

# CASE STUDY

## Top Marks for UCAS

*"Empirix's solutions were very intuitive, allowing technical staff to get straight to the heart of any potential problem, without the need for training on another support tool. It just worked from day one."*

Steve Harrop, Digital Services, UCAS.



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### BUSINESS CHALLENGE:

UCAS is a name that any A-Level student and higher education institution will be very familiar with. It is the central organisation that processes applications for full-time undergraduate courses at UK universities and colleges and it is the key link between the students and universities and colleges. When UCAS first launched its website in 1997 it was fairly simple, and did not have any interactive content. It was primarily an online version of its paper-based UCAS Directory; providing information on the hundreds of colleges and universities, and the thousands of courses on offer. Currently there are around 330 higher education institutions offering over 55,000 courses; each using UCAS to process a total of 2.5 million applications from 520,000 applicants.

For many years the process of applying to a college or university was laborious and time consuming for all parties involved; lots of paperwork, large books, and hours of researching universities and courses. Today, the process has changed dramatically. The website ([www.ucas.com](http://www.ucas.com)) is now the public facing front to the company and the main source of information for students. It is fully interactive and now acts as the main channel used by students to research suitable learning opportunities, submit their applications, check the status of their applications, and reply to offers from the various colleges and universities.

*"Our business is based around providing accurate services and up-to-date information to millions of people; we need to be able to spot potential problems before they happen."*

In 2004 only 21 per cent of the applications processed by UCAS were submitted through the organisation's website. By 2005 this figure had increased to 58 per cent and now for the 2006 application cycle approximately 98 per cent of all the applications have been made through the UCAS website. Its aim is to constantly

improve the application service and quality of information available to applicants and institutions to help both parties make fully informed decisions.

One of the major challenges for UCAS is that the process of applying to higher education institutions is deadline focused. Applicants, schools and universities have numerous deadlines to meet during the application process. This means that the IT infrastructure and systems at UCAS have to be able to cope with huge spikes in the number of users accessing the site for information, completing applications and monitoring and updating application information.

### Key features of the e-Load solution:

- **WebSmart technology** - automate the most complex web applications and associated technologies out-of-the-box to create robust load test scripts.
- **Scalable load generation** - simulate hundreds or thousand of users while minimising the hardware required to run tests.
- **Integrated ServerStats monitors** - gather critical performance metrics from the back-end server and network components to identify bottlenecks that occur under load.
- **Intuitive Web-based user interface** - access e-Load via any web browser to easily configure load tests, set up server monitors, run tests and view real-time and post-run results.
- **Collaborative load testing** - multiple distributed users sharing e-Load results during a live load test session and collaborate on application performance testing and tuning.

By May 2006, Applicants looking to enter higher education in October 2006 had made over 13 million logins to the UCAS website to review the progress of their application. During the busy months one service alone, UCAS Apply, supported over 8,000 concurrent users and an ABCe audit of the UCAS website reported that there were over 67 million page

impressions in November 2005. Throughout the application cycle UCAS' IT infrastructure is truly tested on a number of mission critical days, one such day in 2006 the website supported over 5 million page impressions with the tracking service supporting a peak load of 47 new logins per second.

## BUSINESS SOLUTION:

### Empirix e-Load and OneSight

To help facilitate the new functionality and improve the user experience, UCAS contacted Scientific Computers Limited (SCL) to help provide the level of service and expertise necessary to ensure all services achieved desired service levels.

Scientific Computers Limited ([www.scl.com](http://www.scl.com)) provides innovative computing and IT solutions throughout the UK, Europe and Scandinavia.

UCAS has been working with SCL for 6 years. As the UCAS website became a critical part of the application process, and usage continued to increase, SCL recommended that UCAS implement an ongoing testing and monitoring programme to ensure people using the site are having a satisfactory experience. SCL recommended Empirix's e-Load and OneSight solutions to ensure that the UCAS site delivers the level of service that is required by students and education institutions.

e-Load is a powerful solution that lets UCAS easily and accurately test the performance and scalability of its web applications and web services. With e-Load an organisation can simulate hundreds or thousands of concurrent users, executing real transactions to analyse how well its web applications will perform under peak load. Key benefits are; monitoring the performance of the back-end application infrastructure during load testing, to identify bottlenecks and help tune application performance. UCAS recently used the e-Load solution to ensure that its Track service would handle the huge spike in the number of new logins, predicted to be over 20 logins per second. The e-Load tool allowed UCAS to locate and remove any bottlenecks in the existing infrastructure, to ensure the service could deliver between 40 and 60 logins per second. This work proved vital, as the application sustained an average login rate of 25 logins per second for the first day of operation.

OneSight provides a comprehensive view of an organization's entire web infrastructure to ensure the optimal performance of its web-based applications and deliver the best possible quality to its end users. It combines effective measurement of the customer experience with metrics on the performance and availability of supporting applications and infrastructure. It also

tracks the performance of the web applications, managing user transactions and the operation of components such as servers, databases and network devices, detecting changes that could jeopardise application performance; and allows UCAS to identify, prioritise and address emerging problems before customers or users are affected.

"UCAS' situation is challenging. Not only does it have thousands of people wanting to access its website at any given time, but every single one of those users is accessing different parts of the website. From an IT infrastructure point of view, this can cause many problems", said Alan Hall, Managing Director, SCL.

#### Key features OneSight

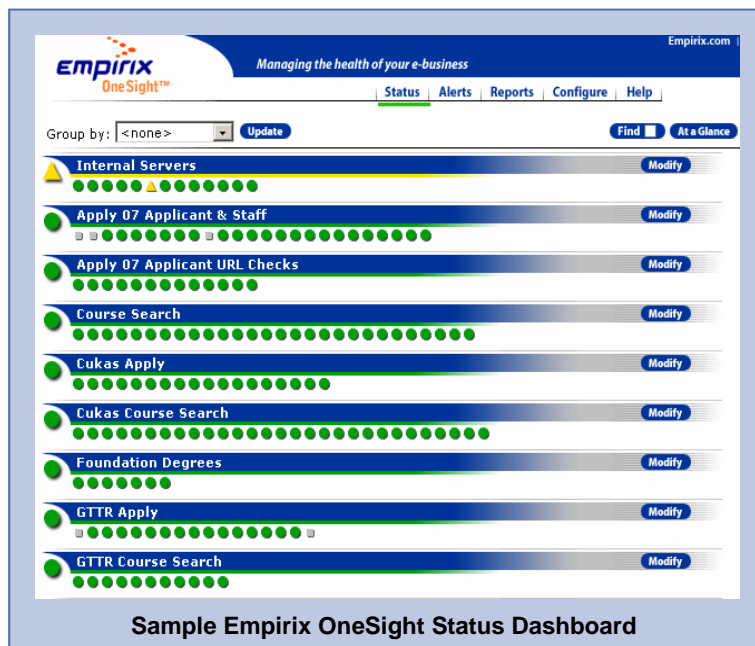
- **True end-user transactions from inside your firewall** and across the Internet to measure the end-user experience and detect issues before the user does
- **Automatic validation of availability**, navigation, performance and content
- **Combine end-user experience with data** on underlying applications and infrastructure performance
- **Enables quick isolation** and resolution of performance issues
- **Encourages collaboration**, provides role-specific views, and anytime anywhere access
- Featured service level management capabilities
- Rich alerting and escalation capabilities
- Complete performance reporting solution

SCL felt that Empirix's solutions would be able to help UCAS because they were proven cost effective tools for testing and monitoring. UCAS required functional solutions that provided good visual aids, easy-to-use, and came with a strong support network. It needed to be able to see what was happening and where, without draining the organisations resources if there was a problem.

## THE RESULTS:

Since implementing Empirix's OneSight solutions, UCAS has been able to implement a cost effective 24x7 support operation, improving service levels for both UK and international users.

Because the solutions are web-based and very intuitive, it meant that UCAS IT staff could access the data easily and quickly.



Sample Empirix OneSight Status Dashboard

"Empirix's solutions were very intuitive, allowing technical staff to get straight to the heart of any potential problem, without the need for training on another support tool. It just worked from day one." said Steve Harrop, Digital Services, UCAS. "Our business is based around providing accurate services and up-to-date information to millions of people; we need to be able to spot potential problems before they happen."