

Hospital del Mar is one of the oldest hospital centers in Barcelona and a key reference in the biomedical research sector. To modernize its Information Technology (IT) infrastructure and prepare it for the implementation of new technologies such as artificial intelligence (AI) or neurolinguistic programming (NLP), they have installed a cluster of four Pure Storage® arrays in a business continuity configuration. The implementation has met their growing storage needs, improved the performance and availability of the systems and simplified the management of the IT department, as well as offering a platform ready for the future.



BUSINESS TRANSFORMATION

With the Pure Storage flash storage solution, Hospital del Mar modernized its storage infrastructure to adapt it to the new technologies that break into the medical sector.

REGION / COUNTRY

EMEA / Spain

INDUSTRY

Healthcare

“With Pure Storage, our management of data is no longer a concern. Now we have solution that gives us value and that we can manage with great ease and the minimum of dedicated human resources.”

Albert Màrquez, *Director of IT Systems and Communications*

A HISTORICAL HOSPITAL THAT LOOKS TO THE FUTURE

Since its foundation in 1914, Hospital del Mar – Parc de Salut MAR in Barcelona has been a benchmark in the provision of health care to residents of the districts of the historic center of the city. Each day, more than 3,000 professionals working in the complex attend an average of 1,185 outpatient consultations, 616 primary care consultations, 361 emergencies and around 50 surgical interventions. In addition, it is a university hospital with 494 beds, 265 resident doctors and 2,000 students.

Apart from the care activity, the Hospital del Mar facilities are also the headquarters of the Hospital del Mar Institute for Medical Research (IMIM), a public institution dedicated to scientific research in the field of biomedicine and health sciences. Likewise, the Hospital de la Esperanza in the Gracia neighborhood is part of the organization. Each year, the scientific production of the 700 IMIM professionals generates 945 publications in top-level international journals.

The existing storage platform could no longer meet the growing demand for the complex’s technology systems, which also needed to adapt its IT infrastructure for the future. As explained by Albert Màrquez, Director of IT Systems and Communications of the Hospital del Mar – Parc de Salut MAR: “We would like a storage system that was able to manage the amount of data that is coming to us and that would not be insufficient in a short time. That is why we are looking for a solution with the appropriate performance to plan developments at 4-5 years based on AI, NLP and other technologies applicable to the health sector, which can keep the hospital at the level of innovation that is expected.”

A COMPETITION WITH A CLEAR WINNER

The IT department of Hospital del Mar – Parc de Salut MAR began the selection process by carrying out a market study to find out about high-end solutions from the main storage manufacturers. For this they relied on Gartner Magic Quadrant 2018 for Solid State Arrays, because they were clear that “evidently” the new solution should be based on flash technology.

Being a public body, the vendor selection had to be carried out through a tender. Finally, the Pure Storage proposal was the winner: “The price was set by the contest, but when evaluating the offers we considered other basic aspects: innovation, reliability, management, etc. And the Pure Storage solution turned out to be a better fit,” recalled Màrquez.

COMPANY:

Hospital del Mar
www.parcdesalutmar.cat

USE CASE:

- 300 virtual servers with VMware®
- Up to 1,500 concurrent users
- Non-relational database with 600,000 IOPS

CHALLENGES:

- Updating the existing storage platform
- Planning capacity for 4-5 years
- Implementing emerging technologies such as IA and NLP
- Small IT department (4 professionals)

IT TRANSFORMATION:

- Exponential improvement of performance in critical processes
- Great response speed for new technological projects
- Ability to meet the high number of users
- Storage management as a service with minimum dedication

“Storage has ceased to be a concern to become simply a service that we can manage and that gives us value.”

Albert Màrquez, *Director of IT Systems and Communications*

When making the final decision, the Hospital del Mar IT team also appreciated the data reduction improvements offered by features such as always-on deduplication and compression. “We are talking about another paradigm when dealing with storage, before we compared raw capacities, but with Pure Storage we can talk about net capacities, because the solution manages information in a very efficient way and many times the number of physical flash drives that are needed is not as important with respect to what the product actually delivers,” said Màrquez.

RAPID IMPLEMENTATION AND EASE OF MANAGEMENT

The implementation of the new Pure Storage platform was quick and without any problems. In total, the process took about three weeks, although the installation of the Pure Storage equipment took just a few days. The rest of the time was dedicated to the migration of the data from the previous infrastructure and to the performance of several very demanding reliability tests, before the start of production of the new storage platform in the facilities.

The solution implemented consists of four Pure Storage arrays in an active-active cluster configuration. This means that all resources are in use, and there is no reserve capacity that can be used if an incident occurs, which requires a highly reliable high availability solution. Currently, the storage platform supports some 300 virtual servers based on the VMware environment that service the different areas of work of the medical complex. Due to the size of the institution, the attendance is high, with up to 1,500 simultaneous users.

According to Màrquez, this year the Pure Storage solution will also manage the storage of the hospital’s database: “We work with a non-relational database and now we can connect technologies with up to 600,000 IOPS, to successfully tackle new emerging technology projects that need very high levels of response speed.”

The satisfaction with the new storage platform is very high, both in the IT department and by the users of the Hospital del Mar – Parc de Salut MAR. “The performance and availability provided by Pure Storage has improved exponentially over our previous platform, which is appreciated above all in processes where working fast without interruptions is critical,” said Màrquez. The solution has also improved the operation of other systems, such as old servers that were pending of optimization. After starting up the new storage system, it has not been necessary to update them, because they have started to work with greater speed.

Another aspect that has pleasantly surprised the IT staff of the institution is the ease of management of the new platform. The IT department of Hospital del Mar – Parc de Salut MAR is formed by four professionals, none of them dedicated exclusively to storage, and none of whom can afford to waste time managing complex systems that require great dedication.

“The Pure Storage solution is very simple to manage and allows giving service almost immediately. We save a lot of resources in that aspect,” said Màrquez. He concluded: “With Pure Storage, storage has ceased to be a concern, now it is a service that gives us value and that we can manage with great ease and the minimum of dedicated resources.”



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