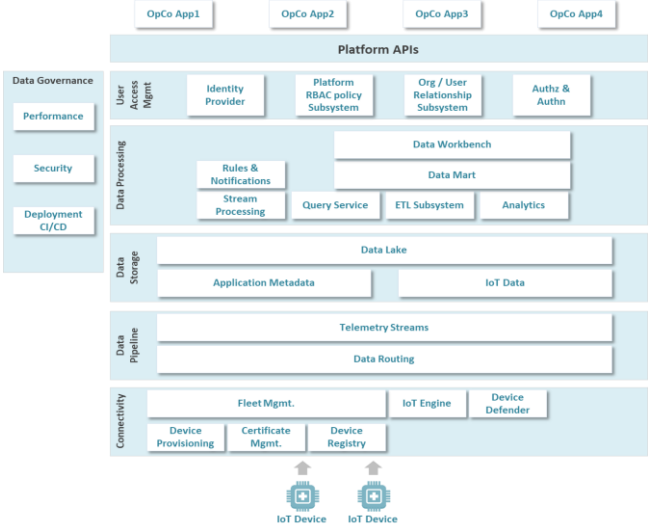
Case Study: Product Identification IoT Platform

Client Requirements

This client is a science and technology innovator, helping customers solve complex challenges and improve quality of life.

They required a central IoT platform that serves the varied needs of their operating companies, providing them all the functionality needed to ingest, process and analyze IoT data from disparate devices.

The platform needed to support remote device monitoring and maintenance with notifications and rules engine features.



Solution Schematic

CitiusTech Services:

- CitiusTech designed and developed a centralized, multi-tenant IoT solution that serves as a common device management platform across all client OpCos
- Built key IoT platform modules, including device identification, device provisioning, remote device monitoring, notifications and rules engine, remote device updates, user management
- Designed and implemented API for user management in AWS Cognito
- Created custom RBAC (Role Based Access Control) policies for authorizing API requests for user groups
- Deployed secured Kafka Cluster using SSL for authentication
- Simulated producer application to run on a Raspberry Pi device, ingesting data directly in Kafka Cluster with client certificate for authentication

Value Delivered:

- Provided an **end-to-end homogenous and scalable solution for remote management of devices**
- **Transformed medical device management processes** by remotely monitoring 2500+ devices in real-time.
- Leveraged CitiusTech's expertise to ensure **cost savings by ingesting data directly to Kafka** instead of using IoT core data ingestion with MQTT messages