Next Generation Applications: Using a Productivity Focus

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Picture: http://www.sandia.gov/~maherou/images/me_2010.jpg

Abstract

The extreme-scale computing community is several years into a highly disruptive period of change. New commodity performance curves must be incorporated into application designs, and the orders of magnitude in performance potential will increase the demand to couple physics and scales into a single integrated execution environment.

In this talk we discuss a productivity focus as the fundamental source for guiding application development activities. Although productivity is always implicitly part of our decisions, an explicit focus on it may lead to new activities, and strategies we have not seriously considered before. We will talk about emerging application architectures, development and use of software ecosystems, software best practices and characterize some of the important attributes of future scalable applications.