OnDemand Agility Solutions

YOUR TRUSTED KNOWLEDGE PARTNER

Case Study

# Data Warehousing

## Business Requirement

A leading digital-media trading expert entrusted us for a project with the business objective to develop a data warehouse to enable analytic, manage their system's operational issues, development of Java based application for effective communication with AD- Exchanges, and QA Automation.

The client provides highly targeted web advertisement services to their clients. They are a leader in **cross-exchange advertising management services** and technology. Client's media trading platform provides the technology, strategy, services and insights to trade effectively across the leading display advertising exchanges on behalf of advertisers. Client has partnered with major display exchanges including **Google - DoubleClick AdEx and Yahoo! - Right Media.**

## Scope

Client's business required a lot of data analysis to ensure success of any campaign they were running for their respective client's. Increase in the number of advertisers and scope of work led to the requirement of building a data-warehouse for serving their analytic and reporting requirements. The client was looking for a solution provider, who would be involved with them in building a data warehouse. The data received from various exchanges had to be merged/transformed and presented for the common analysis. We were selected out of several prospects because of our expertise and vast experience in providing unified, powerful data warehousing solutions, with access to structured and unstructured information and operational and transactional data in real time, and trained data warehousing recourses. The client was also looking for operation support for their production system, involving monitoring of jobs from offshore and taking necessary actions in case there are any failures etc.

We were maintaining 50-80 GB data on daily basis. The successful execution of the project has led to further increase in scope of maintaining data for 2 and then later 3 months thus increasing the data warehousing to 1.5 – 3 TB per month in the near future. Apart from increase in number of months for data warehousing, more ad exchange servers are going to be included in our daily processing. The number of advertisers for processing was also going to be increased.

## Our Approach

After analysis of the entire work requirement a dedicated team was formulated, with one resource working onshore and 9 offshore. Onshore resource was involved in requirement analysis and **designing of database(s) and data warehousing processes (**ETL and other data management jobs). We also helped client with initial configuration of environment with selected tools. This included configuring **Micro strategy BI suit**

along with the selected database, ETL tool, job scheduler and initial code deployment. Development is being managed from offshore location. Offshore team was involved in development of database objects and related scripts, development and testing of defined data warehouse processes, and reporting.

For better co-ordination and simultaneous process workflow, project team was grouped into three sub-teams; one handled data warehousing aspect and front-end GUI re-engineering, second team provides operational support and the third is for QA support.

The solution has been designed in a way that the complete process achieves the focused campaign. The client acts as an intermediate between ad agencies like **RMX (Right Media eXchange), ADX (AD-eXchange, Double Click)** and the advertiser. The client's ad servers directly handle some advertisement campaigns. With the help of campaign attribution and reporting analysis, the advertisers can reach out potential customers and buyers in more cost effective way.

The UI provides information about the ad like number of clicks, impressions, action servers, user viewing the ad, and ad usage. From UI this data is retrieved and stored in client's DB. Various scripts have been developed for RMX and ADX ad exchange. Scripts were fired to pick data from API. Data is fetched from API using application written in **Perl** scripting for RMX and ADX process.

The data is received in .**CSV format** from the client's ad exchange servers. This is populated in the target database in **Oracle using OWB** (Oracle Warehouse Builder). To maintain quality of data, different scenarios have been defined for data analysis. The target is to maintain minimum error. The team has been able to maintain an error percentage of less than one. The data is put in various fact tables after transformation as per requirement for analyzing and reporting.

Core technologies used is **Java/ J2EE, Oracle, Oracle Warehouse Builder, Win Runner (SELENIUM).**

## Important Facts

- We were maintaining 50-80 GB data on daily basis. The successful execution of the project has led to further increase in scope of maintaining data for 2 and then later 3 months thus increasing the data warehousing to 1.5 – 3 TB per month in the near future.

- We believe in the maintenance of quality of data. The team strived to maintain less than 1% errors at all times and till now have been able to achieve this level.

## Our Value Add

We provide unified, powerful data warehousing solutions, with access to structured and unstructured information and operational and transactional data in real time, and trained data warehousing recourses.

We also involved in converting Client's existing web based application to SOA application.