

Converged HPC Infrastructure: Purpose-built for Any Scale

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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 based on new processor architectures will strengthen and widen HP's portfolio of highly scalable architectures.

Power and cooling efficiency is primarily an issue of cost, but also extends for the power and thermal density of what can be managed in a data center. To leverage the economics of scale established HPC centers as well as providers of HPC Cloud services are evaluating new concepts which have the potential to make classical data center designs obsolete. Those new concepts provide significant advantages in terms of energy efficiency, deployment flexibility and manageability. Examples of this new approach, often dubbed POD for Performance Optimized Datacenter, including a concept to scale to multiple PFLOPS at highest energy efficiency will be shown.