

LEADING RADIO STATION RELIES ON
**8K MILES CLICK-DATA
ANALYSIS FOR BETTER BUSINESS
DECISIONS**



About the Client

8K Radio is a unique, live digital radio for the Tamil-speaking community in the US. It is a part of the 8K Miles Media Group which is a leading Media Holding that targets to unite highly fragmented South Asian media market. 8K Radio can be conveniently downloaded as an App for Android and iOS, as well as accessed via web in three time zones: Eastern, Central and Pacific. In fact, 8K Radio was airing 24/7 and was hosting applications on Colocation Data Center.

The challenge

The Live streaming programs, On-demand programs, Shows, Events and RJ information constantly keeps changing on the 8K Radio web sites and mobile applications for iPhone and Android.

Understanding of the customer appeal towards different content sections/items is very important. It is also important that in the highly competitive streaming media industry that content had to be constantly adjusted based on user feedback, to maximize user appeal. However the programme team did not have the reports and analysis in place to achieve this. They wanted to get insights on the users and effectiveness of the web site and mobile apps design.

The challenge remained in understanding and interpreting the huge log data to identify (1) New/Existing Users analysis, (2) Geo location analysis, (3) Overall/Section/Item wise clicks and (4) Click Path Analysis.

Why Redshift

The solution required a huge scalable Data Warehouse to store the pre-processed and aggregated User and Click data for one point access to Analysts and BI Developers. They were required to work extensively with the Click Data and their prior experience with RDBMS was strong. They were much comfortable using Advanced SQL supporting analytical functions.

Amazon Redshift is a fast and fully Managed Data Warehouse solution. Setting up Redshift is effortless and its support for efficient SQL with Window functions satisfies the above needs for the different users. Execution time for SQLs are very fast. Redshift supported wide range of Analytics Tools. For this solution, Tableau is used by the BI developers to develop BI Reports and integrate with the Web Application. Further, with existing environment already based on AWS platform, it made sense to use Amazon Redshift with above mentioned benefits as the Data Warehouse.

Our Solution

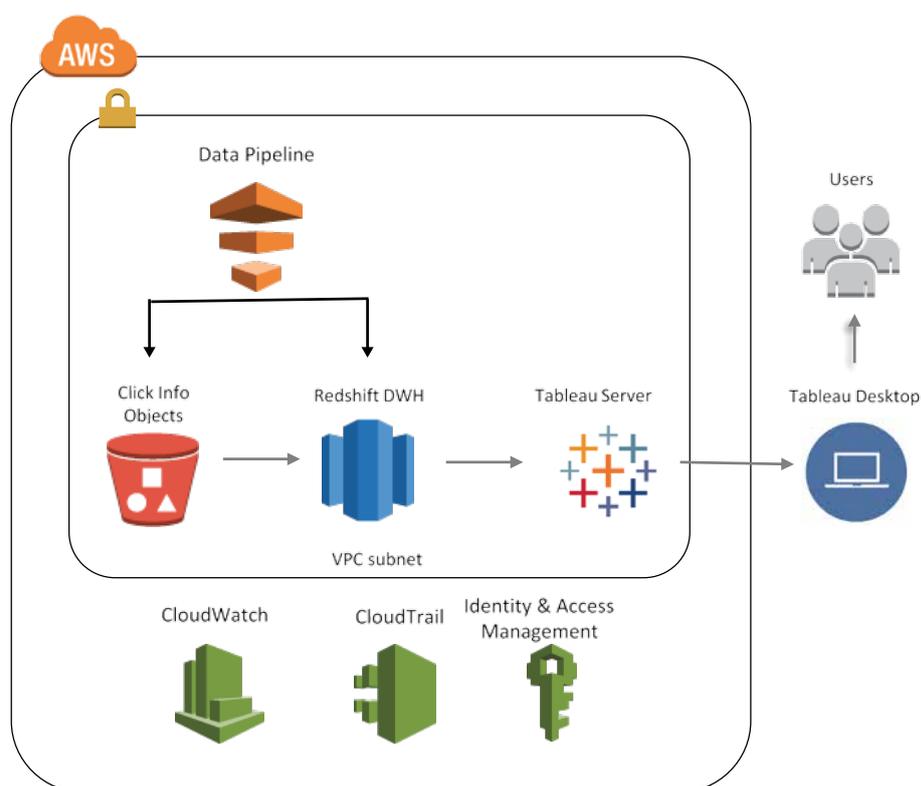
Logs from Amazon CloudFront and Amazon ELB are used for ClickData calculations. User information and application log data are also moved once in a day from the production environment and stored in a separate reduced redundant storage S3.

Through a pipeline, data is filtered and required information is stored in Redshift Data Warehouse. Aggregations are performed and KPIs are calculated and stored.

Tableau is used for BI Reports/Visualization.

The Architecture

- AWS Data Pipeline is defined to load data the files from S3 data node to Redshift database. It is scheduled to run automatically once in a day.
- AWS Data Pipeline is also defined to aggregate the data and populate in separate tables.
- Data Warehouse is implemented using Amazon Redshift Cluster with 4 Nodes.
- Star schema with fact and dimension tables for user click data are efficiently designed. Best practices are followed to setup the cluster and data distribution for optimal query performance.
- Tableau server is setup to access the raw and summary tables in Redshift Cluster. Data analysis, Dashboards, BI reports and ad hoc query services are achieved using Tableau Desktop.
- Network is isolated using Virtual Private Cloud. S3 encryption is achieved using Amazon KMS. AWS IAM and MFA for access control.
- Amazon CloudWatch is used to monitor the utilization and traffic for Redshift cluster.



Benefits

With ClickData Analytics implemented using Redshift on AWS platform, 8K Radio has brought the capability to effortlessly access the user detail and click information. Without the need to worry about the data integration and aggregations, analysts concentrate in studying and analyzing the behaviors of the users and their interests.

Early detection of user response to content is possible and this had led to dynamic feedback to the program team for improvements in different sections/items content for better user appeal. Through effective shows/events/ads, Client is seeing increase in user base and in turn revenue through advertisements.

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