SiteMinder

Case Study

instaclustr
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Building a foundation for global scalability through AWS and Instaclustr

Overview

SiteMinder is the global hotel industry's leading cloud platform, empowering hotels everywhere to tap into the world of potential guests online. From small, independent bed and breakfasts to the most renowned hotel brands and chains, SiteMinder's award-winning solutions are today used by nearly 30,000 hotels in 160 countries to fill their rooms, generate more revenue, and get back to creating memorable guest experiences.

Use Case:
Information Technology

Technology:
Open Source
Apache Cassandra®

Service:
Instaclustr Managed Platform

Website:
https://siteminder.com/

> Working with Instaclustr was key to our successful migration from legacy relational database platform to Apache Cassandra® in AWS. They have the operational experience and expertise we need to manage our Apache Cassandra database for the production clusters that underpin our core platform.

Mike Rogers
CTO,
SiteMinder

Highlights

- Running into upper limits of what could be handled through a relational database structure. Required a distributed database platform for key-value store with high availability and high scalability.
- Identifies Apache Cassandra as the best fit technology, but was hesitant to adopt it due to the operational and development complexity it would put on their team.
- Engaged with Instaclustr Senior Cassandra Consultants to assist with data model design and migration planning, and then deployed to Managed Service for 24x7 DBA operations support to meet always-on availability requirements.

Challenge

SiteMinder provides connections to a vast partner network that includes online travel agencies, hotel booking engines, property management systems, central reservation systems, revenue management systems, and more. Over the year ending June 2017, SiteMinder's platform generated a staggering 57.3 million hotel reservations worth US$18.6 billion in total revenue, representing 109 online room bookings every minute.

With such explosive topline growth also came fast growing data volumes at the infrastructure level. SiteMinder were leveraging PostgreSQL® running on AWS EC2, and were handling the database scaling requirements through manual sharding, which caused significant management overhead and operational complexity, ultimately taking away from their main focus: creating an innovative platform that empowers hotels to attract, reach, and convert guests across the globe. With this architecture model, SiteMinder were beginning to experience contention issues when dealing with massive data volumes on hot tables with billions of rows, including hotel inventory tables.

The company's continued growth meant looking for a different database technology that would be able to handle the accompanied "write heavy" data growth and key value storage requirements at scale. To transition from a place where technology infrastructure was a bottle neck to becoming a growth enabler, Siteminder needed to deploy a data technology platform that would deliver high scalability, always-on global availability, low latency, and minimal operational overhead.

Solution

SiteMinder was in the process of adopting a microservices-based architecture for application development, and this, along with the challenges the team was experiencing, meant that a distributed database solution was the natural choice to replace their existing relational database framework. After an extensive evaluation, open source Apache Cassandra was selected to the power the company's microservices architecture. Apache Cassandra offered predictable horizontal scalability, along with blazing-fast write performance and multi-data center support.

In order to get everything set up correctly from the start, SiteMinder employed Instaclustr in a consulting capacity to help define a suitable architecture, and deployment infrastructure and configuration. Instaclustr consultants provided onsite expertise and worked through the data modelling requirements with the SiteMinder team. They also provided insights on data migration considerations and general hands-on assistance in the shift from a relational database to a distributed database infrastructure.

Due to the success of the consulting engagement, when it came to deployment, SiteMinder selected Instaclustr's trusted management environment on AWS for both technical and operational reasons, and to eliminate the need to hire additional staff to run Apache Cassandra in production.

Results

SiteMinder has benefited from Instaclustr's extensive operational experience deploying and managing open source Apache Cassandra and related technologies. In spite of the tight SLA needed, the move to Apache Cassandra was relatively painless, and the company has benefited from the performance and scalability gains that the technology promised. The team has also enjoyed 24x7 customer support, along with continuous maintenance, health checks, and proactive monitoring and alerts.

While SiteMinder is currently deployed in a single data center, they know with Apache Cassandra's multi-data center support they can scale out if they need to. Additionally, with the team running Apache Kafka® for messaging, they can leverage the Instaclustr-managed open source service when the time is right, so they can continue doing what they do best—helping their customers reach, attract, and converts guests year round.

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.