

Overview:

We developed a web application for a company that specializes in health and beauty products and operates in a click-and-motor model. The issue was with its ecommerce wing. They already had a running website to facilitate online ecommerce. But its contribution towards overall sales and revenue generation was not meeting their expectations. They identified better user experience as one of the areas that needed significant improvement. Besides that, the ecommerce application struggled to handle occasional but sudden bursts in traffic, whenever they happened without prior notice. These were the issues that needed to be addressed.

The purpose of this project was to create another web application which would impress and engage the audiences or visitors. This was to be achieved by making them go through interactive content related to various products, enthralling them and possibly inducing them to purchase online. Features were needed in the web app to facilitate sharing of blog content, running of contests and quizzes with inline products advertising. Provision had to be made to allow visitors to add products to carts, while perusing through related content, and get them directed to the parent website for final payment and checkouts.

To handle the teething and critical issue of handling the sudden surges in visits to the parent website, an AWS EC2 auto-scaling and caching approach was implemented.

Client details:

Name: Confidential | **Type:** Retail | **Location:** UK

Technologies:

HTML5, CSS3, jQuery, AngularJS, PHP, WordPress, Woocommerce, Caching, MySQL, AWS

Project Description:

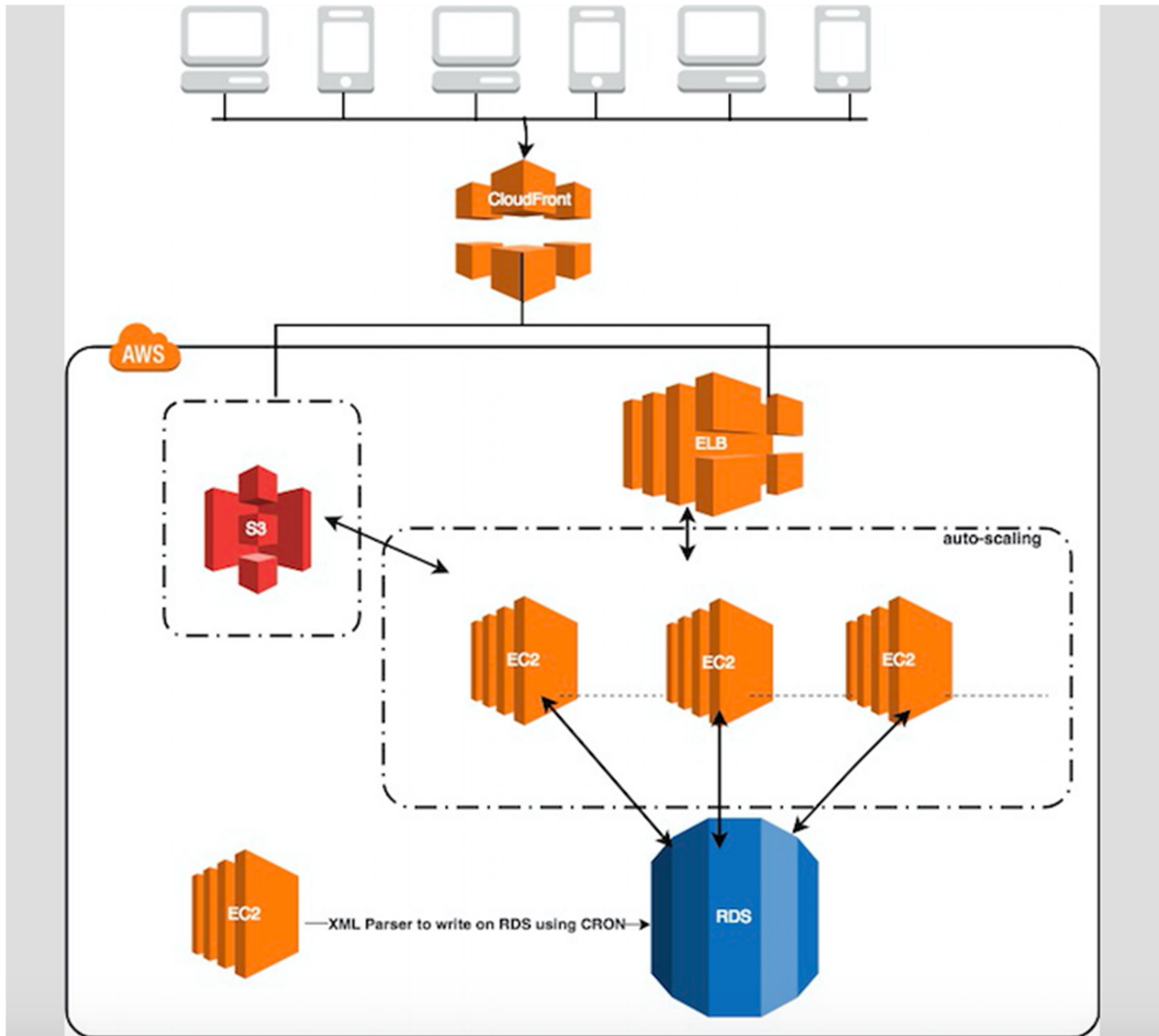
The parent company is a leading pharmacy-led health and beauty retailer. Ranging from local community pharmacies to large destination health and beauty stores, this company successfully runs its business through thousands of such stores spread across the country. Through this project the company intended to give its online presence a major boost. By increasing its degree of engagement with its customers, the purpose was to give a significant push to its sales figures stemming out of ecommerce.

The web application we developed is an interactive online magazine. There are various informative articles available in this website, related to topics on health and beauty, meant to educate and bust myths for its curious readers. These are essentially content aimed at marketing the products that get sold in the parent site, with features to enable its readers to get instant access to their pricing and other relevant information. To keep them tied-in there are quizzes and contests run as well. Visual Composer plugin is used to manage these custom components of the websites e.g. quiz/contest sections.

On every single day an XML file with latest information on product prices and features is sent across to the server. At a scheduled time a PHP script is run to parse this data and update the product information on the live server hosting the new website. For every product, a check is run in parser to determine its state of existence. The ones already present get their data updated while the new ones are added with their corresponding Metadata. WooCommerce is the WordPress plugin that is used to manage all the information related to the products.

Because of the nature of the business, online marketing campaigns are run from time to time to boost sales. The excitement that gets generated amongst the enticed visitors, post such campaigns, reflects in terms of sudden surges in visits to the website. In order to solve the problem of handling these periodic, yet high, numbers of concurrent hits, an AWS-based architecture (EC2-Autoscaling) was implemented by our development team. This facilitated the scaling up of web server capacity to handle the increases in loads at a relatively low cost – overcoming the issues posed by communication breakdown, overhead time, and running infrastructure costs. The caching approach (W3TC) made it possible to reduce the hits to the database by creating static files and serving them; resulting in faster page-load times.

Architecture:



1. ELB - Elastic Load Balancer

- It helps in splitting the traffic to different sub EC2 server.

2. EC2 instance

- WordPress codebase is setup here.
- Multiple servers can be added when there is high traffic.

3. S3

- Used for storing the assets file

4. RDS

- This is used as the database server

5. XML feed

- It can be hosted on rackspace and on this server the latest XML data will be SFTP.
- A parser will be running on this server which will parse the latest XML and insert /update data record on RDS server.
- This WP instance will use the DB configuration of RDS server

6. WP Cache (W3TC)

- We have setup WP caching which helps in creating static files and serving static pages as response.

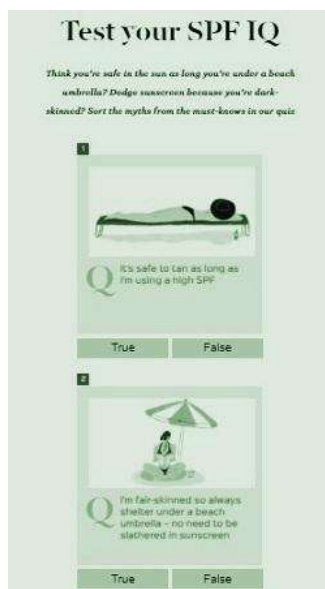
Screenshots



Screenshot 1 & 2: Articles



Screenshot 2: Contest








Screenshot 3: Quiz





Screenshot 4: Product Information




Screenshot 5: Basket

			Saving	Subtotal	
	Paula's Choice Laser Advanced Night Repair Synchronized Recovery Complex II 30ml <small>17751148</small>	<div> <div>1</div> <div>+</div> <div>-</div> </div> Save to list	£0.00	£55.00	
	Yves Saint Laurent Opium Body Cream Jar 200ml <small>1241233</small>	<div> <div>1</div> <div>+</div> <div>-</div> </div> Save to list	£0.00	£62.00	
	Calvin Klein One Eau de Parfum 30ml <small>17461285</small>	<div> <div>1</div> <div>+</div> <div>-</div> </div> Save to list	£0.00	£50.00	
	Soltan Protect & Repel Lotion SPF50+ 200ml <small>12491217</small>	<div> <div>1</div> <div>+</div> <div>-</div> </div> Save to list	£0.00	£8.50	
	Whisper Platinum size 6 - 1 pair <small>12241118</small>	<div> <div>2</div> <div>+</div> <div>-</div> </div> Save to list	£10.00	£28.98	
Apply offer code					
			Subtotal	£213.48	
			Today you're saving	£10.00	


Soltan Once Face Advanced Oil Free Protect Lotion SPF50+ 200ml
17751149
★★★★★ (7)
£10.00 (10 value £20.00, 50% OFF)


Yves Saint Laurent Shower Gel Douce 200ml
1241234
★★★★★ (1)
£38.00 (£76 worth of Advantage C...)


Soltan Soothe & Moisturise Afterpam with Instant Depuffant
17751150
★★★★★ (2)
£5.00 (£10 value £10.00, 50% OFF)

Screenshot 6: Checkout