

## AutoWeb Uses Robin Enterprise Containerization Platform

### INDUSTRY

Automotive – Mega online presence

### KEY CHALLENGES

- Cluster and data sprawl
- Underutilized Hardware
- Skyrocketing costs

### BUSINESS BENEFITS WITH ROBIN

- 2/3rd reduction in infrastructure costs
- Double performance
- Predictable user experience
- DevOps agility and flexibility

**“Robin has been a huge help to us. The use of Robin’s containerization platform helped eliminate infrastructure inefficiencies and lower our infrastructure costs. Our applications are performing better and we are able to deploy new applications significantly faster than before.”**

**Fernando Jose Boiton,  
VP Technology at AutoWeb**

### BUSINESS CHALLENGES

As the leading automotive search company in the world that connects millions of car shoppers with automotive retailers, AutoWeb, has generated over 23M searches online and generated over 500B in sales. Their online revenue yielding search was largely driven by a diverse application ecosystem running on the public cloud infrastructure.

Rapid growth in business resulted in ever growing sprawl of cloud resources and mounting costs. Dedicated clusters from each application resulted in large number of underutilized VMs. Separate clusters also required data to be copied around, leading to lots of data duplications and a large number of storage buckets. Finally, the shared nature of public cloud resources caused unpredictable performance hiccups and sub-optimal user experience.

Mounting searches, growing data, and soaring infrastructure costs made AutoWeb look for a solution that would allow to keep growing their business without blowing their infrastructure spend.

“We clearly needed a better way to manage our applications and its underlying infrastructure as doing the business the usual way was just not sustainable. Our costs were going through the roof and we were struggling to provide a consistent user experience” said Fernando Jose Boiton, VP Technology at AutoWeb.

### ROBIN ENTERPRISE CONTAINERIZATION PLATFORM

Robin Enterprise Containerization Platform heralds the era of application-centric IT by making servers, VMs, and storage boundaries invisible. Robin software transforms commodity hardware into a compute, storage, and data continuum such that multiple applications can be deployed per machine. Robin’s app-to-spindle QoS guarantee maximizes application performance and helps deliver predictable user experience. This makes Robin the ONLY product in the industry that can consolidate even most demanding enterprise applications - such as databases and Big Data clusters- without compromising performance or predictability.

First, Robin’s container-based Virtual Cluster technology enables clusters to be consolidated on shared hardware and dramatically accelerates application deployment. Even the most complex distributed applications, such as Hadoop or NoSQL, can be deployed within a matter of minutes.

Second, Robin application-aware, scale-out storage improves data protection and makes applications fault tolerant. By decoupling compute from storage, Robin platform not only protects applications from server failures, it also enables them to move around without copying or moving data.

Finally, Robin’s application-driven data management capability enables data sharing across clusters thereby eliminating unnecessary data duplication. This allows quick application/cluster cloning regardless of the data volume.

## AUTOWEB CASE STUDY

**ROBIN AT AUTOWEB**

AutoWeb turned to Robin to optimize their public cloud spend by consolidating applications on a shared infrastructure. The use of Robin Containerization Platform enabled them to avoid additional costs while improving the production ready microservices infrastructure, without the investment and learning curve to build from scratch with VMs or on-premise clusters technologies, with the risk of data sprawl.

The fast track to implement and prototype was obtained thanks to the API level interaction to spin up the infrastructure AutoWeb required by the CI/CD layer, in order to profile and stress the systems - thus helping in 2/3rd cost reduction. In addition, AutoWeb experienced better application performance, significant reduction in time for provisioning an application environment, and gained massive agility and flexibility in their DevOps environments.

**Dramatic Cost Reduction through Application Consolidation**

Using Robin, AutoWeb was able to identify how to proceed towards elimination of cluster silos and consolidate applications such as Elasticsearch, Sphinx, Redis, Memcached, among others, on a shared pool of resources. Using Robin's virtual cluster capability, each application was deployed as a set of containers on a set of SSD based VMs. The use of containers, along with Robin's Application-to-Spindle QoS guarantee, made sure that each cluster achieved complete run time isolation and behaved exactly the way it worked originally – but with one big difference - the new infrastructure cost less than half of what AutoWeb was spending earlier.

**Reduced Provisioning Time and Data Sharing through Single Click Provisioning**

Robin's multi-tenant infrastructure and rapid application deployment capabilities brought about significant agility and productivity benefits to application development teams. Robin achieves this by eliminating the need to provision new machines each time a cluster is deployed and automating the entire infrastructure provisioning and application configuration process.

**Performance**

Robin's compute side data acceleration capabilities helped AutoWeb address the unpredictable application performance challenge. By caching data locally on SSDs, Robin helped avoid slow storage access as well as unpredictable network round-trip. This resulted in approximately 2.5x gain in read performance.

Feature	On AWS Public Cloud Only	With Robin
Compute	High spend while profiling undertutilized EC2 compute instances for each application	Profiling and prototyping at any time to improve resources utilization with the ability to run either on EC2 or Robin Clusters
	Active risk for unrecognized over spend with Siloed Clusters	Shared infrastructure allowing performance and cost tuning
Storage	Mainly HDD	SSD + HDD more close to the physical layer available for High I/O tasks
	Underutilized separate S3 data storage for each application	Potential shared commodity storage
	Compute tied to Storage	Compute Storage separation