BREAKING DOWN DATA SILOS FOR A 360° CUSTOMER VIEW

how a national standardized testing company improved their customer experience through real-time analytics

zirous®

zirous®

OVERVIEW

A national standardized testing company needed to integrate their siloed data sources to provide a complete view of their customers across all interactions, and to allow for more complex analytics. Zirous orchestrated an architecture to combine these sources in near real time, and this new open source cloud solution will eventually save the testing company millions on licensing fees to the previously outsourced platforms.

THE CHALLENGE

A national standardized testing company was selling multiple different testing and preparatory materials, many of which were being sold via third-party platforms. To gain a better understanding of their customers' journey, they knew they needed to aggregate the purchases of a single customer across all of the available channels. They also struggled to perform analytics on this outsourced data, and were unable to prove the effectiveness of their prep material.

With the desire to transition to a digital test, instead of the current paper and pencil format, a modern architecture would be a necessary foundation to make it possible. The testing company has a vision to track user activity for research as well as to identify and remediate cheating in near real time.

This company also had a big opportunity to increase revenue by expanding into international markets, but were legally constrained to storing data only in the region of the testing location. Their existing architecture was rigid, expensive to maintain, and didn't provide the possibility to recreate it quickly in new locations. They were losing out on potential revenue and needed a way to capitalize on this opportunity with a flexible and scalable architecture.

THE SOLUTION

The testing company partnered with Zirous to establish a strategic vision and determine how to develop a custom solution that would enable advanced analytics. Due to their need to spin up and spin down environments in international markets, the solution was executed in the cloud and is deployed from the ground up in a matter of minutes with a single command. A variety of open-source technologies were utilized to ingest, transform, and stream the data, and then store it in a variety of ways to allow for data discovery, self-service analytics, and machine learning. This solution also set up integration to bring these insights directly into their customer care platforms.

The teams collaborated to:

• Define and understand business goals and objectives,
• Identify all data sources and formats,
• Empower the company's in-house resources, and
• Implement a sustainable data analytics solution.

QUICK FACTS

Company
• National standardized testing company
• Nearly 2 million students tested in the class of 2018

Technologies Involved
• Kubernetes
• Hortonworks HDF
   • NiFi
   • Kafka
• Hortonworks HDP
   • Hive
   • Spark
   • Zeppelin
• Amazon S3
• R & Python

HIGHLIGHTS

• A national standardized testing company had large volumes of siloed data, being managed by multiple third-party vendors.

• Zirous orchestrated the ingestion, transforming, and streaming of data in near real-time and stored it into a sustainable, flexible, cloud-based architecture.

• Operations became much more scalable, opening up new sources of revenue, and will ultimately save millions of dollars in licensing fees.

zirous®
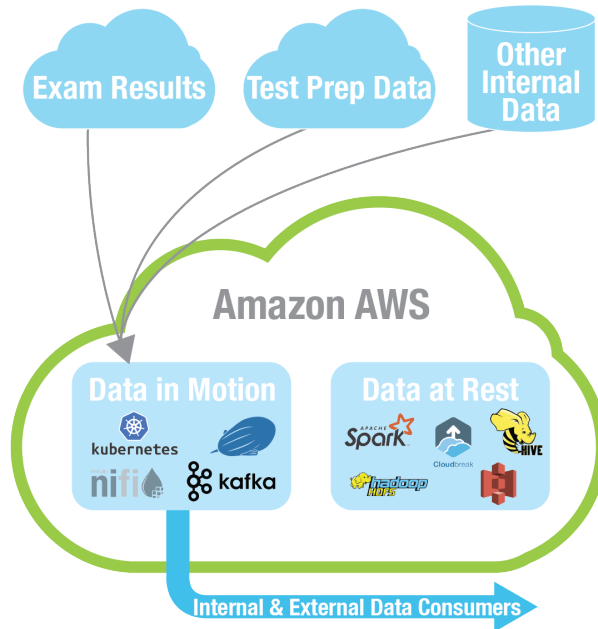
THE IMPACT

Through the consolidation of data across multiple third-party platforms and systems, the national standardized testing company has been able to aggregate data on an individual student across multiple interactions (pre-tests, preparatory classes, multiple exams, etc.). Not only have they stored this data in one centralized location, but they've surfaced this information and insights to their customer care teams to aid in providing an enhanced customer experience; with its real-time capabilities, remediations to website issues were easier to navigate and quicker to solve, and the customer care representatives knew what additional products to suggest and discuss with the students.

The scalability of the big data platform allows the company to spin up secure environments in international markets for test administration, and resulting data storage in accordance with all laws and regulations.

Ultimately, this sustainable, open source, in-house data analytics solution can replace the organization's traditional architecture, which will save millions of dollars in licensing fees.