

Paradigm Shifts in HPC

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Abstract:

HP's HPC product portfolio which has always been based on standards at the processor, node and interconnect level lead to a successful penetration of the High Performance Computing market across all application segments. The rich portfolio of compute, storage and workstation blades comprises a family a components called the Proliant BL-series complementing the well-established rack-based Proliant DL family of nodes. To address specific challenges at the node and systems level HP has introduced the SL-series with proven Petascale scalability and leading energy efficiency.

Recent additions and enhancements to the SL-series based on new GPU- and coprocessor architectures as well as highly advanced storage subsystems will continue to strengthen and widen HP's portfolio of highly scalable architectures.

Power and cooling efficiency is another subject that primarily was an issue of cost, but also extends for the power and thermal density of what can be managed in a data center. Combining all those technologies will result in HPC paradigm shifts towards data centers "in a box", running not only at ultra-high efficiencies but also a with a very high energy recovery rate.