



# Los Alamos National Laboratory issues Request for Proposal (RFP) for new supercomputer

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**LOS ALAMOS, N.M., Jan. 31, 2019**—The next big supercomputer is out for bid. A "request for proposal," or RFP, for Crossroads, a high-performance computer that will support the nation's Stockpile Stewardship Program, was released today.

The RFP is a joint effort of the New Mexico Alliance for Computing at Extreme Scale (ACES), a collaboration between Los Alamos and Sandia National Laboratories.

"Los Alamos National Laboratory is proud to serve as the home of Crossroads. This high-performance computer will continue the Laboratory's tradition of deploying unique capabilities to achieve our mission of national security science," said Thom Mason, director of Los Alamos National Laboratory.

Responses to the RFP are due on March 18, 2019. After evaluation of proposals, the goal is to award the Crossroads contract to the selected vendor by the end of calendar year 2019. The Crossroads platform is projected to be installed at Los Alamos by the fall of 2021.

One of the primary goals of the Crossroads system is to improve efficiency in three key areas: application performance, workflow and application development. Performance efficiency is the achieved performance of the application once ported to the proposed platform. Workflow efficiency is the efficiency that a complete NNSA workflow executes on the proposed platform. Development efficiency is the ease in which NNSA mission codes can be transitioned to the proposed architecture with minimal modifications.

The focus on efficiency is to optimize the complete weapons simulation life-cycle, rather than focusing on a single aspect such as system cost or power usage. The Crossroads system will support the highest fidelity of next-generation weapons simulations and will meet NNSA Defense Programs' mission needs. It will also allow applications to explore and exploit upcoming technologies.

"Since the era of the Manhattan project, it has been essential to underwrite the performance of nuclear weapons using the most powerful computing available. This is particularly true since the cessation of testing," said Bob Webster, the deputy laboratory director of the Weapons program at Los Alamos National Laboratory.

Los Alamos, Sandia and Lawrence Livermore national laboratories will use Crossroads to run some of the largest and most demanding simulations for Stockpile Stewardship

with the goal of assuring the safety, security and effectiveness of the United States nuclear stockpile.

As part of NNSA's mission to assure the health of the U.S. nuclear stockpile, the Advanced Simulation and Computing (ASC) Program continues to provide NNSA with leading-edge, high-end computing and simulation capabilities so that NNSA meets nuclear weapons assessment, certification and qualification requirements.

**About [Sandia National Laboratories](#)**

Sandia National Laboratories is a multimission laboratory operated by National Technology and Engineering Solutions of Sandia LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration. Sandia Labs has major research and development responsibilities in nuclear deterrence, global security, defense, energy technologies and economic competitiveness, with main facilities in Albuquerque, New Mexico and Livermore, California.

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