

CloudFront Implementation for Uluarn's Classes

About the Customer: Uluarn's Classes



Uluarn is an educational portal with a vision to provide aspiring financial professional students with comprehensive study guides and training materials, both online and offline, to ensure they shine brightly in their chosen career path. Uluarn team has some of the best-certified faculties with a sound understanding of the subjects they offer, who are constantly coming up with tested and continuously upgraded study materials. We are constantly striving to make education accessible for all!

Uluarn provide easily accessible study materials to students pursuing financial professional courses for easy understanding and comprehension. To ensure that the students opting for online courses can prepare for the tough exams in their chosen career thoroughly they deliver their study materials directly at their doorstep. Uluarn also run mock tests for various exams so that students gain confidence in their ability to clear the exams with ease. They are confident that the study guides they offer for a comprehensive preparation for the examinations will help students secure a place on top of the success pyramid.

Customer Challenge

Uluarn was facing lots of issues on their LMS platform. Video was slow and videos quality experience was not good. Customer was streaming their class video through server's and it was very slow and creating bad users experience. Videos were buffering as it was not having any CDN.

1. Streaming videos was frequently slow, and user experience was not good.
2. Lack of Edge Caching layer for streaming the lectures across all regions.
3. Viewing of live recorded videos was not smooth.
4. They were serving the static content through On-Prem Server using Ant Media application. Server availability is also a major challenge.
5. There was minimal protection on their public facing website.

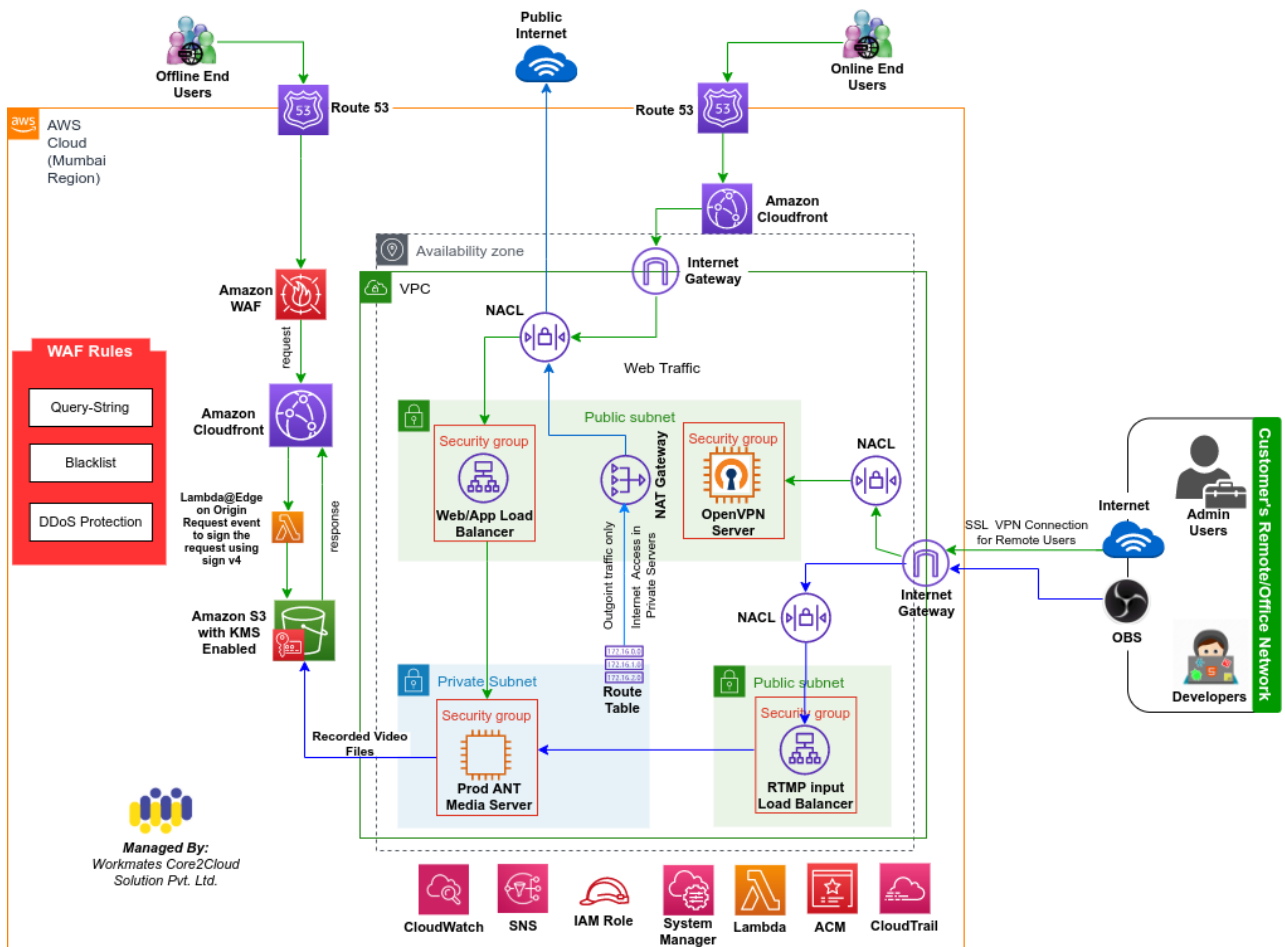
Solution Approach

Workmates helped the customer Uluarn to migrate to the cloud and take advantage of the native cloud services and improve their security posture on the cloud. The following are the key solution details.

1. Migration of the On-Prem Ant media server to AWS. After migrating to AWS customer has confirmed 2x better performance.
2. Implementation of the Ant Media Server for transcoding the raw content. Ant media web server is secured using SSL certificates encryption.
3. Ant Media Server is used for converting the videos and for administrative task web portal is hosted inside the ant media server.
4. All system monitoring is done using AWS CloudWatch. AWS CloudTrail is used for recording API calls to AWS, the logs are kept for 90 days.

5. Auto recovery is enabled for the Ant Media server, so that in case of any hardware failures server would be up and running just after a reboot.
6. WAF is protecting the URL security and users would be able to access the secure URL for the strings which only mates with the input.
7. We have used S3 for storing all there recorded classes. Previously customer used to keep the files on local server which was a big challenge related to availability and scalability. After moving to s3 they had never thought of storage size.
8. We are using SSE-KMS encryption for the S3 bucket and its content. Lambda@Edge functions are given IAM permissions to read from S3 and indirectly operate encryption/decryption using a CMK managed by KMS. These functions are triggered every time CloudFront makes a request to S3, and sign the request with AWS Signature Version 4 by adding the necessary headers.
9. All live video as well as offline videos are being server using the Cloudfront giving a better experience for the end users.

Solution Architecture



Key AWS Services Used

CDN, VPC, CloudFront, CloudTrail, CloudWatch, Lambda@Edge, Elastic Compute Cloud, S3, WAF, S3, EC2, VPN server, Cloud trail, Cloud watch, Lambda, Auto-Recovery, SNS etc.

Results and Benefits

1. Ant Media server is configured in private subnet and is exposed only through load balancer improving the security posture of the server.
2. Improved the uptime compared to On-Premise. There has been Zero downtime since implementation
3. Implementing WAF and Single endpoint URL we have been to achieve a secured environment.
4. Customer is consuming more than 50 TB CDN bandwidth per month with minimal cost implication compared to their previous setup thus improving their TCO.
5. CDN is serving the content across different edge location with minimal latency.

About Workmates



Workmates core2cloud Solution Pvt. Ltd is an AWS Advance consulting partner and Leading Cloud Management Company in Eastern India. Workmates Core2cloud is a cloud managed services company focused on AWS services, the fastest growing AWS Advanced Consulting Partner in India. We focus on Managed services, Cloud Migration and Implementation of various value-added services on the cloud including but not limited to Cyber Security and Analytics. Our skills cut across various workloads like Microsoft, SAP, Media Solutions, E-commerce, Analytics, IOT, Machine Learning, VR, AR etc. Our VR services are transforming many businesses.

Workmates has a yellow theme which is the color of youth. Our Vibrant team of 100% certified resources brings the edge to customers for an End to End AWS partner, committed towards quality and supporting their business on a 24X7 basis.