



MethodData

CASE STUDY

Migration and integration between Salesforce and HubSpot

KBK Communications

Introduction

A confidential, large healthcare service provider needed to increase the efficiency and impact of its sales and marketing teams. The company decided to solve this, by creating a corporate mandate that stipulated that each team would have its own sales CRM (Salesforce) and Marketing Hub environment (HubSpot), with tools specific to the functional area of the team members to help improve overall team productivity and results to the business.

Business Challenge

By having two separate teams (sales and marketing) using the same CRM system for different purposes, the company faced the potentially debilitating prospect of system downtime, as a result of cluttered system and data hygiene issues; and worse still, potential security breaches related to multiple teams requiring continuous access and modifications to the same system and data.

In addition to this, the marketing team found it challenging to use Salesforce for marketing-specific functions. The new objective was intentionally aimed at allowing each team to function more independently and efficiently, on platforms aligned to their daily operations.

The pressing issue was how to abide by the mandate of separate systems while maintaining the integrity of the data within each system, and ensuring that each was synched up on a real-time basis, without creating further issues for the business.

MethodData's solution to this challenge was to migrate the company's marketing team to HubSpot Marketing Hub, where the team would execute its campaigns and have access to purpose-built marketing functionalities that it currently does not have access to in Salesforce CRM.

To maintain collaboration between the two teams, an integration sync between Salesforce and HubSpot was also created to enable the marketing team and sales team to still collaborate in achieving a singular source of truth, and trustworthy data on which to make critical decisions, in pursuit of the business's goals.

AWS Solution

To achieve this migration seamlessly, a reliable system was needed to preserve the order of the messages and objects during migration. Similarly, a robust database was needed to keep track of Salesforce IDs and their relation to HubSpot IDs.

AWS was chosen as the ideal platform for these purposes. What was also appealing to the healthcare service provider, was AWS's shared responsibility model that ensured that AWS would take care of the infrastructure and 'security of the cloud' allowing the company to focus on monitoring the general health and performance of the integration as well the credentials and API keys used in the integration ('security in the cloud'). With an eye on financial optimization, AWS was chosen for its affordable operational services.



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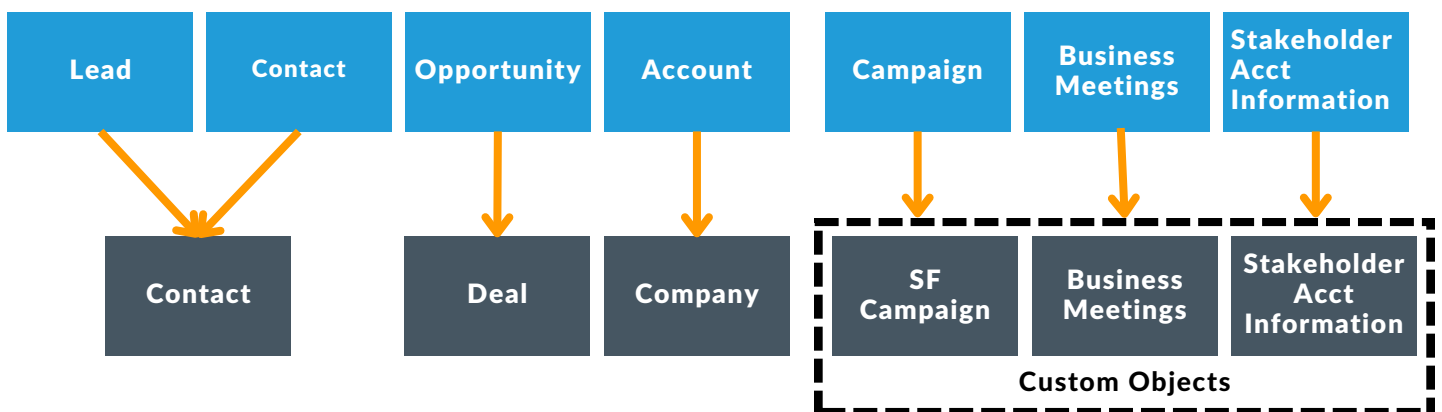


Implementation

Phase 1 - Data Migration

The first step in solving the problem was to map out and migrate all appropriate marketing data to HubSpot from Salesforce. The diagram below shows how Salesforce objects were mapped to HubSpot objects prior to migration. From HubSpot, only the Contact object would be synced back to Salesforce for the Sales team, which would take place once the marketing team had a sales-qualified lead.

Figure 2 Data Migration Structure



AWS services used for this migration:

- Amazon SQS: FIFO (First-In-First-Out) Queues were used to preserve the order of the messages and objects during migration
- Amazon EC2: Migration scripts were run from virtual machines created using EC2 instances.
- Amazon DynamoDB: This database was used to keep track of Salesforce IDs and their relation to HubSpot IDs.

Phase 2 - Integration with critical systems

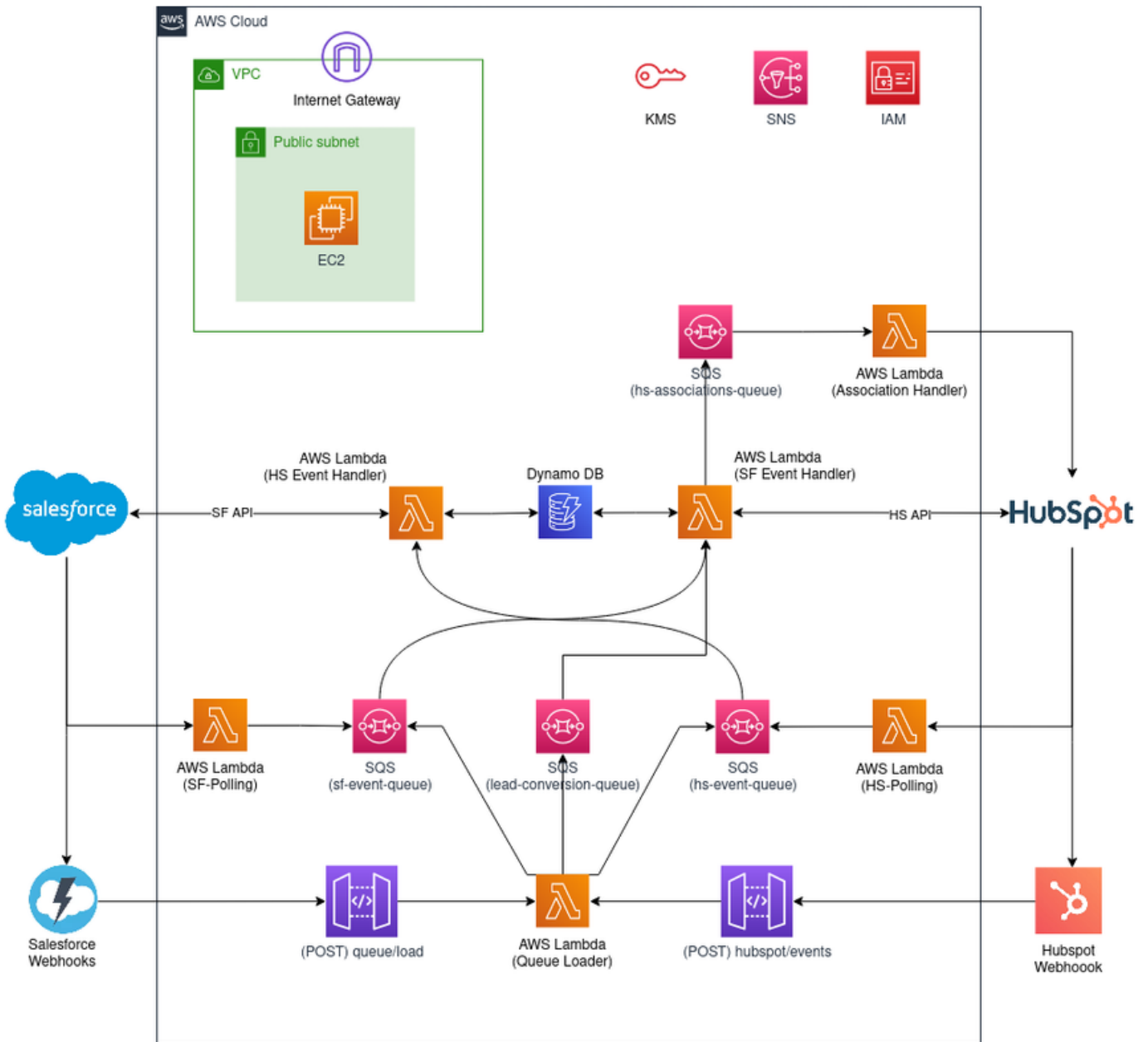
After Migration was completed, the next step in solving the problem was to develop a continuous bi-directional integration that synced data from Salesforce to HubSpot and vice versa. This would allow the marketing and sales teams to collaborate despite being on different platforms.

The solution uses a number of functions and webhooks with AWS Lambda functions playing the main role in the integration. The diagram below gives a schematic representation of the integration solution.

AWS services used for this integration:

- AWS Lambda: Code was run in response to events occurring in Salesforce and HubSpot. Computing resources required by that code were automatically managed by AWS.

Figure 2 – AWS Solution Architecture



The integration uses polling functions (AWS Lambda functions) and webhooks to collect events (creating, updating, or deleting objects). The polling function runs every 5 minutes, to check the Salesforce platform, for any new updates/events within that period. If any modified data exists then an event is triggered which passes the new information over to a SimpleQueueing Service (Amazon SQS). The polling occurs between 12 pm and 2 am UTC (4 am to 6 pm PST) from Monday to Friday to coincide with the busiest period of the working week and capture events on a near real-time basis. The Salesforce objects (see first diagram above) sent by this function are Campaign, Campaign Member, Business Meeting, and Vendor & Manufacturer.

For more critical data requiring immediate push updates, Webhooks were created, listening for any changed events in both Salesforce and HubSpot. Once a critical change happens, the webhooks immediately send the data to the queue in real time. The webhooks focus on the following objects: Account, Lead, Contact, Opportunity, and Users.



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The Queue Services (SQS) takes these messages from the webhooks and polling functions and sends them to a handler. The Salesforce handler processes Salesforce events and the HubSpot handler processes HubSpot events before syncing back to the two platforms.

Results / Outcome

This solution has resulted in a faster end-to-end process for generating leads and executing sales. The solution has also enhanced the company's customer experience through faster response times and, consequently, a faster connection of members to negotiated supplier contracts.

Based on the work that MethodData undertook, KBK's president had the following to say:

"MethodData was recently recommended to us and we've engaged them as our technical consultant on a small project. They far exceeded our requirements on the initial project and we now use them for all our complex technical needs in a challenging industry.

MethodData is particularly skilled at finding reliable solutions for brittle legacy systems, where other consultants have failed due to their constrained skill sets.

They do all our front-end designs, data architecture, analytics, product builds, and complex integrations. What we offer to our clients is greatly enhanced by the wonderful MethodData team."

~Jan Beery, President of KBK Communications

TCO Analysis

The following cost factors were analyzed, quoted, and approved before development started:

For CapEx purposes:

- AWS Infrastructure setup and configuration through cloud formation
- Migration and integration middleware implementation and development costs

For OpEx purposes:

- AWS Infrastructure costs

Lessons Learned

In addressing the GPO's business challenge, technical lessons were learned along the way which will be invaluable for addressing similar integrations in the future. These are:

- How to trigger Lambda functions with SQS queues
- How to set up queues and Lambda concurrency to achieve the desired rate of traffic
- How to use DynamoDB to store ID mappings
- How to trigger Lambdas with complex cron schedules
- How to use SNS to publish errors that occur inside any lambdas



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Conclusion

The solution has helped to automate a number of processes that would otherwise have been done manually, as well as ensure the critical requirement of maintaining data quality was met.. Examples of these processes include:

- Lead generation: helping the team identify sales qualified leads faster.
- Managing campaigns: Emails, forms, calls being executed immediately across different channels (social media, websites etc.)
- Streamlining Workflows: Automatic syncing of leads back to the sales team in Salesforce

The healthcare GPO now runs a slick commercial operation that allows the sales and marketing teams to leverage the fullest functional characteristics of their most favored tools, to optimize their day-to-day activity. The company facilitates seamless interaction and collaboration between teams, despite using discrete and competitive platforms, and multiple data ingestion points, thanks to MethodData and AWS.



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