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SURVEY ARTICLE

Energy Awareness in HPC: A Survey

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Abstract— Along with the increased awareness of energy and cost related to it, power management becomes a big issue for high performance computing. Power control is becoming a key challenge for effectively operating a modern high end computing infrastructures such as server, clusters, data centers and Grids. In addition to reducing operating costs, precisely controlling power consumption is an essential aspect in the field of High performance computing. Building energy efficient computer infrastructure is next major goal of the high performance computing. In recent years many researchers have been taking keen interest into developing sustainable, energy efficient high performance architecture. We, in this paper we are surveying energy efficient techniques for cluster computing and try to classify these techniques.

Key Terms: - Cluster computing, High Performance Computing (HPC), Power Aware HPC, Energy efficient HPC, Green Computing, Green HPC.

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