Flash Group relies on HP & JDS Australia to optimise and validate performance of the Global Corporate Challenge Website



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Objective

Flash Group wanted to mitigate the risk of performance issues for the launch of the 2010 Global Corporate Challenge (GCC) website.

Approach

Flash engaged HP Preferred Partner, JDS Australia and adopted a Business Technology Optimization (BTO) strategy with HP LoadRunner software to obtain an accurate picture of end-to-end system performance.

IT improvements

HP customer case study:

HP LoadRunner ensures

availability of Global

Corporate Challenge's

Advertising & Marketing

performance and

website

Industry:

- Ensured the quality and performance of the GCC website for the 2010 programme.
- Established a standardised procedure for load testing the website.
- Identified and eliminated performance bottlenecks to tune for better performance.
- Matured its website development methodology.
- Raised its profile and credibility as an organisation that produces high-performing, user-friendly websites.
- Delivered 99.99 per cent uptime on its systems with web servers only reaching 20 per cent system capacity, and page response times of less than two seconds which resulted in a high quality user experience and enhanced the programme's brand value.

Business benefits

- Mitigated the risks of poor performance with a consistent approach to load testing.
- Adopted a consistent approach to load testing to make confident, informed decisions about the performance and scalability of the GCC website.
- Gained a true picture of end-to-end performance, which enabled better-decision making and functionality changes.
- Increased client satisfaction through a fast, highperforming website.
- Resolved issues with the production architecture and configuration before users were impacted.
- Gained understanding and confidence in the performance characteristics of the website prior to going live.



Flash Group (Flash) is one of Australia's fastest growing full service advertising agencies, offering integrated services including above and below the line advertising with in-house digital, strategy and design.

The company's 30 staff are dedicated to servicing a group of high profile clients that spans retail, healthcare, travel, fashion, hardware, consumer electronics and entertainment. This includes leading brands such as Pioneer, Stanley, Global Corporate Challenge, Contiki, Origin Energy, Clive Peeters, and more.

Every year, the company assists Global Corporate Challenge (GCC), a world-first virtual health programme that encourages corporations to help their employees get active and healthy. The programme sees people from around the globe form teams and don pedometers for a period of 16 weeks and record their daily step count on the GCC website, which was designed and built by Flash.





In 2009, Flash experienced some performance issues with the Global Corporate Challenge (GCC) website - the world's first virtual health program that encourages corporations to help their employees get active and healthy - that resulted in speed degradation, functionality errors and site downtime. With the number of GCC participants predicted to double in 2010 to 120,000, Flash needed to drive a higher level of application performance and mitigate the risks it had previously. As a result, the company turned to HP Preferred Partner, JDS Australia, for a solution. The company adopted a Business Technology Optimization (BTO) approach to application performance with HP LoadRunner software for predicting the behaviour and performance of the GCC website under load.

Predicting system behaviour and application performance

"The stability and performance of the GCC website is critical to the long-term success of the programme," explains Carla Clark, digital producer, Flash Group. "While we undertook some basic testing in 2009, we did not have adequate visibility to obtain an accurate end-to-end picture of the website's performance, particularly at peak loads. This was apparent when we experienced issues during the 2009 program and it was the impetus for us to seek a performance validation solution.

"Following a review of three solutions, we settled on HP LoadRunner Software, due to its functionality, reliability and versatility."

- Carla Clark, digital producer, Flash Group

"Despite the broad experience of our team, we wanted to leverage specialised expertise in performance validation, so we invited JDS Australia to recommend an appropriate software solution. We settled on HP LoadRunner software, due to its functionality, reliability and versatility."

Partnership provides expertise and speeds time to benefit

A HP Platinum Partner and winner of the coveted HP Software and Solutions Partner of the Year Award for the past four years, JDS is widely regarded as a leader in the BTO space. The company provides extensive and in-depth knowledge in HP's suite of testing and monitoring solutions, offering support to clients in a variety of industries.

"JDS has assisted Flash in getting the most out of HP LoadRunner in a short space of time."

- Carla Clark, digital producer, Flash Group

Dave Melgaard, account manager at JDS Australia believes this is quite an unusual project, as Flash is one of the first creative agencies he has come across that realised the importance of performance validation for a website it had developed. "Ensuring that mission-critical systems such as the GCC website are available and performing as intended is something that all organisations grapple with. However, we don't often see creative agencies trying to predict system behaviour and application performance at this level – that's usually the domain of IT teams or developers.

"For organisations (such as Flash) that don't have in-house performance testing expertise, getting a partner on-board takes the hassle out of deployment. In this instance, JDS provided a roadmap to help Flash mitigate the risk of deploying the GCC website and prevent the costly performance problems it had previously incurred. We helped the team stress test the website to handle the large increase in participants and determine the peak loads and transactional volumes, which in turn enabled us to recommend how best to setup the IT infrastructure. The testing also identified bottlenecks, which the website developers rectified this year."

Carla Clark believes that having a HP partner involved made all the difference to this project. She says, "Having JDS on board meant that we could focus on our core competencies, while allowing them to do what they do best - provide the services needed to ensure the GCC website would be available and performing as and when required. JDS has assisted Flash in getting the most out of HP LoadRunner in a short space of time."

Mitigating risk and gaining confidence

The company's vision in adopting HP LoadRunner was to ensure the GCC website would be scalable in line with the rising number of users. "We wanted to adopt a long-term approach to this project and create a robust website to keep pace with the programme's planned growth," explains Tim Bigarelli, senior developer at Flash. "This also entailed the migration to a new IT infrastructure to further enhance our ability to support the website's evolution."

"We are delighted with the business outcomes of HP LoadRunner software. Thanks to the preparative measures we put in place, our systems thrived and delivered 99.99% uptime, with our webservers only reaching 20% system capacity, and page response times of under two seconds." - Carla Clark, digital producer, Flash Group

Flash began preparations for the launch of this year's website by having JDS test the previous application on the old infrastructure to establish performance benchmarks. The next round of tests were applied to the new code base using both the old and new infrastructure. "The results uncovered were extremely beneficial as it enabled us to redevelop the website for maximum performance and functionality. But more importantly, it provided us with complete visibility into the performance of the application from end-to-end, which enabled us to verify that the new application would sustain loads of 1,000 concurrent users over the first peak hour on the launch day with an average logon time of 7-8 minutes per user and average response times for all pages under two seconds to avoid abandonment," adds Bigarelli.

Better decisions, operational efficiencies and improved client satisfaction

As a result of deploying HP LoadRunner to validate the performance of the GCC website, Flash has realised considerable benefits. The organisation has facilitated better decision-making, particularly on the development side, experienced operational efficiencies and improved client satisfaction.

Clark says, "HP LoadRunner software takes the guesswork out of the GCC website's development. It provides confidence that the application will work as intended and it gives us the data we need to support our decisions. In short, it helps us avoid application performance problems at the deployment stage.

"HP LoadRunner software has helped Flash mature its website development methodology." - Carla Clark, digital producer, Flash Group

"By giving us a true picture of end-to-end performance, diagnosing application and systems bottlenecks and enabling us to tune for better performance, we mitigated the risk of failure for the GCC website. And with access to facts, figures and baseline measurements, we were able to tune the application for success."

Putting the website to the test

Following considerable testing, Flash launched the GCC website on May 13, 2010. As expected, traffic was extremely high, with an average of 130,000 visitors on the first two days, and a peak of 8,403 visitors in the first hour.

"The GCC website performed according to our expectations and we are delighted with the business outcomes of HP LoadRunner software," says Clark. "Thanks to the preparative measures we put in place, our systems thrived and delivered 99.99 per cent uptime, with our web servers only reaching 20 per cent system capacity and page response times of under two seconds. This enabled us to provide a high quality user experience, which is enhancing the programme's brand value. "Overall, HP LoadRunner software helped us solve key issues this year and identify areas for performance improvements for next year. We have benefited from knowing that performance testing prevents potential failures - such as the ones we experienced last year. As a result, we have considerably reduced the opportunity cost of defects, while driving productivity and quality in our operational environment to deliver a robust GCC website this year, that performs as intended. "

Looking ahead

HP will continue to play a key role as the performance validation backbone of the GCC website. By leveraging the functionality and flexibility of HP LoadRunner software, Flash will continue to derive value from predicting system behaviour and application performance. The company is also exploring options to extend its HP investment by utilising the HP LoadRunner scripts with HP Business Availability Center software to monitor

Customer solution at a glance:

Primary hardware

• Multiple Virtual Web and Database Servers hosted externally running Windows Server 2008

Primary software

• HP LoadRunner Software

the performance and availability of the GCC website from an end user perspective.

In the future, Clark is keen to have someone in the team take the lead on testing. She says: "This project has demonstrated to us just how important testing really is, so we are focused on ensuring it becomes part of our routine development. We are also keen to share the functionality of HP LoadRunner to other clients with similar-sized projects.

"On the whole, HP LoadRunner software has helped Flash mature its website development methodology. We deployed a higher quality GCC website, improved client satisfaction and raised our profile and credibility as an organisation that produces high-performing, user-friendly and scalable websites," concludes Clark.

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