TIMG and RackCorp Ensure Secure Workflows and Non-Stop Availability for a State Electoral Commission[1]



'It is easy for me to recommend TIMG as a solution provider. Every part of the engagement process and project execution was done well by them. We were extremely happy with the operational efficiencies and end-user experience that their solution provided.'

State Electoral Commission Project Manager

RackCorp SECURE CLOUD timg®

[1]State name withheld to preserve confidentiality.

The Challenge

Before the State Electoral Commission (StateEC) implemented the TIMG / RackCorp solution, the Commission's workflow management processes for proofing of ballot papers and registration of election materials—both critical, time-constrained processes—were manually handled and paper-based.

The StateEC saw an opportunity to improve operational efficiency, reduce risks on timed deliverables, and improve the experience of process users by introducing a document and workflow management system for these two processes. After conducting a market survey, the StateEC selected TIMG to deliver this solution for their State General Election 2015.

'For these two processes, our number one priority was approving the electoral materials to make sure that they were correct and legislatively compliant. We wanted to find an innovative workflow-based solution for managing these materials electronically to deliver the operational efficiencies so we can better focus on this priority. It was also important to us to continually improve our services to our customers, a group that includes candidates, political parties, and interested organisations and individuals. We wanted to make our administrative processes easy for them to engage with so that they could focus on their other election priorities.' – StateEC Project Manager.

Equally important to the StateEC was a customised disaster recovery (DR) process.

"These processes are highly time-dependent and critical to an election's success, so there is no room for service downtime once the process commences. We needed a DR solution that was absolutely reliable, no matter what kind of server attack or site disaster might occur. Continuity of service was absolutely paramount."

StateEC Project Manager.



The Requirements

The StateEC required TIMG to deliver a solution comprising two workflows, one for each process. The workflows had to be flexible enough for use with the Commission's internal process of ballot paper proofing, as well as for the registration of electoral material for the forthcoming State Election. The solution needed to permit StateEC staff to perform ballot paper proofing in a process that incorporated approval and quality assurance of ballot papers for almost 100 electoral districts, while integrating with a larger multi-vendor workflow that would include the printing process.

TIMG's solution was also required to provide hundreds of users across the State—including dozens of political parties, candidates, and interested organisations and individuals—with a secure self-service portal for registration of electoral material that would incorporate a comprehensive, multi-tiered approval workflow for StateEC staff. Furthermore, each solution required around-the-clock availability within critical timeframes leading up to the State Election. Consequently, downtime, scheduled maintenance and service interruptions of any kind were completely unacceptable.

Hundreds of functional and non-functional requirements—all critical to the success of the system—needed to be met. These included such mandatory features as

- extensive security controls, including
  - access control with two-factor authentication
  - logging and auditing
  - 'denial of service' attack protection
  - at-rest and in-transit encryption
- direct access to 24/7 application and infrastructure-level support by key StateEC staff
- solution scalability, demonstrated via a load testing phase that ensured that the solution's capacities exceeded the expected load and visitors by a factor of at least 10.

The Solution

For its solution, TIMG drew on its experience in providing high availability application and database functionality in conjunction with geographically redundant platforms. This was complemented by integrated DR and a failover mechanism provided by RackCorp to ensure the level of availability the project required.

TIMG engineers used an Agile development process to ensure the flexibility to adjust features in swift response to client feedback. This also ensured that feedback and improvement were incorporated into an ongoing cycle, with project deliverables accessible to StateEC staff long before the final deadlines.

'TIMG executed the Agile methodology exactly as it should be executed. We were able to explore some concepts that we weren't 100% sure of initially through this process, and this gave us the necessary flexibility to "trial and error" our way towards the most suitable solution.' – StateEC Project Manager.

Where the major monolithic cloud service providers couldn't ensure that there would be no scheduled downtime during critical timeframes, RackCorp could guarantee that their DataCentre engineers would work around StateEC's critical 'go live' periods. TIMG was able to use its existing Project Management, Solution Architecture, Software Engineer, and Critical Support resources to form a project team to address all aspects of the project requirements, while collaborating with network engineers at RackCorp to deliver infrastructure components.

Using the secure development techniques that reside at the core of TIMG's development practices, and deploying to the same secure RackCorp platform used for commercial payment systems, security was baked into the foundation of the solution and exceeded requirements. A continuous improvement and iterative approach to system testing, combined with RackCorp's scalable infrastructure, ensured that the entire platform was able to exceed scalability demands—in some case a hundredfold—and could easily handle the volume of visitors that was expected over weeks, without issue. A joint Incident Response Team of key staff from TIMG and RackCorp operated as a cohesive unit, and leveraged advanced monitoring to address all issues leading up to and during the 'go live' period.



Conclusion

Together, TIMG and RackCorp delivered the StateEC a world class information management solution on time, on budget, and exceeding project specifications.

To find out how TIMG and RackCorp can solve your information management and infrastructure challenges, contact TIMG or RackCorp today.

Call our people now to arrange for a review of your current situation

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