

## **What is IoT?**

IoT is short for Internet of Things. The Internet of Things (IoT) is a network of internet-connected objects able to collect and exchange data using embedded sensors. This revolutionary technology is driving the future and transforming the way we live & work.

The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. The Internet of Things refers to the ever-growing network of physical objects that feature an IP address for internet connectivity, and the communication that occurs between these objects and other Internet-enabled devices and systems.

The Internet of Things (IoT) is a term coined by Kevin Ashton, a British technology pioneer working on radio-frequency identification (RFID) who conceived a system of ubiquitous sensors connecting the physical world to the Internet.

Although things, Internet, and connectivity are the three core components of IoT, the value is in closing the gap between the physical and digital world in self-reinforcing and self-improving systems.

### Easy way to implement IoT for use cases

AWS has built IoT specific services, such as AWS Greengrass, and AWS IoT Core. They help you collect and send data to the cloud, make it easy to load and analyze that information, and provide the ability to manage your devices, so you can focus on developing applications that fit your needs.

Along with AWS Greengrass and AWS IoT Core, AWS has built IoT Buttons which can be used as the things in the IoT world for our use cases. In the current world people are using Dash buttons to order items from Amazon, which made their daily life simple. I will talk more about IoT Buttons in this article.

The AWS IoT Button is a programmable button based on the Amazon Dash Button hardware. This simple Wi-Fi device is easy to configure and designed for developers to get started with AWS IoT Core, AWS Lambda, Amazon DynamoDB, Amazon SNS, and many other Amazon Web Services without writing device-specific code.

You can code the button's logic in the cloud to configure button clicks to count or track items, call or alert someone, start or stop something, order services, or even provide feedback. For example, you can click the button to unlock or start a car, open your garage door, call a cab, call your spouse or a customer service representative, track the use of common household chores, medications or products, or remotely control your home appliances.

### How to configure AWS IoT Button to order a service?

First, you will need an AWS account. It's free and easy to create an account.

The fastest way to start using your AWS IoT Button is to download the mobile app for iOS or Android. The mobile app will create the required AWS IoT resources for you, and add an event source to your button that invokes a new AWS Lambda function of your choice using a Lambda blueprint. Blueprints are pre-configured Lambda functions, which allow you to quickly connect the click of a button to the functions that fit you best, such as sending automated emails, text messages or deploying other AWS services.

If you can't use the mobile apps, the AWS Lambda Blueprint Wizard is an easy way to start using your AWS IoT Button. Like the mobile app, the wizard will create the required AWS IoT resources for you and add an event source to your button that invokes a new Lambda function. In the wizard, Select "IoT Button" from IoT Type drop-down menu, enter your device serial number (DSN, you'll find the DSN on the back of the device) and follow the

steps to configure your AWS IoT Button to connect to Wi-Fi and AWS IoT. Continue the steps in the wizard and update the sample Lambda function.

After you configure the AWS IoT Button to connect to your Wi-Fi network and provision the button with an AWS IoT certificate and private key, the button will securely connect to AWS IoT Core and publish a message on a topic when clicked. You can use the AWS IoT rules engine to set up a rule and configure single-click, double-click, or long-press events to be routed to any AWS service. You can configure it to send you a notification through Amazon SNS or store the clicks in an Amazon DynamoDB table. You can even code custom logic written in Node.js, Python, or Java in an AWS Lambda function, and then configure the function to connect to third-party services or other AWS IoT-powered connected things. Amazon IoT Buttons can be purchased through Amazon Prime for \$19.95.

AWS is currently working on LTE buttons, which will make the button configuration easy, and the button is not stuck to the wifi range in this case. This will expand the use cases of AWS IoT Button for the customers.