

Case Study: PrimeSize POC at Racing and Wagering

Background

Racing and Wagering Western Australia (RWWA) runs the WA TAB which operates a high volume and performant wagering system for its customer base across Australia. Historically RWWA ran its production Oracle databases across its on-premise Data Centres, which at peak usage times handles up to 7 terabytes of wagering and customer data. Due to the nature of the business the pattern of throughput and customer activity is highly coupled to key sporting events across the world, with high loads of traffic peaking during these events.

Due to an organisation wide initiative to migrate its key wagering workloads to AWS, RWWA invested in a proof of concept to test the suitability of running the on-premise Oracle workloads in AWS, to ensure the highly performant systems are maintained in the cloud environment, removing the impact of latency back to its on-prem systems whilst taking advantage of the scalability of cloud computing.

A consideration throughout the POC was understanding how to correctly configure AWS EC2 for Oracle to match performance of the equivalent Oracle on-premise environment and demonstrate scalability for expected future growth in demand. Although RWWA has an intimate knowledge of their own systems, they required assistance from a partner who had experience designing, testing and implementing AWS environments for highly available and high-volume Oracle architectures.

Why Blue Crystal Solutions? (BCS)

“We required a partner that was competent with both migrating Oracle databases and proven experience in deploying AWS environments that align to best practice architecture” Grey Properjohn - Head of Software Engineering and Architecture, RWWA



RACING AND WAGERING
WESTERN AUSTRALIA

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Key Benefits

- Minimised unnecessary spend on AWS environment costs as a result of over resourcing
- Increased confidence towards validation of further migrations based on the POC results
- Ensuring license compliance during migration with RWWA's existing Oracle licenses
- POC testing showed that Oracle on AWS EC2 was able to provide better performance, in some cases requests were being processed 2 x faster than the existing Oracle on premise databases.

At Blue Crystal Solutions (BCS) we thrive on helping organisations succeed by always looking to innovate and give our customers an edge that improves their business performance. We do this with passion, pushing the limits and inspiring each other to deliver extraordinary outcomes.

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Why Blue Crystal Solutions cont..

- This was the first time RWWA had attempted a POC involving moving Oracle workloads to AWS cloud, therefore they required a partner who understood both platforms and had developed the relevant pre-migration tools which could provide clarity and a clear design, POC and roadmap for a future migration.
- BCS have developed PrimeSize which when paired with the advice from consultants provides vital information to enable RWWA to make informed on-premise, cloud and licencing decisions with potential cost savings.

BCS Solution

BCS utilised their internally developed PrimeSize Architecture Report that analysed RWWA's environment including workloads during the Melbourne Cup as a component of Spring Carnival and recommended a design to meet their requirements. BCS then built the AWS platform to run the POC for testing.

The analysis and subsequent recommendations from the PrimeSize and POC report provided the framework to determine actual resource requirements and advice for optimum target architecture, considering license constraints, performance, consolidation opportunities and costs for Oracle and AWS cloud services. When looking at the workload statistics they showed that the proposed environment aligned with the current licensing footprint, removing the need to purchase extra licenses.

It was important that any design from the POC should minimise potential downtime during the later migration. "We needed an independent validation of our internal thinking" Properjohn explained. BCS were able to provide clarity and provided a clear recommendation for the optimum target AWS architecture utilising PrimeSize.

Benefits Gained

- RWWA minimised unnecessary spend on AWS environment costs as a result of over resourcing.
- Increased confidence towards validation of the migration approach and assisted in reducing potential delays towards the go live date.
- PrimeSize report provided a framework for a successful Oracle to AWS migration which has the potential be replicated for additional projects across the business.
- As a result of the recommendations included in the PrimeSize report, testing showed that Oracle on AWS EC2 did not require any additional licences and was able to provide better performance, in some cases requests were being processed 2 x faster than the existing Oracle on premise databases.

