



Case Study



## Leveraging Azure CDN & Azure Media services to improve Podcast Delivery

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Enhancing the streaming performance  
4x and improving service experience  
of the product for medical professionals

## Executive Summary

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Content delivery especially streaming, is a specialized field. Technological advancements have made audio, video, image, webpage deliveries swift and secure. The speed has enhanced the consumer experience at different geographical locations due to PoP feature of CDN and optimized the resources and costs. To broaden the spectrum of users and easy their experience social logins is allowed through Azure B2C facility.

## Our Customer

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Medical professionals are busy individuals, yet they need to stay updated with the latest breakthroughs in this dynamic field. Continuous education is also an important part of their regulatory requirements.

Our customer is a medical education company that provides free and paid podcasts to medical professionals from various fields. Besides information and quizzes, it also shares compliance modules to enable continuous educational certifications. While the team had put together a primary proof of concept to test the idea of these modules, the medical professionals who were the end users, were not happy with the service experience.

In their endeavors to expand their user base with an enhanced and best-in-class experience, the customer engaged GS Lab to build a robust, fast, and secure product.

## A Deep-dive into the PoC

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While the customer team's proof of concept was a brilliant one, there were a few challenges that had to be addressed:

- The audio podcasts were stored on the Azure SQL server, thus presenting performance, scale, and security issues.
- The Xamarin-based mobile application was unstable, and it would crash or hang at different instances.
- Certain features were very slow or unusable.
- End-users had requested for social logins for convenience.
- The build process was manual and time-consuming with a manual versioning.
- The network's bandwidth issues at different locations made it difficult to service end-user requests.

## GS Lab's Expert Investigation and Recommendations

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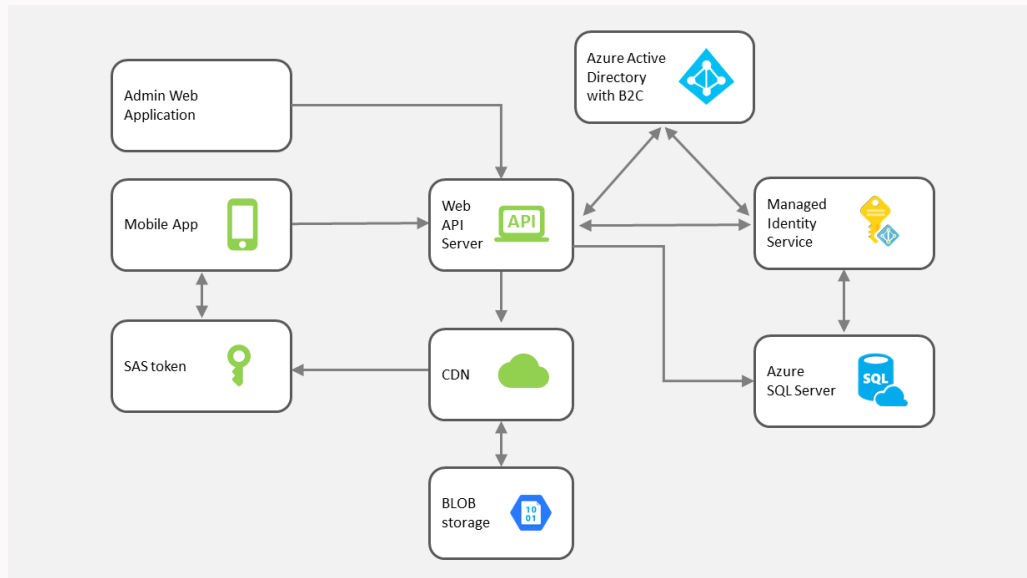
Content delivery, especially streaming, is a specialized field, and with the advent of technological advancements, audio, video, image and webpage deliveries are now swift and secure. Speed has enhanced the consumer experience at different geographical locations due to the PoP feature of CDN while optimizing resources and costs. To broaden the spectrum of users and deliver easier access, users' social logins is allowed through the Azure B2C facility.

Leveraging their expert insights and hands-on Azure experience, GS Lab studied the proof of concept to understand the architecture, current and potential issues and then zeroed in on the following recommendations:

- The team realized that the product needed an architectural overhaul to use CDN and other efficient mobile and cloud practices.
- Azure PaaS resources like Web App Services, Azure SQL server, and BLOB storage had to be accessed more securely.
- Lack of pagination and parallelization had made certain features of the existing application slow and unusable.
- The missing API layer and other cloud security aspects could be a deal breaker.
- The social login infrastructure was not in place but could be resolved with the Azure B2C facility.

## A faster, secure, scalable, and optimized product

GS Lab redesigned the product with the right technologies and methods



- The team used Azure CDN technology with SAS tokens for better scalability, security, PoP access, and performance.
- The mobile application was stabilized using correct design principles and the latest libraries.
- Pagination and Xamarin app side multithreading and lazy loading was implemented to boost the performance.
- Managed identity principles in Azure were used for cross-application authentication in a secure way.
- Azure B2C was the key to allow users to access the app with Gmail, Facebook, LinkedIn and other social media logins.
- The CI/CD was built using Azure CI/CD pipelines for a more defined and quicker process.
- All security recommendations made by Azure Security Centre were implemented to ensure an elevated level of security. This included SSL managed identity SAS tokens and more.
- Azure Media Services was instrumental in providing podcasts (even at lower bandwidths) with auto-compromised quality.

The global healthcare industry has strict protocols around obtaining and retaining Personally Identifiable Information (PII) and any other health information. With the robust security features available from Azure, the application meets all these compliance and certification requirements.

## Making Measurable Impacts

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The customer and end-users were delighted with the overhaul of the entire product. Beyond this, our customer was impressed by the product's responsiveness and felt comfortable taking the product to the market.

Take a look at some of the other business benefits and results of this project:

- Significant cost savings driven by Azure's CDN services
- Streamlined monitoring with the newly implemented log and services analysis using Azure Monitor
- Reduced manual efforts in build and deployment by replacing it with Azure CI/CD pipelines for a faster turnaround with customer feature requirements
- Enhanced security at all levels, including healthcare compliances
- A highly scalable product for faster and widespread adoption
- Quicker, easier and convenient social logins enabled

Great Software Laboratory (GS Lab) has been the technology partner of choice to 150+ organizations across North America, Europe and Asia-Pacific for over 18 years. Leveraging our expertise in 130+ tools & technologies, we have created 350+ 'first-of-its-kind' solutions to real-world problems. Our 'Beyond code' philosophy ensures that we not only push boundaries of existing technologies but also try out newer problem solving approaches to keep our customers one step ahead of their competitors. Our global team of 1600+ employees is adept at creating 'real value' at each stage of the customer growth journey, right from proof-of-concepts to completely scaled up products. For more information about our solutions & offerings, please visit [www.gslab.com](http://www.gslab.com)

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