

CASE STUDY

LOCAL GOVERNMENT

How KJR Helped a Leading Council Deliver a High-Speed, Resilient Website

Project: Corporate Website Performance Testing



KEY OUTCOME 1

Corporate website achieved a throughput of 30 pages per second



KEY OUTCOME 2

Performance testing capability shifted left to the vendor



KEY OUTCOME 3

Two significant performance issues identified and fixed

BACKGROUND

To uphold a positive user experience and ensure platform reliability, a large Australian Local Government organisation engaged KJR to plan, execute and report on performance testing for its new corporate website.

Recognising the website's vital role in citizen engagement, service delivery, and information sharing, the customer took a proactive approach. As a central hub for accessing services, staying informed and interacting with local government, the new corporate website needed to perform under both expected and peak traffic. KJR's performance testing validated the site's ability to handle load effectively, ensuring residents could access essential online resources without disruption.

CHALLENGE

This customer's primary challenge was ensuring its new corporate website—built on Adobe Experience Manager Cloud (AEM Cloud) and integrated with Azure's Integration Platform as a Service (iPaaS) and Elastic Search—could maintain consistent performance under pressure. The site needed to stay responsive during sudden traffic surges, particularly in natural emergencies when residents urgently access critical services and information.

To prevent service disruptions, the customer sought to identify and address performance bottlenecks early. It was essential to gain confidence key website features would continue functioning reliably under real-world peak load conditions, ensuring uninterrupted access to essential information for the community.

SOLUTION

KJR worked with the customer to deliver a comprehensive performance testing solution, providing expertise to plan, execute, and report on the tests. KJR supplied the hardware for JMeter generators and customised datasets for bin and event lookups. Two sets of tests were conducted: one at the HTTP layer and another simulating actual browsers. Testing included a baseline test, image size verification, service concurrency updates followed by an 8-hour soak test. Technologies used included Apache JMeter for load testing and Selenium JMeter Plugin for browser response times. The site was tested under a load of 30 pages per second or 200,000 visits per hour.

DELIVERABLES

KJR developed a detailed Performance Test Plan, outlining the scope, methodology, test data and objectives. To shift testing left, KJR empowered the development vendor to execute tests in their environment. Load and soak tests were conducted to simulate real-world conditions, ensuring the website could handle expected and peak traffic. The results, along with actionable recommendations were documented in a Test Execution Report. Regular progress updates were provided through Weekly Status Reports keeping all stakeholders informed throughout the process.

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KEY OUTCOMES

KJR's performance testing resulted in several key outcomes. The testing validated the website's scalability by confirming its ability to handle peak loads and maintain consistent performance for critical citizen-facing services. These services included crucial website features such as local event lookups, Events near me, bin lookups, and what's my risk, ensuring their functionality under varying load conditions.

KJR also identified and helped resolve key performance bottlenecks including image sizes and slow API calls. By providing thorough testing and actionable recommendations, KJR helped mitigate potential go-live risks, ensuring a smooth and successful deployment.

The KJR team provided reusable JMeter scripts, enabling both the development vendor and the customer to perform performance testing, performance monitoring and proactive maintenance.

Ultimately KJR's input resulted in a high-performing website, significantly enhancing the citizen experience by ensuring reliable access to essential services and information.

VALUE TO CLIENT

The performance testing engagement provided significant value to the customer by proactively addressing performance issues. KJR ensured the website could reliably handle peak traffic, particularly during emergencies when demand surges. By identifying and resolving bottlenecks like large image sizes and slow API calls, KJR helped to optimise the site for seamless performance, safeguarding the customer's reputation and ensuring uninterrupted access to critical citizen services. This enhanced the overall citizen experience, increasing satisfaction and engagement.

KJR delivered testing artifacts, including reusable JMeter scripts, which empower the customer to perform ongoing performance monitoring and proactive maintenance. These tools enable the customer to stay ahead of performance issues and ensure continuous improvement.

KJR's contributions ensured the website could meet its goal of providing essential services and information to the community reliably, fostering increased citizen engagement. The proactive approach to performance testing has set the stage for sustained, high-quality website performance, ensuring this large local government organisation remains responsive and accessible to residents in all conditions.

TOOLS & TECHNOLOGIES

Apache JMeter, Microsoft Azure, Adobe Experience Manager

