cogent infotech

Case Study

Creating an Open Architecture Allows IOT Platform to Work with Disparate Technologies

The **Customer**

Verizon Communications Inc. is an American multinational telecommunications conglomerate and a corporate component of the Dow Jones Industrial Average. Verizon is a Fortune 500 company with a full year revenue of USD $128.3 billion in 2020.

In August 2020, Verizon launched ThingSpace IoT Marketplace, an easy-to-use digital portal that helps customers - from small and medium-sized businesses to large enterprises - quickly purchase, activate and manage customized IoT solutions.

The **Challenge**

- Create an open architecture for ThingSpace platform that allows companies with disparate system to easily integrate and interact with the platform
- Provide real time intelligence to aid appropriate decision making
- Feed into the deep-learning and artificial intelligence models
- Work seamlessly with all the major cloud providers
- Easy integration with high performant infrastructure

About
Cogent Infotech

Founded in 2003, Cogent Infotech is a trusted, award-winning firm with **21+ years** of experience**, 150+** government contracts, **10,000+** projects, and a 96% employee retention rate. Recognized as an SBA Small Business and MBE-certified, we deliver excellence through diverse talent, AI-driven recruitment, and cooperative contracts like NASPO Value Point and TIPS-USA.

Contact Us
+ 972-200-0109

www.cogentinfo.com

Pittsburgh, PA, USA
1035 Boyce Rd,
Pittsburgh, PA 15241

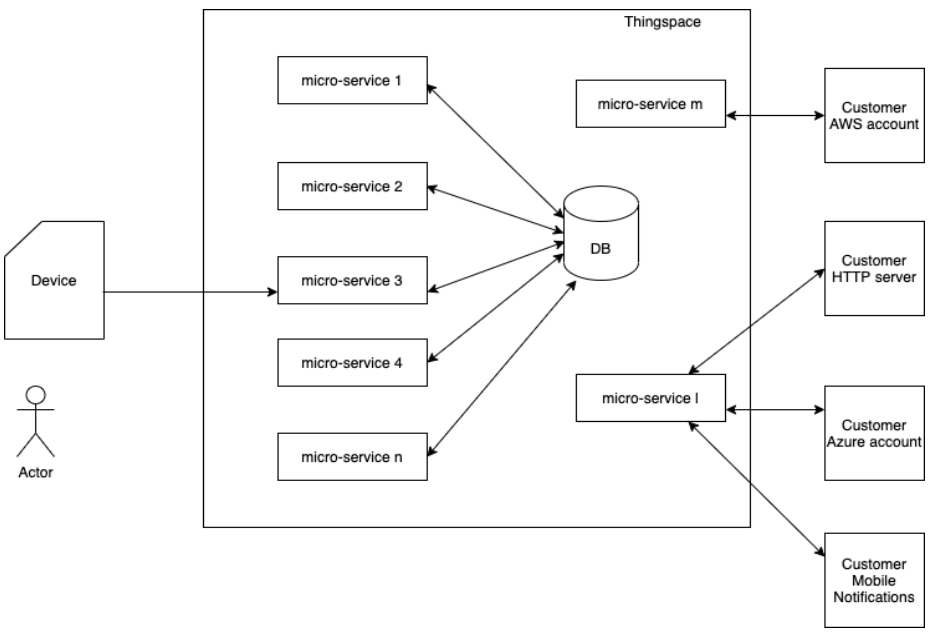
The **Process & Solution**

- Smart devices connect to platform via user defined protocol. A micro-service platform manages the connections between devices and the platform.
- ThingSpace (TS) platform is bunch of micro-services that communicate among one-another and derive business logic, which make sense in use-cases
- A dedicated set of micro-services are responsible to stream the sensor information from device to customer configured cloud accounts
- A dedicated set of micro-services are responsible to notify customer though variety of notifications (email, SMS etc.)
- Some micro-services offer analytics and metric information, which are derived from sensor information of devices

Tech **Stack**

- Programming Languages: Golang, Java
- Data stores: Cassandra, Elastic Search
- Platform: Docker, Kubernetes
- Product Infrastructure: Kafka, Zookeeper

Architecture



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Business **Benefits**

- Platform coupled with analytics infrastructure will offer real time intelligence and also help to feed deep-learning and Artificial Intelligence models, which in turn provides a way for customers to detect the outliers of their product
- Platform's ability to stream data to popular clouds AWS, GCP, Azure, provides more powerful use-cases and enhances the collaboration of major companies towards a common goal of IoT
- Almost every top company, has tapped the potential of IoT and are investing more and more into this technology. The primary reason for off take of IOT is the value of data obtained from these sensor devices, which are very useful for making business decisions

Technical **Benefits**

- A platform agnostic of any IoT use-case ranging from different industries, meaning any IoT use-case can be built on top of Thingspace platform, as it provides the raw infrastructure for smart devices to connect and report data
- The agnostic nature of the platform with respect to use-case, has potentially opened up opportunities to integrate literally any IoT use-case.
- Platform when coupled with high performant infrastructure can offer time-sensitive intelligence to take appropriate decisions, and also help take corrective actions where and when necessary
- Platform can also offer data-sink for the data received from welter of sensors installed Globally
- Advancements in 5G network is going to revolutionize IoT industry, and when coupled with Edge computing, there are no bounds for the efficiency these platforms can offer

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