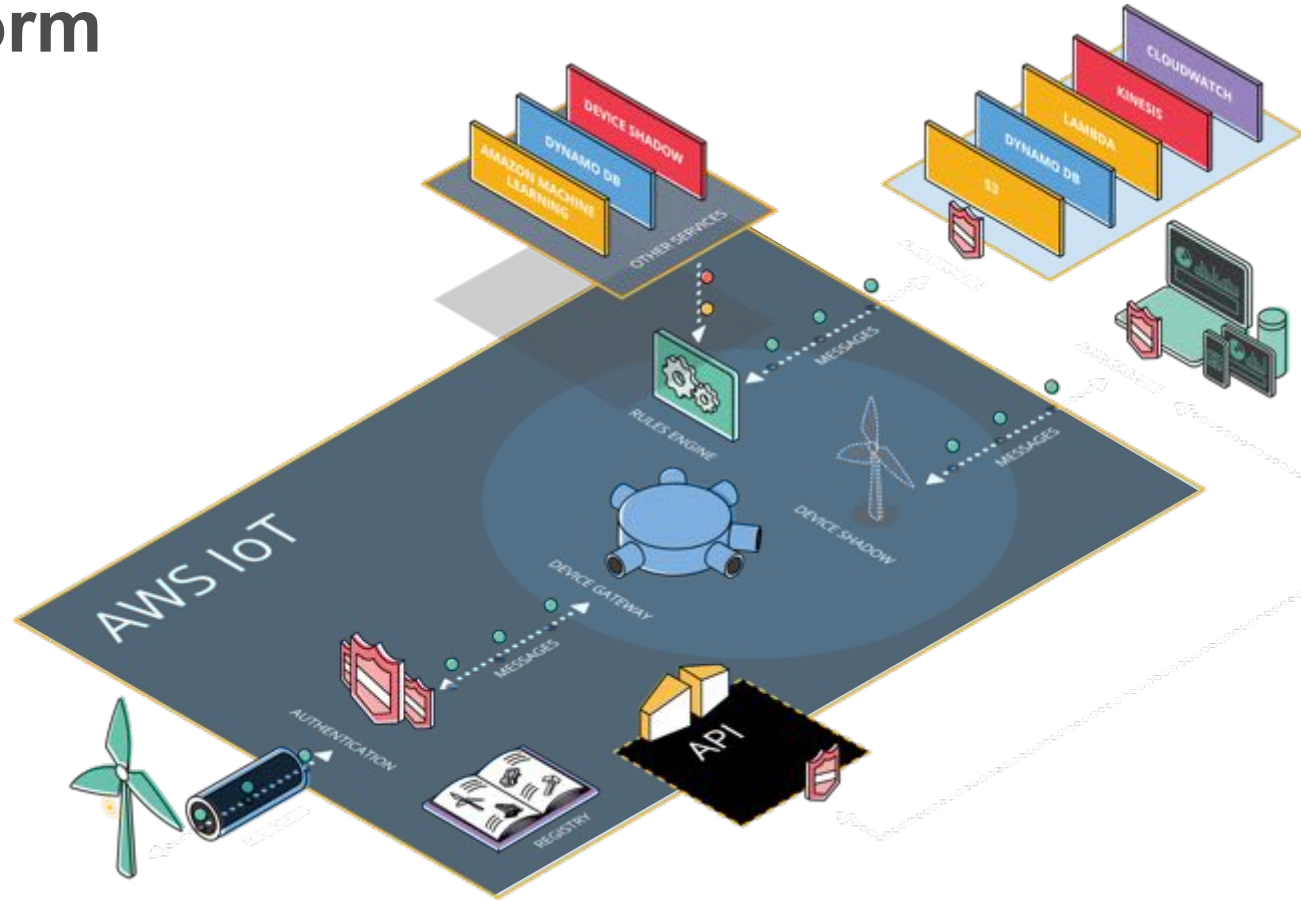
Managed service

- No installation
- Automatic scaling
- No pre-provisioning
- Redundant across AZ
- Pay as you go

All in one service

- Message Broker
- Rules Engine
- Shadow
- Registry

All for \$5/M Msg*



Publish / Subscribe

Standard Protocol Support

MQTT, HTTPS, WebSockets

Machine Friendly

Low power, low bandwidth, fast

Long Lived Connections

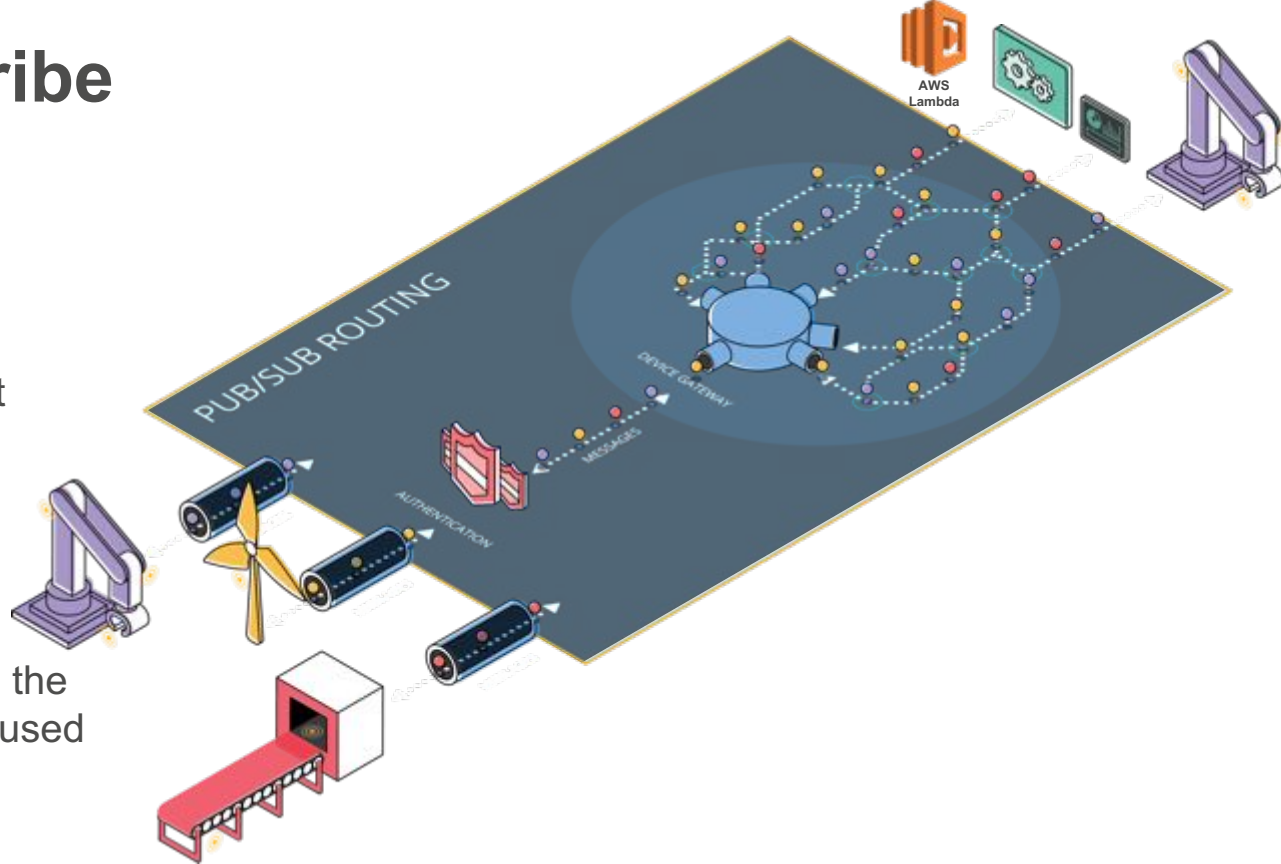
Receive signals from the cloud

Bidirectional

Communication FROM and TO the devices no matter the protocol used

Device SDK

Open Source – Apache 2.0
Embedded-C, Javascript, Python, Java,
Arduino Yún, iOS, Android



Security, Security, Security

Most trusted authentication

X509 Certificates

Mutual Authentication

Easy onboarding and provisioning

Certificate management

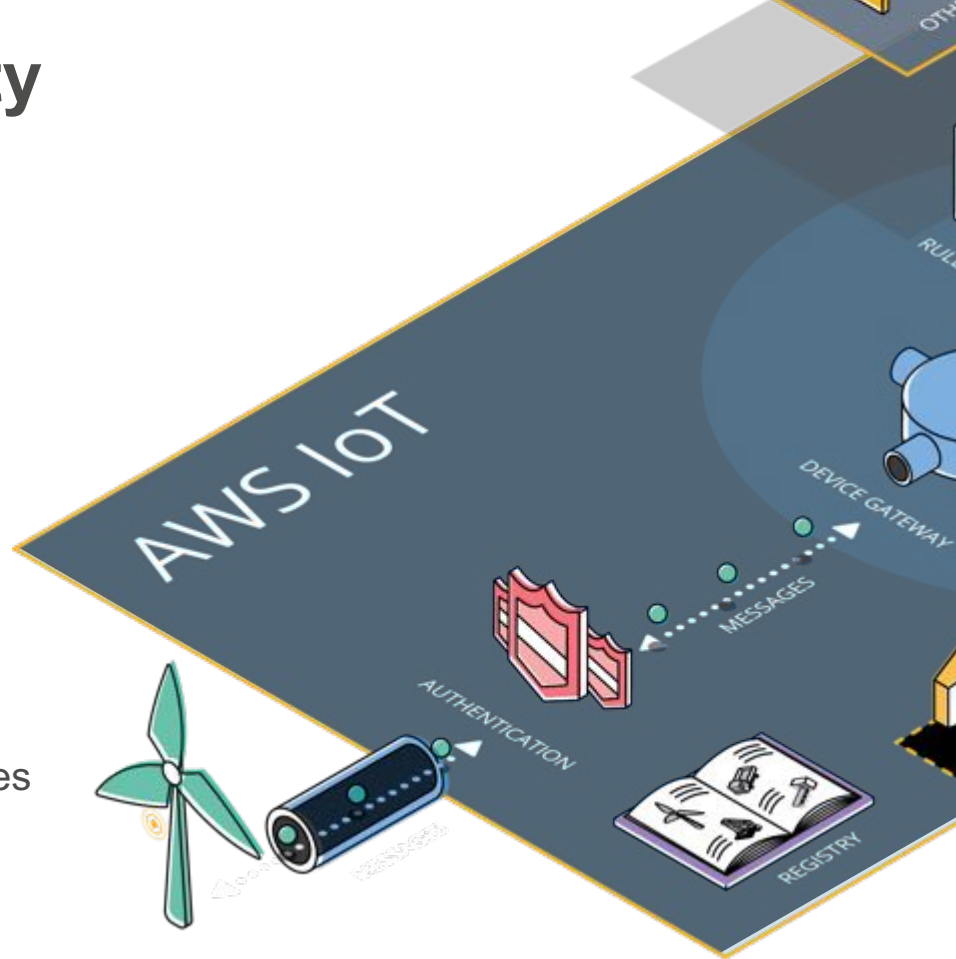
Unlimited amount of Certificates

(Sign your CSR or BYOC)

Policy and Role based access control

Granular access to the message broker for devices and IAM identities

Granular access to backend services via Roles



Rules Engine - Finding the Signals

Easy SQL-Like Syntax

SELECT

DATA

FROM

TOPIC

WHERE

FILTER

Bring Context

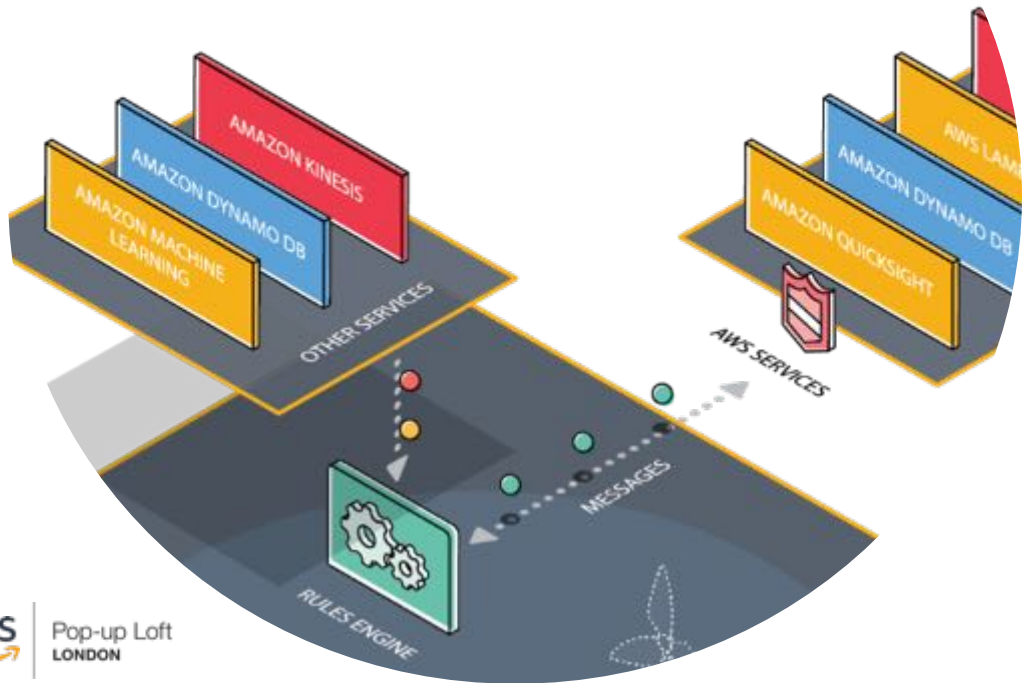
From Amazon Machine Learning, IoT Shadows, DDB

Transforms & Enrich

Math library, JSON parsing and cleansing functions

Route

To multiple AWS Services



AWS IoT Shadow

Virtual representation of the device in the Cloud

Always accessible

Holds “states” up to 1 year

More efficient programming

Familiar REST APIs for read/write

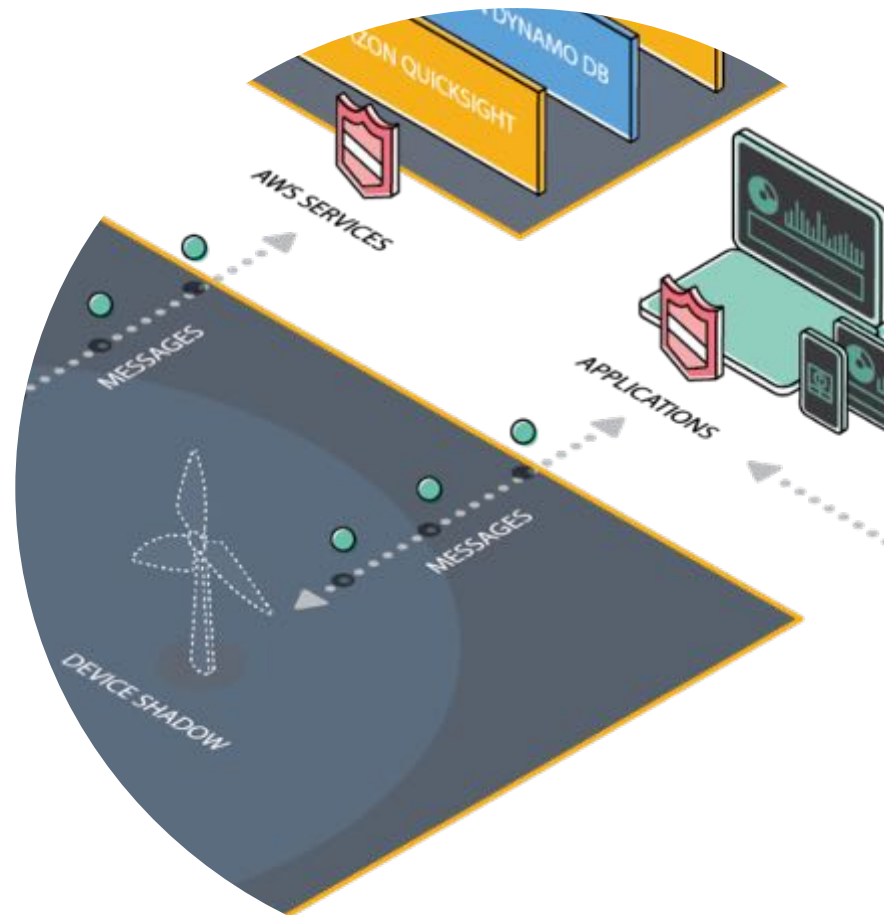
Hide complexity of device connectivity (developers do not need to know what protocol the device uses)

Mindful of device constraints

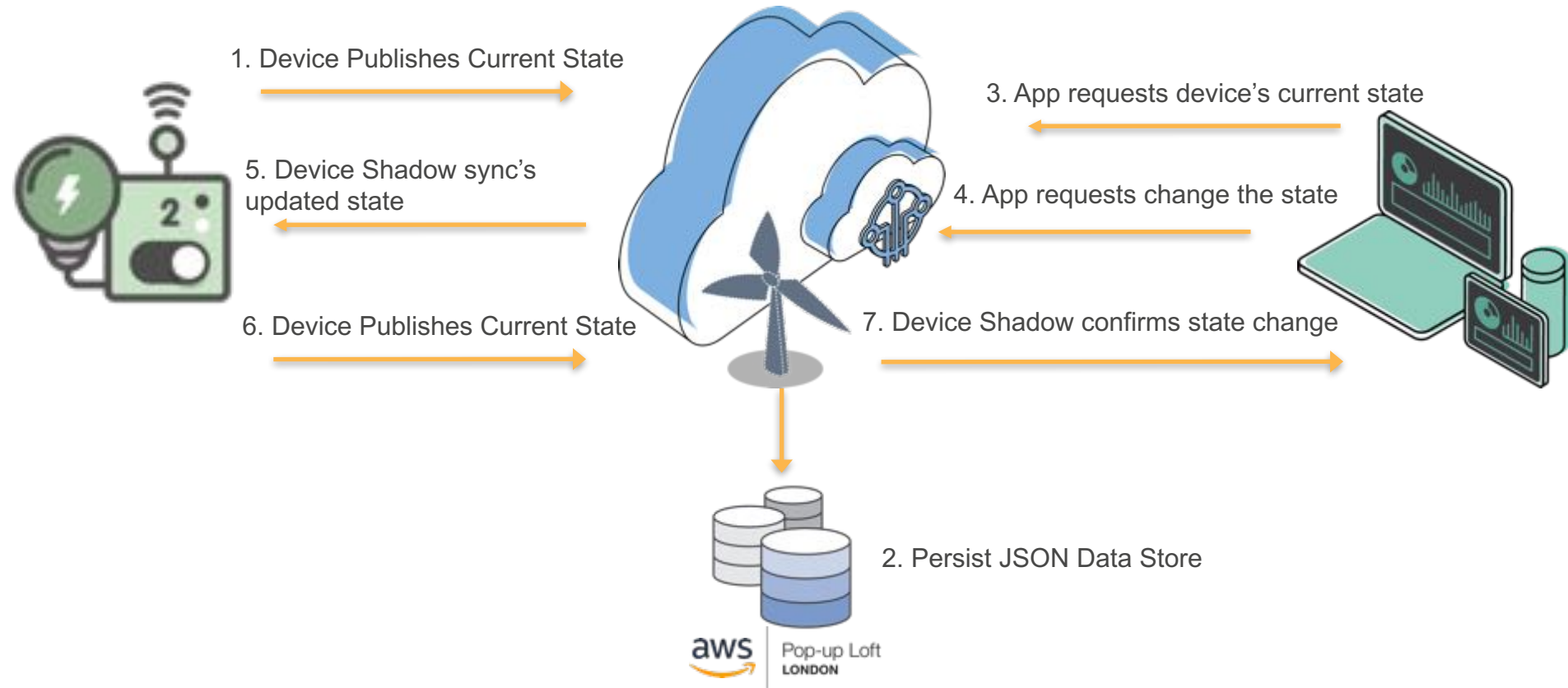
Holds the commands until device is ready

Can be queried anytime

Very fast (~120ms round trip)



AWS IoT Device Shadow Flow



AWS IoT Registry

Device Metadata store

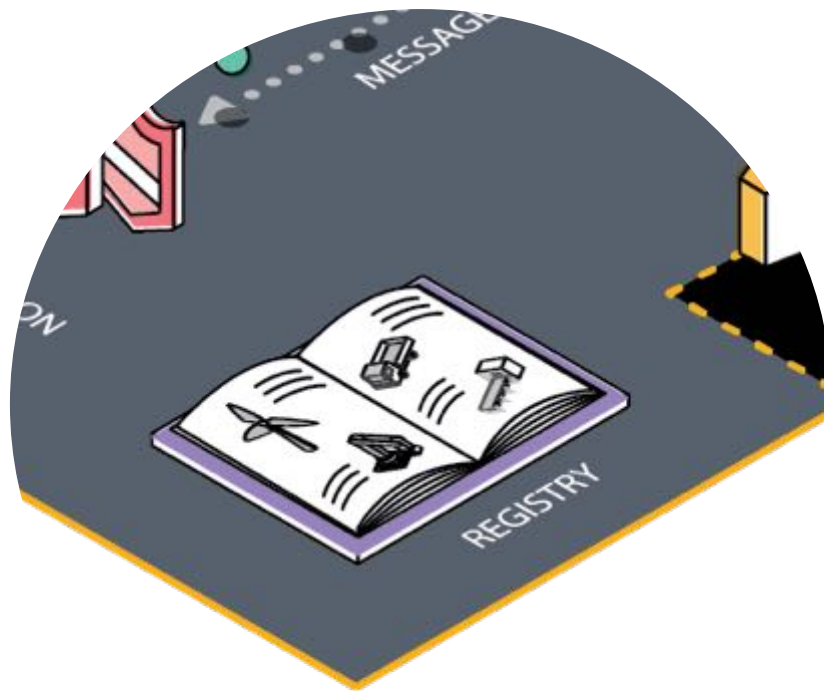
Unlimited registry entries for devices

Mostly used for Metadata

Enforce Schema

Can define Thing Types with set schema

Define up to 50 attributes per Thing



Simple Pay as you go and Predictable Pricing



AWS IoT

- Pay as you go. No minimum fees
- **\$5 per million** messages published to, or delivered in US East (N. Virginia, Ohio), US West (Oregon), Ireland, Germany, UK. \$6/M in Korea, Australia. \$8/M in Asia Pacific (Tokyo, and Singapore)

Free Tier

250,000 Messages Per Month Free for first 12 Months

Enterprise Discounts Available

For large volumes our Enterprise Sales team is engaged



Pop-up Loft
LONDON

Next steps

1. Go to console.aws.amazon.com/iot – Play with it!
2. Stay up to date with AWS IoT aws.amazon.com/iot-platform/
3. Start your first IoT project - aws.amazon.com/iot-platform/getting-started
4. Try some IoT examples - github.com/aws-labs/aws-iot-examples
5. Get an AWS IoT Button



Pop-up Loft
LONDON



Pop-up Loft
LONDON

Thank You



@ziniman

