



Los Alamos announces details of new computational storage deployment

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LOS ALAMOS, N.M., Nov. 16, 2020—Los Alamos National Laboratory announced an industry-first computational storage deployment targeting a next-generation storage system for HPC sited at Los Alamos. This new system will support the National Nuclear Security Administration’s Advanced Simulation and Computing program responsible for ensuring the performance, safety, and reliability of nuclear weapons.

“We believe that emerging non-volatile memory express (NVMe) technologies, particularly computational and fabric-attached storage devices, provide real opportunities to massively increase the performance efficiency of high-performance storage systems. As the capabilities of these new technologies become more widely understood, we expect to see the high-performance storage industry transformed by these technologies,” said Brad Settlemyer, senior scientist with Los Alamos National Laboratory’s HPC Design group.

The Laboratory’s new deployment combines both fabric-attached NVMe storage and NVMe computational storage to create a hardware-accelerated, high-performance Lustre/ZFS parallel file system.

Eideticom’s NoLoad CSP accelerates ZFS by offloading key storage services and utilizes energy-efficient field-programmable gate arrays (FPGAs) from Xilinx deployed on an Alveo U50 Data Center accelerator card operating as a CSP.

“Computational storage is transforming storage architectures and the Lab has been working closely with key vendors to identify and deploy best-in-class technology to its storage systems,” said Gary Grider, division leader of Los Alamos National Laboratory’s HPC Division. “The Eideticom NoLoad Computational Storage technology provided benefits by reducing the footprint while increasing performance and compression ratio in a nearly transparent way, increasing value for our national security mission over previous approaches.”

“We are honored to have Eideticom’s NoLoad technology adopted by Los Alamos National Laboratory,” said Roger Bertschmann, CEO Eideticom. “The world-class storage team at Los Alamos carefully architected the overall system and influenced the features and performance delivered by the NoLoad CSP.”

About [Eideticom](#)

Eideticom was founded in 2016 with the mission of developing world-class Computational Storage solutions for cloud, HPC and enterprise data centers. Eideticom’s NoLoad Computational Storage solutions are accelerating data center

infrastructure enabling greater scalability, increased performance and dramatically lowering cost.

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