

Highlights of Request

Acquisition of prototype leadership-class and production R&D systems

NSF: Towards a Petascale Computing Environment for Science and Engineering – multiyear acquisition of petascale system (by 2011) and mid-range systems as well as deployment of computational grids and advanced software systems to provide world-class HEC resources for academic research

OSD (HPCMP): Upgrade capabilities at multiple supercomputing centers

DOE/SC:

NASA: From second round of National Leadership Computing System (NCLS) call for proposals, open part of Columbia system to external researchers pursuing demanding science and engineering challenges
NIST: Parallel and distributed application algorithms (e.g., large-scale multizone airflow analysis parallelization, with DARPA); fundamental mathematical tools and software infrastructure for HEC applications
DOE/NNSA: Develop and maintain weapons codes; deploy common capacity computing environment across labs
NOAA: Test Earth System Modeling Framework with modeling capabilities across the whole agency; evolve