

CASE STUDY

Delivering Confidence in Learning Management System Platform Performance

AT A GLANCE

Industry

State Government & Education

Capability

Software Quality Engineering

Solution

Performance Testing & Validation

The Challenge

Validate the customer's digital learning management system platform could support the expected annual mandatory compliance training for approximately 95,000 teachers.

The Outcome

- Simulated up to 120,000 course completions per day.
- Verified platform performance under predicted usage scenarios.
- Provided evidence-based evidence the system will support the expected mandatory compliance load.

BACKGROUND

This government education department delivers annual mandatory compliance training to approximately 95,000 teachers through their cloud-based digital learning management system (LMS). Following the rollout of a new quiz engine, the department sought assurance the platform is able to support the peak yearly mandatory compliance training.

THE CHALLENGE

The teachers typically complete their mandatory compliance training during two student-free days at the beginning of the school year. The SaaS vendor Instructure could not certify whether the new quiz engine would perform reliably under this level of demand. Performance issues could disrupt training delivery and create operational issues across schools.

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WHAT KJR DELIVERED

OUR ROLE:

KJR designed and executed independent performance testing to validate the new quiz engine within the LMS environment. The KJR consultants worked closely with both the Department and Instructure, to provide evidence the New Quiz engine would perform under anticipated peak loads.

KEY CONTRIBUTIONS:

- Designed a performance testing strategy aligned to expected training volumes.
- Coordinated independent testing with the Department and Instructure.
- Simulated large-scale user activity based on predicted worst-case scenario.
- Assessed platform behaviour under increasing load conditions.
- Provided analysis supported by the captured metrics.

HOW WE DID IT

01

Discover & Assess

- Reviewed the LMS platform and expected user demand.
- Defined peak-load scenarios and success criteria.
- Collaborated with the customer to establish a production like test environment.

02

Assure & Validate

- Automated end-to-end training and quiz completion activity.
- Simulated progressively increasing user volumes.
- Captured and analysed performance metrics across the platform.

03

Release with Confidence

- Validated performance against anticipated demand.
- Provided clear evidence to support deployment decisions.
- Shared findings with the customer.

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IMPACT & BUSINESS OUTCOMES

- ✓ **Reduced the risk** associated with deploying the New Quizzes engine.
- ✓ **Increased confidence** in platform stability during yearly training periods.
- ✓ **Demonstrated** the ability to support up to 120,000 course completions per day.
- ✓ **Enabled** informed go-live decisions based on performance evidence.
- ✓ **Supported** the Department's annual training delivery with greater confidence.



WHY KJR

- Extensive experience supporting government technology initiatives.
- Proven capability in performance testing and technology assurance.
- Independent validation that provides decision-makers with clear, evidence-based insight.
- Strong track record working with government digital platforms.

TECHNOLOGY VALIDATED

The following technologies were validated as part of the engagement:

Canvas LMS | K6 | Grafana | InfluxDB | AWS

