



WORLD'S LARGEST PUBLISHER OF
MEDICAL AND SCIENTIFIC LITERATURE

**Enabling Business Development & Growth
with a Global, Multilingual eCommerce Website in the Cloud**

As the world's largest publisher of medical and scientific literature, the company serves more than 30 million scientists, students and health and information professionals worldwide.

The company has partnered with a global community of 7,000 journal editors, 70,000 editorial board members, 300,000 reviewers and 600,000 authors to help customers advance science and health by providing world-class information and innovative tools that help them make critical decisions, enhance productivity and improve outcomes.

The world's largest publisher of medical and scientific literature, serves more than 30 million scientists, students and health and information professionals worldwide. The company has been aggressively growing its business and now offers its products in 24 countries.

IT systems play a significant role in supporting the evolving nature of the company's business. As a 130 year old organization, the company had a legacy web commerce platform that integrates with several distribution and fulfillment systems. In a strategic move to strengthen its market share in Europe and APAC, the company wanted to extend its eCommerce platform to support its business for distributing different printed books in these regions.

Cloud Adoption, Fault Tolerant AWS Support & Magento eCommerce Implementation (continued)

As the company's IT Team assessed their existing ecommerce application for this expansion, the application turned out to be too expensive. In addition, it was not scalable to support their evolving business processes and needs.

At this point, the company started to pursue a more scalable, low maintenance and vendor-neutral eCommerce application. It could increase visibility and access to specialized products for their customers. The company required a global, multilingual and secure eCommerce website to reach out to its geographically distributed customers and prospects.

Backed by years of experience in successful cloud implementations with customers across numerous industries, 0-Downtime provides an extensive range of highly tailored cloud solutions and managed services.

0-Downtime was selected to help the world's largest publisher of medical and scientific literature achieve its business objectives with cloud solutions that:

Are scalable to serve the company's evolving business needs

Build a fault tolerant/high availability architecture

Can be designed and implemented with a faster time to market

Deliver reduced IT costs through more efficient usage of resources

Cloud Adoption, Fault Tolerant AWS Support & Magento eCommerce Implementation (continued)

0-Downtime engaged with the company to perform a detailed need analysis, design a roadmap strategy and propose a cloud-based solution to meet all the requirements. After a careful evaluation process, 0-Downtime recommended Magento as the best eCommerce platform to address the company's needs. Based on the critical assessment of the company's operations, geographies and system integration needs, 0-Downtime designed the complete cloud-based ecosystem for the company.

0-Downtime provided an integrated cloud solution that delivered the following business results.

A fault tolerant solution that would guarantee critical service availability and reliability, as well as application execution

Significantly reduced IT costs due to the more effective usage of infrastructure resources and on demand auto-scaling

Enabled high speed delivery to end-users by utilizing local resources

Proactive forecasting for upgrade needs now eliminated unplanned surprises

The cloud solution's automation enabled the company's IT Team to focus more on core business areas, rather than transactional IT operations.

Challenges & 0-Downtime Customized Solution

0-Downtime delivered a multilingual framework and interface, along with exhaustive security on a highly available cloud hosting system.

- 0-Downtime's customized Magento™ eCommerce website cut down world's largest publisher of medical and scientific literature's infrastructure cost by approximately 22%.

- The use of a Content Delivery Network (CDN) for less site load time and a better user experience.

- Amazon Virtual Private Cloud, with advanced security features, was utilized to connect various vendors into the eCommerce site.

The Customer's Business Challenges

The world's largest publisher of medical and scientific literature thrives on an aggressive growth strategy to maintain its position. The company faced the following challenges, which could potentially impede its ability to implement its growth strategy moving forward:

With eCommerce as the critical connection between the business and customers, the existing platform was not scalable enough to meet the company's evolving business processes.

The costs involved to enhance and maintain the eCommerce platform were becoming an impediment to the company's high growth plans.

The highly vendor-dependent application did not allow the company's IT teams to perform in-house upgrades.

Another challenge for world's largest publisher of medical and scientific literature was providing services to a global community of over a million people. The company required an integrated platform with eCommerce support and multilingual capabilities. These needs were not supported by the existing legacy application.

The legacy application required long turnaround times for new implementations and this did not support the company's aggressive business expansion strategy.

**The 0-Downtime Solution:
Cloud Adoption & an eCommerce Website**

0-Downtime created a future-ready and customized Magento™ eCommerce website. The cloud-hosted site met the company's need for an agile and secure eCommerce platform that populates online catalogs with print books, ebooks and journals and makes them available for sale to the company's globally distributed customers.

AWS Cloud delivered scalability, usability and on-demand pricing that supported the company's aggressive expansion plans. In case of any disaster/ fault, AWS's Fault-tolerance mechanism enabled the system to continue its intended operation, possibly at a reduced level, rather than failing completely, when some part of the system fails.

The site was made highly available and localized in multiple languages and currencies and it integrated with different fulfillment systems. It integrates with a variety of different payment gateways. Different layers of security were also implemented and aligned with the company's access requirements. Seamless connectivity with various vendors was achieved and the advanced security management now in place provided strong control over business transactions.

The Amazon Elastic Block store (Amazon EBS) provides a higher quality and more durable solution than a typical hard drive, including persistent block level storage and redundancy. The average annual storage failure rate (AFR) for Amazon EBS storage is typically between 0.1% and 0.5%, compared to an average annual failure rate for a commodity hard drive of 4%.

Challenges & 0-Downtime Customized Solution (continued)

To achieve a more optimized user experience, a Content Delivery Network (CDN) now enables rich media content delivery from the data center that is closest to the end-user. This reduces bandwidth costs, improves content availability and speeds up load times.

With the eCommerce business model, Amazon EC2 empowered the company with the ability to scale its infrastructure vertically and horizontally based on demand and peak load requirements and balance across multiple availability zones. EC2 also enabled a highly reliable, 99.95% uptime and a fault tolerant system.

Amazon ElastiCache significantly improved latency and throughput for many “read-heavy” applications, allowing the company to store the objects that are often read in a cache.

Benefits & Outcomes

The first implementations were in Japan, Korea and Taiwan and they were a huge success. After that, the 0-Downtime Team helped the company roll out the 0-Downtime solution to the rest of APAC and Europe.

Key Features for the Cloud Hosting Infrastructure

- Elastic compute capacity using Amazon® EC2 instances
- Scalable in-memory cache
- Apache Solr™ search integration
- Using Amazon EBS storage for images and product-related resources
- S3 Snapshot backups for all instances
- AWS Security: Hosted inside a VPC with restricted access



Business Results

The first implementations were in Japan, Korea and Taiwan and they were a huge success. After that, the 0-Downtime Team helped the company roll out the 0-Downtime solution to the rest of APAC and Europe.

0-Downtime's agile, fault-tolerant and secure eCommerce website on the cloud helped the company achieve its business requirements, including these results:

Benefits & Outcomes (continued)

0-Downtime combined a strong team of deep cloud experts and years of experience in cloud consulting to develop an integrated solution to address the company's business challenges.

Compared to the cost of ownership for the company's legacy eCommerce application, an immediate TCO reduction of 30% was projected.

The Amazon Web Services' (AWS) agile cloud platform enabled the company to concentrate on its business operations - without having to worry about time-consuming setup and management for its infrastructure resources.

Supporting the world's most demanding workloads, fault tolerant computing gave the company the ability to achieve a system uptime of 99.99% or better - with zero failover time and without data losses.

Now with high availability, high performance and faster load times, the company gained a unique competitive advantage.

By using infrastructure resources more effectively and leveraging on demand auto-scaling, the company was able to significantly reduce IT costs.

Seamless content delivery with reduced resource usage helped to increase the company's sales revenue.

Amazon SES, an Email Service by Amazon, helped the company save marketing costs with the ability to send bulk and transactional emails out to customers in a quick and cost-effective manner.

ABOUT 0-DOWNTIME



0-Downtime Cloud Solutions provides extensive cloud technology expertise and a proven track record to help businesses address a wide range of cloud deployment and cloud maturity needs. We provide exceptional project management based on processes perfected over almost 20 years of delivering business technology services and successful customer outcomes.

0-Downtime provides consultative advice on the most effective approaches and ways to save on costs. We explain how we will ensure that each project is primed for success. We provide roadmap assessments and consultative guidance, discovery, design, building, deployment, and operational support. We understand that for an effective transition to the cloud, an integrated approach is necessary to realize the full business value of cloud computing. We will walk you through every step to achieve a successful outcome and provide unparalleled support where you need it; short-term and long-term. We provide highly specialized and cost-effective teams—drawing from our expert IT resources of 1,000+ worldwide.

0-Downtime is a leading, Advanced AWS™ Consulting Partner, helping customers leverage AWS' Web Service's secure, highly preferred on-demand cloud infrastructure. Through the use of Amazon Web Services infrastructure and application services and effective cloud implementations, 0-Downtime Cloud Solutions help customers unleash tremendous flexibility and cost optimization along with performance, scalability and responsiveness improvements.



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