

**IoT Devices on
Amazon Web Services
Secure Devices,
Connections & Data**

IoT Device SDK

- Easily & quickly connect your hardware device or mobile application.
- Your devices can connect, authenticate and exchange messages with IoT using MQTT or HTTP protocols
- C, Javascript & Arduino compatible
- Includes client libraries, the developer guide etc
- You can also use Open Source or write your own SDK

Device Gateway

- Enables your devices to securely and efficiently communicate within the suite
- Exchange messages using a publication or subscription model to enable one or more communications.
- Supports MQTT and HTTP 1.1 protocols
- The Gateway automatically scales to support billions of devices without provisioning infrastructure.

Authentication and Authorization

- Mutual authentication and encryption at all connection points ensures data is never exchanged between devices and the IoT Suite without proven identity.
- Ensures greater authentication with Sigv4 and X.509 certificate based authentication.
- Connections using HTTP can use either of these methods, while connections using MQTT use certificate based authentication.

- Map roles or policies to each certificate, so that you can authorize devices or applications to have or revoke access without ever touching the device.
- Create, deploy and manage certificates and policies for the devices from the console or using the API.
- The IoT Suite supports connections from mobile apps, which takes the necessary steps to create a unique identifier for your app users.

Registry

- This establishes an identity for devices and tracks meta data such as devices attributes and capabilities.
- Each device has a unique identity which is consistently formatted regardless of the type of device or how it connects.
- You can store your meta data about your devices at no additional charge.
- Meta data in the registry does not expire as long as you can access or update your registry entry at least once in 7 years.

Device Shadows

- Create a persistent, virtual version of each device that includes the device's latest state so that applications or other devices can read messages and interact with the device.
- The Device Shadows persists the last reported state and desired future state, even if the device is offline.
- You can retrieve the last reported state of a device or set a desired future state through the API or using the rules engine.
- Device shadows makes it easier to build applications that interact with your devices by always providing REST API's.

- You can store the state of your device for free, for an year.

Rules Engine

- Build IoT applications' that gather, process, analyze and act on data generated by connected devices at a global scale without having to manage the infrastructure.
- Evaluate In bound messages published in the IoT and transform and deliver them to another device or a cloud service, based on the rules you define.
- You can author rules within the management console or write your own rules using a SQL- like syntax, depending upon the content of the message.
- Java, Node.js or Python compatible to set rules and transform your data.