

Enabling Optimal Ad Placements and Improving the User Experience for a Multinational Media Conglomerate



→ The Challenge

Our client is a multinational media conglomerate with multi-billion dollar advertising (ad) revenues. Their digital channels attract a large viewership that advertisers use for reaching out to their target audience. Each piece of content delivered through the digital channel carries some ads.

Our client asked us to work with them to optimize their digital ad delivery. Their challenges were twofold. One, online viewers often saw repeat ads, leading to customer dissatisfaction. Two, ads were often not shown, leading to lost ad revenues for our client. Since advertisements form a significant chunk of our client's revenue, this was a very significant concern with high impact.

Each digital channel owned by our client generates viewership logs. These logs contain viewing data like viewer id, video id, advertisement id and several viewer behavior statistics. Our client needed an efficient means of analyzing the logs to address the above challenges. We had to overcome the following technical challenges associated with analyzing viewership logs -

- The logs are unstructured and complex in nature
- All of our client's digital channels generate a huge data volume of 350 million records every day
- Our client wanted to use its existing MicroStrategy infrastructure to analyze the unstructured log data

→ The Solution

We developed a robust and efficient automated monitoring and reporting mechanism to meet the above challenges. Our solution processes batch data within a MicroStrategy on big data hybrid environment. It is an integrated solution for handling varying loads of data. The solution can handle -

- *Light data loads in the range of 50 to 250 GB within 5 to 10 seconds respectively.* MicroStrategy Intelligent Cubes handle these loads in conjunction with Apache Spark In-memory computation engine to produce summarized reports. Combining data loads and MicroStrategy components in this manner guarantees optimal reporting response time.
- *Heavy data loads in the range of 1 to 5 TB in no more than 5 minutes.* Disk based aggregate and granular tables handle such heavy loads. This data arrangement ensures optimal performance when users want to access granular data for deep-dive data analysis.

We used two of our accelerators to see this project through to its logical end -

1. MicroStrategy on Hadoop Fast Track
2. MicroStrategy - Hadoop Connectors Sandbox

The architecture is comprised of Hive tables on Hadoop Distributed File System (HDFS). All high volume data processing takes place in Apache Spark.

→ The Results

Our solution has improved our client's ability to diagnose ad content delivery issues leading to ad fatigue, repetitive ads, high volume of house or promo ads and inconsistent user experience. We achieved the following results -

- 85% improvement in problematic streams preventing revenue loss worth millions of dollars
- 99% reduction of problematic ad impressions
- Our solution identified approximately 5 million videos with no ads. Fixing this problem increased our client's total revenue by a significant margin
- Better ad performance visibility and better ad placement planning

Summary

We helped a multinational media conglomerate improve its consumers' user experience that was impaired due to incorrectly placed advertisements. Advertising is a significant source of revenue for our client, so they needed an efficient way of avoiding erroneous placements. We used our proprietary accelerators to deliver a robust and efficient MicroStrategy on big data solution that aids in spotting them effortlessly.

Industry

Mass Media

Users

Planners, Inventory Teams and Traffickers

Technologies

MicroStrategy, Hadoop, HDP, Apache Spark, Hive, HDFS, TEZ, HQL Scripts

Team Size

10 InfoCeptians, 2 Client Associates

InfoCepts Accelerators or Assets Used

MicroStrategy on Hadoop Fast Track, MicroStrategy - Hadoop Connector Sandbox