



The new IBM eX5 enterprise systems with Intel® Xeon® Processor 7500 Series

Powerful. Intelligent. Memory than previous x86 servers

The advertisement features the Intel Xeon logo on the left, a central orange banner with the headline, and a stylized orange graphic of a server rack on the right.

InformationWeek

THE BUSINESS VALUE OF TECHNOLOGY

DARPA Taps Intel, Nvidia For Extreme Scale Computing

Ubiquitous high performance computing program will develop exascale supercomputers that push the boundaries of Moore's Law.

By Elizabeth Montalbano, [InformationWeek](#)

Aug. 11, 2010

URL: <http://www.informationweek.com/story/showArticle.jhtml?articleID=226700040>

The Defense Advanced Research Projects Agency (DARPA) has selected four organizations to develop prototypes of a next-generation extreme-scale computing system.

Intel, Nvidia, the Massachusetts Institute of Technology computer science and artificial intelligence laboratory, and Sandia National Laboratory will be building the systems for DARPA, which aims to have them developed by 2018.

Another organization -- the Georgia Institute of Technology in Atlanta -- will lead an applications, benchmarks, and metrics team for evaluating prototypes as they are developed, according to a press statement.

DARPA -- the technology research and development arm of the Department of Defense (DoD) -- is developing an exascale system through a program aimed at re-inventing computing called the ubiquitous high performance computing (UHPC) program.

The agency said it wants to push the current boundaries of Moore's Law to develop "radically new computer architectures and programming models that are 100 to 1,000 times more energy efficient, with higher performance, and that are easier to program than current systems."

Moore's Law says that the number of transistors that can be placed on an integrated circuit can be doubled every two years. DARPA researchers believe current supercomputer development accepts this evolutionary approach, while its UHPC program wants to supersede it.

An exascale supercomputer has been on DARPA's radar for some time. In June, the agency released a [request for proposals](#) seeking "revolutionary" approaches to advance the performance and capabilities of future computing systems and enable ExtremeScale computing as part of an omnipresent high performance computing (OHPC) program.

The technology developed through the solicitation is meant to support the UHPC program.



Slideshow: Next Generation Defense Technologies

[\(click for larger image and for full photo gallery\)](#)

The agency said that the UHPC program directly addresses some of the key priorities of President Obama's Strategy for American Innovation, which calls on government agencies to create new technologies that will make American industry more competitive globally.

Specifically, DARPA said the UPHC program will try to meet the administration's goals to pursue both exascale supercomputing and energy-efficient computing as well as improve worker productivity.



More Power. Less Coin

Copyright © 2009 [United Business Media LLC](#), All rights reserved.