AAIC helps Skyword for Migration and Modernizing Application Deployment and Maintenance With AWS.

aws partner network

EXECUTIVE SUMMARY

Skyword moves marketing leaders and those who create content for them forward by embracing a sustainable, scalable approach to original storytelling, Skyword liberates brands from ineffective marketing practices and inspires them to create deeper connections with their audiences, combining world-class content marketing technology, professional services, and a network of professional freelance writers, videographers, photographers, and other creatives.

In this case study we will describe how AAIC helped Skyword to achieve migration and modernization for their Content Management Application. The efforts on deploying, maintaining and supporting the existing applications reduced with the help of AWS Services. Also, How Skyword achieved an optimal automation and DevOps on their platforms.

Applied AI Consulting (**AAIC**) is a bespoke AI and Cloud Consulting Service. The core team is comprised of industry veterans with cumulative 25+ years of experience in building, architecting and delivering cutting edge technology solutions focused toward solving customer pain points.

BUILDING THE SOLUTION

AAIC engineers team worked with Skyword technical leadership and Product owner team to develop modernized business solution Primarily involving below objectives.

- CI and CD implementation for Skyword application.
- API and Selenium UI automation testing of Skyword application use cases, and make it part of the CI/CD.
- Setting up Operations/Monitoring dashboard on datadog.
- Help in migrating private GitLab to public SaaS GitHub.
- Automating the deployment of environments for the application with the implementation of ASG to achieve scalability and high reliability.

WHY AWS?

Cloud computing has lately gained interest for the advantages it delivers to performance ratio based on the principles of multi-tenancy, distribution and scalability forms the core principles of cloud computing Specifically, AWS has made cloud computing accessible to a large community of developers by exposing web services APIs that allow 3rd party companies to host their applications on the Amazon cloud and take advantage of the robustness of their larger network instead of having to incur the cost of maintaining one's own data center.

There is not only a strong commercial aspect supporting migration of applications also valid technical reasons to do so. Cloud based architectures allow applications to scale to massive levels dynamically with little tuning leveraging the capabilities of the underlying infrastructure.

skyword
Moving stories. *Forward.*™

The Content Marketing Company

Skyword recently Named as a Leader in the Gartner 2021 Magic Quadrant for Content Marketing Platforms!

Skyword has a content marketing platform built to help companies that wish to produce and disseminate their own content for the purpose of new customer acquisition.

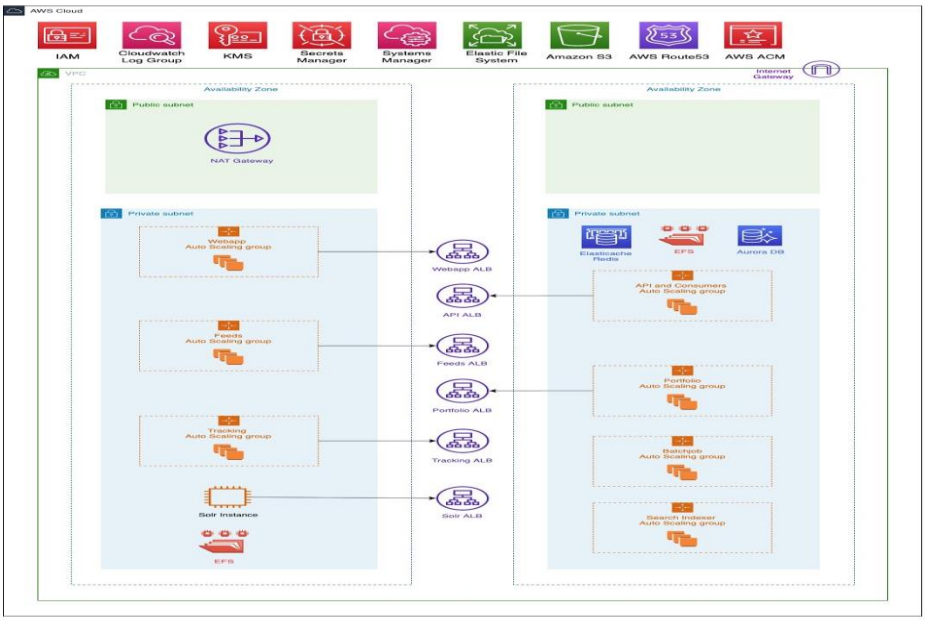
Skyword also provides services to brands wishing to produce their own content. Skyword also maintains a digital publication on the topic of content marketing it calls the Content Standard.

Skyword Also owns TrackMaven which is a marketing analytics software that helps marketers prove ROI and improve results on 18 integrated digital and social channels.

Location:
1101 K Street NW, Suite 930, Washington, DC.

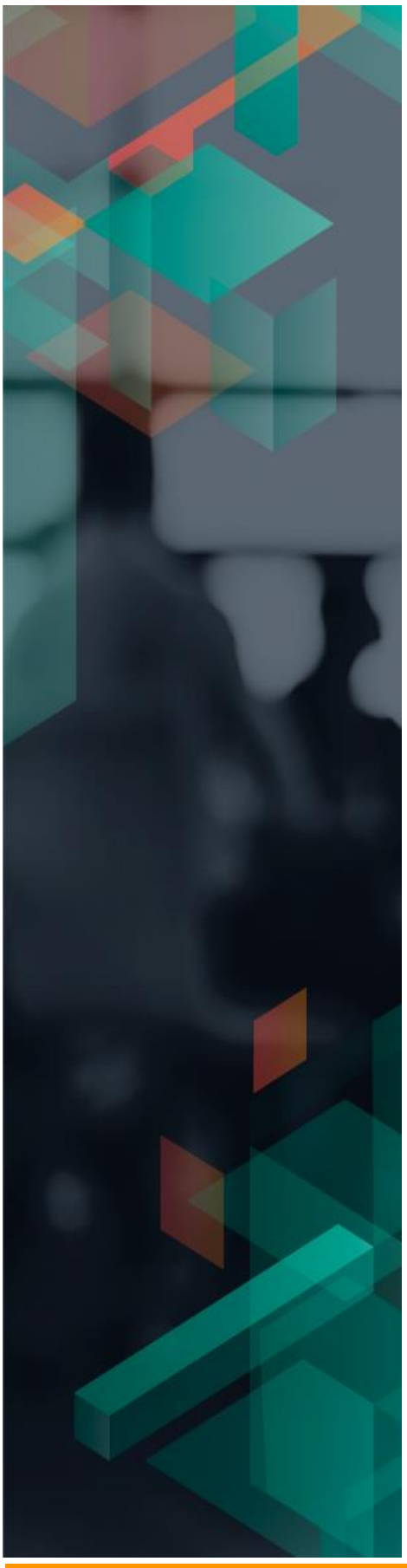
ARCHITECTURE

Our Team of experts at AAIC worked closely with Skyword to design and Architect the solution on the AWS to achieve scalability and high reliability. Standard 3 Tier architecture was used for the deployment and appropriate Login implemented using IAM security. Group rules and security were also used as standard Security Practice.
Within AWS the architecture utilized Amazon's Elastic Load Balancers combined with Auto Scaling Groups to balance the traffic across multiple instances and automate the creation/termination of instances across multiple Availability Zones. Modularity achieved through this architecture also made it fault-tolerant. This provides redundancy across multiple geographic location.



DEPLOYED AWS SERVICES

AWS Services	Usage of the Services.
S3 Bucket	This storage service is used to store the images formatted by the openross application S3 bucket is getting used
Elastic File System	This is used mainly for sharing the file system across multiple applications
Cloudwatch Log Group	This service is used to monitor, store, and access application logs.
Application Load Balancer	ALB is used for distributing incoming application traffic across multiple targets, such as EC2 instances, in multiple Availability Zones.
Route53 Hosted Zones	Route 53 is a highly available and scalable DNS web service. It is getting used for routing internet traffic to the Skyword applications
Secrets Manager	All the Skyword application secrets or properties are stored in AWS Secrets Manager.
Key Management Service	This service is used to control customer master keys, the encryption keys used to encrypt your data. It is getting used to encrypt the EFS data and Skyword applications secrets.
Elasticache (Redis)	This in-memory data store service is used for session management in Skyword web application.
Certificate Manager	This service is used to deploy SSL/TLS certificates for use with AWS services and your internal connected resources.
System Manager	This service is used to manage EC2 instances,through an interactive one-click browser-based shell or through the AWS CLI.
IAM Service	This service enables to manage access to AWS services and resources securely.



THE DATA LAYER

RDS was used for the data-layer. AWS Aurora is a MySQL-compatible RDBMS which was designed from the ground-up to run on AWS, and has a number of benefits over MySQL running on RDS which is more durable and redundant

Deployment

Application Instance creation, launch and updating is managed using AMI.(Amazon Machine Image.)In order to update AMI i.e., modifying WAR/JAR files present in the AMI, AMI bakery is used. It also provides support for deploying it into the respective auto-scaling group. AMI deployment process is done where a new instance will be launched and only after that older or previous instance will be terminated this includes minimal downtime which reduces the existing Production service impact.

AWS lambda function has been set up in environment. This lambda function is responsible for scaling up or scaling down autoscaling groups. It can be scheduled to scale up or scale down at a specific rate or crontab also.

VERSION CONTROLLING YOUR INFRASTRUCTUR

Git VCS is used to manage the versioning of the infrastructure. a git repo is created with all of the relevant setup & configuration scripts, along with any relevant documentation etc. Detailed information on how to recreate our infrastructure from scratch is combined with CloudFormation which allowed to automate the creation of almost all AWS services.

THE MODERNIZATION & MIGRATION BENEFITS

- **Uptime**
  Significant improvement, which can be monitored with 3rd party tools and confirmed.
- **No single point of failure**
- **Ability to innovate**
  Being on AWS opens up an array of new services and technologies that are now significantly more accessible to the average IT group. Whether it's looking at new storage engines like Redshift or services like Amazon Machine Learning or Lambda, the time to implement – and therefore innovate – is significantly reduced.
- **Integration to other systems**
  Being on AWS opens up new possibilities to integrate including best of breed tools & services to connect to other systems.
- **Scale**
  Elasticity, load balancing and the capability to scale automatically is a big bonus.

COST OPTIMIZATION

With the deployment and output of AWS Pricing calculator, Skyword was able to see detailed reports of their inventory. The utilization of resources was analyzed, and this helped in right-sizing the company's AWS solutions. Some of Skyword's existing resources were over-provisioned and right-sizing their resources resulted in significant cost savings.

With the use of tagging and AWS Billing and Cost Management, an ongoing review was carried out to ensure Skyword operated at cost efficiency.