



Global Education Pioneer Conquers liabilities of Multiple Applications in On-premise with a Scalable Cloud-based SaaS Solution





Challenges

- The existing solution doesn't scale to multiple user base.
- Outdated technology stack hinders adaptation to a cloud platform.
- Utilization of monolithic architecture.
- Maintenance difficulties with multiple apps.

Solutions

- Modern, SaaS-based multi-tenant application designed to scale with user needs.
- Cloud agnostic solution deployed on AWS, ensuring flexibility and reliability.
- Microservices architecture with Micro Front End UI allows scaling of the application to a larger user base.

About The Customer

Our client is one of the leading education institutions which operates multiple schools across the UAE. It is one of the largest private K-12 education providers in the world. They hold an unparalleled track record of providing diverse curricula and educational choices to all socio-economic means and have schools in the Middle East, North Africa, Asia, Europe, and North America.

The Need

The client has been operating a Learning Management System that is deployed on-premises. They want to overcome the limitations of the existing solution and establish a robust and scalable system that caters to the diverse needs of educational institutions. They are seeking a comprehensive cloud-based multi-tenant web & mobile application that can manage the entire school operation for K12 education.





Benefits

- Unified Integrated Platform combines all school functions and handles day-to-day operations in a single platform.
- Built a scalable application that reduces release cycle and eases maintenance of the platform.
- Multi-tenant SaaS product allows schools to operate on the same platform and view/manage only their data.
- 40% improvements in throughput compared to the prior on-premises solution.
- Reduced turnaround time in multiple Businesses Processes.

The Challenge

The client has been facing the challenge of overcoming the limitations of their existing on-premises learning management system and transitioning to a robust and scalable solution that caters to the diverse needs of educational institutions. The following are the various challenges encountered in various aspects:

Business Challenges:

1. The current solution faces significant limitations as it doesn't scale to a multiple user base and cannot deliver customized solutions to different schools using the system.
2. Additionally, the existing solution relies on an outdated technology stack that poses challenges when attempting to fully adapt it to a cloud platform.

Technical Challenges:

1. Utilization of Monolithic Architecture
2. Single Tenant Deployment
3. Maintenance difficulties with multiple apps
4. Multiple applications for various needs





The Solution

In the face of our client's challenges with their existing on-premises learning management system, Aspire Systems stepped in as a trusted technology partner to create comprehensive solutions. Through meticulous analysis and a deep understanding of the client's needs, Aspire's team of experts was able to create strategies that addressed the limitations of the current system:

- » A modern, SaaS-based multi-tenant application which is a Unified Integrated Platform has been designed to scale based on user needs that allows schools and districts of any size to leverage the benefits of an integrated Learning Management System.
- » Cloud agnostic solution deployed on AWS, microservice architecture with Micro Front End UI allows scaling of the application to a larger user base without trading off performance.

Benefits

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- » A **Unified Integrated Platform** is built that combines all school functions and handles day to day school operations in a single platform.
 - » It offers a range of academic features, including course setup, groups, attendance, timetable, assessment, behavior tracking, incident tracking, vault, digital portfolio, grading, and progress tracking. These features are all designed to streamline academic activities and provide an **enhanced user experience, making it easier for educators, students, and administrators to manage and track academic progress.**
 - » **Flexibility is offered** to schools to configure master data elements corresponding to their academics.

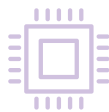


- » Built a scalable application that **embraces cloud-agnostic solution and microservice architecture that reduces the release cycle** and eases maintenance of the platform in comparison with the current application.
- » Multi-tenant SaaS product allows schools to **operate on the same platform and view/manage only their data**, which was complex and challenging in the previous system.
- » The new solution is built by leveraging state-of-the-art modern technologies which provide a fluid and **seamless user experience** and has resulted in **40% improvements in throughput** compared to the prior on-premises solution.
- » The solution can **handle 3x concurrent users** without any hassle compared to the prior solution.
- » It has reduced turnaround time in multiple Businesses Processes. For instance, setting up Master data for a new school has been **reduced from 5 days to 1 day**.
- » An enterprise tenant can easily **onboard multiple tenants into a single platform** thereby reducing the costs of managing multiple applications and infrastructure.





Technology Snapshot



- » AWS EKS
- » Cloud front
- » Istio
- » AWS Cloud Watch
- » AWS X Ray
- » AWS Cognito
- » AWS ECR
- » AWS Lambda
- » Kong API Gateway
- » AWS MSK
- » .NET Core Web API
- » Angular
- » Azure DevOps
- » Python
- » React Native
- » PostgreSQL
- » Document DB (Mongo DB compatibility)
- » AWS RDS for SQL Server
- » Home-grown SaaS accelerator



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