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Extramarks Achieves 15% ROI by Leveraging AWS Auto Scaling

Introduction

Extra marks aims to transform the conventional system of education by providing modern day total learning digital solutions to students as well as teachers. With easy to understand engaging content empowered by advance technology, Extramarks effectively creates a smart, personalized and interactive learning environment in classroom and home alike. With features like- Progress Tracker, Mentor Support, Study Scheduler, Group Work and many more; this one-app-one-solution is currently used by over 9000 schools across India, Singapore, Kuwait, UAE, Qatar and South Africa.

Business Needs

'Extramarks' interactive sessions have been providing deep, immersive learning through Learn-Practice-Test (LPT) Pedagogy. In this technology driven time, Extramarks is constantly promoting independent learning for its stakeholders (parents, teachers & students) while maintaining continuity from school to home and ensuring effective communication among the stakeholders.

However, over the years their application was running on standalone servers in the public domain to handle the incoming load. This made them dependent on the main server and possessed many security issues which undoubtedly made the application vulnerable to attacks and malwares.The client was looking to cater three prime requirements:

» Looking for a solution that would automate their scaling.

» Secure its application from any kind of attacks and,

» Deploy their application at a faster pace.

Solution Approach

The Cloud Consultants at Rapyder designed the right solution and configuration that could support the seamless functioning of the application to overcome the challenges mentioned above. The consultants at Rapyder proposed the following solutions to achieve the desired results:

» The servers were migrated to private subnets to make it the application secure.

» To tackle the vulnerabilities of the website, AWS WAF was implemented with Cloud Front.

» AWS Auto Scaling was implemented to handle the load based on the incoming load on the servers.

» OWASP WAF rules such as Cross Site Match Conditions, Size constraint conditions, SQL injection, IP Match Conditions and String regex Match Conditions were implemented to prevent any further vulnerabilities.

» For new deployments to the server running in Auto Scaling groups, a script was written that the client would deploy the application on one static server and then run the custom script written by Rapyder.

» The script was designed to take the AMI of the server and deploy it on Auto Scaling Group, making sure that the new application was up and running successfully.

Reaping Rewards

With Rapyder's consultation and right solution, Extramarks was able to achieve the desired results and achi scalability on their application. Here's a lowdown of the benefits derived by them:

» Servers now being on private subnets were no longer publicly accessible and restricted any unauthorized access, making it the server secure.

» The client no longer had the need to perform Manual Scaling.

» With the implementation of AWS Auto Scaling, Extramarks achieved a ROI of upto 15% on AWS cost.

» Our scheduled scaling at peak times made them witness further savings of 10%.

» Cloud Front by AWS helped the client caching the content dynamically and made them leverage edge location for faster delivery of content.