Apache Cassandra® provides scale and reliability for Blackberry's IoT platform

Overview

Blackberry is a leading global enterprise providing software for industrial applications and mobile device management solutions. Blackberry has deployed open source Apache Cassandra® as the NoSQL database solution for the core of Blackberry Internet of Things (IoT) platform. The Blackberry IoT platform underpins several specific industry applications, including the Blackberry Radar IoT solution designed to provide continuous visibility into the assets of an organization's transportation fleet. Tracking devices provide near real-time information to the central event processing and analytics components of the system to provide analytics and current information on trailer, chassis, and container management of a transportation fleet.

At the heart of the tracking infrastructure is Blackberry's QNX; providing the secure embedded systems software and management service, powering embedded networked devices in cars, medical, and industrial applications along with an extensive amount of other mission critical applications.

Use Case:
Internet of Things

Sector:
Industrial Applications

Technology:
Open Source Apache Cassandra® on AWS

Website:
https://blackberry.com/

> *Instaclustr has played an important behind-the-scenes role in the deployment and operations of the Blackberry IoT platform. We have relied on Instaclustr's expertise in managing the operational aspects of our Apache Cassandra® NoSQL database environment. Their focus on maintaining a stable data layer for us has enabled our team to concentrate on delivering a great IoT platform and solution for our customers.*

Conrad Seaman
Senior Business Operations Manager, Blackberry

Challenge

The challenge for BlackBerry was to develop a core IoT platform that had the foundations to provide reliable and efficient systems interconnectivity—a foundation platform from which the company could build a range of industry specific applications and solutions.

From the start the Blackberry engineering team set out to build a cutting edge IoT platform that maintained three core design principles:

- **Security:** With an already rock solid reputation for security, BlackBerry needed to uphold these expectations for their customers. Security concerns have come up within the IoT market surrounding the potential target of devices previously isolated from the internet. BlackBerry needed a high performance data platform that provided high security functions worthy of their preceding security credibility.

- **Scalability:** The IoT environment involves an increasing number of multiple devices, far more intuitively interconnected than previous mobile and PC waves. BlackBerry needed a platform that supported massive amounts of data that has the capability to scale rapidly and index instantaneously, along with redundant long term storage at every layer of the data architecture.

- **Efficiency:** Effective communication is the cornerstone of IoT applications. BlackBerry required an active high availability publish-subscribe communication channel, allowing for efficient data messaging between devices and applications enabling advanced use cases.

Solution

Apache Cassandra managed and supported by Instaclustr delivered the scale, performance, and security required by Blackberry to deliver the core requirements and capabilities of the Blackberry IoT platform.

Handling the platform's data intake and application scaling requirements has proven to be instrumental to BlackBerry, innovating and strengthening their product to deliver a far more effective IoT platform for their customers.

The Instaclustr managed solution for Apache Cassandra has provided the stable operational environment required for the BlackBerry engineering team to be able to focus primarily on developing additional capabilities and features to integrate effectively into the IoT Platform.

BlackBerry has relied on the expertise and continued support of the Instaclustr support team to ensure that the database and associated technologies operate effectively and as efficiently as possible.

About Instaclustr

Instaclustr helps organizations deliver applications at scale through its managed platform for open source technologies such as **Apache Cassandra®**, **Apache Kafka®**, **Apache Spark™**, **Redis™**, **OpenSearch®**, **PostgreSQL®**, and **Cadence®**.

Instaclustr combines a complete data infrastructure environment with hands-on technology expertise to ensure ongoing performance and optimization. By removing the infrastructure complexity, we enable companies to focus internal development and operational resources on building cutting edge customer-facing applications at lower cost. Instaclustr customers include some of the largest and most innovative Fortune 500 companies.