Barcelona Supercomputing Center
Centro Nacional de Supercomputación

intel®

10X power reduction

with Intel Optane PMem compared to DRAM DIMMS.[1]

"We're trying to reduce server power while accelerating applications by using Intel Optane PMem and intelligently managing where the data is located and its movements. We can take advantage of the big memory footprint that the new technology offers and put more data closer to the processor."

Antonio Peña, senior researcher, Barcelona Supercomputing Center

Barcelona Supercomputing Center Research Accelerates HPC Workloads

Barcelona Supercomputing Center is at the heart of innovative hierarchical memory research. High Performance Computing (HPC) applications are constrained by the amount of DRAM. They need more memory, but adding more DRAM with the current technology is not feasible due to system power constraints. A team lead by Antonio Peña is using Intel® Optane™ persistent memory in App Direct mode as large capacity, manageable system memory with data objects intelligently allocated to optimize the performance of applications. The team is collaborating with Intel to help build a new software ecosystem around byte-addressable persistent memory to accelerate HPC applications while enabling more power-efficient supercomputers.

Products and Solutions
2nd Gen Intel® Xeon® Scalable processors
Intel® Optane™ persistent memory

Industry
Research

Organization Size
501-1.000

Country
Spain

Learn more
Case Study