Open Mesh
CLOUDTRAX

Case Study

instaclustr

Apache Cassandra® the perfect solution to enable CloudTrax to scale operations

Overview

CloudTrax is a free cloud-based network controller from Open Mesh that enables customers to build, manage, and monitor enterprise-grade wireless networks from anywhere in the world.

Open Mesh creates low-cost, cloud managed wireless mesh networks that enable the deployment of enterprise-grade Wi-Fi throughout a hotel, apartment, office, retail store, campus, or any organized environment. It designs, builds, and sells the hardware required, including a line of access points and modular enclosures. All access points are managed with Open Mesh's free cloud-based network controller, CloudTrax.

CloudTrax works with Open Mesh access points to establish wireless networks and enable the detailed management of these networked environments. This includes setting the bandwidth for individual users, designing corporate splash and connection pages, tracking and monitoring the usage of all clients, applications, and network connectivity.

Use Case:
Internet of Things

Sector:
Technology, Infrastructure

Website:
https://cloudtrax.com/
https://openmesh.com/

> *We chose Instaclustr because of their expertise in database management, allowing our engineering team to concentrate on our core business and building the CloudTrax platform.*

Andreas Langer
Lead Engineer,
Open Mesh

Challenge

Open Mesh had a large existing customer base with over 180,000 deployed devices in 80,000 cloud-managed networks serving millions of daily clients worldwide. With a new generation of firmware, the Open-Mesh engineering team was tasked with tracking 3-5 times more clients and all application-level data per client. Developing and releasing a new management platform would need to immediately be capable of scaling rapidly to serve the existing user base and grow significantly as additional networks were added over time.

The managed environment needed to be capable of storing a vast amount of data for each network, on a range of different metrics that the controller collects, analyzes, and reports on. This ability to scale couldn't be compromised by downtime; adding more capacity had to be done in a continuous manner. In addition, as the CloudTrax solution would eventually be managing hundreds of thousands of networks globally, any database solution needed to be capable of delivering continuous availability without downtime.

Solution

After extensive research, the Open Mesh team knew that Apache Cassandra® was ideal for their intended capability. The solution had the scalability and data storage requirements to meet the needs for the CloudTrax platform. The solution and platform is a perfect example of Apache Cassandra® enabling the Internet-of-Things—consuming a vast amount of time-series data that comes directly from users and devices in a variety of geographic locations.

The Open Mesh engineering team used Instaclustr to provision an initial development environment for the CloudTrax platform in minutes. The team used this environment to establish and build the platform, and this has now been launched into production, with the entire development lifecycle on Instaclustr.

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.