



SM

Performance improvements migrating to AWS

The migration and new infrastructure of their digital educative platform improved user's capability by 40%.



SM is a publishing company with more than 80 years of history focused on the publication of educative content for primary and secondary school. SM has presence in Spain and 9 more countries in Latin America. Their main business includes selling textbooks as well as publishing literature for children and young public.

Amongst their values, it is highlighted their commitment promoting culture and education through their publications and the **SM Foundation**, which fundraises funds to empower quality education on less developed areas. SM has nowadays more than 2,000 employees, a 345M € year turnover and 40 million publications sold in 61 different countries in 2017.



The Challenge

SM has a digital education environment called Savia, developed to integrate various digital tools to enhance learning processes at a school level.

Savia offers support not only to schools but also to teachers through this techno-educative product that allows, apart from other functionalities, the management of class lessons, homework follow-ups and an area where students can upload their projects online, in a secured and easy way.

Savia, that has been **developed and deployed directly on a public cloud infrastructure, is suffering serious performance and scalability issues.**

Regarding scalability, Savia is directly linked to the school's timetable, so it has work peaks during that period and it lowers activity during school holidays.

This scenario requires a flexible structure capable of adapting to what SM needs as a business. At the beginning, the SM application was created on a public cloud in order to benefit from a totally scalable solution and variable costs based on demand.

Per contrary, **SM found themselves with a rigid infrastructure that was not able to cover the business scalability that was needed.**

With all those limitations in hand, SM decided in 2017 to migrate Savia to AWS with Syntax as their technological partner.



The Solution

Savia's educative environment is formed by several applications including a web front-end, static content and a database.

During the migration process and deployment of the new architecture on AWS, Syntax proposed the allocation of the different elements as well as the architecture itself using the following AWS services:

- **Amazon EC2**
Instances (t2, r3, r4, m4, c4).
- **Amazon S3**
Data storage.
- **Amazon Elastic File System (Amazon EFS)**
Allowing an easy and scalable file storage system for the EC2 instances.
- **Amazon Elastic Block Store (Amazon EBS)**
To store persistent data with automatic replication on an availability zone, increasing availability, security and durability.
- **Amazon RDS (MySQL & SQL)**
Self-managed database engines.

In order to improve on scalability and optimization, **Elastic Load Balancers and Auto scaling (programmed or per use)** resources were added to each layer of infrastructure, spreading incoming traffic automatically to the available resources. Those two services allow the management of variable traffic in a secure way, avoiding down-falls and ensuring high availability.

In real terms, such improvements allow SM the capability to **assist all service users during critical peak hours avoiding slowing down or collapsing the platform**. At the same time, during low activity hours, the infrastructure is reduced automatically, optimizing costs without compromising the availability of the service.

“Syntax supported us defining the whole infrastructure, as well as running the implementation and platform migration to AWS”

David Villelga

SM Managing Infrastructure & Quality Coordinator

SM

The Benefits

Savia's migration to AWS proves the reliability of the new solution brought to SM by Syntax, especially in the **performance and scalability side**, two of the main problems SM was facing at the beginning of the project. Their **new infrastructure on AWS is now elastic** and it also has advanced tools to maintain the platform, as well as enhancing new launching processes.

As a result, from switching to **RDS database managed service**, the spending time on IT workloads has been reduced and it has helped the team to focus on new tasks that are more relevant for the business such as continuous integration, optimization solutions and other internal matters. Finally, the user's increase that SM was expecting was easily

absorbed on AWS thanks to the adjustments made on the auto-scaling groups, as well as the modifying RDS and EC2 instance's sizing depending on the metrics and growing needs. The new infrastructure allows that any increase in demand is managed automatically, with no extra time or resource investments. **Those benefits have positioned Savia as key asset in SM digital's strategy.**

“Syntax's proof of concept carried out on AWS with a similar structure and environment to what was originally in place in SM proved around 40%-50% improvement in machine consumption, performance and users' capability on the same infrastructure”

David Villelga

SM Managing Infrastructure & Quality Coordinator

SM

The Future

In this context Syntax, as a **consultant and AWS Premier Partner**, will continue to support SM on their expansion projection. In 2018, the road-map includes developing new projects and digital publishing solutions directly on AWS, deployed on an agile and scalable way. Next projects which are in line with SM internationalization goals are:

- A new tool to **control the company's organizational structure**, where all writer editors can control their workflow and text editing in all countries where SM operates.
- A multichannel marketing platform based on a **SAP Hybris solution**.
- Implementation of **Amazon Workspaces** where employees will be able to remotely connect and access to all SM apps in a virtual way, with no need to physically invest on new equipment.
- Introduce **Amazon Connect** as a support integrated solution, that will allow the automation of internal processes and also at a customer level with Salesforce.

ABOUT SYNTAX

Since 1972, Syntax has been providing comprehensive technology solutions to businesses of all sizes with thousands of customers trusting Syntax with their IT services and ERP needs. Today, Syntax is a leading Managed Cloud Provider for Mission Critical Enterprise Applications.

Syntax has undisputed strength to implement and manage ERP deployments (Oracle, SAP) in a secure, resilient, private, public or hybrid cloud. With strong technical and functional consulting services, and world class monitoring and automation, Syntax serves corporations across a diverse range of industries and markets.

Syntax has offices worldwide, and partners with Oracle, SAP, AWS, Microsoft, IBM, HPE, and other global technology leaders. Learn more about Syntax at www.syntax.com.



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