IoT in the Google Cloud

Advanced 7 Steps 7 hours 46 Credits

In this quest, you will learn about Google Cloud's IoT Core service and its integration with other services like GCS, Dataprep, Stackdriver and Firestore. The labs in this quest use simulator code to mimic IOT devices and the learning here should empower you to implement the same streaming pipeline with real world IoT devices.

Infrastructure Data Business Transformation

Prerequisites:

This Quest builds on an understanding of the functions of basic Google Cloud Platform Services. It is recommended that the student have earned a Badge by completing the hands-on labs in the Baseline: Infrastructure Quest and/or the GCP Essentials Quest before beginning.

Quest Outline

Internet of Things: Qwik Start

This lab shows you how to use Google Cloud Platform Console to create a Cloud IoT Core device registry and register a device. It also shows you how to run a sample to connect a device and publish device telemetry events.

40 minutes | Introductory | 1 Credit

Streaming IoT Data to Cloud Storage

In this lab configure Cloud IoT Core and Cloud Pub/Sub to create a Pub/Sub topic and registry on GCP, then use this topic to ingest data streaming from a simulated IoT device.

45 minutes | Fundamental | 5 Credits

Streaming IoT Core Data to Dataprep

Configure Cloud IoT Core and Cloud Pub/Sub to create a Pub/Sub topic and registry on GCP. Using a simulated device, stream data to Google Cloud Storage, then design a Dataprep flow to analyze data.

1 hour 15 minutes | Fundamental | 5 Credits

Building an IoT Analytics Pipeline on Google Cloud

This lab shows you how to connect and manage devices using Cloud IoT Core; ingest the stream of information using Cloud Pub/Sub; process the IoT data using Cloud Dataflow; use BigQuery to analyze the IoT data. Watch this short video, Easily Build an IoT Analytics Pipeline.

50 minutes | Advanced | 7 Credits

A Tour of Cloud IoT Core

In this lab you build a simple IoT system. Simulated devices publish data to their telemetry feeds, the server then decides the devices' state using IoT Core.

45 minutes | Advanced | 7 Credits

APIs Explorer: PubSub and IoT

In this lab you will provision Cloud IoT and Pub/Sub services using the APIs explorer. These will be used to create a temperature telemetry steam.

1 hour | Advanced | 7 Credits

Using Cloud Logging with IoT Core Devices

In this hands-on lab you configure CloudFunctions to send IoT Core device application logs to Stackdriver Logging.

1 hour | Advanced | 7 Credits

Using Firestore with Cloud IoT Core for Device Configuration

Learn how to configure Cloud Functions for Firebase to relay document changes in Cloud Firestore as configuration updates for Cloud IoT Core Devices.

1 hour | Advanced | 7 Credits

Quest Complete!

Congrats! You completed this quest and earned a badge. Become a cloud expert and start another.