Digital Marketing Database Migration Case Study

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FORTUNE 100 COMPANY'S DATA MIGRATION EXPECTED TO DELIVER 71% 3-YEAR ROI

Ever wonder why so many consumer brands offer loyalty programs? The short answer: Because they work. A 2016 U.S. retailer study found that customers who enroll in loyalty programs spend as much as 18 percent more than those who don't. Not surprisingly, most companies (57 percent) plan to increase spending on their loyalty programs.

So, when one of our clients, a Fortune 100 beverage corporation, asked us to migrate its backend customer loyalty program from its hybrid database architecture to AWS, we knew we had to bring our "A" game. The stakes were high.

EXPENSIVE, UNRELIABLE DATA SYSTEMS CAUSED CONSTANT FRUSTRATION

Before determining the right solution, we did a deep-dive into the client's data structure, which consisted of an operational system and an analytics platform.

The operational system, or web container, tracked all of the loyalty and rewards activity on the client's website, gathering data on the success of the client's loyalty program. The analytics platform used advanced and predictive analytics tools to integrate those consumer insights with data from 3rd party sources.

Our client's desired end result was a refined data set for analytics reports, and for tailoring and driving marketing campaigns. These campaigns include personalizing content as visitors navigate the website, and segmenting customers for more targeted marketing campaigns that could generate increased revenue.

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Unfortunately, our client wasn't experiencing this best-case scenario. And, in fact, serious challenges made it close to a worst-case scenario.

OUR CLIENT WASN'T HAPPY WITH ITS LEGACY SYSTEM BECAUSE OF SEVERAL ONGOING ISSUES:

- Frequent outages during routine patches because of a lack of redundancy
- Excessive and unplanned downtime
- Unnecessarily complex architecture that couldn't be scaled globally
- Expensive operations and maintenance (licensing costs, capital expenditures and personnel expenses added up!)
- Inconsistency with our client's online security guidelines

Not only were these issues frustrating, they also didn't align with our client's customer service focus. Loyalty programs can turn satisfied customers into brand advocates. Our client wants its customer-facing application to foster customer loyalty. System failures harm it.

Another thing that didn't mesh with our long-term client's values? The fact that its data architecture ran in a data center. Our client's vision is to modernize its infrastructure with cloud technology, enhancing reliability and decreasing maintenance requirements at the same time.

Our task was hugely important: Build a solution that cost less and was more stable. But, how?

CANDID ANALYSIS REVEALS BEST OF THREE POTENTIAL OPTIONS

We thoroughly analyzed our client's challenges and evaluated three migration options – run everything on DB2 in Amazon Elastic Compute Cloud (EC2), which is a "standard" AWS migration strategy; port everything to Oracle RDS running on AWS; or leverage Amazon Aurora and Unica Cloud solutions (still unavailable).

We weighed the pros and cons of each of these options. We considered the timelines and teams required. And we asked critical risk analysis questions: How easy would the migration be in each case? Would it reduce operational costs? How would each option impact system reliability? And what would be the risks due to product limitations and resource constraints?

After carefully weighing all of these considerations, porting everything to Oracle RDS running on AWS emerged as the clear winner. Among the items in the pros column? Reduced operational costs. proven technology, decreased outages, and freedom from routine database maintenance tasks. So, we set off to make the migration happen.

SMOOTH MIGRATION MODERNIZES LEGACY SYSTEM, BRINGS IT TO AWS

We started by moving the client's operational system, or container, into AWS. The system used Apache Tomcat and Unica software. We provisioned the appropriate infrastructure in EC2 and then replaced the existing DB2 code with Oracle RDS code.

We added a few AWS enhancements at this stage such as Virtual Private Clouds, load balancing and auto-scaling. The Virtual Private Clouds (VPCs) provide security and facilitate communication with other client systems running on AWS.

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[1]Accenture Research

[2]US Marketers Plan to Invest More in Loyalty Programs

Next, we moved the client's analytics platform to the cloud. The existing platform was based on a Netezza warehouse using an Aginity ETL process. We chose to host everything in Amazon Redshift and accomplish the ETL functionality with AWS Glue.

After that, all that was left was to get the operational system talking to the analytics platform. We accomplished that using a combination of AWS Glue and Amazon Kinesis. The entire process took just six months from start to finish.

CLIENT'S NEW DATA SYSTEM EXPECTED TO DELIVER HIGH ROI, FAST PAYBACK

The client is extremely pleased with the final results. The system is far more secure than it had been. It is much more stable, since it has built-in detection of failovers and global redundancy. As a bonus, the performance of the analytics is much faster than the previous dedicated system. The analytics platform is currently processing over 3TB of data, or 25 billion

record sets, per day within a third of the time previously required.

More informed decision-making enables our client to produce products that align with industry trends and customer demands – a powerful advantage in the ultra-competitive beverage industry. Other migration benefits include:

- Estimated 21-month payback period with 71% 3-year ROI
- < 2 second response time for queries against billion row tables in Amazon Redshift
- Enhancements to loyalty programs, increasing customers' brand commitment
- Reduced downtime and increased customer satisfaction
- Alignment with client's long-term commitment to cloud architecture
- Much greater scalability and reliability than legacy architecture
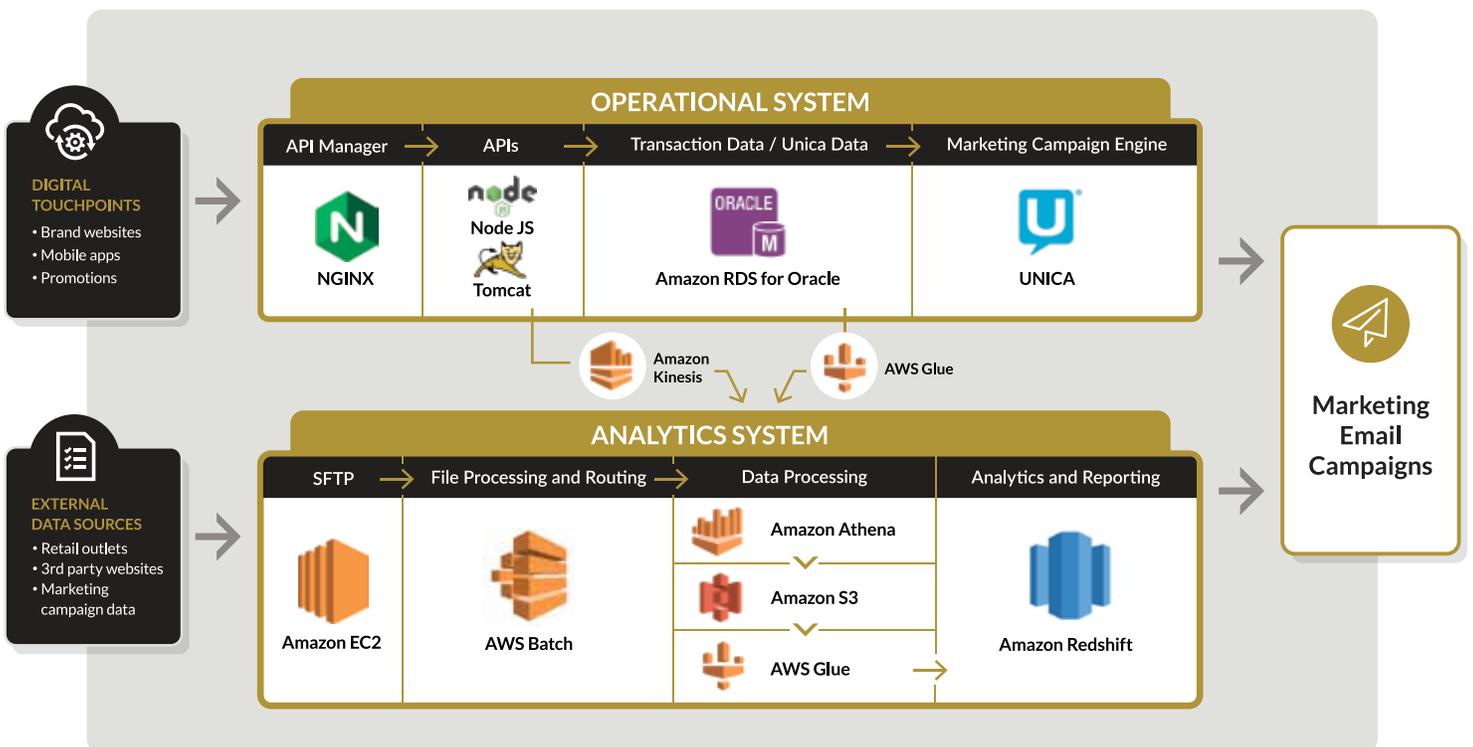
- Pay-for-use plan instead of license fees
- Consistency with the client's online security guidelines

Customer loyalty is an engine that drives increased revenue. By migrating that engine to AWS, we've ensured that our client's loyalty programs will continue to thrive and that our client can reap all the benefits that its customer data can deliver.

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