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NERSC/PDSF Status report - A Year of Changes

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PDSF is a networked, distributed computing environment used to meet the detector, simulation, and data analysis requirements of physics (large-scale, high-energy physics, and astrophysics) and nuclear science investigations.

Since our last report two years ago, the cluster has been upgraded significantly. We retired older nodes, expanded compute and storage capacities, and fortified network connectivity. While eight-core AMD compute nodes were retained, older nodes were replaced dual quadcore- (Intel Nehalem) and dual hexcore- (Intel Westmere) based Dell PowerEdge R410 systems. Total cluster capacity also grew by 50 percent, from 800 to 1200 job slots. Total storage capacity has been expanded to about 1TB (comprised of a combination of GPFS and xRootd file systems deployed atop mostly Dell SAS-based units. Networking infrastructure, although still 1 GigE-based, has been fortified with new switches (which couple the PDSF cluster to ESnet at 10 Gbps) and additional data transfer nodes with 10GigE network connectivity.

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