QualityLogic

CASE STUDY

Managed QA Services with eCommerce Load Testing

After the failure of their new web-based reservation system, the agency determined that they needed an independent load test of the system under high demand conditions.

The Client

The client is a recreational resources service that operates as a sub-agency of a county government. Since 1970, they have operated their own IT department, separate from the county, with a substantial budget. They offer class registrations, meeting room rentals and live theater tickets that are reserved and paid for through an eCommerce system that was built by a third party web development service. They also use a third party credit card authorization service.

The Issue

Three times per year, residents have a priority registration for classes and other services offered by this organization. This causes a high traffic period for reservation sales. Previously, the organization had used a manual registration process for this high intensity period. To better manage demand they went to a new automated web-centric system.

The system was launched during a 'rush' period and crashed after three minutes. Three months were spent resolving issues with the vendor's help, and a new JavaScript version was identified as the problem. Their next high-volume service registration coincided with the next attempt to use the repaired system, and it crashed again within minutes. This time, a corrupted logo being put on receipts appeared to be the culprit.

The Solution

After correcting the logo issue, the client began using the web system successfully for all but peak demand periods, but this comprised less than five hits per day. They determined that they needed an independent load test of their registration system under the high demand conditions that had caused the previous failures.

The organization expected a concurrent user load of approximately 50 to 100 users with 300 users in one hour. QualityLogic designed load test scripts to browse catalog entries and add classes to a shopping cart that would be checked out through the third-party cart system. Additional

scripts ran background loads that simulated user activity other than reservation purchases.

The system was ultimately tested with 100 concurrent users performing 2,000 transactions over five minutes to exceed the maximum expected load and verify the available usage level overhead. The organization's web server is hosted at a remote center and hosts other functions, so the test required coordination with several agencies, as well as the third-party credit card verification vendor.

The Outcome

Early functionality verification of the QualityLogic load test scripts revealed problems with the credit card authorization service and with the configuration of the web site for servicing more than 10 users. These issues were corrected, and the test proceeded as planned. Several additional configuration adjustments allowed the test to successfully exceed the initial maximum performance parameters for the system under test.

As a result of the test and corrective actions it prompted, the client had a successful re-launch of their online registration process. They were able to process 150 registrations online in the first 15 minutes of the next rush period without any problems with the system. The outcome of the load test and re-launch of the service was considered an unqualified success.

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For More Information
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