

Pure Storage Partners with CERN openlab to Evaluate the Benefits of Flash for Scientific Research

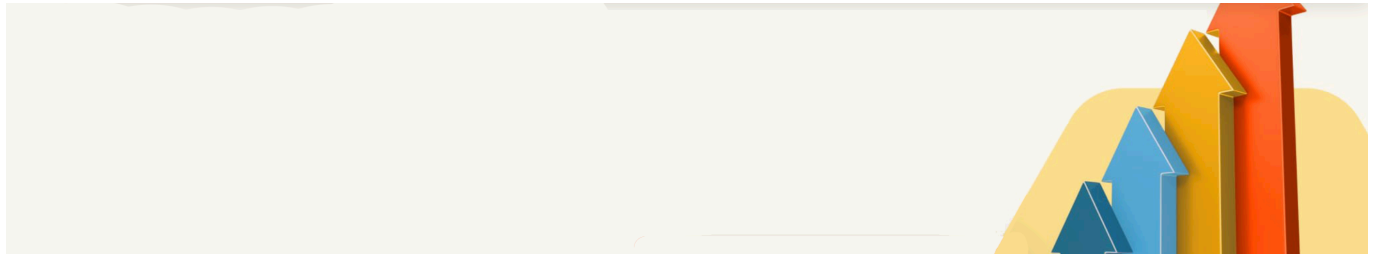


Pure Storage has announced a partnership with CERN (the European Laboratory for Particle Physics), which aims, through the CERN openlab collaboration, to accelerate the development of cutting-edge ICT solutions for the Large Hadron Collider. The partnership will explore how Pure Storage® DirectFlash® technology can support the needs of future scientific research.

CERN openlab's High Performance Computing (HPC) Needs

CERN generates a massive amount of data, primarily through its high-energy physics experiments at the **Large Hadron Collider (LHC)**. This data needs to be effectively recorded and stored to enable scientists to access and analyze it to enhance our understanding of the universe. Traditional storage solutions have become bottlenecks for high performance computing, and replacing legacy hard-disk drives with flash will unlock new possibilities by improving performance, density, and environmental sustainability. Through a multi-year agreement, the Pure Storage modern data platform will support CERN openlab to evaluate and measure the benefits of large-scale high-density storage technologies.

CERN openlab's research and development is focused on how to implement the most sustainable technology solutions while keeping a focus on infrastructure that meets the specific needs of the scientific community. A key element of the collaboration will be utilizing Pure Storage DirectFlash technology, which provides significantly better space and [energy efficiency](#), to support and accelerate CERN High-Energy Physics' performance-driven workloads.



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Data Storage for High-Energy Physics Experiments

Pure Storage and CERN openlab are collaborating to enable the next generation of storage for High-Energy Physics experiments. Both organizations will optimize exabyte-scale flash infrastructure and the application stack for Grid Computing and HPC workloads.

The joint research aims to identify opportunities to maximize performance in both software and hardware while maximizing energy savings across a unified data platform. This multi-phase partnership will support the ever-growing demands of the Large Hadron Collider and revolutionize how data is recorded and managed, with a focus on advancing the distributed storage infrastructure.

HPC and Grid Computing research: Together with CERN openlab, we are pushing the boundaries of what's possible in HPC and Grid Computing environments supporting cutting-edge scientific workflows. With the integration of our state-of-the-art technology in CERN's large-scale distributed storage system, CERN openlab is ready to tackle the unprecedented volumes of data with unparalleled speed and reliability while empowering researchers for the extraordinary challenges posed by the High-Luminosity Large Hadron Collider (HL-LHC) era.

Future-looking science data storage: “We expect this partnership will deliver some key wins as we look to the future of storing scientific experiments data. First, we expect to integrate this technology into our large-scale distributed storage system and to deliver data more effectively, providing a way to scale storage performance beyond what is possible today. Second, we are hoping to unlock the next generation of high-energy physics breakthroughs at CERN and demonstrate to the broader scientific community the potential for enhancing storage capabilities, ultimately accelerating the pace of discovery and innovation at research institutions globally,” commented Luca Mascetti, Storage CTO, CERN openlab.

We’re honored to be a part of this collaboration and can’t wait to share more in the coming months.