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Title: Integration of The Energy Exascale Earth System Model (E3SM) into The Pavilion Test Harness

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The Los Alamos National Laboratory (LANL) High Performance Computing (HPC) support teams test end-user applications on production Department of Energy (DOE) National Nuclear Security Administration (NNSA) supercomputers. The Energy Exascale Earth System Model (E3SM) scientific application furthers our nation's predictive capabilities of the Earth's climate and environmental systems to deliver future sustainable energy solutions.¹ Manual testing of E3SM's supported build configurations is time consuming. LANL's Pavilion Test Harness² addresses this issue by enabling the creation of portable, abstract test definitions. This project focuses on building a Pavilion test to verify that E3SM builds and runs on LANL production systems while analyzing its performance and portability. Harnessing E3SM under Pavilion supports continuous development and integration for developers and captures performance profiles for support teams to use in continuous application monitoring. Subsequently, LANL HPC testing teams will support running E3SM under Pavilion for continual evaluation of our systems' ability to support the DOE's Climate and Environmental Science Division's (CESD) workload.

¹ <https://e3sm.org>

² <https://github.com/hpc/pavilion2>