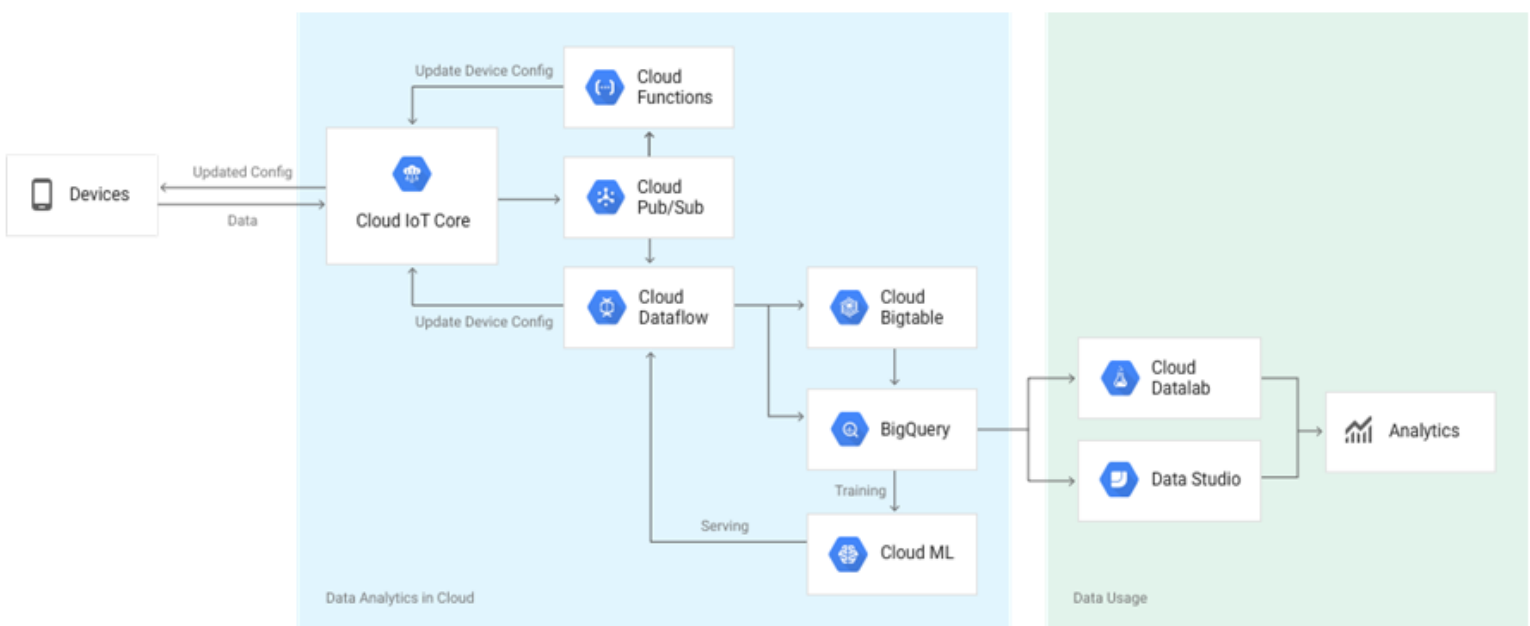


Secure device connection and management

Cloud IoT Core is a fully managed service that allows you to easily and securely connect, manage, and ingest data from millions of globally dispersed devices. Cloud IoT Core, in combination with other services on Google Cloud IoT platform, provides a complete solution for collecting, processing, analyzing, and visualizing IoT data in real time to support improved operational efficiency.



Make informed decisions at Global Scale

Cloud IoT Core, using Cloud Pub/Sub underneath, can aggregate dispersed device data into a single global system that integrates seamlessly with Google Cloud data analytics services. Use your IoT data stream for advanced analytics, visualizations, machine learning and more to help you improve operational efficiency, anticipate problems, and build rich models that better describe and optimize your business.

Securely connect your existing device network

Securely connect a few or millions of your globally dispersed devices through protocol endpoints that use automatic load balancing and horizontal scaling to ensure smooth data ingestion under any condition. Cloud IoT Core supports the standard MQTT and HTTP protocols, so you can use your existing devices with minimal firmware changes. Google Cloud IoT Core runs on Google's serverless infrastructure, which scales automatically in response to real-time changes and adheres to stringent industry-standard security protocols that protect your business data.

Establish two-way communication with your devices

Bring device data into your everyday business through a secure, intelligent, and responsive IoT data pipeline created by Google Cloud IoT Core. Rely on the intelligence of Android Things to push out automatic firmware updates, or easily push your own device updates with Cloud IoT Core.

Get straight to work

Centrally manage your entire IoT data network from a single pane of glass. Cloud IoT Core works out of the box with Android Things devices and other devices from leading hardware manufacturers. You can easily reduce capital expenditures on your IoT projects and maintenance costs with a pay-as-you-go service.

CLOUD IOT CORE FEATURES

Cloud IoT Core has two main components: a device manager and a protocol bridge.

Device Manager

The device manager allows individual devices to be configured and managed securely in a coarse-grained way; management can be done through a console or programmatically. The device manager establishes the identity of a device, and provides the mechanism for authenticating a device when connecting. It also maintains a logical configuration of each device and can be used to remotely control the device from the cloud.

Protocol Bridge

The protocol bridge provides connection endpoints for protocols with automatic load balancing for all device connections. The protocol bridge has native support for secure connection over industry standard protocols such as MQTT and HTTP. The protocol bridge publishes all device telemetry to Cloud Pub/Sub, which can then be consumed by downstream analytic systems.

Single global system

Connect all devices and gateways to Google Cloud over standard protocols, such as MQTT and HTTP, through the protocol endpoints and manage all your devices as a single global system. The service uses Cloud Pub/Sub underneath, which retains data for 7 days.

Out-of-box data insights

Use downstream analytic systems by integrating with Google Big Data Analytics and ML services such as Dataflow, BigQuery, Bigtable, ML, Data Studio, or partner BI tools.

Fully managed and scalable

The service is serverless and doesn't require any upfront software installation. It scales instantly without limits using horizontal scaling of Google Cloud Platform.

Role-level access control

Apply IAM roles to device registries to control user access to devices and data

Device deployment at scale

Use REST APIs to automatically manage the registration, deployment, and operation of devices at scale. Also, use the APIs to retrieve and update device properties and state even when the devices are not connected.