



The Internet of Things with AWS

CONNECTING THE PHYSICAL
WORLD TO THE CLOUD



When you understand the state of every *thing*, you're empowered to improve productivity and boost efficiency across your business.

To help you get to this stage, Amazon Web Services (AWS) has built IoT-specific services, such as [Amazon FreeRTOS](#), [AWS Greengrass](#), [AWS IoT Core](#), and [AWS IoT Analytics](#). These services help you collect and send data to the cloud and analyze it. They also provide the ability to manage your devices, so you can focus on developing applications that fit your needs.



WHAT AWS IOT CAN DO FOR YOU

Deep IoT Edge Services

AWS IoT helps you run applications seamlessly across the AWS Cloud and edge devices. AWS IoT gives you the flexibility to collect data and compute in the cloud or wherever data is generated.

Easily add Machine Learning to your IoT Applications

AWS IoT helps you add machine learning to your IoT applications. First, AWS IoT Analytics filters, transforms, and enriches IoT data before storing it in a time-series data store for querying and analysis. You can then use pre-built machine learning models for common IoT use cases. Using AWS Greengrass Machine Learning Inference, you can take machine learning models that were built and trained in the cloud and then deploy and run them locally on devices.

Pay-as-you-go pricing

With AWS IoT you only pay for what you use and when you use it.

ENEL ENABLES SMARTER ENERGY PRODUCTION WITH AWS IOT

By using AWS, Enel is saving 21 percent on compute costs and 60 percent on storage costs, has reduced provisioning time from four weeks to two days, and has transformed its business. Enel is an Italian multinational manufacturer and distributor of electricity and gas that serves 61 million customers. **Enel uses AWS as its platform for IoT and energy management.**



AWS INTERNET OF THINGS SERVICES

AWS IoT includes 7 fully-managed services. AWS IoT enables you to easily and securely connect and manage millions of devices. You can gather data from, run sophisticated analytics on, and take actions in real time on your diverse fleet of IoT devices from edge to the cloud.



AMAZON FREERTOS

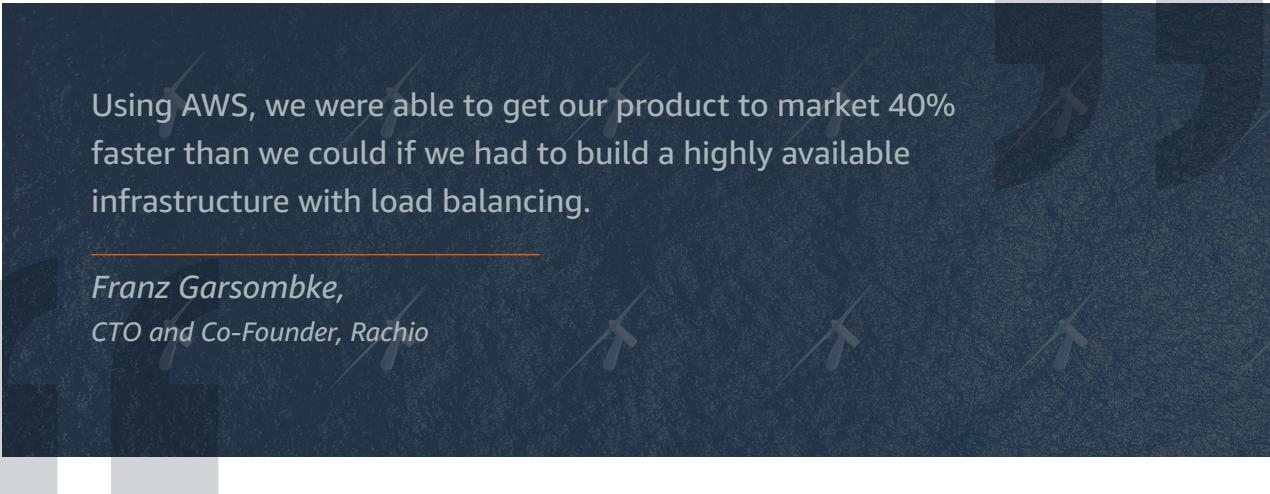
Amazon FreeRTOS securely connects your small, low-power devices to more powerful edge devices or to the cloud. By reducing the complexity, cost, and time to market for connecting microcontroller-based devices to the cloud, you can have an IoT solution in minutes.

AWS GREENGRASS

With AWS Greengrass, connected devices gather data, keep device data in sync, and communicate with other devices securely—even when not connected to the Internet. Devices can respond quickly to local events, while still using the cloud for management, analytics, and durable storage. Using AWS Greengrass Machine Learning Inference, you can take machine learning models that were built and trained in the cloud and then deploy and run them locally on devices.

AWS IOT CORE

AWS IoT Core forms the backbone for IoT deployments to securely connect all your devices and handle their data at scale. AWS IoT Core allows you to securely connect devices to the AWS Cloud and route, process, and act on the data and messages coming from these devices. You can develop applications that can interact with these devices, even when they are offline. AWS IoT Core makes it easy to use AWS services like AWS Lambda, Amazon Kinesis, and Amazon DynamoDB, to build IoT applications that gather, process, analyze, and act on data generated by connected devices, without having to manage any infrastructure.



Using AWS, we were able to get our product to market 40% faster than we could if we had to build a highly available infrastructure with load balancing.

*Franz Garsombke,
CTO and Co-Founder, Rachio*

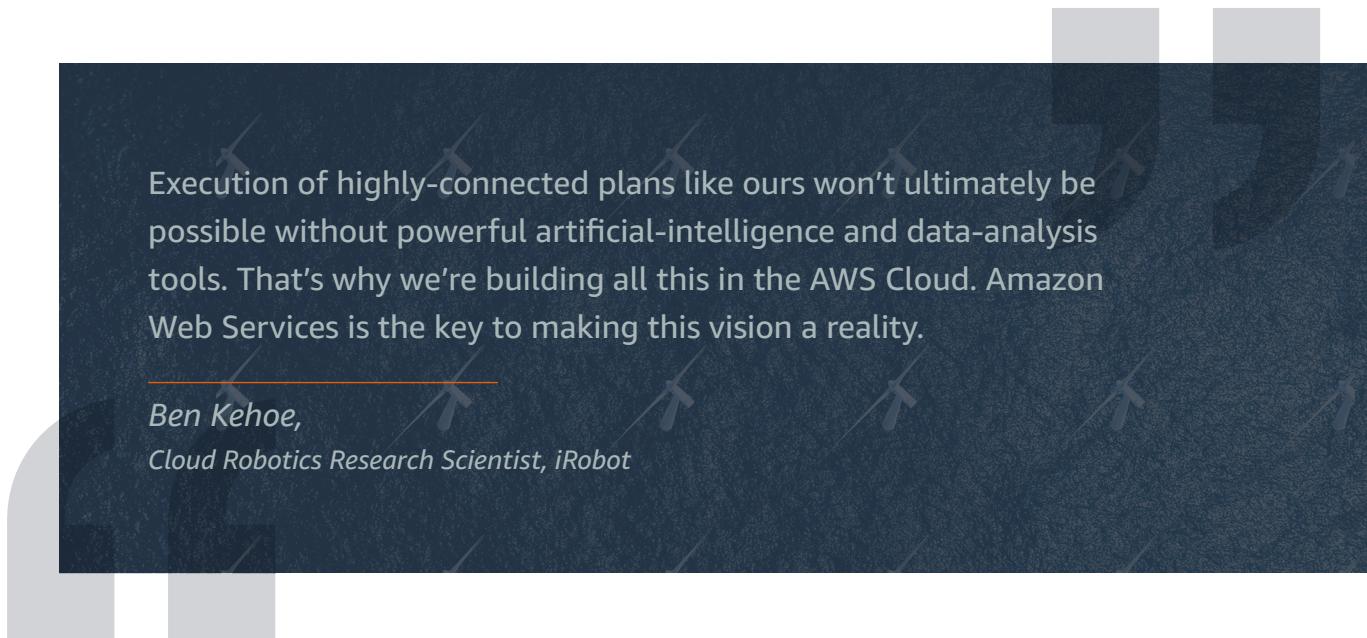
AWS IOT DEVICE MANAGEMENT

AWS IoT Device Management makes it easy to securely onboard, organize, monitor, and remotely manage IoT devices at scale. AWS IoT Device Management allows you to scale your device fleets and reduce the cost and effort of managing large IoT device deployments.



AWS IOT DEVICE DEFENDER

AWS IoT Device Defender continuously audits the security policies associated with your devices to make sure that they aren't deviating from security best practices. AWS IoT Device Defender sends an alert if there are any gaps in your policies that might create a security risk. AWS IoT Device Defender also lets you monitor devices for behavior that deviates from what you have defined as appropriate behavior for each device. Then, if something doesn't look right, AWS IoT Device Defender sends out an alert.



AWS IOT ANALYTICS

AWS IoT Analytics automates each of the difficult steps that are required to analyze data from IoT devices. You can analyze your data by running queries using the built-in SQL query engine, or perform more complex analytics and machine learning inference. AWS IoT Analytics makes it easy to get started with machine learning by including pre-built models for common IoT use cases. With AWS IoT Analytics, you can analyze data from millions of devices and build fast, responsive IoT applications without managing hardware or infrastructure.

AWS IOT 1-CLICK

AWS IoT 1-Click is a service that makes it easy for simple devices to trigger AWS Lambda functions that execute a specific action. Some examples of possible actions include calling technical support, reordering goods and services, or locking and unlocking doors and windows.

CONNECT AND CONTROL YOUR DIGITAL AND PHYSICAL WORLDS

AWS IoT offers a set of managed services and software for organizations to easily create IoT solutions that increase operational efficiency and create net-new revenue streams. With AWS IoT, you can securely connect and manage billions of devices and gather device data. You can also perform sophisticated analytics such as machine learning. AWS IoT gives you the flexibility to collect data and compute in the cloud or wherever data is generated in order deploy smarter, faster responding, and more cost-effective IoT applications. Our mission with AWS IoT is to make sure you can know the state of every *thing* and can reason on top of that data to solve business problems.

Connect your physical and digital worlds securely with AWS IoT.

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Get started on AWS.

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