DataHouse

Large K-12 educational system transforms student data analytics with AWS and creates a pathway for modernization

EXECUTIVE SUMMARY

One of America's largest K-12 school districts called upon DataHouse to help solve their complex, ongoing challenge of quickly identifying at-risk students, planning interventions, and tracking intervention program effectiveness. Since the organization's increasing database requirements made scaling on-premise hardware infeasible, DataHouse proposed Amazon Elastic Compute Cloud (Amazon EC2) to create a hybrid cloud/on-premise environment to extend the useful life of the organization's legacy system, reduce setup and long-term costs, and pave the way for future application development and integration. By leveraging Amazon EC2 and built-in Amazon Web Services (AWS) features, the organization took an essential, incremental step toward their vision and set the foundation for continuous modernization and innovation.

THE CHALLENGE

With more than 180,000 students, this large K-12 school district needed an effective way to collect, track, and analyze data across many dimensions to quickly identify at-risk students and begin providing intervention services. The organization also needed to track and monitor data to measure their service and program effectiveness. With over 500 GB of data in an ever-growing on-premise database, sizing was a challenge and required immense hardware and maintenance costs. The organization needed to expand capacity to ensure reliable performance and availability, while optimizing costs and resources. Any system failure would impact the organization's ability to provide student services in timely and preventative manner.

THE SOLUTION

DataHouse launched a new system using Amazon EC2 to create a hybrid cloud/on-premise environment that accounts for increasing capacity and future integration needs. DataHouse also implemented a Single Sign-on (SSO) feature for users to seamlessly switch between the on-premise and AWS environments. To incrementally modernize the system, DataHouse built a custom application that integrates with both environments to increase data transparency, analytics capabilities, and user adoption. The organization plans on developing more applications to continuously modernize the system and make strategic strides toward their overall vision.

Each new wave of technology forces all educational organizations to continuously modernize and adapt to achieve compliance, maximize returns, remain relevant, and meet the demands of their communities.

THE RESULTS AND BENEFITS

The new hybrid cloud/on-premise environment on Amazon EC2 extends the legacy system's useful life with enhanced usability and data transparency. It also provides insight for educators to target, track, and measure interventions and adopt new technology in a nondisruptive way. Plus, as DataHouse develops and integrates additional custom applications, the organization will be able to effectively identify and track support service activity for compliance and funding reimbursement purposes.

Additional benefits include:

- ✓ Initial setup and long-term cost reduction
- ✓ Data concurrency with multiple applications
- ✓ Low maintenance and shared security features, including FERPA compliance
- ✓ Smoother transition and user training with no disruption
- ✓ Unlimited room for growth and new capabilities

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NEXT STEPS

DataHouse intends to continue building and integrating new applications and modernizing the organization's legacy systems to further support their student body and internal operations. Each incremental improvement makes a significant impact on the overall delivery of student services so that more students have more opportunities to learn and thrive.

ABOUT DATAHOUSE

DataHouse is the longest-standing IT consultancy in Hawaii and has developed a reputation as the go-to company for solving complex IT problems. Since our founding in 1975, we have helped numerous public and private sector organizations design, development, implement, and maintain IT systems, reengineer business processes, and modernize legacy systems in alignment with their visions and strategic goals. We frequently leverage and promote AWS services and solutions in all of our practice areas, and several of our employees are AWS Certified professionals. We are proud to be an AWS Standard Public Sector Partner and truly value our partnerships with public and private organizations so that, together, we can continuously elevate our local and global communities.