Case Study: Spiros Louis Stadium

The Company Background

Interzone is a consulting company based in Greece that specializes in open source solutions. Founded in September 2001 to serve small to mid-range companies, their clients including Media SA and the Hellenic Venture Capital Association (an association of Greek private equity firms).

Interzone has created client-server applications that include Content Management Systems (CMS) and Enterprise Resource Planning (ERP) systems. They use perl and WxWidgets to create front-end gui's connecting to Database Management Systems. Their database of choice is PostgreSQL.

Interzone is also active in open source software development, contributing patches to OpenOffice.org and other projects.

The Challenge

Named after the winner of the Marathon of the First Modern Olympic Games, the Spiros Louis Stadium had been renovated as one of the major venues for the 2004 Athens games. Having the capacity to hold 58,800 screaming football fans the stadium is, for the next two years, home to the A.E.K. F.C.

AEK is one of Greece's most prominent teams. Founded in 1924, the A.E.K. F.C. has won 11 Championships, 13 Cups, 2 SuperCups and 1 League Cup. The team is almost every year in a European Cup, be it either the UEFA Cup, or the Champions League.

They needed a modern and efficient online reservation/sales system for season tickets that could handle the increased demand for seats.

The Situation

The previous manual registration system used an Interbase database system to archive customer information. In its present form, the system was simply not up to the task of handling the demands, let alone performing real-time financial transactions online. A fully relational database management system (RDBMS) was crucial to a successful online reservation system. As Michalis described, "Transactions are critical: it's not enough to reserve the seats but you must get confirmation of payment too. Therefore, rollbacks are critical" Ticket seats could not be confirmed without first getting authorization from the bank's own IT system. Adding to the mix was a business model that offered specials and package discount rates.

Interzone was also required to provide a bevy of reports detailing sales, income, and the percentage of seats covered.

The Recipe for Success

The hardware configuration consisted of a Celeron 800 Mhz PC with 768 MB memory. A RAID-1 storage configuration was used for redundancy. Interzone, being a SuSE Business Partner, had installed the PostgreSQL (7.4.x series) backend on SuSE Linux Professional 9.1.

Of course, the complete solution for web-based applications uses LAMP (Linux, Apache Middleware and PostgreSQL). Perl scripts were used with an Apache web server to provide an interface PostgreSQL backend.

Their previous experience on similar projects, fine tuning the server was trivial. The team was able to setup the system in one month. A further two months of live support assured the project's success.

Asked if he had any doubts about PostgreSQL's ability to tackle the challenge, Michalis answered that they had always used PostgreSQL because it gave them the flexibility to apply the business and application logic at either the web server end or in the database end, which ever best suited the situation.

Michalis was also asked if they ever felt the need to consider the more expensive solutions available, Michalis stated "We use it [PostgreSQL] for all of our needs and we haven't seen yet a project that would need a [proprietary] DB".

Success

In the forty days since the site has been active, almost 12,000 seats have been sold. Michalis says, "The busiest day was August 24, with 13,049 pages, and there are 5 days of over 10,000 pages each". The daily average during August was 6000 pages and that's while the Olympic games were running too!

References

http://www.interzone.gr/ (Interzone)
http://www.aekfc.gr/ (A.E.K. F.C.)
http://www.uefa.com/ (UEFA Cup)