

### Snapshot

Deployment:  
3 clusters totaling  
80+ nodes

Sector:  
AdTech

Technology:  
Apache Cassandra  
on AWS



***AdStage provides an all-in-one online advertising platform to manage Google, Bing, Facebook, LinkedIn and Twitter ad campaigns together.***

## Overview

AdStage is a technology company building advanced tools to help businesses and agencies of all sizes advertise more effectively. The AdStage Platform brings together usability, smart design, and intelligent technology to help advertisers make sense of their ad data and optimize their campaigns.

By taking a cross-network approach and integrating the major search and social advertising networks, AdStage enables customers to spend more time on their businesses rather than reporting and analyzing all of their spend and performance on individual delivery networks.

 ***Instaclustr has been instrumental in helping us manage, scale, and optimize our Cassandra deployment, allowing us to focus on delivering a great product to our customers.*** 

***Jason Wu,  
CTO & Co-Founder, AdStage***

## Challenge

AdStage analyzes a vast amount of data from five major advertising networks, and its automation tools are constantly monitoring performance trends and optimizing campaigns on behalf of advertisers. For AdStage, having downtime is not an option, and to add to this constraint, any significant latency means that the platform cannot deliver the ideal solution to customers, effectively meaning that the product is down.

AdStage also needed a solution that allows the platform to scale rapidly. Integrating a new customer to the platform can mean literally adding terabytes of data within a short time span. The company is currently experiencing massive data growth due to rapid growth in customers and the resulting added data needs.

## Solution

Ultimately Apache Cassandra delivered the operational speed that AdStage needed to ensure that the platform has low latency and the required throughput. Cassandra's high availability architecture ensured that they didn't have any single point of failure in the environment. In addition, Cassandra's ability to simply scale by adding more nodes means that they had covered all of their requirements.

Having a managed service looking after the application's Cassandra clusters allowed the AdStage engineering team to concentrate on their customers and to get the most value out of customer data sets.

## Migrating to Open Source Apache Cassandra

During the early stages of AdStage development the company participated in the DataStax Startup Program, and their large production cluster was deployed on DataStax Enterprise. While AdStage met the conditions of being a startup there was no licensing fees associated with their production deployment.

As the company went through a considerable growth phase AdStage was nearing the point where the company would no longer qualify for the DataStax Startup Program and as such were facing the prospect of having to pay considerable licensing fees as the production deployment was now over 80 nodes.

The proposed increase in operational costs for AdStage was prohibitive and unsustainable. A decision was made to transition to the open source version of Apache Cassandra, which includes all the functionality required by AdStage.

The Instacluster technical operations team worked with the AdStage engineering team to transition every node in both production and staging environments to the open source version of Apache Cassandra, and with the Instacluster managed solution this was all achieved with zero downtime.

AdStage have been able to continually rely on the expertise and continued support of the Instacluster Tech Ops team when dealing with large data ingestion and the application's scaling requirements.

## About Instacluster

Instacluster is a company with extensive experience in designing, deploying and managing critical infrastructure for open source solutions that require immense scale.

We deliver mission critical, high performance and always on data solutions for our customers. We provide managed and hosted services for open source data management solutions such as Apache Cassandra and Apache Spark. We also deliver a wide range of related consulting and support services for these technologies.

Instacluster's consulting expertise leverages the experience we have gained from almost 10 million node-hours of managing Apache Cassandra and related technologies. Our staff includes experienced consultants with deep expertise in the technologies we support as well as extensive consulting experience.