



Client Overview

- A global multi-channel mobile engagement provider with more than 15 years of leadership.
- The client's single campaign management platform powers billions of mobile messages every month across channels including SMS, voice, push and social media apps (OTT).
- The client serves 800+ enterprises and is a trusted connection for over 550 carriers across the globe.



Business Requirements

- Customer escalation due to delay in downstream billing reports generation (fed by process intensive overnight batch jobs) impacted client's revenue and brand value.
- Increased frequency of batch job delays, scalability challenges in existing ETL architecture, and expected exponential increase in data volume made the client look out for scalable, faster, and future-proof solutions.
- The solution was also expected to support Analytics, at scale, to enable new analytics driven business models.



Key Challenges

- Design a horizontally scalable, low-latency architecture that would reduce data processing time by at least 70% (SLA).
- Understand existing system architecture, data, expected data volume growth to devise an architecture that would help the client transition to a scalable, faster and future proof architecture.



Our Approach

- We took a blended approach of re-architecting, migrating, and integrating RDBMS and Hadoop, to best meet the client's transition objectives while solving the pressing issue of batch job delays.
- We decided to run process-intensive operations in the Hadoop cluster (not in RDBMS), to leverage the storage and parallelism capabilities of HDFS, to bring down data processing time and reap cost benefits from use of commodity hardware.



Our Solutions

- Apache Sqoop was used to import data from RDBMS into Hive external tables in Hadoop clusters provisioned.
- The process-intensive data operations were handled in Hive and the processed data was loaded back in RDBMS using Sqoop.
- A new set of batch jobs were developed and scheduled to handle this data processing.



Results

- The data processing time came down from 11 hours to under 3 hours.
- Zero escalations from end customers on delay in billing reports generation.
- Indium is working on next set of projects that enables complete transition to a hybrid model of RDBMS and Hadoop that would enable Analytics, at scale.



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