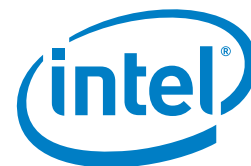


CASE STUDY

Intel® Xeon® processor 7500 series and
Intel® Xeon® processor E7 family

Enterprise Client - Automation and Cost Savings in the Cloud



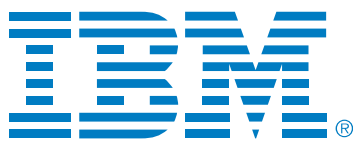
Arsys takes the lead

Spanish IT hoster turns to IBM, Intel® Xeon® processor 7500 series and Intel® Xeon® processor E7 family to develop CloudBuilder* platform

Arsys is a leading Spanish provider of hosted IT services. It has over 250,000 small and medium-sized customers across 100 countries and a core of enterprise-size customers. Its services range from hosting websites to cloud computing, managed hosting, and IT infrastructure solutions. This also includes application delivery, back-up, and systems management. Employing approximately 270 people, it achieved a turnover of €41 million in 2010. The company wanted to significantly expand its cloud-based services, specifically its infrastructure-as-a-service (IaaS) offering, so its customers could benefit from lower IT costs, greater flexibility, and always-available services.



arsys.es



CHALLENGES

- **Cloud computing development:** Arsys wanted to extend its cloud computing platform to provide customers with greater flexibility and more cost control
- **Client control:** It aimed to deliver services that required no up-front costs and which clients could easily manage based on pay-per-usage models

SOLUTIONS

- **IBM and Intel:** It turned to a platform consisting of IBM System x3850 X5* servers powered by Intel® Xeon® processors 7500 series and the Intel® Xeon® processor E7 family
- **Flexibility:** Simple control panel provides load balancing, different storage and server configurations, firewalls, back up policies and more

IMPACT

- **100 to 1:** Arsys developed a cloud platform it called CloudBuilder which delivers a server virtualization ratio of 100 to one
- **Virtual data center:** Customers can effectively implement their own virtual data centers within a few minutes and increase or decrease IT resources based on an effective pay-per-usage model
- **Cloud energy savings:** The CloudBuilder platform and a new data center deliver a 20 percent power consumption savings and significant reduction in operational costs¹

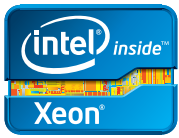
More power

Since its inception in 1996, Arsys has traditionally been known as an Internet services provider. It pioneered a domain name registration service in Spain and has gradually and progressively diversified into wider Internet-based activities such as Web hosting and e-commerce. In 2009 it unveiled a cloud hosting service called Cloud Flexible Server*. Built on IBM x3550* servers powered by the Intel® Xeon® processor 5400 series, the service gives customers control over their applications and costs by enabling them to scale resources according to their needs.

More recently, Arsys wanted to extend and upgrade its cloud hosting services and provide customers with more power and greater flexibility. Central to this was the provisioning of cloud-based virtual data centers that provide customers with even greater flexibility. The aim was to permit customers to configure many of their own technical resources such as CPU, memory, and storage without the need for their own physical IT infrastructures.

“The development of this cloud computing platform has generated important benefits from the business perspective... [and] has allowed us to reduce power consumption by 20 percent and significantly reduce our operational costs.”

Olof Sandstrom, Chief Operations Officer, Arsys



Arsys achieves a server virtualization ratio of 100 to 1 with Intel® Xeon® processor 7500 series and Intel® Xeon® processor E7 family to deliver data center modernization

Maximum stability

Olof Sandstrom, Chief Operations Officer for Arsys, said: "We needed a cloud platform that would be consistent with our customers' expectations. This translates into maximum stability, the highest levels of service, flexibility, and unlimited power."

Arsys wanted to find the optimal way to increase performance and energy-efficiency for cloud-based operations. It already had extensive experience in developing cloud-based services due to its development of Cloud Flexible Server. However, it sought to extend its knowledge and talked to Intel, which introduced the company to the Open Data Center Alliance (ODCA). The ODCA is dedicated to developing common standards for cloud-based data centers. As a result Arsys became a member.

Armed with knowledge from the ODCA about best practice for cloud computing and its own experience with Cloud Flexible Server, Arsys embarked on extensive market research for the most efficacious technology. It eventually opted for high-end IBM x3850 System X5 servers powered by the Intel Xeon processor 7500 series and the Intel Xeon E7 4830 processor. This decision was driven by several key technical and operational factors.

The IBM platform delivers the flexibility to meet changing workload demands: greater performance at a lower cost than other systems, mainframe-style reliability, and simplified power and systems management with an energy-smart design and easy, secure remote access.

At a more technical level, the platform provides several key advantages such as the capability to expand the maximum available memory by an additional 50 per cent for each

server, without adding new processors. This is due to MAX5 technology a memory expansion unit included in the IBM x3850 System X5 server architecture. There's also the choice of up to eight cores with varying speeds and up to 24 MB cache.

The platform also offers scalability from two to eight processor sockets with up to 256 processor sockets supported through node controller technology. The benefits of these technical advancements can be distilled into superior energy consumption and efficient performance when compared to competitive systems.

100 to one

Arsys named the platform CloudBuilder, a cloud computing platform that lets clients set up their own virtual data centers within minutes to enable data center modernization, optimization and energy savings. Customers need no up-front investment and options to increase or decrease resources are based on a pay-per-usage model.

Arsys launched the CloudBuilder platform as part of its IaaS offering, starting off at a relatively small scale of about 25 servers. As it began to work on several service consolidation projects for its 250,000-plus customers, it achieved a virtualization ratio² of 100 virtual servers to one physical server. Sandstrom says: "The implementation was undertaken progressively and at different phases. Due to the advantages and features that CloudBuilder offers, it is growing faster than we estimated at launch. The marketplace is very receptive to this new way to consume our technology and the cloud computing offer that it enables."

The technology infrastructure is providing the basis for delivering services to 95 per cent of Arsys customers. Approximately 1.4 million active services are being delivered, including Apache,* Microsoft Exchange,* SQL Server,* MySQL,* Active Directory,* Tomcat*, and more. Services can be offered through a public, private, or hybrid cloud.

Spotlight on Arsys

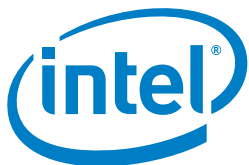
Arsys is a leading technology and innovation company that provides Internet presence, cloud computing, managed hosting, and advanced technological infrastructure solutions. With over 1,400,000 active services and more than 250,000 customers in over 100 countries, Arsys holds a commanding position in Spain, its home country, and more so following its pioneering development the first cloud hosting platform. With a presence in Spain, France, and Portugal, Arsys employs 270 people. www.arsys.es

No implementation costs

Cloudbuilder enables customers to run their own virtual data centers with no implementation costs. Customers are benefiting from real-time pricing, so they can see what they are using and in what quantities. As a result, they can adjust their usage accordingly if required. Services are also fully optimized, which means that a customer no longer needs to pay for unused resources such as physical servers if they are under-utilized. Private CloudBuilder extensions also permit customers to choose different levels of isolation for their virtualized data centers.

Sandstrom adds: "The development of this cloud computing platform has generated important benefits from a business perspective. On the one hand, Arsys has become the first European company in the sector to develop such a wide-ranging commercial cloud hosting platform. On the other hand, the consolidation of servers, together with other initiatives like a new data center, has allowed us to reduce power consumption by 20 per cent and significantly reduce our operational costs."

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² Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

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