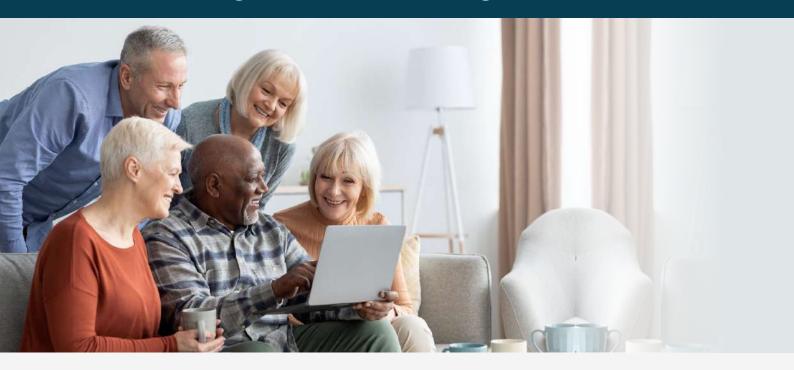# ASI - Data Analytics Information System

INTRODUCTION

AARP is a philanthropic, unbiased social welfare organization with 38 million members that assists people in making their goals and dreams a reality. It strengthens communities and fights for the issues that matter most to families, including healthcare, unemployment, income security, and protection from financial abuse. AARP offers its subscription members discounts and benefits in various healthcare and other lifestyle categories.

AARP Services Inc. (ASI) oversees the association with organizations that offer AARP member benefits. Influent50 is an AARP agency and an expert in the 50+ age market. The company researches trends in that segment, including attitudinal patterns, behavioral tendencies, purchasing trends, and so on. It has strategic alliances with other companies that provide valuable and relevant insights such as research on the 50+ age segment with positive communication channels for a fee.

CHALLENGE

The process of maintaining distributed application requirements has become a significant challenge for ASI. Below is the list of concerns experienced:

1. Responsibility for managing a new AWS environment.

2. Managing the cost of the environmental setup.

3. Supporting the management of the core network.

4. Providing access to the support team.

SOLUTION

Idexcel team created **"ASI DAIS Solution"** as a solution for the above challenges. The team developed a well-planned new setup that was designed as per the ASI requirements. This includes setting up an entirely new environment for ASI DAIS in the AWS Cloud. In addition to this, a few supplementary processes have been added. Idexcel provided this new setup for ASI DAIS in their environment. DLU, ClickStream, Converge, and Daily ClickStream extract are the DAIS applications used in the process.

The team adapted a completely automated channel for setting up the environment. The data will be loaded into Redshift and reports will be generated depending on the input files and its functionalities. This generated data will be analyzed by the Data Scientists to create reports. Idexcel oversees and contributes to the process' infrastructure backup for ASI.

The Idexcel team maintains the infrastructure support for the setup in the AWS cloud and makes use of the following AWS services: VPC, S3, Lambda, SNS, EC2, Redshift, and CloudWatch.

BENEFITS

The Idexcel team was able to develop an entirely new setup in the ASI DAIS environment with correct assessment, planning, and design.

Following are the key benefits attained from the new solution:

➤ The deployment and infrastructure has been fully automated.

➤ The AWS resources provisioned for the DAIS solution can be re-used for future enhancements.

LESSONS LEARNED

After a series of discussions, the Idexcel team noticed a few lessons learned from the above process. They are as follows:

1. For Cloud Formation Templates

➤ Configure the DeletionPolicy & UpdatePolicy attributes for all the AWS resources that Cloudformation supports, otherwise AWS CloudFormation may deletes/updates the AWS resource by default.

➤ Use network-based authentication for the glue connection type attribute instead of credential-based authentication because if we use credential based authentication, we need to manage / maintain the credentials.

➤ Ensure that timeout configuration is added for glue jobs/tasks so that the job/task does not run continuously in case of network connectivity issues or job configuration issues.

2. Manage the access for KMS-CMK keys with a custom access policy rather than IAM roles for better access control.

3. We need to configure the actions, principle and AWS resources in S3 bucket policies carefully because any gap in the policy configuration can lead to denial of access to the S3 bucket for all the AWS account users except root user.

4. Auto generate the master credentials for Redshift to avoid exposing/sharing of the credentials.

OUR AWS COMPETENCIES

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