Case study:

University Of Bristol

Introduction:

The University Of Bristol is one of the most popular and successful universities in the UK and is ranked as one of the top 50 universities in the world.

Founded in 1595 Bristol is at the forefront of many technological advancements to date, with areas ranging from cot death prevention and nanotechnology.

Bristol also boasts one of the highest student approval ratings, with over 18,000 undergraduates and a further 5000 postgraduatess currently enrolled.

The Situation:

• No performance testing resource was identified within the University. 'Tribal' indicated they had Performance Tested, but we wanted to check public facing pages ourselves to give an additional level of confidence. This was raised the week before go-live, as an afterthought.

• After a delay with Tribal provisioning and configuring the Training environment, timescales were exceptionally tight for getting test data into the new environment. The training team had their test data but were manually entering it into the system, via SITS, from a spreadsheet.

• SITS Client is un-automatable

• The university were facing 2 months delay due to ineffective data preparation.

• CBlue had no in-house performance capability

They have offices in 26 countries, employ over 13,200 people and have the global reach and distribution power to meet the needs of issuers and investors worldwide.

They trade globally, on all markets. Orders for various regional markets are collected and prepared into batches for valuation, in readiness for the start of the specific regional trading day.

The Solution:

• We used LoadRunner and quickly scripted performance tests for the Public Enquiry form, uncovering a critical defect.

• This approach was far from efficient, so we created a script that took their dataset and automatically put it into the environment to save the job of copy and pasting from a spreadsheet. The script was demonstrated and the approach quickly approved and adopted

• Our technical specialists undertook an analysis, and identified a way forward.

• The requirement was simple; the university had a selection of source files. They needed the data converted from flat files to JSON. Using C#, we developed a PoC that converted Programme Structures from flat file to an importable JSON file. After demonstration, we were asked if we could create conversions for all data types (Structures/ILOs Competencies/ Mapping etc).

• We implemented performance testing capabilities for CBlue

The Results:

• Critical defect discovered whereby only 1 user could sub use the Public Enquiry Form at one time. 2 or more concurrent users caused an error to be shown. In the event of the error, a nonstandard error page was displayed showing a form that should have been hidden behind secure login. This work raised awareness of both the critical defect (which remains only partially resolved) as well as gaps in the Vendor validation

• The automation saved time, reduced the risk of human error and freed up resource to carry out essential training preparation. It was also scalable so when further data was required the same script was used. Despite the tight timeline, training was carried out successfully.

• We achieved an acceptable level of automation on the SITS Client, despite initial internal dismissal of this topic (Technically too difficult). We utilised OO Concepts, to allow interaction with controls on the screens, despite the fact controls on the screen were not recognised (testability really needs to be designed in from the start). Each page is represented by a class, and multiple page objects can be created and interacted with at one time, allowing complex tasks to be automated.

• The core code was developed for all transformations. The 2 months delay was recovered, their internal proposed solution was cancelled, and they were able to generate ad-hoc partial or full datasets for upload into CBlue.

• Comprehensive performance test scripts were written to provide effective code base coverage. Numerous performance issues were identified. We were instrumental in the troubleshooting and resolution of numerous performance issues.

About Infuse Consulting

Since 2002, Infuse Consulting has been helping leading companies deliver their software projects more successfully. We are early adopters and industry leaders of Test Automation, DevOps, Agile & CI/CD Services.

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