

CASE STUDY

Cloud Service Providers (CSPs)
Intel® Optane™ Technology



Provider cdmon Builds a Next-Generation Cloud Using Intel® Technology

Spanish CSP cdmon uses Ultra SuperServer* systems by Supermicro* featuring Intel® Xeon® processors and Intel® Optane™ technology in a pioneering infrastructure.



Cloud service providers (CSPs) today face a highly competitive landscape. To differentiate, they need to offer better, faster services at an attractive price. One company that has faced this challenge head-on is cdmon, an innovative company that devised an ambitious plan to stay ahead of its competitors with the help of cutting-edge technologies from Intel and Supermicro.

The Big Leap by cdmon

A fast-growing CSP in Spain, cdmon has a stellar reputation for speed, security, reliability, and customer support. The company caters to the demands of medium-sized customers, including those in e-commerce and event management, whose requirements can vary widely over the year and spike dramatically at certain times. Mainstream CSPs typically handle these challenges as best they can with the help of incremental technology improvements. But cdmon decided instead to invest in the future of the cloud and reinvent its data center completely using emerging technologies. The leadership team didn't want to merely outperform the competition—it wanted to be years ahead.

“With the new architecture, cdmon is poised to challenge the existing cloud marketplace with higher speed service, higher quality, more options for development, and therefore greater ease to succeed with our customers' projects,” explains Jaume Palau, CEO of cdmon.

The goal for cdmon was to create a new private cloud service for its customers that would be the fastest cloud in Europe—without a higher price tag.

The Importance of Partnership

To pursue this project, cdmon needed the guidance of trusted partners. It turned to its partner of almost a decade, Supermicro, to collaborate closely on a custom solution for its project goals.

“It's not just about providers; you need partners to pursue a vision like this. We never could have gotten to where we are today without partners like Supermicro,” says Joan Oliva, CTO of cdmon.

Supermicro is a leading innovator of server and storage solutions in the marketplace, and its strategic partnership with Intel puts the company first to market with many new solutions based on Intel® technologies. The solution, built on Supermicro's Ultra SuperServer* systems, is highly optimized for Intel® Xeon® Scalable processors and Intel® Optane™ DC Solid State Drives (SSDs).

“We reviewed all the hardware options, not just from Intel but from other companies, too, and we concluded that Intel with NVMe* and [Intel® Optane™ technology] was the best platform.”
— Joan Oliva, CTO of cdmon

“In the beginning, it was just a project; but now, this project has changed the company. This is the company we wanted for the future and now it is already here. New departments, new positions, new ways of communication—everything is evolving, everything is changing because of this amazingly innovative project.”
— Diana Castelltort Vives, Chief Marketing Officer at cdmon

Making the Dream Real

Supermicro did not simply provide servers to cdmon. The Supermicro team took the time to truly understand the strategy and requirements of cdmon, and the teams worked together closely to design a highly optimized custom solution using Supermicro's leading-edge technology with Intel products.

"We spent a lot of time together with Supermicro," explains Juan de Haro, Head of Infrastructure of cdmon. "They helped us with reviewing the motherboard design of the servers, verifying that the server architecture was able to manage the traffic between the SSDs and CPUs, calculating drive bandwidth and how many cores we needed for optimal performance. They helped ensure we were meeting all our requirements."

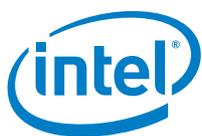
The architecture of cdmon's next-generation data center is built on a new model in which two different non-volatile storage media are used together. Intel® 3D NAND SSDs provide large-capacity storage at a low price point, whereas Intel Optane DC SSDs provide a high-performance cache of non-volatile data close to the processor to significantly improve the performance and reduce the latency of the system.

The Results: Exceeds Expectations

The performance improvements for cdmon in its redesigned data center using Supermicro servers and Intel technologies have exceeded expectations. The bet that cdmon placed turned out to be a good one.

This kind of speed means more to customers of cdmon than just faster and more reliable page-load times. This fast cloud also opens new possibilities for even small- and medium-sized customers in areas such as artificial intelligence (AI), real-time analytics, the Internet of Things (IoT), and big data. Moreover, cdmon's new data center offers customers additional advantages such as encrypted storage, fast automatic recovery from failures, and reliability enhanced by massive redundancy.

Not only has Intel technology delivered by Supermicro created a new standard of performance levels for cdmon customers, but it has been transformative for the company itself.



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Printed in USA

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Supermicro* Solution Ingredients

When cdmon approached Supermicro with the goal of building the fastest cloud in Europe, Supermicro customized a deployment that includes four different server configurations based on Supermicro's Ultra SuperServer* systems with:

- Dual Intel® Xeon® Scalable processors
- Flexible drive bays for:
 - o Intel® Optane™ DC SSDs
 - o Intel® 3D NAND SSDs
 - o SAS-3
 - o SATA 3
- 3 TB DDR4, 2,666 MHz, in 24 DIMM slots
- 100/25 gigabit Ethernet (GbE)
- 8 PCIe* 3.0 expansion slots
- Redundant Titanium Level (96%+) power supplies

This Supermicro solution is powered by Intel® technologies and offers the reliability, efficiency, and performance needed for cdmon's cloud project.



"When we started the project, some people said we were crazy—until they saw the performance improvements in test results. We're getting 10 times faster disc reading!"
— Juan de Haro, Head of Infrastructure of cdmon