

# Leveraging Cloud Solutions to Solve Search Scalability Constraints



## SUMMARY

When a professional medical association faced outages during the critical residency matching process, it partnered with CapTech to analyze the issues and engineer a cloud-based solution. Systems modernization and a cloud-based data platform alleviated stress on older on-premises systems and allowed the organization to optimize its search functionality to handle peak volumes during the residency matching process.

This resulted in a more resilient system with better performance and the ability to scale for future growth.

## CHALLENGE

For medical students, “Match Day” is a source of excitement and anxiety. The matching process takes place over a six-month period, culminating on the day when students receive their residency program assignment to complete their medical training.

Behind the scenes, this process requires complex data analysis and processing to run smoothly. The client is a leader in providing search engines to facilitate the matching process, but its on-premises systems were struggling to keep pace with the volume and complexity of the search requirements. This came to a head when the client’s system experienced outages during key business events, which impacted its ability to match students with residency programs.



### CLIENT

A Professional Medical Association



### INDUSTRY

Healthcare & Life Sciences



### SERVICES

Amazon RDS

AWS Database Migration Service

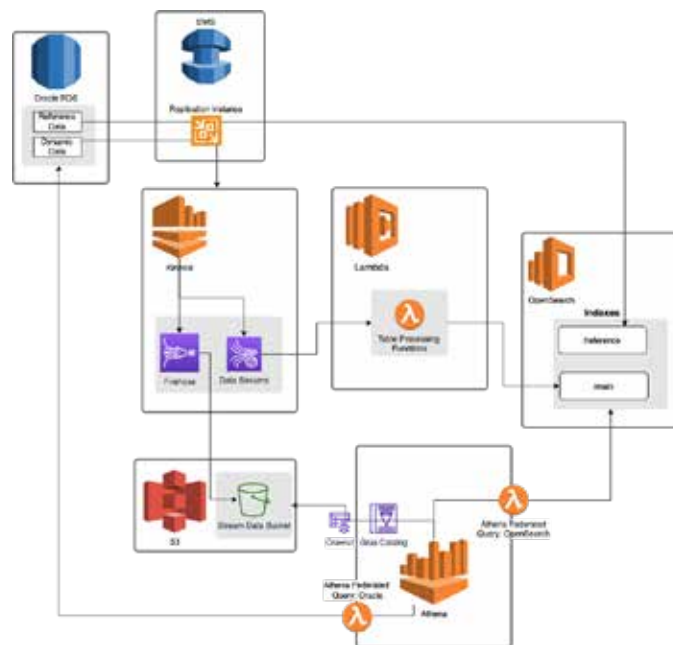
Amazon Kinesis

Amazon Lambda

For help modernizing its system, the client enlisted CapTech for a thorough assessment and recommendation for a cloud-based solution. The assessment uncovered a key issue: program directors were able to build searches with unlimited fields which stressed the system to the point of disabling it, leading to those outages.

## APPROACH

The CapTech Data and Analytics team implemented a data pipeline that utilized DMS, Kinesis, and Lambda functions to transform and ingest the needed search data into OpenSearch. The CapTech team also delivered target state architectural designs and a strategic roadmap for how to modernize the client’s applications and implemented updates to the application to leverage OpenSearch. In addition to the OpenSearch and data pipeline resources, the modernized process utilized Athena, S3, and Glue to verify data.



## RESULTS

With the new platform in place, the client experienced faster search capabilities and the ability to handle peak volumes. This was key for both residency program directors searching for medical student candidates, and for students utilizing the database tools. For the client, this resulted in a confidence that its systems would be able to withstand the traffic during the matching process.

## Connect with us.

Call 844.373.4025 or visit us at [captechconsulting.com](https://www.captechconsulting.com) to start a conversation.

