



Overview

Country or Region: Australia

Industry: Government

Customer Profile

The Melbourne 2006 Commonwealth Games Corporation (M2006) managed the 2006 Commonwealth Games, held in Melbourne, Australia, in March 2006.

Business Situation

M2006 needed a Web site to deliver schedules, venue and transport information, team and athlete profiles, photos, video, and up-to-the-minute news and results from 16 sports during the Games.

Solution

Microsoft built and operated the Web site between April 2005 and March 2006 at its Solutions Development Centre using a wide range of Microsoft® software.

Benefits

- 100 percent uptime during the Games
- Results published within one second
- Easy to manage for M2006 volunteers
- Satisfied up to 10,000 page requests per second

Melbourne 2006 Commonwealth Games Web Site Delivered on Time and on Budget

“Microsoft project management and software development methodologies ensured Web site performance was smooth and uninterrupted.”

Brian Nourse, Group Manager, Technology, Melbourne 2006 Commonwealth Games

The Melbourne 2006 Commonwealth Games Corporation needed a Web site to deliver schedules, venue and transport information, team and athlete profiles, photos, and up-to-the-minute news and results during the 12 days of the Games. Microsoft, the Official Technology Partner for the Games, built and operated the Web site between April 2005 and March 2006. Microsoft® Services consultants at the Microsoft Solutions Development Centre and local partners built the site on a wide range of Microsoft server software. During the Games, the Web site processed up to 10,000 page requests per second and reached a global audience of nearly 12 million. Microsoft faced an immovable deadline, the need to contain costs, and a long list of must-have features. A series of best practices including the Microsoft Solutions Framework helped balance the competing demands of time, budget, and scope while actively managing the risk of such a high-profile project.

Situation

For the Melbourne 2006 Commonwealth Games to run as smoothly as they did took meticulous behind-the-scenes planning and effort. Similarly, the Games Web site—which delivered schedules, venue and transport information, team and athlete profiles and up-to-the-minute news and results—needed to run without a hitch throughout the Games. It took careful planning and project management to make that vision a reality.

For the Melbourne 2006 Commonwealth Games Corporation (M2006), the Web site needed to be secure, scalable, and reliable—and it needed to be up and running long before the Games started.

“During peak times, the Web site had to satisfy 10,000 page requests per second; a major Australian bank’s Web site would peak at around 75,” said Brian Nourse, Group Manager, Technology at M2006. “It served up a rich mix of content, including the latest stories, images, and sporting results. It aggregated information from a wide variety of sources. We needed to ensure everything that went live was accurate and had gone through the necessary approvals. And to serve a global audience of nearly 12 million, it had to be available 100 percent of the time.”

Solution

Working with M2006 staff and local partners, including Devtest, Readify, and Telstra, Microsoft built the Games Web site at its Solutions Development Centre (SDC). The SDC is part of the company’s Microsoft® Services arm and is tailored to deliver large, complex projects using the unique and proven software development and project management methodologies from Microsoft.

An Integrated Software Solution

Microsoft Content Management Server 2002 allowed M2006 staff and volunteers to

aggregate text, images, video, schedules, and results using a simple interface.

Sophisticated workflow features ensured all content was approved before going live. This allowed the Web site to be updated and maintained by volunteers with minimal training and ensured the Web site complied with accessibility specifications for the visually impaired.

Each result was digitally signed and sent from M2006’s Games Info System to a server running Microsoft BizTalk® Server 2004 Enterprise Edition. BizTalk Server analyzed each result, translated it into a format readable by the content management system, and published it to the Web site. The development team used the graphical tools in BizTalk Server to define process flows for each type of data.

Microsoft Windows Server™ 2003 Enterprise and Standard Editions provided a stable and secure operating system environment. The integrated components of Windows Server 2003 saved the developers considerable effort in tying pieces together. The authentication technology in the Active Directory® directory service ensured only the appropriate people gained access to vital systems and content. Internet Information Services version 6.0 Web server and Microsoft ASP.NET 2.0 allowed the developers to build powerful, database-driven Web pages that delivered customized, up-to-the-minute information to each Web site visitor.

Microsoft SQL Server™ 2000 Enterprise Edition provided a reliable back-end database cluster to store all the information required by the Web site, content management server, and BizTalk Server. The powerful text searching capabilities of Microsoft SQL Server 2005 greatly improved the Web site’s overall performance and speed of searches.

Microsoft Operations Manager 2005 monitored the performance of each server and software component to ensure the Web site would run smoothly under any circumstances. Its pre-defined management packs allowed Microsoft to set thresholds for factors affecting server performance such as disk space and processor utilization that might indicate a particular server was struggling.

Deadline, Cost, and Features Not Negotiable

“Building the Games Web site, we faced three major challenges: a tight deadline, the need to contain costs, and a long list of features that had to be included no matter what,” said James Simpson, Services Program Manager at Microsoft Australia. “We needed to keep the team focused and productive for a year.”

The SDC used a range of tactics and skill sets to complete the Web site quickly and cost effectively.

“We use a series of best practices including the Microsoft Solutions Framework, the agile development processes outlined in the Scrum methodology, and the wealth of intellectual property and experience we have developed in the Microsoft SDC,” said Simpson.

To achieve the best results, the SDC had the Web site up and running within three months of starting and then worked iteratively with M2006 to improve the solution month by month. For M2006, this meant the scope of the project wasn't locked down from the beginning so its final shape could accommodate changes needed as the Games drew nearer.

“As M2006 evolved as an organisation, features and functionality were regularly being refined which meant changes to the Web site,” said Nourse. “Microsoft showed us its methodology could comfortably deal with

this level of change and that's something unique in the software development environment.”

Monthly Releases and Daily Builds

From February 2005 until the site went live in December of the same year, Microsoft provided a series of monthly releases. Each month was a self-contained development project. Microsoft would develop new features for three weeks and spend the next week reviewing the results with M2006. Based on the results of the review, M2006 and Microsoft would then set the requirements for the next release. This process of improvement continued even after the site went live until the start of the Games in March 2006.

During the monthly release cycle, Microsoft built and tested a new version of the software every day, running over 1,000 tests a night and collecting important quality metrics throughout the process. The SDC shared with M2006 the results from its issue tracking system—a tool that captures metrics such as how quickly bugs are fixed or new bugs detected.

“You need to make sure you collect the right statistics and manage them appropriately,” said Simpson. “You need to find issues and solve them. You must set unambiguous targets.”

“This is a much higher level of transparency than is usual for a software development project. It allowed us to analyze trends, which came in very handy during the monthly review phase. For example, we could show M2006 that the number of issues was decreasing as we approached the go-live date.”

Communication Skills and Shared Goals

In a time-critical project, good communication is just as important as technical skills or project methodologies. Microsoft had

dedicated team members in Melbourne for the duration of the development phase and conducted daily updates between M2006 and the Sydney-based production team. Microsoft placed technical staff on site at M2006 during critical phases of the project and trained M2006's editors, who worked with teams of volunteers to update the site, using the content management system.

Microsoft also allocated technical account managers to support the system during the Games. The engineers who worked with the development team to build the systems were on hand during the operational phase as the first port of call for technical issues.

"Customers are increasingly seeking direct involvement from their technology suppliers," said Simpson. "They want partners who are willing to share the risk of major projects. Because Microsoft is such a well-known brand, they want to deal directly with the source.

"Microsoft's consulting division has solutions architects and development leads with the best skills on the Microsoft platform, which we use to guide the development process. We also worked with selected partners who had specialist knowledge."

Benefits

For M2006, one business benefit outweighed all the others: the Web site performed flawlessly for the duration of the Games.

"It's like electricity - you only notice when it's not working," said Nourse. "Microsoft project management and software development methodologies ensured Web site performance was smooth and uninterrupted."

These methodologies and the experience Microsoft has in delivering large-scale Web site projects, including the Webjet online travel Web site and the 2003 Rugby World

Cup site, ensured the Melbourne 2006 Web site was delivered with all the required features, on time, and within budget. The integrated innovation of the Microsoft technology stack provided a stable, secure and feature-rich environment.

M2006 and the Games also experienced the following benefits:

- During the Games, the Web site processed many thousands of page requests per second and reached peak loads of more than 6 million page views in a single day. In total, it served more than 64 million page views to nearly 12 million visitors.
- The content management system processed more than 17,000 content postings; around 3,800 were created manually, 8,100 were generated automatically from event results and schedules, and 5,300 were athlete biographies.
- The integration server processed 114,000 schedule and result messages which were posted to the Web site within one second of reaching M2006's Games Information System.

"Microsoft and M2006 worked really well together," said Nourse. "We were always confident the approach we took would result in a fantastic Web site for the Games, one that both organizations would be very proud of. Microsoft's rigorous approach and high level of professionalism made all the difference."

For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: www.microsoft.com

For more information about Devtest products and services, call (613) 9826 1499 or visit the Web site at: www.devtest.com

For more information about Readify products and services, call (61) 1300 666 274 or visit the Web site at: www.readify.net

For more information about Telstra products and services, visit the Web site at: www.telstra.com

For more information about M2006 and the Melbourne 2006 Commonwealth Games, visit the Web site at: www.melbourne2006.com.au

Microsoft Services

Microsoft Services helps customers and partners discover and implement high-value Microsoft solutions that generate rapid, meaningful, and measurable results. As the consulting, technical support, and customer service arm of the world's leading software company, Microsoft Services enables the successful adoption, deployment, and use of Microsoft solutions and technologies for all customers, from the individual to the enterprise.

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Software and Services

- Microsoft Servers
 - Microsoft BizTalk Server 2004 Enterprise Edition
 - Microsoft Content Management Server 2002
 - Microsoft Operations Manager 2005
 - Microsoft SQL Server 2000 Enterprise Edition
 - Microsoft SQL Server 2005
 - Microsoft Windows Server 2003 Enterprise Edition
 - Microsoft Windows Server 2003 Standard Edition
- Services
 - Microsoft Services
- Technologies
 - Active Directory®
 - Microsoft ASP.NET 2.0
 - Internet Information Services 6.0

Hardware

All servers were hosted in a secure, purpose-built Telstra datacenter. The solution was hosted on eGenera BladeFrame chassis and servers and included:

- 16 Web servers
- 2 support servers
- 2 content management servers and
- 2 integration servers, each with two 2.4GHz Intel Xeon processors
- 4 database servers, each with four 2.4GHz Intel Xeon processors

Partners

- Devtest
- Readify
- Telstra