VGW - Virtual Back Office

Case Study

MECHANICAL ROCK

The Client

Virtual Gaming Worlds is an innovative and highly profitable game design workshop.

VGW are the pioneers of Social Sweepstake Gaming with tens of thousands of players worldwide and multiple product lines including the Chumba Casino and Global Poker platforms.

Virtual Back Office

VGW's rapid expansion has placed an increasing demand on their back office organisation which deals with critical processes such as user administration, cash outs and redemptions.

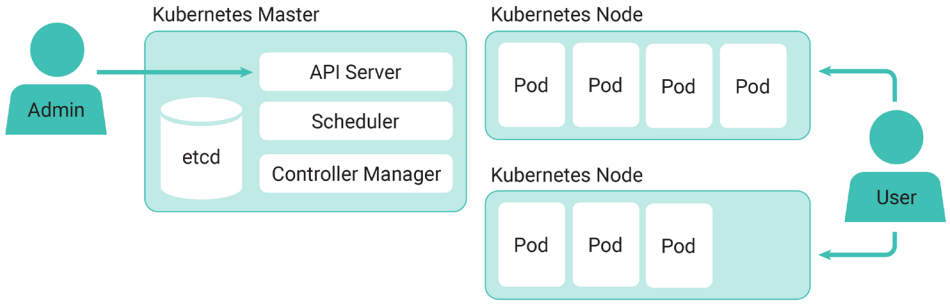
In order to streamline the back office and support a growing customer base, VGW decided on a ground-up rewrite of the back office platform to support all of their core front-ends in a single, scalable platform.

The Problem

Kubernetes and the Cloud

VGW turned to Mechanical Rock to build a modern, efficient back office application suite. Using a combination of AWS managed services and Kubernetes container technology Mech Rock delivered a robust, reliable, autoscaling solution with minimal operational overheads.

The VBO solution utilises Kubernetes, the open-source container-orchestration system for automating deployment, scaling and management of containerised applications.



Containers enable portability and reduce the friction of moving an application through development, testing and into production. They encapsulate all necessary dependencies to serve as a building block that can be deployed on any compute resource regardless of software, O/S or hardware.

Kubernetes deploys and runs containers in 'pods' on a managed cluster of compute instances. It decides when and where to run your pods, manages traffic routing and scales based on utilisation. It also automatically restarts pods which fail.

The combination of containers and Kubernetes delivers:

Flexibility – via continuous deployment into reusable containers

Scalability – via autoscaling and scheduling of nodes

Resiliency – via Kubernetes self-healing properties and the redundant nature of nodes, pods and containers

Efficiency – with a higher compute density than traditional VMs, containers offer a lower TCO as you only pay for what you use

The Solution

Managed Kubernetes on AWS

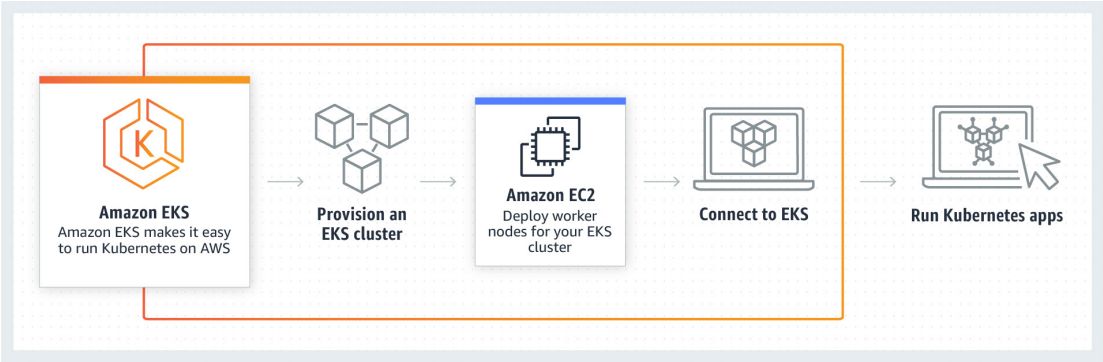
To minimise the overheads of running Kubernetes, Mechanical Rock used EKS, the AWS managed Kubernetes service.

EKS makes it easy for you to run Kubernetes on AWS without needing to maintain your own Kubernetes control plane.

The VBO solution represents the first production deployment of AWS EKS in Australia and VGW is scaling up the integration of this with their front-end gaming platforms.

Amazon EKS provides a scalable and highly-available control plane that runs across multiple AWS availability zones. The Amazon EKS service automatically manages the availability and scalability of the Kubernetes API servers and the etcd persistence layer for each cluster.

Amazon EKS makes it easy to provide security for your Kubernetes clusters, with IAM providing fine-grained access control and Amazon VPC isolating your Kubernetes clusters from the public internet.



The Benefits

End-to-End Solution

VGW's back office system represented a complex problem and demanded an end-to-end solution. Mechanical Rock's design catered for all of the complex technical and business requirements and was delivered quickly.

Previous implementations were tightly coupled to the front-ends they served. Using CQRS & event sourcing enabled the back office to be decoupled and provided an easy migration path.

Using containers also smoothed the development of the back office service as components could be developed, tested and deployed independently using continuous build pipelines.

Moving to containers and Kubernetes enabled VGW to reuse large portions of code, already written as long running java services. These provide high performing services as some frontends required sub second responses, irrespective of load.

And VGW is a global 24x7 operation with tens of thousands of active customers around the world. The VBO solution had to support high availability, high activity workloads around the clock.

The VBO solution represents another successful evolution in the long and valued partnership between VGW and Mech Rock. As VGW continues to push the envelope in what is possible for online gaming, Mechanical Rock is there to support their growth, providing valuable technical assistance as a trusted partner.

> *"Mechanical Rock helped us put our first automated deployment pipelines together and kicked off our DevOps practices in the company. They're a talented team who have helped us with a lot of projects over the last couple of years."*
>
> **Matt James**
> Chief Technology Officer
> VGW Holdings Ltd

Think we can help with your project?

Get in touch so we can chat about your plans over a coffee

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