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Windows on AWS Case Study



AWS Cloud based solution to establish a highly available website taking advantage of demand generated autoscaling for an online website offering a platform on which to conduct debates for a global English speaking market at low cost.

Customer: ForDebating.com

As a free, online, debate platform website whose target market is English speaking users worldwide, ForDebating.com (FD) addressed technical issues around latency, availability, and scalability in the USA, UK, Canada, and Australian markets by selecting Amazon Web Services as their cloud solution provider. Overall project goal was to achieve under 1,000 speed index for reads from any of the target markets, but as a startup company FD had to contain costs. Their initial intention is to launch in the USA, and expand as demand grows worldwide. The highest priority for FD is to provide a great customer experience at the most efficient value ratio AWS could provide.



THE CHALLENGE

Speed - FD wanted users to experience 1,000 or less speed index from any of the 4 target countries. With a goal of having the same readable content presented in under 1 second across all locations

High Availability – The website needed to be available 24/7 with little to no data lose.

THE SOLUTION

We recommended Ohio as the primary site given the population of the US and Canada are concentrated near these areas with expansion sites in London, Sydney, and N. California. Leveraging route 53 latency-based routing to CDN, and, load balancers in front of autoscaling groups.

Multi-AZ MySQL and read replicas would take over in the event of a primary, AZ, or location failure. With multiple AZ in the Load Balancing groups combined with multiple



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	locations, if the speed requirement wasn't met, the health checks in Route 53 would maintain the website.
THE CHALLENGE	THE SOLUTION
Scalability – FD needed to be able to scale based on demand to maintain the required customer experience they desired.	AMIs set to auto scaling automatically at 80% utilization as demand increased satisfied this requirement without having an impact on user experience (UX). Our design allowed for FD to spin up new instances in geolocated data centers beyond the initial four requested with the knowledge transfer we provided.
Cost based on demand – As a startup company, controlling cost is of key importance and FD required that costs be justified by demand. They wanted to maintain as low as costs as possible while keeping a high level of performance.	We recommended the T2.Medium at 2vCPU and 4GB RAM over the m4.large because the traffic was expected to be concentrated during peak hours. MS Server 2016 minimum requirements are 512MB, and the T2.small went over 20% utilization too often in testing. We also recommended one reserve instance in each of the locations.

THE BENEFITS

In house administration

The architecture implemented can easily be administered by FD's own staff without need to hire 3rd party vendors.

Global footprint

By using AWS's infrastructure FD is able to expand their global footprint quickly and seamlessly.

Minimized costs

The use of minimal hardware in a horizontal scaling architecture allows for granular control of capacity and therefore minimizes over provisioning.



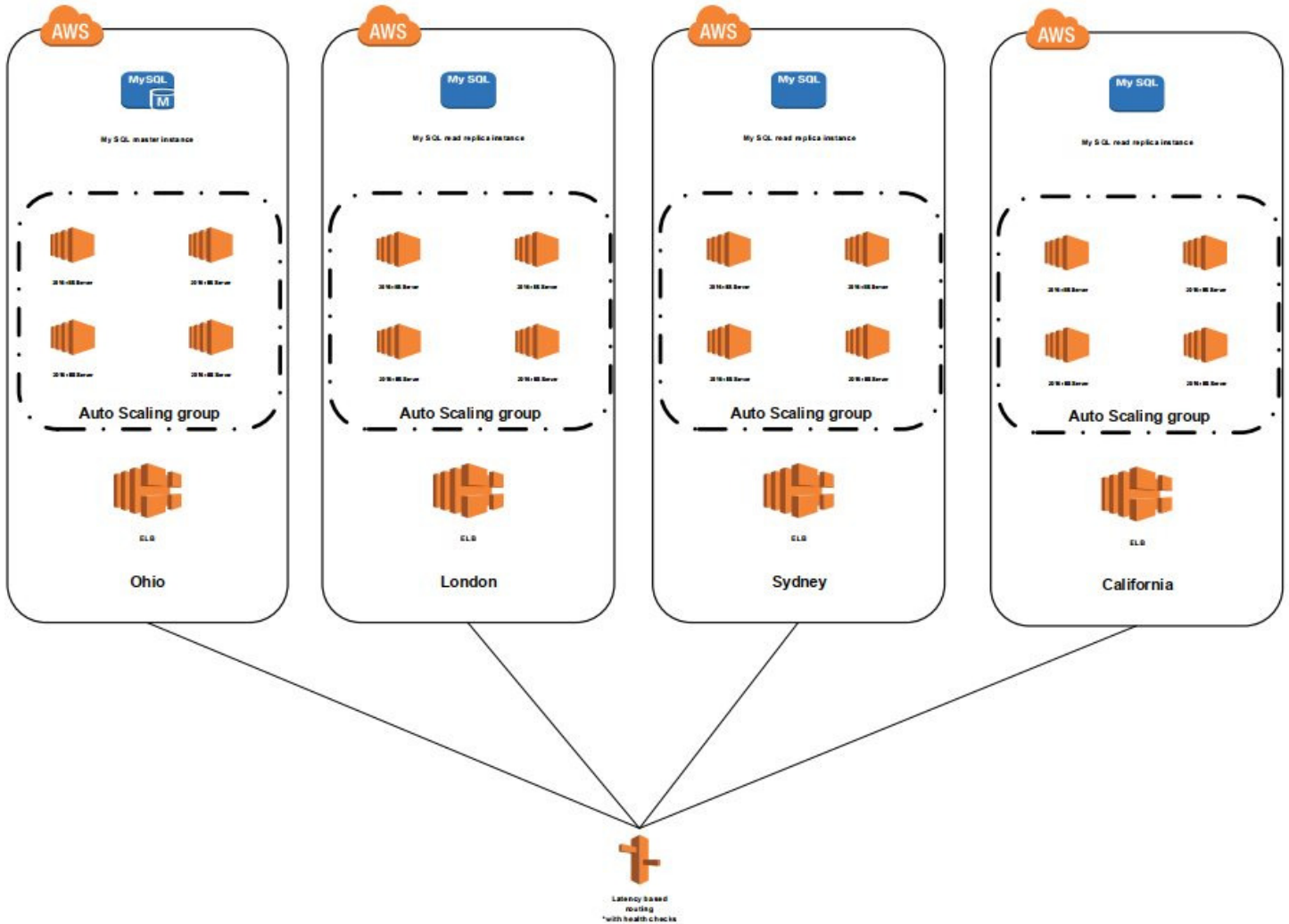
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