**SIMPLIFIED - MAY 19 2023**

**Scaling Database Operations to Enhance Customer Satisfaction for a  F100 Healthcare Firm (BCBS)**

* + **Challenge**
    - Customers of our client-end users of a healthcare application were dissatisfied with the service and often complained about the significant data inconsistencies seen in the healthcare account management portal.
    - These challenges had direct impact on our client's database operations and customer satisfaction since an incorrect number for healthcare fees and payments meant significant drop in customer trust
  + **Solution**
    - Creospan provided Sr. Consultant who followed our standardized framework (Assessment, Gap Analysis, Solution Proposal, Execution, Iteration), identified the root cause of this issue was linked with the limitations associated with a legacy database employed by our client.
    - Employing an agile framework, our Sr. Consultant, proposed a holisitic solution that included migration to a more robust and scalable database platform (Cosmos db) from Gemfire to eliminate bottlenecks and ensure client had access to their data in a consistent and reliable manner
    - Our consultant spearheaded a team of 8 developers and executed this solution over a period of 1 year employing a batched migration to mitigate risks related to database outages and minimize impact on the end users
  + **Impact**
    - Customer Satisfaction
    - Robust Database Operation
    - Operational Efficiency
  + **Tech Stack**
    - MS Azure, JavaScript, Python, NET, Node
* **Areas of improvement - Feedback received & will soon be incorporated**
  + **Application Overview**
    - We will focus on adding more insights around the type of application that we worked on, end users, use cases, and more
  + **Scalability**
    - To address scalability concerns for case studies, we will conduct training sessions and streamline case study frameworks to scale this process
  + **Simplicity**
    - Going forward, we will try to simplify these case studies so this information can be easily digested by stakeholders
  + **KPIs**
    - We will try to procure KPIs wherever possible to quantify business impact
    - Team will add a disclaimer in these documents anytime they need to add KPIs that might be client-sensitive to mitigate corresponding risks

**DETAILS**

**HCSC- Streamlining database operations (Cosmos DB) for a healthcare web application to enhance customer sastisfaction**

**Business Challenge:**

* Our client- A fortune 500 healthcare brand leader experienced an issue from a solution developed by a previous vendor resulting in the release of incorrect data to different teams within the organization.
* This issue significantly impacted the operations of our client’s database operations and customer satisfaction
* The steady growth in data-delivery related common errors called for immediate attention to evaluate this problem and find an appropriate solution to resolve this issue

**Business Requirements:**

* Our client needed a Sr. Consultant (TEM) who can evaluate this problem, recommend a solution, lead a team of engineers and execute the solution, ensure accurate data is delivered to end users, thereby enhancing customer satisfaction
* Below is a high-level overview of the business requirements for this case study:
  + Analyze the issue and identify the root causes
  + Evaluate the system and recommend a potential database platform that can best address this issue
  + Manage the migration
  + Enrich the current code and tune it such that it will work well with the new database tool
  + Minimize the data-related issues faced by customers

**Our Approach & Solution:**

* Creospan provided a Senior developer to solve this challenge.
* Our team conducted a consulting session with the existing system architects and engineers.
* Our Team evaluated the existing system architecture and tried to analyze gaps in it.
* They realized a lot of data-related challenges were linked with the database platform. that was recently deployed by a different vendor and was not integrated into the system in a holistic manner.
* Given the timeline and reliability requirements of the system, we propose a plan to replace the existing database platform (Gemfire) with a new platform I.e Microsoft Azure Cosmos DB.
* The team presented the plan to the stakeholders, factored in their feedback and executed the migration over a period of several years using an agile approach.
* This resulted in significant reduction in data-related support tickets raised by end users thereby enhancing customer satisfaction rate

**Business Impact:**

* Enhanced Customer Satisfaction – This transition to the new database platform ensured end-users were presented accurate data in a consistent manner thereby enhances customer trust
* Software Reliability – We transitioned their database from a legacy platform to Cosmos DB which resulted in minimizing transaction failures and enhancing software reliability
* Time & Cost Savings – The reduction in transaction failures freed their time which they would otherwise invest in debugging and that led to enhanced productivity.

**Technology Stack:**

* Agile, Azure, JavaScript, Python, NET, Node

Brendan Russ interview with Michael LaBrot