

Topic 16

Applications of High-Performance and Grid Computing

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The use of high performance and grid computing has spread rapidly, revolutionising the ability of scientists and engineers to tackle the challenges they face. Driven by commoditisation and open standards: the widespread availability of parallel computers, large data storage, fast networks, maturing Grid middleware, and distributed service-oriented technologies have led to the development and deployment of large scale distributed simulation and data analysis solutions in many areas. The papers in this topic highlight recent progress in applications of all aspects of distributed computing technologies with an emphasis on successes, advances, and lessons learned in the development, implementation, and deployment of novel scientific, engineering and industrial applications on high performance and grid computing platforms. Today's large computational solutions often require access to or generate large volumes of data- indeed today seamless data access and management can be as important to the underlying computational algorithm as raw computing power. Papers in the sessions highlight data intensive applications which couple together High Performance/ Grid computing with large-scale data access/ management.